Mario Gervasi

Prevention of Environmental Harm under General International Law

An Alternative Reconstruction

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Quando la natura ti sembrerà naturale,
tutto sarà finito – e comincerà qualcos'altro.
Addio cielo, addio mare!

Pier Paolo Pasolini, *Medea*, scena 7

The author would like to thank Professor Angelo Davì for his academic guidance and the many inspiring discussions over these years.
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Abbreviations

AJIL	American Journal of International Law
Am. Univ. ILR	American University International Law Review
Ann. fr. dr. int.	Annuaire français de droit international
Ann. Inst. dr. int.	Annuaire de l'Institut de Droit international/Yearbook of the Institute of International Law
Asian LJ	Asian Law Journal
Asian YBIL	Asian Yearbook of International Law
Australian YBIL	Australian Year Book of International Law
Austrian JPIL	Austrian Journal of Public and International Law
Austrian RIEL	Austrian Review of International and European Law
Berkeley JIL	Berkeley Journal of International Law
Boston College Env. Affairs LR	Boston College Environmental Affairs Law Review
Boston College ICLR	Boston College International and Comparative Law Review
BYIL	British Yearbook of International Law
Cahiers dr. eur.	Cahiers de droit européen
Canadian YIL	Canadian Yearbook of International Law/ Annuaire canadien de droit international
Chinese JIL	Chinese Journal of International Law
Climate & Carbon LR	Climate and Carbon Law Review
Columbia J Env. L	Columbia Journal of Environmental Law
Com. Int.	La Comunità Internazionale
Common Mark. LR	Common Market Law Review
Dir. um. dir. int.	Diritti umani e diritto internazionale
EJIL	European Journal of International Law
Emory ILR	Emory International Law Review
Env. PL	Environmental Policy and Law
Eur. Const. LR	European Constitutional Law Review
Finnish YBIL	Finnish Yearbook of International Law
Fordham ILJ	Fordham International Law Journal
Fordham LR	Fordham Law Review

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Georgetown I Env. LR	Georgetown International Environmental Law Review
Georgetown JI Affairs	Georgetown Journal of International Affairs
German YIL	German Yearbook of International Law
Harvard Env. LR	Harvard Environmental Law Review
Harvard ILJ	Harvard International Law Journal
Houston JIL	Houston Journal of International Law
I.C.J. Reports	International Court of Justice Reports
ICLQ	International and Comparative Law Quarterly
IJ	International Journal
ILM	International Legal Materials
Indian JIL	Indian Journal of International Law
Indiana J Glob. Leg. Studies	Indiana Journal of Global Legal Studies
Int. Comm. LR	International Community Law Review
Int. Org. LR	International Organizations Law Review
IR Red Cross	International Review of the Red Cross
Irish YIL	Irish Yearbook of International Law
Israel YBHR	Israel Yearbook on Human Rights
Italian YIL	Italian Yearbook of International Law
ITLOS Reports	International Tribunal for the Law of the Sea Reports
J Energy & Nat. Res. L	Journal of Energy and Natural Resources Law
J Env. L	Journal of Environmental Law
J Marit. L & Commerce	Journal of Maritime Law and Commerce
J Transn. LP	Journal of Transnational Law and Policy
James Cook Univ. LR	James Cook University Law Review
Japanese YIL	Japanese Yearbook/Annual of International Law
JI Affairs	Journal of International Affairs
JI Disp. Settl.	Journal of International Dispute Settlement
JIL	Journal of International Law
Journ. dr. int.	Journal du droit international «Clunet»
Kansas LR	Kansas Law Review
Legal Issues Eur. Integr.	Legal Issues of European Integration
LJIL	Leiden Journal of International Law
Maastricht JECL	Maastricht Journal of European and Comparative Law
Melbourne JIL	Melbourne Journal of International Law
Merkourios IE Env. L	Merkourios - International and European Environmental Law
Michigan JIL	Michigan Journal of International Law
MPEPIL	Max Planck Encyclopedia of Public International Law

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MPYUNL	Max Planck Yearbook of United Nations Law
N.Y. L School JICL	New York Law School Journal of International and Comparative Law
Nat. Res. J	Natural Resources Journal
NILR	Netherlands International Law Review
Nordic JIL	Nordic Journal of International Law
Ocean & Coastal LJ	Ocean and Coastal Law Journal
Ocean Dev. IL	Ocean Development and International Law
Ocean YB	Ocean Yearbook
OJEU	Official Journal of the European Union
Ord. int. dir. um.	Ordine internazionale e diritti umani
Oregon LR	Oregon Law Review
Pacific Rim LPJ	Pacific Rim Law and Policy Journal
Pol. dir.	Politica del diritto
QIL	Questions of International Law
Rec. cours	Recueil des cours de l'Académie de droit international de La Haye / Collected Courses of the Hague Academy of International Law
RECIEL	Review of European, Comparative and International Environmental Law
Rev. belge dr. int.	Revue belge de droit international
Rev. gén. dr. int. pub.	Revue générale de droit international public
Rev. hellénique dr. int.	Revue hellénique de droit international
RIAA	Reports of International Arbitral Award
Riv. dir. civ.	Rivista di diritto civile
Riv. dir. int.	Rivista di diritto internazionale
Riv. giur. amb.	Rivista giuridica dell'ambiente
Riv. int. fil. dir.	Rivista internazionale di filosofia del diritto
Riv. it. dir. pub. com.	Rivista italiana di diritto pubblico comunitario
South African LJ	South African Law Journal
Suffolk Transn. LJ	Suffolk Transnational Law Journal
Suffolk Transn. LR	Suffolk Transnational Law Review
Temple ICLJ	Temple International and Comparative Law Journal
Texas ILJ	Texas International Law Journal
Univ. Chicago LR	University of Chicago Law Review
UNTS	United Nations Treaty Series
Washington Univ. JLP	Washington University Journal of Law and Policy
Yale JIL	Yale Journal of International Law
YEL	Yearbook of European Law
YI Env. L	Yearbook of International Environmental Law

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YILC	Yearbook of the International Law Commission
ZaöRV	Zeitschrift für ausländisches öffentliches Recht und Völkerrecht

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Introduction

Summary: I. New Momentum for the Principles of International Environmental Law: The Ambition of Adopting a Global Pact for the Environment. – II. Object and Purpose of the Book. – III. Some Terminological Issues. – IV. Research Plan.

I. *New Momentum for the Principles of International Environmental Law: The Ambition of Adopting a Global Pact for the Environment*

The issue of the 'principles of international environmental law' seemingly lost interest in the international arena following the UN Conference on Environment and Development, held in Rio de Janeiro from 3 to 14 June 1992. As is known, that Conference adopted the homonymous Rio Declaration, which proclaims twenty-seven principles dealing with protection of the environment according to the new approach of sustainable development.[1] Environmental conferences subsequently held under the aegis of the United Nations, namely the 2002 World Summit on Sustainable Development in Johannesburg and the 2012 Conference on Sustainable Development in Rio de Janeiro (Rio+20), were focused on *implementation* and therefore no statement of principles was adopted.[2] Furthermore, they were essentially concerned with economic and social problems, including in particular the eradication of poverty.[3] Even the declara-

[1] Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, Res. 1, Annex 1, UN Doc. A/CONF.151/26/Rev.1 (Vol.1).

[2] As for the World Summit on Sustainable Development, alongside the Plan of Implementation, a non-binding declaration was also adopted, namely the Johannesburg Declaration on Sustainable Development: see the Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002, Res. 1 (tellingly entitled 'Political Declaration'), UN Doc. A/CONF.199/20. As for Rio+20, 'The Future We Want', the outcome document, is anything but a declaration of principles, nor is any such declaration included: see the Report of the United Nations Conference on Sustainable Development, Rio de Janeiro, Brazil, 20-22 June 2012, Res. 1, UN Doc. A/CONF.216/16.

[3] See especially Pierre-Marie Dupuy, Jorge E. Viñuales, *International Environ-*

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tion included in the document 'Transforming Our World: The 2030 Agenda for Sustainable Development', adopted by the UN General Assembly in 2015, is no exception to this, as it introduces the seventeen sustainable development goals, rather than laying down principles of environmental protection.[4]

Recently however, States' attention has again been attracted to the issue of the principles of international environmental law: on 10 May 2018, the General Assembly adopted Resolution 72/277, entitled 'Towards a Global Pact for the Environment'.[5] A process was thereby launched with the aim of identifying and assessing the weaknesses within international environmental law, a process which may *possibly* – and not necessarily – lead to the adoption of a Global Pact for the Environment.[6] The Resolution does not provide any details of such an instrument, not even in relation to its content.

At first sight, principles of environmental protection are barely apparent in the Resolution: the only pertinent reference is confined to the preamble, where the principles contained in the Rio Declaration are reaffirmed *en bloc*. Nonetheless, on closer examination, the issue of environmental principles lies at the heart of the Resolution. In fact, the underlying initiative propounded the idea of a treaty enshrining the principles of international environmental law. It had its origins in civil society, specifically in the French *Club des juristes*.[7] At the time Resolution 72/277 was adopted, the Club had already prepared a Draft Global Pact for the Environment,[8] which was intentionally conceived of as a *treaty* owing to the assumed need for a binding instrument setting forth the principles of international environmental

mental Law (2nd ed., Cambridge: Cambridge University Press 2018), at 17-20. The progressive dilution of protection of the environment by the concept of sustainable development will be illustrated *infra*, Chapter 7.

[4] UNGA Res. 70/1 of 25 September 2015.

[5] UNGA Res. 72/277 of 10 May 2018.

[6] The process would involve two steps. First, the General Assembly would request the Secretary-General to submit a report 'that identifies and assesses possible gaps in international environmental law and environment-related instruments with a view to strengthening their implementation' (UNGA Res. 72/277, cit., para. 1). Secondly, it would establish an ad hoc open-ended working group charged with the task of considering that report and discussing possible solutions to any identified gaps with the aim of 'making recommendations, which *may* include the convening of an intergovernmental conference to adopt an international instrument' (ibid., para. 2, emphasis added).

[7] Le Club des juristes, White Paper 'Toward a Global Pact for the Environment' (September 2017), available at *www.globalpactenvironment.org*.

[8] Ibid., at 44-53.

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law.[9] That initiative was endorsed and promoted internationally by France, first at a high-level event held in Paris on June 2017 and later at the seventy-second session of the General Assembly.

Accordingly, discussions prior to voting Resolution 72/277 were not confined to matters concerning the process that was being set in motion by the General Assembly: the need for a legally-binding instrument setting out the principles of international environmental law was at the forefront.[10] The idea of such a treaty was a distinctive one since, as mentioned above, the trend followed by the last UN conferences had marked a paradigm shift from the proclamation of principles to implementation. Thus, whereas only six States voted against (Iran, the Philippines, Russia, Syria, Turkey, and the United States),[11] it is significant that, in line with that trend, they generally emphasised the importance of focusing efforts on implementing existing environmental instruments, rather than creating a new one.[12] Moreover, the problem of the relationship between the Global Pact for the Environment and the current system of environmental principles was also considered,[13] including in particular the risk that the former could have an adverse impact on the latter.[14]

[9] Ibid., for instance at 30: 'the project of a Global Pact for the Environment provides a response to the contemporary necessity for transposing the consensual principles of international environmental law into a binding instrument'.

[10] For some remarks on the possible contribution of a Global Pact for the Environment, see Christina Voigt, 'How a "Global Pact for the Environment" Could Add Value to International Environmental Law' (2019) 28 *RECIEL* 13, especially at 20-23.

[11] UNGA 88th Plenary Meeting, 10 May 2018, UN Doc. A/72/PV.88.

[12] According to the Russian representative, 'the global discussion on environmental issues should focus primarily on implementing the existing instruments': therefore he deemed it 'important to focus the efforts of the ad hoc open-ended working group on considering the possibility of improving implementation of the existing instruments on the environment rather than on establishing a new instrument' (ibid.). By the same token, in underlining 'the importance of fostering and activating international instruments and conventions on the environment and addressing the loopholes and problems that impede their implementation', Syria disagreed 'that one document will achieve that goal or that creating a global pact for the environment will provide the optimal solution to activate instruments and conventions' (ibid.).

[13] The Philippines observed that 'there already exists an integrated framework for the global community's work on the environment and its sustainable development': it hence considered it essential that 'States be able […] to determine if, in their view, the existing environmental law framework and instruments are sufficient or whether there is a need for a new intergovernmental process' (ibid.).

[14] Iran stated: 'we support the existing processes and we believe that there are

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Indeed, even the principles of international environmental law themselves were discussed.[15] Section II of the report submitted by the Secretary-General to the General Assembly,[16] as requested in Resolution 72/277, deals with the 'Gaps concerning Principles of International Environmental Law'. As regards their scope and status, the Secretary-General concluded that '[t]here are important deficiencies'.[17] In particular, '[t]here are instances where there is no clarity as to the nature and content of a principle, or no judicial consensus as to its applicability, or no recognition in binding legal instruments, or all of the above'.[18]

Be that as it may, the expectation of a legally binding instrument 'codifying' the principles of international environmental law seems destined to be frustrated: the working group set up by the General Assembly ultimately recommended the preparation of a merely *political* declaration to be adopted at a UN high-level meeting.[19] In such an eventuality, from a formal perspective at least, it would appear difficult to discern the added value of

enough existing processes. We are concerned that the new processes damage the current processes' (ibid.). In reality, it was made clear in Res. 72/277 that the process established there 'should not undermine existing relevant legal instruments and frameworks'. That was reiterated by the working group in its recommendations: see Recommendations of the ad hoc Open-ended Group Established pursuant to General Assembly Resolution 72/277, para. 5, as endorsed by UNGA Res. 73/333 of 30 August 2019.

[15] In the words of Duncan French, Louis J. Kotzé, '"Towards a Global Pact for the Environment": International Environmental Law's Factual, Technical and (Unmentionable) Normative Gaps' (2019) 28 *RECIEL* 25, at 29, 'if the Global Pact is the first iteration of what could become a universally binding instrument of [international environmental law] which must, in the words of its drafters, "enshrine the founding principles of environmental law", then one must ask whether the current proposed law is adequate and whether it contains normative "gaps"' (footnotes omitted).

[16] Report of the Secretary-General, 'Gaps in International Environmental Law and Environment-Related Instruments: Towards a Global Pact for the Environment', UN Doc. A/73/419 of 30 November 2018.

[17] Ibid., at 42, para. 102.

[18] Ibid. Within legal scholarship, for an overview of the ambiguities of environmental principles in international law, see Eloise Scotford, *Environmental Principles and the Evolution of Environmental Law* (Oxford/Portland: Hart 2017), at 76-84; and, as far as their status is concerned, Teresa Fajardo, 'Environmental Law Principles and General Principles of International Law', in Ludwig Krämer and Emanuela Orlando (eds.), *Principles of Environmental Law. Elgar Encyclopedia of Environmental Law* vol. VI (Cheltenham/Northampton: Edward Elgar 2018), 38, especially at 39-42.

[19] See the Recommendations of the ad hoc Open-ended Group, cit., para. (b) of section 'Further work'.

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the Global Pact for the Environment, when compared to the Rio Declaration as the current framework instrument:[20] specifically, the future document would lack legally binding force, just as its predecessor does.[21]

However, regardless of the final outcome of the process started through Resolution 72/277, the initiative for the Global Pact for the Environment appears to have the merits of having brought the principles of international environmental law back to the forefront of debates on how to enhance protection of the environment. Although they are of considerable importance, problems concerning the implementation of environmental instruments cannot be properly addressed in isolation from a better understanding of the key features of the underlying principles.[22] As was observed by the Secretary-General in his report, '[t]he degree of legal uncertainty surrounding many of these principles has a direct and indirect impact on the predictability and implementation of sectoral environmental regimes'.[23]

II. *Object and Purpose of the Book*

Against the backdrop of the renewed attention being paid to the principles of international environmental law, this book will explore

[20] According to Jorge E. Viñuales, 'The Rio Declaration on Environment and Development: A Preliminary Study', in Jorge E. Viñuales (ed.), *The Rio Declaration on Environment and Development. A Commentary* (Oxford: Oxford University Press 2015), 1, at 60, the term 'constitutional instrument' may be used to refer to the Rio Declaration 'to highlight its emblematic or representative character of the main principles and policies organizing our relations to the environment', considering that '[n]o other international instrument of the same standing and adopted by consensus brings these principles and policies together at once; and no other instrument provides a sufficient basis to understand such principles and policies'.

[21] The fact that '[t]he Rio Declaration is not binding as such' is said to represent one of the 'straightforward' reasons for the need to adopt a Global Pact for the Environment: see Yann Aguila, Jorge E. Viñuales, 'A Global Pact for the Environment: Conceptual Foundations' (2019) 28 *RECIEL* 3, at 5. Strictly speaking, as a 'political declaration', the Global Pact for the Environment could not even amount to a declaration of principles: it would thus be more akin to the aforementioned Johannesburg Declaration on Sustainable Development than to the Rio Declaration on Environment and Development.

[22] According to Sophie Domaine, 'Problemi e prospettive dell'idea di un Patto globale per l'ambiente' (2019) 13 *Dir. um. dir. int.* 393, at 399, the shortcomings emerging from the report submitted by the Secretary-General could all be traced back to serious uncertainty about the scope and interpretation of the principles of international environmental law.

[23] 'Gaps in International Environmental Law', cit., at 42, para. 102.

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the status of general international law governing prevention of environmental harm as the foundation for environmental protection. The aim is to offer an alternative reconstruction that may help to address the significant questions left unanswered by the current view on prevention.

At present, most scholars take the view that there is a customary international law obligation to prevent transboundary environmental harm. According to the aforementioned report of the Secretary-General as well, the prevention principle, whereby 'States are required to exercise their sovereignty over natural resources in a manner which ensures that activities within their jurisdiction or control do not significantly damage the environment beyond their territorial boundaries […] is well established as a rule of customary international law'.[24]

Whereas the position of the majority of authors will be examined later, including the arguments proposed in support of the customary status of the purported obligation of prevention,[25] it must be stressed from the outset that, on the other hand, the content of that rule remains nuanced in several respects. It is usually said to give rise to a due diligence obligation, but this is of little help as the specific conduct that is required still remains unclear. Everything has often been left, either explicitly or implicitly, to the specific circumstances of the individual case.[26] Sometimes, the content of prevention has been defined by referring to other 'principles', such as the obligations of notification and consultation, rooted in cooperation, as well as the obligation to conduct an environmental impact assessment.[27] However, a problem arises as to how to determine the relationship between prevention of transboundary environmental harm and those other principles, considering that some of them have themselves been acknowledged as customary rules. The scope of prevention is uncertain too: irrespective of the distinction between harm to the environment of other States, harm

[24] Ibid., at 7, para. 11.

[25] See *infra*, Section 1.1.1.

[26] See Catherine Redgwell, 'Transboundary Pollution: Principles, Policy and Practice', in S. Jayakumar et al. (eds.), *Transboundary Pollution: Evolving Issues of International Law and Policy* (Cheltenham/Northampton: Edward Elgar 2015), 11, at 13-16; and Philippe Sands et al., *Principles of International Environmental Law* (4th ed., Cambridge: Cambridge University Press 2018), at 210-211 ('The specific application of the rule will turn on the facts and circumstances of each particular case or situation').

[27] See Dupuy, Viñuales, *International Environmental Law*, cit., at 69.

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to the environment beyond the limits of national jurisdiction and harm to the environment within the jurisdiction of the State of origin of the harm itself, it is necessary to establish whether all activities causing or likely to cause environmental harm fall within the reach of the alleged rule. As a related issue, another unclear aspect of the content of prevention is the threshold of environmental harm that triggers the rule's application, as well as the concept itself of harm to the environment.[28]

It is self-evident that these uncertainties are significant. To say the least, they undermine the relevance of the purported customary obligation to prevent transboundary environmental harm. Indeed, owing to the vagueness of the content, doubts have been expressed concerning the usefulness of the rule in specific cases involving transboundary environmental harm, especially when global commons are at stake.[29] From a broader perspective, these uncertainties end up undermining the view that preventing environmental harm constitutes an obligation established by a customary rule, because its consolidation through widespread and consistent practice should have rendered the contours of its content more clearly defined.

The basic assumption of this study is that, since the construction of prevention of environmental harm as a rule of customary international law has thus far proved incapable of providing entirely satisfactory solutions to the problems concerning the features and applicability of prevention, that construction itself may be fallacious and should be questioned. It might not make sense to continue addressing those problems from the same viewpoint. In other words, it is argued that a meaningful attempt to depict coherently and comprehensively the status of general international law governing prevention of environmental harm should not take for granted the commonly held belief that there is a customary obligation to prevent transboundary environmental harm, and should rather look for an alternative classification of prevention under general international law.

After all, debate is still ongoing both as regards the methods for identifying customary international law and also as regards general

[28] See Alessandro Fodella, 'I principi generali', in Alessandro Fodella and Laura Pineschi (eds.), *La protezione dell'ambiente nel diritto internazionale* (Torino: Giappichelli 2009), 95, at 100-101; and, for an overview, Sands et al., *Principles*, cit., at 741-746.

[29] See Xue Hanqin, *Transboundary Damage in International Law* (Cambridge: Cambridge University Press 2003), at 327-331, especially at 330; and Francesco Munari, Lorenzo Schiano di Pepe, *Tutela transnazionale dell'ambiente. Principi, regole, problemi* (Bologna: il Mulino 2012), at 37-41.

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international law, including general principles of international law. In this respect, it is noteworthy that both the topics have recently attracted the attention of the International Law Commission[30]. Therefore, the issue of prevention of environmental harm is somewhat intertwined with deeper problems relating to general international law. As far as feasible within the confines of this study, an attempt will be made to address the most relevant of these problems.

III. *Some Terminological Issues*

In order to better clarify the object of this monograph, some terminological explanations should be provided. In particular, although defining the notion of 'transboundary harm to the environment' has been incorporated into the research question, a preliminary definition of the term 'transboundary' is required. Considered in the sense of something 'that crosses a boundary or boundaries',[31] it may be used to refer to either harm specifically occurring within the boundaries of another State, usually a neighbour of the State of origin of the harm, or to harm occurring everywhere beyond the boundaries of the State of origin, including in areas outside any national jurisdiction. In addition, the 'boundaries' crossed by the harm may be understood as the limits either to the State's territory or to the State's jurisdiction and control. With regard to both of these alternatives, the broader meaning is chosen here, as to do otherwise would be to arbitrarily restrict the scope of this study.

Therefore, the term 'transboundary harm' is understood as having the same meaning as the term 'damage' in the second sentence of principle 21 of the 1972 Stockholm Declaration, according to which States have 'the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction'.[32] Indeed, principle 21 will represent a reference point in this study: as will be illustrated, according to most legal scholarship it reflects the alleged customary obligation to prevent transboundary environmental harm.[33]

[30] In 2018, it adopted the Draft Conclusions on Identification of Customary International Law (see *infra*, Section 1.3), and has been working on general principles of law since then (see *infra*, Section 3.1).

[31] *Shorter Oxford English Dictionary* vol. 2 (6th ed., Oxford: Oxford University Press 2007), at 3319.

[32] Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, UN Doc. A/CONF.48/14/Rev.1 (emphasis added).

[33] See *infra*, Section 1.2.1.

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However, in contrast to the formulation of principle 21, the term 'harm' is preferred here to 'damage' because the latter properly refers to harm *that has already occurred*: hence, the former better fits the concept of prevention. The term 'harm' is likewise preferred over 'injury', which is typically used with respect to State responsibility, and thus could be ambiguous in that it implies the breach of an obligation. Instead, the object of this monograph is to determine *whether* States are under a general obligation to prevent transboundary environmental harm.

The term 'general international law' requires some elucidation too. This is because there is no common position in relation to its meaning, as is illustratively apparent from the work of the International Law Commission. In particular, in its Report on the Fragmentation of International Law, finalised in 2006, the Study Group noted that 'there is no well-articulated or uniform understanding of what [general international law] might mean'.[34] It ultimately proposed that the International Law Commission address the question as to 'what sources are covered by the reference to "general international law"'.[35] Still in 2013, when work was starting on the identification of customary international law, the Special Rapporteur felt the need to stress that it would be 'desirable that the specific meaning intended by [general international law] be made clear whenever the context leaves the meaning unclear'.[36] In 2017, the question became unavoidable in the context of work on *jus cogens* since, based on Article 53 of the Vienna Convention on the Law of Treaties,[37] the Special Rapporteur concluded that one of the criteria for establishing *jus cogens* is whether the norm forms part of general international law.[38] He affirmed that it encompasses both customary international law

[34] Report of the Study Group of the International Law Commission, finalised by Martti Koskenniemi, on the Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law (2006), UN Doc. A/CN.4/L.682, at 254.

[35] Ibid., at 256.

[36] See Michael Wood, 'First Report on Formation and Evidence of Customary International Law' (2013), UN Doc. A/CN.4/663, at 19, para. 42.

[37] Vienna Convention on the Law of Treaties (VCLT), adopted on 23 May 1969 and entered into force on 27 January 1980, 1155 *UNTS* 331.

[38] As is known, Art. 53 VCLT defines *jus cogens* as follows: 'For the purposes of the present Convention, a peremptory *norm of general international law* is a norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent *norm of general international law* having the same character' (both emphases added).

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and general principles of law under Article 38(1)(c) of the Statute of the International Court of Justice.[39]

In fact, it should be clear that the phrase 'general international law' indicates – general – customary international law at a minimum.[40] Nevertheless, uncertainties remain as to *what else* should be included, as the use of the term tends not to be limited to customary law. For instance, having observed that general international law 'clearly refers to general customary law as well as "general principles of law recognized by civilized nations" under article 38(1)(c) of the [ICJ] Statute',[41] the Study Group on the Fragmentation of International Law added that 'it might also refer to principles of international law proper and to analogies from domestic laws, especially principles of the legal process'.[42] Similarly, the UN Secretariat stated that, whereas the International Law Commission had employed the phrases '"general international law" and "customary international law" interchangeably',[43] in its work the expression 'general international law' was also used to refer more broadly to all of the 'rules of international law other than treaty rules',[44] including general principles of law and general principles of international law.[45] By contrast, according to the Special Rapporteur on Identification of Customary International Law, '[t]he term "general international law" […] is used to mean something broader than general customary international law, such as customary international law together with general principles of law, and/or together with widely accepted conventions'.[46]

The differences between the various conceptions of general international law are tellingly confirmed by two separate opinions appended to the 2015 judgment of the International Court of

[39] See Dire Tladi, 'Second Report on *Jus Cogens*' (2017), UN Doc. A/CN.4/706, at 19-31.

[40] By definition, particular customary international law should be excluded, whether geographic customary rules or rules aimed at amending or supplementing treaties. Indeed, its spurious features have been highlighted within legal scholarship, so much so that rules of that kind cannot be entirely subsumed under customary international law: see Gaetano Arangio-Ruiz, 'Consuetudine internazionale', in *Enciclopedia giuridica* (Roma: Treccani 1988), 1, at 9 and 10.

[41] Report on the Fragmentation of International Law, cit., at 254.

[42] Ibid.

[43] Memorandum by the Secretariat, 'Elements in the Previous Work of the International Law Commission That Could Be Particularly Relevant to the Topic "Formation and Evidence of Customary International Law"', UN Doc. A/CN.4/659 of 14 March 2013, observation 29.

[44] Ibid.

[45] Ibid., observations 29 and 30.

[46] See Wood, 'First Report', cit., at 18-19, para. 42.

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Justice in the joined cases *Certain Activities in the Border Area* and *Construction of a Road*,[47] which will be analysed below in relation to transboundary environmental harm.[48] On the one hand, Judge Donoghue affirmed that the Court had used 'the terms "general international law" and "customary international law" […] apparently without differentiation'.[49] On the other hand, Judge ad hoc Dugard held that some fuzziness within the term 'general international law' is to some extent unavoidable:[50] it was stated to include not only 'customary international law and general principles of law within the meaning of Article 38(1)(b) and (c) of the Court's Statute', but 'possibly' also 'general international conventions, particularly those that codify principles of international law; and widely accepted judicial decisions, particularly decisions of the International Court of Justice'.[51]

Any attempt to provide a definitive answer to this terminological issue would go well beyond the limits of this study. Absent any agreed meaning, it is sufficent to note that, for the purposes of this monograph, the phrase 'general international law' will be used to refer not only to customary international law and general principles of law derived from domestic legal orders (or recognised *in foro domestico*) under Article 38(1)(c) of the ICJ Statute, but also to the more controversial category of general principles of international law,[52] to which consideration will be given.[53]

In line with this approach, the distinctive feature of 'general international law' consists in its applicability to or relevance for all the subjects of international law: due to its distinctiveness, such a

[47] ICJ, *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua* v. *Costa Rica)*, judgment of 16 December 2015, *I.C.J. Reports 2015*, 665.

[48] See *infra*, Section 5.2.2.b.

[49] Separate Opinion of Judge Donoghue, para. 2.

[50] Separate Opinion of Judge ad hoc Dugard, para. 13.

[51] Ibid., para. 16.

[52] Hence, in contrast to the suggestion made by Christian Tomuschat, 'General International Law: A New Source of International Law?', in Riccardo Pisillo Mazzeschi and Pasquale De Sena (eds.), *Global Justice, Human Rights and the Modernization of International Law* (Cham: Springer 2018), 185, especially at 201-202, general international law will not be regarded as an autonomous source of international law other than both customary international law and general principles of law, namely a source consisting in *jus cogens* norms and 'rules that enjoy no privileged position in the hierarchy of legal sources'.

[53] See *infra*, Chapter 3.

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feature cannot *by definition* depend on occasional circumstances.[54] Hence, the phrase 'general international law' will not be used to refer to treaties, irrespective of whether they have obtained universal or quasi-universal participation:[55] such an outcome is merely contingent, because treaties are obviously not per se binding on all States. The decisions of the International Court of Justice and other international courts and tribunals are all the more so excluded from the meaning of 'general international law', despite the above quotation from the separate opinion of Judge ad hoc Dugard. As is known, the decisions of international courts and tribunals are formally binding only on the parties to the dispute:[56] the fact of being 'widely accepted' is merely incidental. Furthermore, pursuant to Article 38(1)(d) of the ICJ Statute, decisions only represent 'subsidiary means for the determination of rules of law', rather than international law sources or law-making processes.

IV. *Research Plan*

This monograph is divided into three parts. The conclusions of each part contain the premise for the arguments proposed in the following part.

[54] This dynamic has been described as a 'généralité extrinsèque' or *ratione subiectorum* by Gionata Piero Buzzini, 'La «généralité» du droit international général: réflexions sur la polysémie d'un concept' (2004) 108 *Rev. gén. dr. int. pub.* 381, 388: 'La généralité *extrinsèque* est, par définition, une notion unitaire, une qualité qu'une règle possède ou ne possède pas: ou bien une règle de droit est apte à s'imposer, dans les limites de son champ d'application, à tous les sujets de l'ordre juridique auquel elle appartient, ou bien elle ne l'est pas. Dès lors, contrairement à la généralité intrinsèque, la généralité extrinsèque n'est pas une question de degré' (emphasis in original). Accordingly, he defined general international law 'comme une droit ayant vocation à s'imposer, dans les limites du champ d'application des règles qu'il concerne (aspect lié au degré plus ou moins élevé de généralité intrinsèque de celle-ci), à l'ensemble des sujets de l'ordre juridique international' (ibid., at 390-391). As far as general principles are concerned, see Béla Vitanyi, 'La signification de la "généralité" des principes de droit' (1976) 80 *Rev. gén. dr. int. pub.* 536, at 542-545: '*la «généralité» comme synonyme de l'universalité* […] *concerne la validité dans l'espace du principe du droit, et veut exprimer que son champ d'application s'étend à tous les Etats*' (ibid., at 545, emphasis in original).

[55] Within legal scholarship, the view that treaty rules should be included in general international law alongside customary rules was authoritatively defended by Grigory Tunkin, 'Is General International Law Customary Law Only?' (1993) 4 *EJIL* 534.

[56] Art. 59 of the ICJ Statute reads as follows: 'The decision of the Court has no binding force except between the parties and in respect of that particular case'.

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The first part aims to demonstrate that the common construction of prevention of transboundary environmental harm as an obligation under a customary rule shows, on closer scrutiny, some weaknesses. First of all, it is based on a method for identifying customary law that de-emphasises the weight of the actual practice of States, while attaching great value to treaties, soft law instruments and international case law. Be that as it may, the existence of a preventive obligation under customary law is at variance with continuing degradation of the environment and with numerous cases involving environmental harm in which the rule has not been given any consideration. Indeed, especially in the past, a few authors have denied the customary status of the alleged obligation of prevention on account of discrepancies in State practice. All in all, the existence *vel non* of a customary obligation to prevent environmental harm appears to depend on the value of the actual practice of States in indentifying customary law. In this regard, it does not appear that 'modern' approaches that discard it may be said to have superseded the traditional two-element approach, nor could the opposite be easily demonstrated. Secondly, the view that prevention of environmental harm amounts to a customary obligation usually implies that its origins lie in the no-harm rule and, ultimately, in mutual respect for territorial sovereignty. That has a bearing on the status of prevention, because the connection with such an essential feature of international law as territorial sovereignty corroborates its existence as a customary rule. Nonetheless, prevention of environmental harm, as enshrined in the Stockholm Declaration, is distinguished by the collective nature of the underlying interest, namely the protection of the environment per se as an interest of the international community as a whole. That interest should be kept distinct from individual State interests which, at any rate, may also be relevant in cases involving transboundary environmental harm.

On account of these weaknesses, the construction of prevention of environmental harm as an obligation established by a customary rule can be called into question: hence, the second part of this monograph will seek to identify an alternative classification. In order to do so, the category of general principles of international law will be taken into account. Although there still appears to be some reluctance to admit that category, the arguments against it seem to be inconclusive, viz. the exclusive relevance of general principles derived from national legal orders and the paucity of practice in which general principles of international law have been relied on. Contrariwise, it will be argued that the international legal system, as any legal system, is composed of both principles and rules, and

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a functional approach to distinguishing the former from the latter will be endorsed. According to this approach, general principles provide a value-oriented direction, and thus perform a guiding function, without creating rights and obligations.

Since a programmatic intent permeates the Stockholm Declaration, it will be argued that, at least prima facie, prevention of environmental harm may qualify as a general principle of international law. This intuition will be put to a twofold test. First, it will be tentatively demonstrated that prevention has been embodied within more specific treaty rules: not only can it be inferred by abstraction from such treaties, but it also has been vested with an inspiring function within them, as is illustrated by its inclusion in preambles or in provisions expressly intended to set out guiding principles. Furthermore, despite the paucity of international organisations with authority to adopt legally binding acts, and the ensuing difficulty in identifying binding acts of their own that implement prevention, it is significant that, in EU law, prevention only serves a guiding function, although it is laid down in a TFEU provision. Secondly, it will be shown that, within international case law, including the case law of the International Court of Justice, prevention of environmental harm has actually operated as a general principle, rather than as a rule aimed at assessing the lawfulness of the conduct at stake. It will be pointed out that, in the few decisions in which it is explicitly characterised as a customary rule, protection of the environment and mutual respect for territorial sovereignty are closely intertwined.

In the third part of the book, it will be argued that the reconstruction of prevention of environmental harm as a general principle of international law is not only plausible, but is also best suited to fit the reality. Moreover, this reconstruction offers new perspectives on questions that have been left unanswered within the construction of prevention as a customary rule. In particular, it will be illustrated that, in order to determine the content of prevention, it is no longer necessary to define the scope and meaning of one single rule expected to potentially extend to all activities that cause or are likely to cause environmental harm. Instead, the content of prevention *as a principle*, in general international law, is comprised of the specific customary rules that are informed by that principle. As a result, it will be possible to identify the main trends resulting from the operation of the principle of prevention in general international law.

The overall impression is that the principle of prevention is being progressively absorbed by the concept of sustainable development. It seems that, leaving aside procedural obligations, the emergence of customary rules of a substantive nature has been notably hindered by the tendencies to create treaty regimes that set forth de-

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tailed standards or thresholds and provide for civil liability regimes. By contrast, certain prohibitions of a customary character may be identified with regard to activities that do not involve the economic exploitation of natural resources. Therefore, some concluding considerations will be dedicated to the interaction between protection of the environment, economic growth and technology. Since technology may not be successful in ensuring the sustainability of *continued* economic growth, as the foundation for the current global economic system, it will be suggested that the reconstruction of prevention of environmental harm as a general principle of international law may prove to be useful in a hypothetical de-growth scenario.

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Part I

Weaknesses in the Construction of Prevention of Environmental Harm as a Customary Rule

Chapter 1

Marginalisation of State Practice

Summary: 1.1. The Common View That There Is a Customary Rule Imposing an Obligation to Prevent Transboundary Environmental Harm. - 1.1.1. Marginalisation of State Practice within the Arguments in Favour of the Existence of the Rule. - 1.1.2. The Background: A Paradoxical Disregard for the Status of Prevention of Environmental Harm… - 1.1.3. …and the Initial Focus on State Liability. – 1.2. Inconsistencies within State Practice. - 1.2.1. Continuing Degradation of the Environment. - 1.2.2. Non-Application of the Alleged Customary Rule on Prevention in Cases of Environmental Harm. - 1.2.3. The Torrey Canyon Case… - 1.2.4. …and Other Incidents Involving Oil Tankers. - 1.2.5. The Ixtoc I Case. - 1.2.6. The Chernobyl Case. - 1.2.7. The Sandoz Case. - 1.2.8. The Deepwater Horizon Case. - 1.2.9. The Fukushima Daiichi Case. – 1.3. Doubts concerning the Customary Nature of Prevention of Transboundary Environmental Harm. - 1.3.1. The Weight of State Practice in the Arguments against the Existence of a Customary Rule on Prevention. - 1.3.2. The Issue of Inconsistencies in State Practice in the Light of the Methodological Problem of How to Determine Customary International Law… - 1.3.3. …and Their Relevance Despite the Ongoing Difficulties in Definitively Solving the Problem.

1.1. *The Common View That There Is a Customary Rule Imposing an Obligation to Prevent Transboundary Environmental Harm*

1.1.1. *Marginalisation of State Practice within the Arguments in Favour of the Existence of the Rule*

According to most authors, there is currently a customary obligation under international law to prevent transboundary environmental harm. The rule is commonly deemed to be enshrined in principle 21 of the 1972 Stockholm Declaration,[1] which provides as follows:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their

[1] For instance, Nicolas de Sadeleer, *Environmental Principles. From Political Slogans to Legal Rules* (Oxford: Oxford University Press 2002), at 62-63, highlights the widespread definition of principle 21 of the Stockholm Declaration as a rule of customary international law and tellingly refers to that principle as though it is binding as such: '[o]bligated by Stockholm Principle 21 […] States find themselves bound by a due diligence requirement'.

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> own resources pursuant to their own environmental policies, *and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction*.[2]

The existence of this rule of customary law is now widely accepted in legal scholarship. It has been asserted in publications concerning both international protection of the environment in general and specific aspects of environmental protection.[3] The opinion is so embedded that, sometimes, the existence of the rule has seemingly been taken for granted.[4]

However, as illustrated above, much uncertainty surrounds the content of the alleged customary obligation to prevent transboundary environmental harm, so much so that some scholars have ex-

[2] Emphasis added. The common reference to principle 21 of the Stockholm Declaration might be readily understood considering that the Stockholm Conference is usually regarded as a turning point in the development of international protection of the environment: from the normative perspective, the Conference adopted 109 recommendations grouped into the Action Plan for the Human Environment, as well as the aforementioned Declaration; from the institutional and financial perspective the Conference adopted a resolution recommending that the General Assembly establish a Governing Council for Environmental Programme, an environment secretariat headed by an Executive Director, an Environment Fund and an Environmental Coordinating Board. On the essential importance of the Stockholm Conference in the evolution of international protection of the environment see *infra*, Section 2.3.2.

[3] As for the former publications, see Alessandro Fodella, 'I principi generali', in Alessandro Fodella and Laura Pineschi (eds.), *La protezione dell'ambiente nel diritto internazionale* (Torino: Giappichelli 2009), 95, at 98-99; Pierre-Marie Dupuy, Jorge E. Viñuales, *International Environmental Law* (2nd ed., Cambridge: Cambridge University Press 2018), at 66-69; Philippe Sands et al., *Principles of International Environmental Law* (4th ed., Cambridge: Cambridge University Press 2018), at 206-211. As for the latter, see René Lefeber, *Transboundary Environmental Interference and the Origin of State Liability* (The Hague/London/Boston: Kluwer Law International 1996), at 19-25 and 314-315 (referring specifically to an 'extra-conventional' obligation to 'prevent and abate transboundary environmental interference'); Roda Verheyen, *Climate Change Damage and International Law. Prevention Duties and State Responsibility* (Leiden/Boston: Martinus Nijhoff Publishers 2005), at 145-149 (simply asserting that the no-harm rule, 'as enshrined in Principle 21 of the Stockholm Declaration', constitutes 'existing customary international law').

[4] See Sara Poli, *La responsabilità per danni da inquinamento transfrontaliero nel diritto comunitario e internazionale* (Milano: Giuffré 2006), at 15-16; Julio Barboza, *The Environment, Risk and Liability in International Law* (Leiden/Boston: Martinus Nijhoff Publishers 2011), at 4 and 14-18 (relying on a 'general obligation of prevention' to describe an 'international regime of prevention').

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pressed perplexities about its very usefulness.[5] It is thus necessary to subject to closer examination the construction of prevention of environmental harm as an obligation established by a customary rule.

If one therefore investigates the foundations of that construction, it can be observed that, interestingly, State practice has been given marginal weight within the arguments in support of it. This is the case, in particular, in relation to State behaviour in specific cases involving environmental harm, including claims and protests in such cases, and considered within the context of the overall reality as it manifests itself. Rather, other factors have been relied on.

Specifically, an often-adduced piece of evidence is the repetition of principle 21 of the Stockholm Declaration in various other instruments.[6] From this viewpoint, emphasis has been placed on principle 2 of the 1992 Rio Declaration on Environment and Development,[7] which reproduces verbatim principle 21, aside from a minor addition.[8] Authors have also stressed the restatement of principle 21 in a high number of other soft law instruments, including significant resolutions adopted by the UN General Assembly, such as the 1974 Charter of Economic Rights and Duties of States and the 1982 World Charter for Nature. The reaffirmation of principle 21 in numerous treaties has also been given weight.[9]

[5] See *supra*, Introduction, Section II.

[6] The significance to be attached to the references to principle 21 in international instruments, specifically treaties and acts of international organisations, will be discussed *infra*, Chapter 4.

[7] Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26/Rev.1 (Vol.1).

[8] Principle 2 of the Rio Declaration differs from principle 21 of the Stockholm Declaration by an additional inclusion within the first sentence, i.e., the part of the provision concerning sovereignty over natural resources: developmental policies are mentioned in addition to the environmental ones. As a consequence, pursuant to principle 2 of the 1992 Rio Declaration, 'States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental *and developmental* policies […]' (emphasis added).

[9] See Paola Ivaldi, *Inquinamento marino e regole internazionali di responsabilità* (Padova: CEDAM 1996), at 62-68 (mentioning the repetition of principle 21 of the Stockholm Declaration in the 1974 Charter of Economic Rights and Duties of States, the 1982 World Charter on Nature, and the 1992 Rio Declaration); de Sadeleer, *Environmental Principles*, cit., at 64-68 (inferring the customary nature of the obligation to prevent transboundary environmental harm from its inclusion in numerous treaties); Laura Pineschi, 'I principi del diritto internazionale dell'ambiente: dal divieto di inquinamento transfrontaliero alla tutela dell'ambiente come *common concern*', in Rosario Ferrara and Carlo Emanuele Gallo (eds.),

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In addition, great importance has been attached to the case law of international courts and tribunals. The dictum concerning transboundary air pollution in the *Trail Smelter* decision, issued by an arbitral tribunal in 1941, is commonly claimed to represent a landmark in the development of international environmental law.[10] However, it is especially the case law of the International Court of Justice that scholars usually deem to constitute conclusive evidence of the customary nature of the purported obligation of prevention,[11] as if it had had the final say on the issue.[12] The Court is said to have affirmed

Trattato di diritto dell'ambiente. Le politiche ambientali, lo sviluppo sostenibile e il danno (Milano: Giuffré 2014), 93, at 110-111 (emphasising the repetition of principle 21 in principle 2 of the Rio Declaration, in soft law instruments, and in treaties); Catherine Redgwell, 'Transboundary Pollution: Principles, Policy and Practice', in S. Jayakumar et al. (eds.), *Transboundary Pollution: Evolving Issues of International Law and Policy* (Cheltenham/Northampton: Edward Elgar 2015), 11, at 13-14 ('It has been enunciated in soft law declarations, endorsed inter alia by the General Assembly, the International Law Commission […] and in various multilateral environmental agreements', footnotes omitted).

[10] See *infra*, Section 2.2.1.a.

[11] See Marie-Louise Larsson, *The Law of Environmental Damage. Liability and Reparation* (The Hague/London/Boston: Kluwer Law International 1999), at 153-172; Malgosia A. Fitzmaurice, 'International Protection of the Environment' (2001) 293 *Rec. cours* 9, at 106-111 and 205; Fodella, 'I principi generali', cit., at 99; Pineschi, 'I principi', cit., at 111; Redgwell, 'Transboundary Pollution', cit., at 14; Dupuy, Viñuales, *International Environmental Law*, cit., at 68; Sands et al., *Principles*, cit., at 209-210. It is also noteworthy that the case law of the International Court of Justice is the only evidence of the customary nature of principle 21 provided by the Club des Juristes within the project of a Global Pact for the Environment (see *supra*, Introduction, Section I), as it is symptomatic of the decisiveness attached to it: Le Club des juristes, White Paper 'Toward a Global Pact for the Environment' (September 2017), available at *www.globalpactenvironment.org*, at 31.

[12] See Stephen C. McCaffrey, 'Of Paradoxes, Precedents, and Progeny: The Trail Smelter Arbitration 65 Years Later', in Rebecca M. Bratspies and Russell A. Miller (eds.), *Transboundary Harm in International Law. Lessons from the Trail Smelter Arbitration* (Cambridge: Cambridge University Press 2006), 33, at 42 ('There is also little doubt that because its existence was recognized by the International Court of Justice itself, the principle now forms part of customary international law'); and Karine Bannelier, 'Foundational Judgment or Constructive Myth? The Court's Decision as a Precursor to International Environmental Law', in Karine Bannelier, Theodore Christakis and Sarah Heathcote (eds.), *The ICJ and the Development of International Law: the Lasting Impact of the* Corfu Channel *Case* (London/New York: Routledge 2012), 242, at 248 ('Today, nobody disputes the customary character of the due diligence principle in international environmental law nor its status as the cornerstone of international environmental law. The success of this collective construction would not have been possible without the Court's contribution').

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the existence of a customary obligation to prevent transboundary environmental harm in the 2010 judgment in the *Pulp Mills* case, subsequently confirming it in the 2015 judgment in the joined cases concerning *Certain Activities Carried out by Nicaragua in the Border Area* and *Construction of a Road in Costa Rica along the San Juan River*. Earlier and more cautious precedents have often been found in the 1996 advisory opinion in the case concerning the *Legality of the Threat or Use of Nuclear Weapons* and in the 1997 judgment in the *Gabčíkovo-Nagymaros* case.[13]

The resulting marginalisation of the actual practice of States is arguably due to the fact that, as will be illustrated below, it tends to conflict with the classification of prevention of environmental harm as an obligation established by a customary rule.[14] Accordingly, it is submitted here that inconsistencies within State practice, coupled with its marginalisation, cast doubts on the construction of prevention as a customary international law obligation. Although this is not tantamount to asserting that the solidity of that construction is definitively undermined, it can certainly be called into question.

Before attempting to point out the discrepancies in State practice and their significance, it is worth noting that scant attention has been paid in legal scholarship to the status of prevention of environmental harm in general international law, with commentators focusing rather on the issue of liability. It is against this background that the neglect of State practice is especially striking.

1.1.2. *The Background: A Paradoxical Disregard for the Status of Prevention of Environmental Harm…*

In examining the principle of prevention of environmental harm, one author has recently observed that 'prevention has found itself in a paradoxical situation: defined as the "golden" principle of international environmental law, [it] is considered to be an axiom in

[13] International case law relevant for prevention of transboundary environmental harm, including the cases before the International Court of Justice cited, will be analysed *infra*, Chapter 5.

[14] See *infra*, Section 1.2.2. Significantly, Sands et al., *Principles*, cit., at 207, admit that 'consistent state practice is not readily discernible' and that 'there are relatively few claims which have been brought by states relying upon the rule reflected in Principle 21', with the result that 'one is left to rely upon state practice as evidenced in particular by participation in and support for treaties and other international acts, as well as states' statements'.

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environmental law *but tends not to be investigated further*'.[15] The situation becomes even more paradoxical when one considers that transboundary harm to the environment might be labelled as a 'classic' problem of international law.

In fact, several decades have already elapsed since an environmental consciousness started to emerge, during the 1960s and 1970s. It was at that time that an awareness of the adverse effects on the environment of unprecedented technological and industrial development started to spread. People were confronted with exploitation of natural resources on an unparalleled scale, massive reliance on pesticides within the context of the so-called Green Revolution, huge amounts of waste and the occurrence of serious incidents involving oil tankers. Sensitiveness to the precariousness of the environment grew throughout public opinion and civil society.[16]

Since the very outset of international protection of the environment, the importance of prevention has been clear: historically, it provided the first answer to environmental degradation. In 1968, with environmental consciousness expanding, the UN General Assembly upheld action to protect the environment and convened the Conference on the Human Environment,[17] to be held in Stockholm in June 1972.[18] Not only was prevention of transboundary environmental harm enshrined in principle 21 of the final Declaration, but its significance was immediately underlined by the General Assembly, which observed that that provision was one of the two principles laying down 'the basic rules' governing the international responsibility of States with regard to the environment, and thus declared that no resolution adopted in that session would affect principle 21.[19]

Prevention of transboundary harm has likewise maintained an essential weight in the evolution of international protection of the environment.[20] Following the Stockholm Conference, a 'corpus' of international law concerning protection of the environment

[15] See Leslie-Anne Duvic-Paoli, *The Prevention Principle in International Environmental Law* (Cambridge: Cambridge University Press 2018), at 2 (emphasis added).

[16] The rise of environmental awareness will be discussed in greater detail *infra*, Section 3.3.1.

[17] UNGA Res. 2398 (XXIII) of 3 December 1968, para. 1.

[18] Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, UN Doc. A/CONF.48/14/Rev.1.

[19] UNGA Res. 2996 (XXVII) of 15 December 1972. The other relevant provision is principle 22, on which see *infra*, Section 6.3.5, while the importance of the Resolution will be discussed *infra*, Section 3.3.1.

[20] See *infra*, Chapters 4 and 5.

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emerged and developed: it is comprised of alleged customary obligations, hundreds of treaties, binding and non-binding acts of international organisations, decisions of the conferences of the parties to multilateral treaties as well as formally non-binding instruments, and international case law. The centrality of prevention within the protection of the environment is self-evident: reparation of environmental harm often proves to be difficult, if not impossible.

The problem of prevention of transboundary environmental harm would appear to be even more 'classic', should one take the commonly held view that prevention of harm *to the environment* is connected with prevention of harm *to the territory* of other States.[21] In that case, the problem would have come to the fore in interstate relations long before an environmental awareness spread: indeed, transboundary repercussions of industrial activities were already apparent in the late nineteenth century. Moreover, the ancient question of pollution of shared natural resources, especially international watercourses, would have been relevant too.[22]

Nonetheless, despite the long-standing problem of transboundary harm to the environment and the relevance of prevention, authors have mostly undertaken *partial* studies on prevention of transboundary environmental harm,[23] which resulted in the 'paradoxical situation' referred to above. Scholars' efforts have been circumscribed to specific media, including the atmosphere,[24] seas,[25] and international watercourses,[26] or to particular phenomena, such as climate change.[27]

Except for the issue of liability, the shape of general international

[21] See *infra*, Section 2.2.

[22] As will be seen, the problem of the pollution of international watercourses is long-standing and pre-dates the emergence of environmental consciousness in the 1960s and 1970s: see *infra*, Section 2.4.1.c.

[23] Such partial approach is also observed by Duvic-Paoli, *The Prevention Principle*, cit., at 4.

[24] See Phoebe Okowa, *State Responsibility for Transboundary Air Pollution in International Law* (Oxford: Oxford University Press 2000).

[25] See Brian D. Smith, *State Responsibility and the Marine Environment. The Rules of Decision* (Oxford: Clarendon Press 1988).

[26] See Johan G. Lammers, *Pollution of International Watercourses. A Search for Substantive Rules and Principles of Law* (Boston/The Hague/Dordrecht/Lancaster: Martinus Nijhoff Publishers 1984); André Nollkaemper, *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint* (Dordrecht/Boston/London: Martinus Nijhoff/Graham & Trotman 1993); Maurizio Arcari, *Il regime giuridico delle utilizzazioni dei corsi d'acqua internazionali. Principi generali e norme sostanziali* (Padova: CEDAM 1998); Stephen C. McCaffrey, *The Law of International Watercourses* (2nd ed., Oxford: Oxford University Press 2007).

[27] See Benoit Mayer, *The International Law on Climate Change* (Cambridge: Cambridge University Press 2018).

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law governing prevention of environmental harm has been largely disregarded. In this context, a fundamental question that has been overlooked concerns the status of prevention of environmental harm under general international law: as far as this author is aware, no monographic study has ever been specifically devoted to this. Although some authors have already pointed out this gap,[28] thus far it has not been filled.[29]

As a matter of fact however, it is in respect of the state of general international law governing prevention of environmental harm on the whole that the absence of an in-depth analysis in legal writings appears to be pre-eminently paradoxical. When no source of 'particular' international law is applicable in a case of transboundary harm to the environment, i.e., in the absence of a treaty regime that might be relevant *ratione materiae* or *ratione personae*, it is essential to establish the legal value of the general proposition concerning prevention.

1.1.3. *…and the Initial Focus on State Liability*

Aside from the studies dealing with specific environmental media or problems, the issue of State liability for environmental harm, among the general aspects of prevention, seemingly catalysed the attention of legal scholars at the outset.[30] Different models of State liability – in the broadest sense of the word – have been compared and contrasted in monographic writings from both a theoretical and an empirical perspective.[31]

[28] See Daniel Bodansky, 'Customary (and not so Customary) International Environmental Law' (1995) 3 *Indiana J Glob. Leg. Studies* 105, at 110 ('I am unaware of any systematic empirical study of this issue', namely the question as to whether the duty to prevent transboundary pollution amounts to a rule of customary international law); and Greg Lynham, 'The *Sic Utere* Principle as Customary International Law: A Case of Wishful Thinking?' (1995) 2 *James Cook Univ. LR* 172, at 173 ('the acquiescence by many publicists in readily accepting [the *sic utere* principle's] customary legal status has resulted in the principle receiving only a limited critical evaluation of its legal status').

[29] Not even the author of the passage quoted that mentions a 'paradoxical situation' filled it: her book is focused on the evolution and value of prevention of environmental harm in the international legal system, with only few pages dealing with the 'customary status of prevention': see Duvic-Paoli, *The Prevention Principle*, cit., at 91-97.

[30] The term 'liability' is used here in its most comprehensive meaning, to include both liability *ex delicto*, more commonly referred to as responsibility for internationally wrongful acts, and *sine delicto* liability.

[31] By way of illustration, Pierre-Marie Dupuy, *La responsabilité internationale des États pour les dommages d'origine technologique et industrielle* (Paris: Pedone 1976), argues against the existence of a general regime of State liability for environ-

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Authors have wondered whether a general regime of *sine delicto* liability, as opposed to State responsibility for internationally wrongful acts, is or should be applicable in the event of transboundary harm to the environment. Indeed, since environmental harm is frequently caused by activities that are considered to be economically and socially necessary, *sine delicto* liability appeared at first sight to be better suited to addressing the problem of transboundary harm to the environment. It would enable a solution to be found in the middle-ground between an inconceivable prohibition of all and any activities that cause environmental harm and absolute freedom of States to carry out or permit such activities. In fact, under a *sine delicto* liability regime, States would be obliged to indemnify transboundary environmental damage irrespective of the breach of any international obligation *qua* primary rule.

The liability-oriented approach in legal scholarship has plausibly been influenced by the work of the International Law Commission. As is known, when dealing with the topic of the international responsibility of States,[32] it engaged with the problem of transboundary harm caused by acts not prohibited by international law as early as the 1960s. In eventually limiting its work to responsibility for internationally wrongful acts, the International Law Commission left open the option of separately addressing, in the future, the issue of State liability for harm caused by lawful acts.[33] Having upheld that decision,[34] the UN General Assembly recommended that the issue

mental harm arising out of lawful activities (ibid., at 203-256) and hence focusses on responsibility for internationally wrongful acts (ibid., at 259-287), although limits himself to mentioning the principle of non-injurious use of territory, purportedly enshrined also in principle 21 of the 1972 Stockholm Declaration, as a general basis for State responsibility (ibid., at 30-36, 259, 261-264), while observing the trend towards and need for the development of more specific treaty obligations and non-binding standards (ibid., at 264-274). See also Nathalie L.J.T. Horbach, *Liability versus Responsibility under International Law. Defending Strict State Responsibility for Transboundary Damage* (Leiden: 1996), who advocates, from a purely theoretical viewpoint, a regime of State responsibility for internationally wrongful acts based on the mere occurrence of transboundary harm, leaving open the question as to the actual existence of the alleged absolute prohibition of transboundary harm (ibid., especially at 415-448).

[32] International responsibility of States was included among the topics for progressive development and codification in the very first session of the International Law Commission, held in 1949: (1949) *YILC* at 281, para. 16. The relevant work started in 1954, following UNGA Res. 799 (VIII) of 7 December 1953: see (1954-II) *YILC* at 21-25.

[33] (1973-II) *YILC* 168, paras. 38-39.

[34] UNGA Res. 3071 (XXVIII) of 30 November 1973, para. 3(c).

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be addressed.[35] This occurred at the beginning of the 1970s, in the aftermath of the Stockholm Conference: although the work of the International Law Commission was not specifically concerned with transboundary harm *to the environment*, this kind of damage became the most relevant one, because transboundary economic effects were excluded and the topic was limited to *physical* harm.[36]

In actual fact, this focus on the issue of liability for transboundary environmental harm should not have driven scholars to underestimate the relevance of the question concerning the status of prevention in international law, as they are closely intertwined. From the standpoint of State responsibility for internationally wrongful acts, absent any relevant treaty obligations or other sources of 'particular' international law, it is necessary to verify the existence *vel non* of a general obligation on States to prevent transboundary harm to the environment, in order for the rules governing responsibility to be applicable in cases involving transboundary environmental harm. The violation of such a general obligation – coupled with the imputation of the conduct to a State – would trigger *ex delicto* liability.

Determining the existence of a general rule on prevention would not become any less significant even if a general regime of *sine delicto* liability were found to operate: that would not per se preclude the possibility that States are *also* obliged to prevent transboundary environmental harm. In the event that both a general regime of *sine delicto* liability and a general obligation to prevent transboundary environmental harm existed, States would be held responsible for any breach of that obligation, regardless of the occurrence of harm; at the same time, they would be obliged to indemnify any environmental damage, should this occur notwithstanding their compliance with the said obligation.[37]

[35] UNGA Resolutions 3315 (XXIX) of 14 November 1974, section I, para. 4(a); 3495 (XXX) of 15 December 1975, para. 4(b); 31/97 of 15 December 1976, para. 4(b).

[36] In the commentary on Art. 1 of the Draft Articles on Prevention of Transboundary Harm, the International Law Commission included the physical nature of the consequences of acts causing significant transboundary harm among the parameters that define the scope of the Draft Articles themselves. Any transboundary harm caused by monetary or economic policies of States would fall outside its reach: see (2001-II-2) *YILC* at 151, paras. 16-17.

[37] The scenario illustrated is conceivable on condition that any purported customary obligation to prevent transboundary environmental harm be a due diligence obligation or an obligation of conduct, rather than an obligation of result. In the latter case, any transboundary damage would amount per se to a breach of such an obligation, with the result that there would be *in point of fact* no difference in 'trigger' between the application of the rules governing State responsibility for in-

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That being so, the question concerning the status of prevention of environmental harm under general international law should not have been disregarded. Moreover, the very existence of a customary regime of *sine delicto* liability has constantly been denied in legal scholarship,[38] and it seems that the International Law Commission has also excluded it. In this regard, it must be borne in mind that, at the end of its work on liability for acts not prohibited under international law, the International Law Commission adopted two documents:[39] the Draft Articles on Prevention of Transboundary Harm from Hazardous Activities,[40] in 2001 (hereafter, Draft Articles on Prevention of Transboundary Harm), and the Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities,[41] in 2006 (hereafter, Draft Principles

ternationally wrongful acts and the application of a regime of *sine delicto* liability for States: in both cases, the occurrence of transboundary environmental damage would be sufficient. On the compatibility between *ex delicto* responsibility and *sine delicto* liability, see also Michel Montjoie, 'The Concept of Liability in the Absence of an Internationally Wrongful Act', in James Crawford, Alain Pellet and Simon Olleson (eds.), *The Law of International Responsibility* (Oxford: Oxford University Press 2010), 503, at 505 ('The existence of a specific regime of liability for injurious consequences arising from activities not prohibited by international law does not imply an abandonment of responsibility for internationally wrongful acts for those same activities […]. The two regimes are not conflicting, but rather they are complementary').

[38] In addition to Dupuy, *La responsabilité internationale*, cit., at 203-256, whose opinion was referred to above (*supra*, note 31), see Xue Hanqin, *Transboundary Damage in International Law* (Cambridge: Cambridge University Press 2003), especially at 299-312, and Attila Tanzi, 'Liability for Lawful Activities', in *MPEPIL online* (2013), para. 15 ('Strict liability cannot be considered to apply under general international law, and it may be found at the conventional level exceptionally with regard to ultra-hazardous activities').

[39] As suggested by the Working Group established to make recommendations on the working programme, in 1997 the International Law Commission decided to divide its work into two phases in order first to deal with prevention and subsequently to address the issue of liability: see (1997-II-2) *YILC* at 59, and UNGA Res. 52/156 of 15 December 1997, para. 7. The working group had deemed such a division to be advisable not only considering the fundamental focuses of the previous work of the International Law Commission, but also because of theoretical and conceptual uncertainties (also concerning the scope and content of the topic), the inadequacy of the title of the topic, and the links with the topic of international responsibility of States for wrongful acts: see (1997-II-2) *YILC* at 59, para. 165.

[40] Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries, in Report of the International Law Commission on the Work of Its Fifty-Third Session (2001), UN Doc. A/56/10, 148.

[41] Draft Principles on the Allocation of Loss in the Case of Transboundary Harm

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on the Allocation of Loss). Neither of them codifies rules on State liability for acts not prohibited by international law. Focusing on the Draft Principles on the Allocation of Loss, which are specifically meant to address the problem of liability as a result of transboundary damage,[42] two features are particularly significant, one of which is substantive and the other structural.

On a substantive level, the Draft Principles on the Allocation of Loss are in fact more concerned with *civil liability* than *sine delicto* liability of States. According to those principles, *the operator* is primarily liable for transboundary damage, rather than the State.[43] That stands out if such a solution is contrasted with Article II of the Convention on International Liability for Damage Caused by Space Objects,[44] which has commonly been considered as the model for

Arising out of Hazardous Activities, with Commentaries, in Report of the International Law Commission on the Work of Its Fifty-Eighth Session (2006), UN Doc. A/61/10, 59.

[42] Instead, the Draft Articles on Prevention of Transboundary Harm concern a previous stage: as the name itself suggests, they deal with *prevention* of transboundary harm (Draft Articles on Prevention of Transboundary Harm, cit., at 148, para. 1). In this respect, see *inter alios* Alan Boyle, 'Liability for Injurious Consequences of Acts not Prohibited by International Law', in Crawford, Pellet and Olleson (eds.), *The Law of International Responsibility*, cit., 95, at 97 ('[The Draft Articles on Prevention of Transboundary Harm] codify only the legal framework for regulation and management of activities which pose a risk of transboundary harm. There is little in them of relevance to liability'). Therefore, should one admit the existence of rules of customary international law corresponding to the provisions of the Draft Articles on Prevention of Transboundary Harm, their breach would give rise to State responsibility for wrongful acts, as the International Law Commission made clear in the commentary to the preamble of the Draft Principles on the Allocation of Loss: 'these draft principles do not affect the responsibility that a State may incur as a result of infringement of its obligations of prevention under international law' (Draft Principles on the Allocation of Loss, cit., at 61, para. 4). Hence the scope of application of the Draft Principles is confined to the eventuality that the obligations on prevention, as purportedly codified in the Draft Articles on Prevention of Transboundary Harm, have been complied with, but where transboundary damage nevertheless occurs: '[f]or the purposes of the present draft principles it is assumed that duties of due diligence under the obligations of prevention have been fulfilled. Accordingly, the focus of the present draft principles is on damage caused despite the fulfilment of such duties' (Draft Principles on the Allocation of Loss, cit., at 63, para. 8).

[43] The difference in approach was acknowledged by the International Law Commission itself: 'State liability is accepted essentially in the case of outer space activities. Liability for activities falling within the scope of the present draft principles primarily attaches to the operator' (Draft Principles on the Allocation of Loss, cit., at 60, para. 8).

[44] Adopted at Washington, Moscow and London on 29 March 1972 and entered

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sine delicto liability.[45] It stipulates that '[a] launching State', not the operator, 'shall be absolutely liable to pay compensation for damage caused by its space objects'.[46]

In short, the Draft Principles on the Allocation of Loss are informed by the so-called 'polluter pays' principle.[47] The International Law Commission has deemed this approach to be consistent with current trends in treaties and national law.[48] As for the State of origin, i.e., the State within whose territory the hazardous activity takes place or under whose jurisdiction or control such an activity is carried out, it should ensure that prompt and adequate compensation is available for the victims of transboundary damage.[49] To this

into force on 1 September 1972, 961 *UNTS* 187.

[45] See, for instance, Alan Boyle, 'Globalising Environmental Liability: The Interplay of National and International Law' (2005) 17 *J Env. L* 3, at 8 ('The only clear precedent for no-fault liability of this kind is the 1972 Space Objects Liability Convention'), and Montjoie, 'The Concept of Liability', cit., at 511 ('The only treaty instituting objective State liability is the Convention on International Liability for Damage Caused by Space Objects').

[46] Pursuant to Art. 1(c) of the Convention on International Liability for Damage Caused by Space Objects, the term 'launching State' is used to refer to both 'a State which launches or procures the launching of a space object' and 'a State from whose territory or facility a space object is launched'.

[47] According to the polluter-pays principle, as enshrined in principle 16 of the 1992 Rio Declaration on Environment and Development, 'the polluter should, in principle, bear the cost of pollution': see, in greater detail, *infra*, Section 6.3.5. Along with principle 13 of the Rio Declaration on the development of national and international law regarding liability and compensation in connection with environmental damage, principle 16 is reaffirmed in the first paragraph of the preamble to the Draft Principles on the Allocation of Loss. The related commentary states that the International Law Commission 'consider[ed] the "polluter pays" principle as an essential component in underpinning the present draft principles' (Draft Principles on the Allocation of Loss, cit., at 61, para. 2).

[48] According to the International Law Commission, '[o]perator's liability has gained ground for several reasons and principally on the belief that one who created high risks seeking economic benefit must bear the burden of any adverse consequences of controlling the activity. The imposition of the primary liability on the operator is widely accepted in international treaty regimes and in national law and practice' (Draft Principles on the Allocation of Loss, cit., at 78, para. 11).

[49] Principle 4, para. 1, of the Draft Principles on the Allocation of Loss. Pursuant to principle 2(g), the term 'operator' is employed to refer to 'any person in command or control of the activity at the time the incident causing transboundary damage occurs'. Alternatively, liability might be attributed to the person or entity that 'is functionally in command or control or directs or exercises overall supervision' (Draft Principles on the Allocation of Loss, cit., at 60, para. 8). Of course, the State too might be the economic operator and be held liable *as such*, i.e. not as the State of origin (ibid., at 72, para. 33).

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end, it should adopt measures such as the imposition of liability on the operator, the requirement for the operator to establish and maintain financial security, or the creation of industry-wide funds.[50] Therefore, the State of origin would be responsible for any action taken in response, although the operator would be involved at all times and the – actually or potentially – affected States themselves would have to take measures to mitigate or eliminate the damage.

On a structural level, even assuming that the Draft Principles have some relevance for *sine delicto* liability of States, the existence of equivalent customary rules could hardly be inferred: in the Draft Principles, the purpose of progressive development prevails over a *stricto sensu* codification of international law. The International Law Commission clearly stated that it had not even tried to determine whether those provisions reproduced existing rules of customary international law:[51] the main purpose was to contribute to the progressive development of international law.[52] Moreover, according to the International Law Commission, it was treaty law that needed to be developed,[53] not cus-

[50] Principle 4, paras. 2-4, of the Draft Principles on the Allocation of Loss. If these measures are inadequate, the State of origin should ensure the availability of further financial resources under principle 4, para. 5, which does not imply any residual liability of the State of origin, as the International Law Commission made clear: the provision 'does not directly require the State of origin to set up government funds' (Draft Principles on the Allocation of Loss, cit., at 83, para. 38). For an overview, see Fulvio Maria Palombino, 'I principi elaborati dalla Commissione del diritto internazionale sulla responsabilità per danni transfrontalieri derivanti dall'esercizio di attività pericolose' (2005) 20 *Riv. giur. amb.* 655, at 658-665.

[51] Draft Principles on the Allocation of Loss, cit., at 61, para. 13: 'The focus of the Commission was on the formulation of the substance of the draft principles as a coherent set of standards of conduct and practice. It did not attempt to identify the current status of the various aspects of the draft principles in customary international law'.

[52] In the general commentary, the International Law Commission affirmed that the Draft Principles on the Allocation of Loss were 'intended to contribute to the process of development of international law in this field' (Draft Principles on the Allocation of Loss, cit., at 59, para. 5), as in fact declared in the last paragraph of the preamble. Indeed, in the first recital of the preamble, principle 13 of the 1992 Rio Declaration on Environment and Development is reaffirmed, which recommends that States develop national and international law concerning liability and compensation.

[53] The eighth recital of the preamble to the Draft Principles on the Allocation of Loss recalls not only 'the significance of existing international agreements covering specific categories of hazardous activities', but also 'the importance of the conclusion of further such agreements'. Principle 7 recommends the development of specific international agreements. It is equally significant that the International Law Commission also placed emphasis on the development of national law: with respect to the above-mentioned reference to principle 13 of the Rio Declaration (*supra*,

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tomary law.[54] It was convinced of the need for *detailed* rules, depending on the characteristics of the hazardous activities.[55]

1.2. *Inconsistencies within State Practice*

1.2.1. *Continuing Degradation of the Environment*

The tendency to disregard the problem of the status of prevention of environmental harm under general international law, also as a result of the initial focus on the issue of State liability, might help to explaining why authors have usually neglected the actual practice of States in asserting the existence of a customary obligation to prevent transboundary environmental harm, whereas such other factors have been stressed as repetition in treaties or soft law instruments, as well as international case law. The fact remains, however, that the actual practice of States appears to be inconsistent, or hardly compatible to say the least, with the view that prevention of environmental harm amounts to an obligation established by a customary rule.

Evidence of such a discrepancy is first provided by the continuing degradation of the environment. In this regard, the centrality of prevention of environmental harm in protecting the environment should be borne in mind. Had there been uniform practice by a majority of States from the 1970s onwards that was consonant with prevention of environmental harm, the state of the environment overall would have improved since then. Nonetheless, the data suggests the opposite in several respects.[56]

note 47), the International Law Commission referred only to the 'need to develop national law', although development of international law too is cited in principle 13 (Draft Principles on the Allocation of Loss, cit., at 61, para. 2). The importance of national law is however consistent with the prominent importance attached to the polluter-pays principle (see *infra*, Section 6.3.5).

[54] Having made it clear that it had not attempted to determine the status of the Draft Principles on the Allocation of Loss with reference to customary international law, the International Law Commission added that 'the way in which the draft principles are formulated is not intended to affect that question' (Draft Principles on the Allocation of Loss, cit., at 61, para. 13).

[55] The International Law Commission stressed that 'different characteristics of particular hazardous activities may require the adoption of different approaches with regard to specific arrangements' (Draft Principles on the Allocation of Loss, cit., at 60, para. 11). It consistently observed that 'the necessary arrangements for compensation may be provided under international agreements covering specific hazardous activities, and the draft principles encourage the development of such agreements' (ibid., at 59, para. 4).

[56] With respect to prevention of harm to the environment within the territory

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Specifically, according to a 2020 study released by OECD,[57] global emissions of greenhouse gases have increased by 50% since 1990 and by 35% since 2000.[58] As a result of global warming, ocean acidity has risen by 26% on average over the past thirty years, when compared with pre-industrial levels, and could increase by between 100% and 150% by the end of the century.[59] As regards air pollution in general, premature deaths associated with emissions of fine particulates have increased worldwide, with more than five hundred estimated deaths per million inhabitants in central and eastern European countries, which are the most affected States.[60] The amount of waste has grown as well: in the OECD area, a person generates on average 520 kg of municipal waste per year, which is 20 kg more than in 1990.[61] On the issue of waste, hundreds of marine and coastal species, including aquatic mammal and seabird species, are estimated to be affected by marine plastic litter and micro-plastics.[62] Indeed, biodiversity continues to be under threat not only at sea: as the WWF has reported, an overall decline of 60% in species population sizes was recorded between 1970 and 2014.[63]

From a broader perspective, it is noteworthy that, according to scientists, a number of 'planetary boundaries' have been transgressed owing to human activities. The concept of planetary boundaries was introduced in a seminal article published in 2009.[64] It refers to control variables that seek to define a 'safe distance' for Earth-system processes from their biophysical threshold, or from a dangerous level as for processes the threshold for which is still uncertain. Planetary boundaries have been established for nine Earth-system processes, specifically climate change, rate of biodiversity loss, stratospheric ozone depletion, ocean acidification, biogeochemical flows, land-sys-

of the State of origin of the harm, Saverio Di Benedetto, *Sovranità dello Stato sulle risorse naturali e tutela degli equilibri ecologici nel diritto internazionale generale* (Torino: Giappichelli 2018), at 172-173, describes as paradoxical the fact that continuing degradation of the environment provides both a social reason for the existence of a prevention obligation and, at the same time, evidence for denying it.

[57] OECD, *Environment at a Glance 2020* (Paris: OECD Publishing 2020).

[58] Ibid., at 17.

[59] Ibid., at 20.

[60] Ibid., at 28.

[61] Ibid., at 43.

[62] Ibid., at 54.

[63] See WWF, *Living Planet Report. 2018: Aiming Higher* (2018), available at *www.worldwildlife.org*.

[64] See Johan Rockström et al., 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity' (2009) 14 *Ecology and Society* 32.

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tem change, global freshwater source, atmospheric aerosol loading, and chemical pollution. Considering that the breaching of one or more planetary boundaries may have deleterious or even catastrophic impacts, it is significant that, in 2009, at least three planetary boundaries were found to have already been passed, viz. the boundaries for climate change, rate of biodiversity loss, and biogeochemical flows.[65] In addition, according to an article published in 2015, humanity has also passed the boundary for land-system change.[66]

1.2.2. *Non-Application of the Alleged Customary Rule on Prevention in Cases of Environmental Harm*

Evidence of the inconsistency of State practice with the existence of a customary obligation to prevent environmental harm is apparent not only from the continuing degradation of the environment. It may also be noted that, in situations involving environmental harm, States have been reluctant to invoke or acknowledge any breach of that obligation. Thus it is difficult to find cases in which the purported customary rule mandating the prevention of environmental harm has been applied. Some exceptions are only prima facie offered by international case law: upon closer scrutiny, as will be seen, these deal more with mutual respect for territorial sovereignty than protection of the environment per se.[67]

It must be admitted that, in order to conclude that States have abstained from invoking the alleged customary rule on prevention of environmental harm under any particular circumstances, the applicability of that rule to the case at hand should be assessed as a preliminary matter. In other words, one could not reasonably expect States to rely on a rule that does not in actual fact apply. On the other hand, the assessment of the applicability of the alleged customary obligation to prevent transboundary environmental harm can only be hypothetical, owing to the uncertainties surrounding its content. Therefore, it is only possible to verify whether it could *potentially* have come into consideration.

At any rate, considering the features commonly attached to that obligation, it should have been relevant for the cases that will be

[65] Ibid.

[66] See Will Steffen et al., 'Planetary Boundaries: Guiding Human Development on a Changing Planet' (2015) 347 *Science* 736.

[67] See *infra*, Chapter 2 for the difference between protection of the environment per se and mutual respect for territorial sovereignty, and Chapter 5 for the analysis of international case law.

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examined below. This is because, in those cases, environmental harm appears to have been extremely serious, to such an extent that the threshold of significance, wherever that might be, could be deemed to have been reached. In addition, it seems that the State of origin of the harm, in whose jurisdiction or control the harmful activity was carried out, could be said to have failed to take adequate steps to prevent the harm. After all, it could hardly be maintained that none of the prominent cases involving environmental harm ever fell within the scope of the purported customary rule on prevention.

Furthermore, it should be borne in mind that, as mentioned above, uncertainty surrounding the content of the alleged obligation to prevent environmental harm is also due to a failure to apply it, as some controversial aspects would certainly have been clarified, at least in part, through practice.[68] Accordingly, the doubts surrounding the content of the alleged obligation to prevent transboundary environmental harm not only make it more difficult to verify whether or not it could have been relevant in a specific case involving environmental harm, but also result from the paucity of practice, which is hence indirectly confirmed.

That said, some of the main cases involving environmental harm will be analysed below.

1.2.3. *The Torrey Canyon Case…*

Torrey Canyon was a Liberian-flag oil tanker owned by Barracuda Tanker Corporation and chartered to the Union Oil Company of California.[69] On 18 March 1967, while shipping a cargo of 119,328 tons of crude oil under a voyage charter to British Petroleum Trading Ltd., the Torrey Canyon ran aground off the south-eastern coast of the United Kingdom. The ensuing explosion caused an oil spill, which threatened the marine environment as well as the French and British shores.[70] Any action taken by France and the United Kingdom to

[68] See *supra*, the Introduction, Section II.

[69] On the legal status of the Torrey Canyon, see Marina Spinedi, 'Problemi di diritto internazionale sollevati dal naufragio della Torrey Canyon' (1967) 50 *Riv. dir. int.* 653, at note 1; Emmanuel Du Pontavice, *La pollution des mers par les hydrocarbures. A propos de l'affaire du «Torrey Canyon»* (Paris: Pichon et Durand-Auzias 1968), at 31-34; H. Marcus Price, 'Interrelationship of the Behavioral Sciences and Law in International Crisis Decision Making: An Analysis of the "Torrey Canyon Incident" as a Model' (1974) 8 *International Lawyer* 219, at 221.

[70] On the adverse effects of the oil spill on the marine environment, wildlife, commercial fishery and tourism industry in France and the United Kingdom, see

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reduce the oil spill would have been dangerous, and was moreover hindered by adverse weather conditions. On 27 March, the United Kingdom eventually decided to set fire to the oil spill and bomb the tanker in order to destroy the remaining cargo.[71] Despite the destruction of the oil near the tanker, around 80,000 tons of crude oil spread out over the sea and reached the French and British shores.[72]

The alleged existence of a customary obligation to prevent transboundary environmental harm appears to be inconsistent with this incident,[73] as it was neither considered nor applied for the purposes of establishing the international responsibility of the State of origin.[74]

Jean G. Schinas, 'L'affaire du "Torrey Canyon", sept ans après. Essai d'une synthèse' (1973/1974) 26/27 *Rev. hellénique dr. int.* 254, at 261-262; and Gaetano Librando, 'Influence of the *Torrey Canyon* Incident on the Liability and Compensation Regimes Developed under the Auspices of the IMO', in Norman A. Martínez Gutiérrez (ed.), *Serving the Rule of International Maritime Law. Essays in Honour of Professor David Joseph Attard* (London/New York: Routledge 2010), at 315.

[71] For an overall analysis of the decisions of the United Kingdom, see Price, 'Interrelationship', cit., at 222-226.

[72] For further details concerning the circumstances of the Torrey Canyon accident, see Charles Rousseau, 'Chronique des faits internationaux. Affaire du *Torrey Canyon*' (1967) 71 *Rev. gén. dr. int. pub.* 1092, at 1092-1095; Spinedi, 'Problemi', cit., at 653-657; Du Pontavice, *La pollution*, cit., at 5-9; Robert H. Stansfield, 'The Torrey Canyon', in Rudolf Bernhardt (ed.), *Encyclopedia of Public International Law* vol. IV (Amsterdam: North-Holland 2000), 867, at 867-868; Julia Pfeil, 'The Torrey Canyon', in *MPEPIL online* (2006), paras 1-5.

[73] For the sake of completeness, it is worth noting that the importance of the Torrey Canyon accident in international law is not confined to the field of prevention of transboundary environmental damage. Rather, the incident is also relevant to the issue of the flags of convenience: see Spinedi, 'Problemi', cit., at 658-661 and 665. Moreover, the case is frequently mentioned in relation to the issue of necessity as a circumstance precluding wrongfulness: the United Kingdom's bombing on the oil tanker could be considered as an instance of this, as it has been by the International Law Commission, 'Draft Articles on State Responsibility for Internationally Wrongful Acts, with Commentaries' (2001-II-2) *YILC*, at 82, para. 9. However, according to Spinedi, 'Problemi', cit., at 665 ff., when the United Kingdom bombed the oil tanker, the Torrey Canyon was a wreck that had been tacitly abandoned, and thus its destruction did not give rise to any breach of international law.

[74] According to Du Pontavice, 'La pollution', cit., at 56, France and the United Kingdom could have invoked the international responsibility of Liberia for the breach of a treaty, specifically the International Convention for the Prevention of Pollution of Sea by Oil, rather than the presumed customary obligation to prevent transboundary environmental harm. However, doubts have been cast on the applicability of the Convention to the Torrey Canyon case. In particular, it does not apply, pursuant to Art. 4(1)(b), in the event of an oil spill caused by ship damage or unavoidable leakage, 'if all reasonable precautions have been taken after the occurrence of the damage or discovery of the leakage'. In this regard, see Rousseau,

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In particular, France and the United Kingdom could have at least explored the option of invoking the responsibility of Liberia. As a Liberian-registered vessel the Torrey Canyon was shipping the cargo of crude oil under Liberian jurisdiction when the accident took place. Furthermore, France could have perhaps invoked the responsibility of the United Kingdom itself, as it seems that the British bombing of the Torrey Canyon aggravated the oil spill.[75]

Admittedly, it would not have been easy to establish State responsibility in either case. As far as Liberia was concerned, its connection with the Torrey Canyon was merely formal, since the Liberian flag was one of convenience.[76] Indeed, France and the United Kingdom were maybe reluctant to create a precedent likely to discourage the flag of convenience practice, since this would have affected their own interests.[77] Moreover, Liberia could have replied that it had exercised all due diligence.[78] The oil tanker had no technical weaknesses,[79] the number of the crew members was adequate,[80] and the shipping licence had been issued to an expert and qualified person.[81] Following

'Chronique 1967', cit., at 1096; Spinedi, 'Problemi', cit., note 30; Jean-Pierre Quéneudec, 'L'incidence de l'affaire du Torrey Canyon sur le droit de la mer' (1968) 14 *Ann. fr. dr. int.* 701, at 705-707.

[75] See Spinedi, 'Problemi', cit., at 669-670.

[76] In this regard, see Rousseau, 'Chronique 1967', cit., at 1095; Spinedi, 'Problemi', cit., note 24; Du Pontavice, 'La pollution', cit., at 56.

[77] The United Kingdom in particular was seemingly reluctant to establish a precedent that would in all likelihood have discouraged the use of flags of convenience. On 30 March 1967, the Prime Minister of the United Kingdom declared that the Torrey Canyon accident had impacted on future opportunities to economise on oil costs and the related benefits. On the contrary, in the aftermath of the Torrey Canyon accident, France condemned the use of flags of convenience. For further details, see Quéneudec, 'L'incidence', cit., note 6.

[78] See Spinedi, 'Problemi', cit., at 662-665. It is worth noting that she refers to the due diligence requirement with respect to the customary obligation of States to ensure that their own flag vessels do not damage other States, rather than to the alleged customary obligation to prevent transboundary environmental harm: on the difference between the former and the latter, see *infra*, Chapter 2.

[79] That point is especially stressed by Quéneudec, 'L'incidence', cit., at 703. However, see also Spinedi, 'Problemi', cit., at 663-664; Price, 'Interrelationship', cit., at 221; Pfeil, 'The Torrey Canyon', cit., para. 2. According to Rousseau, 'Chronique 1967', cit., at 1095-1096, also the investigation commission set up by Liberia concluded that the Torrey Canyon had not been affected by any technical deficiencies.

[80] See Spinedi, 'Problemi', cit., at 664.

[81] Ibid. On the other hand, in the opinion of Price, 'Interrelationship', cit., at 221, and Pfeil, 'The Torrey Canyon', cit., para. 2, it was the decisions of the Captain that caused the accident. In fact, the investigation commission established by Liberia

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the oil spill, Liberia also set up an investigation commission.[82] As for the responsibility of the United Kingdom, it was not certain that the oil spill had worsened due to the British bombing, and it appeared that the United Kingdom had complied with due diligence requirements before taking that action.[83]

Nevertheless, one still has the feeling that, far from being indicative of the emergence of a customary obligation to prevent environmental harm, the Torrey Canyon incident shows a tendency by States to rely on civil liability solutions. In the event, France and the United Kingdom claimed compensation from the owner of the tanker, the Barracuda Tanker Corporation,[84] before the United States courts.[85] Indeed, it is remarkable that they preferred to do so as several difficulties clearly stood in the way. The legal status of the Torrey Canyon was quite complex, and the Barracuda Tanker Corporation was a limited liability company.[86] Nor was it easy for France and the United Kingdom to gain compensation from it. They

found that the Captain had made a series of mistakes, which eventually caused the accident. For instance, he chose a dangerous route and refrained from changing it. In addition, he did not slow down, disable the automatic pilot and check the correct functioning of the switch from automatic to manual pilot mode. For further details, see Rousseau, 'Chronique 1967', cit., at 1095, as well as Du Pontavice, 'La Pollution', cit., at 34-35, who also illustrated the responses given by the Captain of the Torrey Canyon to the Liberian investigation commission (ibid., at 35-37).

[82] See Spinedi, 'Problemi', cit., at 664-665.

[83] Ibid., at 669-670.

[84] See Pfeil, 'The Torrey Canyon', cit., para. 6.

[85] On the reasons for the choice of the United States as the *forum*, see Rousseau, 'Chronique 1967', cit., 1097-1098, who stresses in particular the limited character of the liability of the owner of the Torrey Canyon as well as the difficulties in enforcing a compensation decision issued abroad.

[86] With respect to the complex legal status of the Torrey Canyon, the words of the French Minister of Domestic Affairs are significant: 'ce pétrolier qui battait pavillon libérien appartenait à la Barracuda tanker corporation, filiale, aux Bermudes, de l'Union oil company of California, dont le siège est à Los Angeles. Cette dernière société l'avait à son tour affrété au voyage à la British petroleum company, contrôlée à 48 p. 100 par l'amirauté britannique. Enfin le capitaine et l'équipage étaient de nationalité italienne. En présence d'une situation aussi complexe, on peut se demander qui est responsable, à qui les dommages peuvent être réclamés, enfin quelle juridiction peut être valablement saisie' (*Journal Officiel de la République Française. Compte rendu intégral de l'11e séance du mardi 25 Avril 1967 de l'Assemblée nationale*, 26 April 1967, at 802). France restated its perplexities in summer 1967, when the Government declared that it was still attempting to identify the most appropriate action in public and private international law (*Journal Officiel de la République Française. Questions remises à la Présidence de l'Assemblée nationale*, 29 July 1967, at 2861). On the impact of the complex legal status of the Torrey Canyon on the issue of

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needed to seize one of its vessels, specifically the Lake-Palourde, in order to secure payment.[87] In the end, the owners and charterers of the Torrey Canyon paid one and a half million pounds each to the United Kingdom and France, who in return waived any further compensation claims.[88]

The classification of the Torrey Canyon incident as an instance of civil liability rather than State responsibility for a breach of the alleged customary obligation to prevent environmental harm is also evident from a broader perspective. States seemingly took the view that there was a lacuna in international law in relation to the issue of transboundary pollution.[89] As a result, the incident led to the adoption of two treaties few months later, on 29 November 1969, in order to fill that gap. Neither of them, however, is based on State responsibility, as one concerns the operator's liability, viz. the International Convention on Civil Liability for Oil Pollution Damage,[90] whilst the other deals with intervention in the event of oil pollution, viz. the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Causalities.[91]

responsibility, see Quéneudec, 'L'incidence', cit., at 702-703, who tellingly refers to a 'dédale juridique' with regard to the legal situation of the oil tanker.

[87] Seizure by the United Kingdom occurred in Singapore, while the French seizure was enforced in Rotterdam. For further details concerning both seizures, see Rousseau, 'Chronique 1967', cit., at 1098-1099. See also Quéneudec, 'L'incidence', cit., note 9.

[88] See Pfeil, 'The Torrey Canyon', cit., para. 6.

[89] In the telling words of Quéneudec, 'L'incidence', cit., at 703-704, 'l'agitation déclenchée par cette affaire fut en grande partie provoquée par la circonstance que l'on se trouvait en présence d'un vide juridique. Les Etats intéressés étaient totalement désarmés: aucune règle de droit international ne leur permettait d'agir, soit à titre préventif, soit pour obtenir réparation des dommages subis'.

[90] Adopted at Brussels on 29 November 1969 and entered into force on 19 June 1975, 973 *UNTS* 3. As regards the influence of the Torrey Canyon accident on the conclusion of this Convention, see Schinas, 'L'affaire', cit., at 264-265, and Pfeil, 'The Torrey Canyon', cit., para. 7. See also Niels-Jürgen Seeberg-Elverfeldt, 'State Responsibility for Transjurisdictional Oil Pollution Damage Resulting from the Exploration and Exploitation of the Continental Shelf' (1980) 2 *N.Y. L School JICL* 1, at 24. Indeed, in the opinion of Librando, 'Influence', cit., at 317 ff., the Torrey Canyon case provided impetus to the conclusion of all international treaties on civil liability and compensation for marine pollution by oil.

[91] Adopted at Brussels on 29 November 1969 and entered into force on 6 May 1975, 970 *UNTS* 211. As regards the influence of the destruction of the Torrey Canyon on the conclusion of this Convention, see Price, 'Interrelationship', cit., at 227-228; Schinas, 'L'affaire', cit., at 266-268; Librando, 'Influence', cit., at 316; Pfeil, 'The Torrey Canyon', cit., para. 7. See also Seeberg-Elverfeldt, 'State Responsibility', cit., at 24. For further details on the relevant *travaux préparatoires* within the framework of the Inter-govern-

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1.2.4. *…and Other Incidents Involving Oil Tankers*

In the early 1970s, other incidents involving oil pollution occurred which confirmed the tendency of States to rely on civil liability rather than State responsibility based on a breach of the alleged customary rule on prevention of environmental harm.

A case in point was the Arrow incident. On 4 February 1970, the Liberian-registered oil tanker Arrow ran aground near Canada, at the southern end of Cape Breton Island. As a result, the tanker broke up and the ensuing oil spill extended for more than four hundred square kilometres. Various Canadian shores were polluted and numerous bird species were affected. The alleged customary rule on prevention of environmental harm did not come into consideration: Canada claimed compensation from individuals. In particular, the Canadian Transport Minister claimed compensation for the clean-up costs from the owner of the oil tanker, Aristotele Onassis, and from the Canadian charterer, the Imperial Oil Company Limited.[92]

Another example is the Allegro/Pacific Glory incident. On 23 October 1970, the oil tankers Allegro and Pacific Glory collided in the English Channel, six kilometres off the Isle of Wight. Both tankers were registered in Liberia, but were owned by different companies, the Allegro by Petroleum Marine Carriers Corporation and the Pacific Glory by Oceanic Tankers Incorporated. The collision caused an extensive oil spill, eventually causing pollution to the British coast in Sussex. In addition, thirteen people died and several crew members were missing. Again, the alleged customary rule on prevention of transboundary pollution did not come to the fore. On 26 October, the United Kingdom authorised the Allegro to continue its route on condition that it paid a deposit for the expenses incurred due to marine pollution. In the same vein, on 28 October, the United Kingdom brought two compensation claims against the Pacific Glory for clean-up costs and the recovery of the tanker.[93]

In the Cherry Point case on the other hand, the customary obligation to prevent transboundary harm was seemingly considered by

mental Maritime Consultative Organisation, today the International Maritime Organisation (IMO), see Quéneudec, 'L'incidence', cit., at 712 ff., especially 716-719.

[92] For further details, see Charles Rousseau, 'Chroniques des faits internationaux. Pollution accidentelle des côtes canadiennes par le pétrolier libérien *Arrow* (4-11 février 1970)' (1971) 75 *Rev. gén. dr. int. pub.* 167, at 167-168.

[93] See Id., 'Chroniques des faits internationaux. Collision entre les deux pétroliers libériens *Pacific Glory* et *Allegro* au large de l'île de Wight (23 octobre 1970)' (1971) 75 *Rev. gén. dr. int. pub.* 1159, at 1159-1161.

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the affected State, which in the end however relied on civil liability. Specifically, on 4 June 1972, a Liberian-registered oil tanker, the World Bond, was involved in an accident during uploading operations at the Cherry Point refinery, in the United States. The incident caused the leakage of 21 million gallons of crude oil, which spread into the surrounding waters and reached the shores of Canada.

Initially, as the State in whose jurisdiction the activity causing harm was carried out, the issue of the United States responsibility was seemingly at the forefront. Canada invoked the alleged customary obligation to prevent transboundary pollution, and hence some authors have found confirmation of its existence in the initial Canadian response.[94] In fact, the Canadian Secretary of State for External Affairs affirmed 'that one country may not permit the use of its territory in such a manner as to cause injury to the territory of another and shall be responsible to pay compensation for any injury so suffered'.[95] Canada recalled the establishment of that rule in the 1941 *Trail Smelter* arbitration, where the parties had also been the United States and Canada.[96]

In the end, however, the rule was not applied, as Canada limited itself to accepting compensation from the owner of the refinery, a private individual.[97] Although nothing is known about the United States' position in relation to the Cherry Point incident, or about its reaction to the assertions made by Canada,[98] it refrained from paying any compensation. Indeed, although the reference to the *Trail*

[94] See Horbach, *Liability versus Responsibility*, cit., at 276-277; Xue, *Transboundary Damage*, cit., at 79; Barboza, *The Environment*, cit., at 54, all emphasising the invocation of the alleged prevention obligation in a case involving accidental environmental damage originating from activities carried out by individuals, regardless of any further causal link other than with the territory of the source State. Indeed, the International Law Commission observed with regard to the Cherry Point oil spill that 'States are responsible both for the private activities conducted within their territorial jurisdiction and for the activities they themselves conduct within or beyond the limits of their territorial control': see (1985-II-1) *YILC*, paras. 463 and 480-481.

[95] Secretary of State for External Affairs, Mitchell Sharp, 'Statement on Cherry Point oil spill' (1973) 11 *Canadian YIL* 333, at 334.

[96] Ibid.

[97] In the words of the International Law Commission, '[t]he final resolution of the dispute did not involve the application of the principle invoked by Canada': see (1985-II-1) *YILC*, para. 481. See also Xue, *Tranboundary Damage*, cit., at 79, in whose words 'the principle laid down in the *Trail Smelter* case was not tested'.

[98] The uncertainties surrounding the United States' position are confirmed by the International Law Commission, (1985-II-1) *YILC*, para. 481, as well as Horbach, *Liability versus Responsibility*, cit., at 277; and Barboza, *The Environment*, cit., at 54.

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Smelter arbitration in some sense hinted at the United States responsibility, Canada did not explicitly invoke it. Contrariwise, in its official statement, Canada referred more generally to 'those legally responsible', and declared its intention to examine 'all the legal options' for the Canadian interests to be protected.[99] It thus expressed its appreciation for the owner of the refinery, who had acknowledged the 'obligation to meet the cost of the clean-up operations'.[100] In sum, it is reasonable to argue that what Canada was seeking from the United States was not compensation for the damage, but rather the adoption of measures to prevent the risk of future oil spills arising in relation to the movement of large quantities of oil into the Cherry Point refineries.[101] Canada considered the incident as a case that substantiated its concerns on this score.[102]

Furthermore, it must be noted that, in the Cherry Point case, the issues of harm to the environment and of the harm to the territory of another State were intertwined; as a result, it is difficult to say whether the Canadian position towards the United States was based on traditional mutual respect for territorial sovereignty or on protection of the environment per se, or alternatively a combination of the two. Indeed, the Cherry Point incident occurred just some days before the beginning of the 1972 Stockholm Conference and, in the statement referred to above, Canada expressed its 'hopes' that the dictum from *Trail Smelter* would be enshrined in the Stockholm Declaration.[103] Yet, as will be seen, it is argued here that, contrary to the common construction, prevention of environmental harm should

[99] See the 'Statement on Cherry Point', cit., at 333-334.

[100] Ibid., at 333.

[101] Ibid., at 334: 'even the best compensation arrangements cannot be a substitute for effective preventive measures'.

[102] Accordingly, the 'Statement on Cherry Point', cit., at 333, states that 'the incident confirmed [Canadian] anxieties over the threat to the ecology and resources of this inland marine area from oil tankers' as well as the restatement of Canadian 'broader concerns about the hazards' arising in relation to the movement of oil tankers into the refineries at Cherry Point. The Cherry Point oil spill took place against the backdrop of long-standing diplomatic relations between Canada and the United States focusing on the need to refer the issue to the International Joint Commission, as urged by Canada. For further details, see the Canadian House of Common Debates, held on 21 April 1972, concerning the 'West Coast Tanker Route – Proposed Reference to the International Joint Commission' and on 19 June 1972, concerning the 'West Coast Tanker Route – United States Response to Request for Reference to International Joint Commission' (1973) 11 *Canadian YIL* respectively at 331-332 and 332-333.

[103] 'Statement on Cherry Point', cit., at 334.

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be kept distinct from the no-harm rule and, ultimately, mutual respect for territorial sovereignty.[104]

1.2.5. *The Ixtoc I Case*

The Ixtoc I was an oil well located off the coast of Mexico, in the Gulf of Campeche. On 3 June 1979, a blowout occurred and caused a fire: the ensuing oil spill into the sea only stopped in March 1980. It eventually entered the territorial sea of the United States and polluted the shores of the state of Texas. It had adverse effects on endangered wildlife species and the marine environment in general, along with the tourism industry and commercial fishing.[105]

The alleged customary obligation to prevent transboundary environmental harm played no role also in this case, as the United States did not invoke it.[106] And yet the activity that had caused the environmental damage was carried out under the jurisdiction and control of Mexico. In particular, whereas drilling on the Ixtoc I well had been carried out since August 1977 by a privately-owned Mexican firm, Perforaciones Marinas del Golfo (PERMARGO), it was doing so for the Mexican national oil company, Petroleos Mexicanos (PEMEX). So affected individuals such as fisherman and resort owners sued the Government of Mexico and PEMEX directly in the United States courts.[107] By contrast, the United States filed a suit against the private companies involved,

[104] See *infra*, Chapter 2.

[105] For further details of the circumstances of the case, see James E. Fender, 'Trouble over Oiled Waters: Pollution Litigation or Arbitration – The Ixtoc Oil Well Blow-out' (1980) 4 *Suffolk Transn. LJ* 281, at 282-283.

[106] An allusion to the weight of the United States' conduct may also be found in the words of Günter Handl, 'The Case for Mexican Liability for Transnational Pollution Damage Resulting from the Ixtoc I Oil Spill' (1979) 2 *Houston JIL* 229, at 238: 'inaction by the U.S. Government […] must set a precedent which is likely to make the issue of compensation more difficult to resolve in future cases of transnational oil pollution'. Similarly, Barboza, *The Environment*, cit., at 61, observes that the Ixtoc I case 'would have been a good testing ground […] had the United States Government attempted a formal claim against the Mexican Government in international law'. It is true that the tense relationships between Mexico and the United States might have helped to discourage the latter from invoking the former's responsibility for a breach of international law. On these frictions, see Fender, 'Trouble over Oiled Waters', cit., at 281-282 *et passim*. Be that as it may, in point of fact the presumed customary obligation to prevent transboundary environmental harm was not applied in the Ixtoc I case.

[107] As far as the domestic proceedings are concerned, see Jordan J. Paust, 'The Mexican Oil Spill: Jurisdiction, Immunity, and Acts of State' (1979) 2 *Houston JIL* 239; and James M. West, 'The Ixtoc I Oil Spill Litigation: Jurisdictional Disputes at the Threshold of Transnational Pollution Responsibility' (1981) 16 *Texas ILJ* 475.

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namely PERMARGO and SEDCO Inc., i.e., the Texas-based company that owned the semisubmersible drilling rig used by PERMARGO at the time of the accident.

On 1 March 1983, an agreement was eventually reached between the United States and SEDCO Inc., without the United States claiming any compensation from Mexico.[108] Under the terms of the agreement, SEDCO alone undertook to pay two million dollars 'in full and final settlement'.[109] In return, the United States relinquished any further compensation claims, not only against SEDCO,[110] but also against PERMARGO,[111] as well as PEMEX.[112]

It is remarkable that there was no acknowledgement of responsibility or liability, not even in the agreement. On the contrary, it was denied. The parties to the agreement did not admit or concede 'fault, negligence or legal liability for the initial blowout, the subsequent pollution, or any damages actually or allegedly suffered by any party'.[113] The reiteration of this point is indicative of the importance that the parties attached to it.[114]

The Ixtoc I case seems to be inconsistent with the existence of the alleged customary obligation to prevent transboundary environmental harm also from Mexico's perspective. In fact, Mexico denied any responsibility for the oil spill.[115] Moreover, in the aftermath of the incident, the United States sought a contribution from Mexico to the clean-up costs: Mexico refused to pay, asserting that the request had no basis in international law.[116] Even though the United States

As regards liability of PEMEX and the possibility to sue it in the United States, see also Seeberg-Elverfeldt, 'State Responsibility', cit., at 46-47.

[108] Agreement concerning Settlement of Claims Arising from the 1979 Oil Well Blowout and Oil Spill in the Gulf of Mexico (SEDCO, Inc.-United States) (1 March 1983), (1983) 22 *ILM* 580.

[109] Agreement concerning the 1979 Oil Well Blowout, at 584.

[110] Exhibit A to the Agreement concerning the 1979 Oil Well Blowout, at 587.

[111] Exhibit C to the Agreement concerning the 1979 Oil Well Blowout, at 588-589.

[112] Exhibit D to the Agreement concerning the 1979 Oil Well Blowout, at 589-590.

[113] Agreement concerning the 1979 Oil Well Blowout, at 583.

[114] Agreement concerning the 1979 Oil Well Blowout, at 586.

[115] This is emphasised by William J. Macdonald, 'Ixtoc I: International and Domestic Remedies for Transboundary Pollution Injury' (1980) 49 *Fordham LR* 404, at 419.

[116] Fender, 'Trouble over Oiled Waters', cit., at 283-284. It is stated in 'Mexico Says It Won't Pay for Damage to Texas Coast' (3 October 1979) *www.nytimes.com*, that Mexico refused to pay compensation to the United States in view of the latter's failure 'to pay Mexico for damages resulting from the salting of the Mexicali Valley'. However, Macdonald, 'Ixtoc I', cit., note 52, quotes the following declaration from Mexico: 'A la luz del Derecho Internacional Publico, en su etapa actual en el

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had not invoked the responsibility of Mexico, the latter's position implies that it did not feel any obligation to provide reparation or compensation.

1.2.6. *The Chernobyl Case*

The Chernobyl disaster occurred on 26 April 1986 in the former Soviet Union. The explosion of one of the nuclear plant's reactors caused the spread of radioactive particles beyond the national borders to Europe, Asia and North America.[117] Considering the seriously adverse effects of the incident, there can be little doubt that it was a case involving significant transboundary pollution. And yet the alleged customary obligation to prevent transboundary environmental harm was once again not applied.[118] The case therefore does not seem to support the existence of such an obligation.[119]

On the one hand, the States affected by nuclear radiation did not invoke the Soviet Union's international responsibility for a wrongful act,[120] including a breach of prevention of transboundary pollution as an obligation established by a customary rule. Nevertheless, the Soviet Union's responsibility would have been consequential. Suffice it to say that, as a result of the transboundary impact of the incident,

caso [de Ixtoc I], no existe responsabilidad del Estado mexicano para indeminzar los posibles danos sufridos por gobiernos extranjeros, o por entidades publicas or privadas de otro Estado'.

[117] For further details concerning the facts of the incident, see the reports by the United Nations Scientific Committee on the Effects of Atomic Radiation, available online at *www.unscear.org*.

[118] On the possibility of applying that obligation, see Tullio Scovazzi, 'La responsabilità internazionale in caso di inquinamento transfrontaliero' (1986) 1 *Riv. giur. amb.* 272, at 274-277.

[119] According to Sands et al., *Principles*, cit., at 754, it is 'difficult to discern firm principles arising from the Chernobyl experience'.

[120] See Alexandre Kiss, 'L'accident de Tchernobyl et ses conséquences au point de vue du droit international' (1986) 32 *Ann. fr. dr. int.* 139, at 144; Günter Handl, 'Paying the Piper for Transboundary Nuclear Damage: State Liability in a System of Transnational Compensation', in Daniel Barstow Magraw (ed.), *International Law and Pollution* (Philadelphia: University of Pennsylvania Press 1991), 150, at 152; Mauro Politi, 'The Impact of the Chernobyl Accident on the States' Perception of International Responsibility for Nuclear Damage', in Francesco Francioni and Tullio Scovazzi (eds.), *International Responsibility for Environmental Harm* (London/Dordrecht/Boston: Graham & Trotman 1991), 473; Lynham, 'The *Sic Utere* Principle', cit., at 187-188; Okowa, *State Responsibility*, cit., at 124; Patricia Birnie, Alan Boyle, Catherine Redgwell, *International Law and the Environment* (3rd ed., Oxford: Oxford University Press 2009), at 212 and 518; Sands et al., *Principles*, cit., at 752-754.

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some of the contaminated States, specifically the Federal Republic of Germany, Sweden and the United Kingdom, were required to pay compensation to their own citizens and persons under their jurisdiction.[121]

It is noteworthy that the reluctance of certain States to invoke the responsibility of the Soviet Union appears to have been due in particular to their perplexities over the existence of a customary obligation to prevent environmental harm.[122] It seems that the United Kingdom considered only liability treaties on the peaceful use of nuclear energy with a view to claiming compensation: having observed that the Soviet Union was not a party to any of them, it did not take customary international law into consideration, as if no customary rules could have been relevant.[123] Switzerland excluded outright the possibility that a rule existed that was capable of providing the legal basis for a compensation claim.[124] The Federal Republic of Germany initially reserved its right to claim damages, and to this effect exchanged notes and communications with the Soviet Union, although it eventually did not make any claim.[125]

Although the circumstances of the case were particularly complex,[126] attempts to apply the alleged customary obligation to prevent transboundary environmental harm could have helped to resolve

[121] See Philippe Sands (ed.), *Chernobyl: Law and Communication* (Cambridge: Grotius Publications 1988), at 26-27, and note 136.

[122] See Birnie, Boyle and Redgwell, *International Law*, cit., at 518-519, who argue that the affected States did not invoke the Soviet responsibility as they were reluctant to set a precedent that might possibly have unwelcome effects for all States operating nuclear energy plants. In any case, this explanation seems to imply that the affected States had doubts as to whether a customary obligation to prevent transboundary environmental harm existed. Of course, the reluctance of States to set an undesired precedent is only conceivable with respect to a still-non-existent or still-emerging customary rule.

[123] See Sands (ed.), *Chernobyl*, cit., at 28; Okowa, *State Responsibility*, cit., at 124-125; Birnie, Boyle and Redgwell, *International Law*, cit., at 518; Sands et al., *Principles*, cit., at 753.

[124] See Handl, 'Paying the Piper', cit., note 15.

[125] Sands (ed.), *Chernobyl*, cit., at 27-28.

[126] Among the authors who draw attention to the specific circumstances of the case, see Kiss, 'L'accident', cit., at 144; Linda A. Malone, 'The Chernobyl Accident: A Case Study in International Law Regulating State Responsibility for Transboundary Nuclear Pollution' (1987) 12 *Columbia J Env. L* 203, at 240; Sands (ed.), *Chernobyl*, cit., at 27. According to Malone, 'The Chernobyl Accident', cit., these difficulties include the vagueness of the primary rule breached (ibid., at 210-216 and 236-237), the complexities in identifying the damage to be repaired (ibid., at 217-218), and the weaknesses of judicial enforcement mechanisms (ibid., at 224-226).

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the relevant difficulties,[127] as has already been pointed out in general terms.[128] In this context, it seems that the uncertainties surrounding that rule were themselves at the root of the problem. For instance, having noted that no treaty was applicable to the incident, Sweden did not turn to customary international law, because the underlying issues were 'complex from the legal as well as the technical point of view'.[129]

On the other hand, the former Soviet Union ruled out the relevance of customary international law in relation to the incident, including the presumed obligation to prevent transboundary environmental harm.[130] It denied that it was under any obligation to compensate nuclear damage outside its own territory.[131] Similarly, the Soviet Union stated before the UN General Assembly that it could not be held responsible for the Chernobyl disaster due to the absence of a relevant international treaty.[132] Within the context of the International Atomic Energy Agency, the Soviet Union referred to the as yet unresolved status of the issue of compensation for damage resulting from nuclear incidents, and to the ensuing need for a mul-

[127] According to the similar view of Politi, 'The Impact', cit., at 475, the decision made by the affected States not to claim compensation from the Soviet Union would denote their caution towards 'the pursuit of the aim of elaborating and clarifying [international] norms'. See also Sands (ed.), *Chernobyl*, cit., at 29-30, according to whom the issue of the quantification of damage could have been resolved.

[128] See *supra*, Section 1.2.2.

[129] See Sands et al., *Principles*, cit., at 753. See also Sands (ed.), *Chernobyl*, cit., at 28.

[130] Indeed, it seems that the Soviet Union initially denied outright the existence of any transboundary harm, or in any case the seriousness of such harm, and alleged that disinformation had been spread and unnecessary measures had been adopted by those States that had supposedly been contaminated. In this regard, see Malone, 'The Chernobyl Accident', cit., at 234; Sands, *Chernobyl*, cit., at 2; Birnie, Boyle, Redgwell, *International Law*, cit., at 519; Marco Citelli, 'Questioni di diritto e organizzazione internazionale ai tempi di Fukushima: norme e meccanismi in caso di incidente nucleare' (2013) 68 *Com. Int.* 77, at 95. It is also significant that, within the context of the Programme for Establishing an International Regime for the Safe Development of Nuclear Energy, the Soviet Union referred to the responsibility for damages 'caused by unwarranted action taken under the pretext of protection against the consequences of nuclear accidents (the spreading of untrue information, introduction of unjustified restrictive measures, etc.)': see Sands (ed.), *Chernobyl*, cit., at 227, and 232-233.

[131] According to Walter Pincus, 'Chernobyl Is Focus of IAEA Session' (30 September 1986) *www.washingtonpost.com*, the Soviet Union declared that it had no 'legal responsibility to compensate anyone outside its borders for Chernobyl'. See also Richard E. Levy, 'International Law and the Chernobyl Accident: Reflections on an Important but Imperfect System' (1987) 36 *Kansas LR* 81, at 88.

[132] See Okowa, *State Responsibility*, cit., at 129.

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tilateral treaty.[133] No reference was made to customary international law on transboundary environmental harm.[134]

1.2.7. *The Sandoz Case*

On 1 November 1986, a fire broke out at the Sandoz chemical factory in Basel, Switzerland. The water that put out the fire flowed away into the Rhine, with the result that toxic substances from the factory spread into the river. The pollution caused damage to the fluvial environment in addition to the fishing industry, as well as impairing the extraction of drinking water.[135] Since both Switzerland, as the State of origin of the harm, and the affected States, namely France, the Federal Republic of Germany and the Netherlands, were all members of the International Commission for the Protection of the Rhine,[136] the issues arising in relation to the incident were addressed under its aegis.

Again, the alleged customary obligation to prevent transboundary environmental harm did not come into consideration,[137] and this case

[133] See again Sands (ed.), *Chernobyl*, cit., at 232-233.

[134] See also Okowa, *State Responsibility*, cit., at 128-129.

[135] On the circumstances of the accident, see Hans Ulrich Jesserun d'Oliveira, 'The Sandoz Blaze: The Damage and Public and Private Liabilities', in Francioni and Scovazzi (eds.), *International Responsibility*, cit., 429, at 434; and Sands et al., *Principles*, cit., at 368.

[136] The consideration that it was necessary to establish a specific commission for the protection of the Rhine dated back to April 1946 when the Netherlands raised the issue of Rhine pollution before the Central Commission for Navigation on the Rhine, which in turn referred the problem to the Salmon Commission. On 26 August 1946, the Salmon Commission proposed the establishment of an ad hoc commission dealing with Rhine pollution, as the matter fell outside its own mandate. The International Commission for the Protection of the Rhine first met on 11 July 1950 in Basel and its founding members were France, the Federal Republic of Germany, Luxembourg, the Netherlands, and Switzerland. For the sake of completeness, it is worth clarifying that, in addition to the founding members, today the European Union is also a member of the Commission. Moreover, Austria, Belgium and Liechtenstein participate in the Commission's work as observer countries, along with the allowed international organisations and non-governmental organisations. For further details on the International Commission for the Protection of the Rhine, see its official website: *www.iksr.org*, where all the communications of the Conference of Ministers that will be cited below are available.

[137] See Lynham, 'The Sic Utere Principle', cit., at 188. On the other hand, in the opinion of Barboza, *The Environment*, cit., at 52, France and the Federal Republic of Germany claimed compensation from Switzerland as well as Sandoz, and both paid compensation respectively to the two affected States and individuals. However, this description is inconsistent with how the case is portrayed by most authors, and

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is more indicative of the tendency of States to rely on civil liability, rather than the existence of such a rule.[138] The affected States did not invoke any breach not only of customary law, but also of treaty law, including the Agreement for the Protection of the Rhine against Chemical Pollution, which was particularly relevant.[139]

Therefore, when the Rhine Commission's Member States acknowledged the need for prompt compensation or reparation of the damage caused by the fire,[140] liability was imposed on Sandoz.[141] As regards Switzerland and the States affected, they played but a 'mediatory' role. In particular, France, the Federal Republic of Germany, and the Netherlands were charged with collating all compensation claims brought by individuals and transmitting them to Switzerland,

is not confirmed within the communications of the Ministerial Conference of the Member States of the Commission for the Protection of the Rhine.

[138] In the telling words of Jesserun d'Oliveira, 'The Sandoz Blaze', cit., at 434-435, '[n]o trace of State responsibility can be found': the States involved only referred to 'Sandoz's civil liability' and to the victims' right 'to claim directly from Sandoz', and clarified 'that good office of the respective governments did not imply any recognition of liability, nor engage the liability of the governments'. From this perspective, it seems that 'the governments of the riparian States privatized their own claims by seeking reparation from Sandoz, instead of holding Switzerland responsible and liable under public international law' (ibid., at 440). See also Birnie, Boyle, Redgwell, *International Law*, cit., at 219, in whose opinion the Sandoz case represents an instance of the tendency of States 'to channel claims through national courts, relying on principles of civil liability' in cases involving pollution to international watercourses.

[139] According to Jesserun d'Oliveira, 'The Sandoz Blaze', cit., 430-434, the affected States could have invoked the responsibility of Switzerland for a breach of the Agreement for the Protection of the Rhine against Chemical Pollution, adopted at Bonn on 3 December 1976 and entered into force on 1 February 1979, 1124 *UNTS* 375, specifically Articles 7(1) and 11, which respectively provide for the obligation to take preventive environmental measures and the obligation to report pollution.

[140] *Communiqué de la 7e Conférence des ministres sur la pollution du Rhin*, held in Rotterdam on 19 December 1986, *Déclarations générales*, para. 1.3.

[141] See the *Communiqué de la 7e Conférence*, *Règlements des dommages et responsabilité*, para. 2.1. Significantly, the Commission for the Protection of the Rhine directly or indirectly restated the point. For instance, one year after the accident, the Conference of Ministers expressed the expectation 'qu'une décision soit prochainement prise *par la société Sandoz ou ses assureurs* pour les dommages non encore réglés' (*Communiqué de la 8e Conférence des ministres sur la pollution du Rhin*, held in Strasbourg on 1 October 1987, paras 2.2, emphasis added). Similarly, in 1988, having found that most compensation claims had been satisfied, the Commission for the Protection of the Rhine declared that it was reliant 'sur la firme Sandoz pour régler les cas encore en suspens' (*Communiqué de la 9e Conférence des ministres sur la pollution du Rhin*, held in Bonn on 11 October 1988, at 14).

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which would then pass them on to Sandoz. Ultimately, the examination and satisfaction of the claims was for Sandoz alone.[142]

It is possible that the States affected wanted to avoid setting a precedent that might be invoked against them in future cases involving transboundary pollution. They put pressure on Sandoz with the aim of preventing any lengthy compensation process and thus any risk of responsibility being imposed on Switzerland.[143] Indeed, following the Sandoz incident the Member States of the Rhine Commission expressed their general views on environmental damage caused by hazardous activities, stating that liability should be borne by the operator, according to the polluter-pays principle.[144] In this regard, they stressed the importance of harmonising domestic laws.[145]

1.2.8. *The Deepwater Horizon Case*

The Deepwater Horizon was an offshore drilling rig operating in the Gulf of Mexico, owned by Transocean and hired to BP. On 20 April 2010, it burst into flames around fifty miles off the costs of Louisiana, resulting in the discharge of around five million oil barrels and the death of eleven employees. The spill spread for seventy-five thousand square kilometres, polluting about four hundred kilometres of the United States coast.[146] The harm to the environment was

[142] *Communiqué de la 7e Conférence*, *Règlement des dommages et responsabilité*, cit., paras. 1.1-1.3. It is worth noting the insistence of Switzerland on the merely auxiliary nature of its own role: '[le] ministre compétent de la Suisse promet la *collaboration* de son gouvernement et se déclare disposé à œuvrer *pour que soit mise* au point à court terme une offre acceptable d'indemnisation […] Il déclare en outre que le gouvernement suisse accordera, *si nécessaire*, ses *bons offices* pour le règlement des dommages' (ibid., para. 1.3, emphasis added). One year later, Switzerland restated the point with respect to the compensation claims still to be satisfied, as stated in the *Communiqué de la 8e Conférence*, cit., para. 2.3).

[143] See Jesserun d'Oliveira, 'The Sandoz Blaze', cit., 441.

[144] *Communiqué de la 7e Conférence*, *Règlements des dommages et responsabilité*, cit., para. 2.1. Hence the declaration of 'la grande importance d'une responsabilité indépendante de la faute' (ibid.).

[145] Ibid., para. 2.2.

[146] See Kyriaki Noussia, 'Environmental Pollution Liability and Insurance Law Ramifications in Light of the Deepwater Horizon Oil Spill', in Jürgen Basedow et al. (eds.), *The Hamburg Lectures on Maritime Affairs 2009 & 2010* (Berlin/Heidelberg: Springer 2012), 137, at 141-142; Arthur J. Ewenczyk, 'For a Fistful of Dollars: Quick Compensation and Procedural Rights in the Aftermath of the 2010 Deepwater Horizon Spill' (2013) 44 *J Marit. L & Commerce* 267, at 268; Sergei Vinogradov, 'The Impact of the Deepwater Horizon: The Evolving Legal Regime for Offshore Accidental Pollution Prevention, Preparedness, and Response' (2013)

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certainly significant, including adverse effects on marine biological resources.[147]

The alleged customary obligation to prevent transboundary environmental harm played no role also in this case. The incident was treated as a purely domestic one, as if the United States alone were involved. Therefore, various private companies, particularly BP, were held liable, and only the individuals affected were paid compensation.[148] No international treaties on civil liability were taken into account.[149]

Nevertheless, the Deepwater Horizon incident was in actual fact of 'transboundary' relevance. In this regard, it should be noted as a preliminary matter that there is some difficulty in identifying the State of origin of the environmental harm. This is because, since mobile drilling units are quite a recent phenomenon, there is ongoing uncertainty over whether they should be classified as ves-

44 *Ocean Dev. IL* 335. For a detailed description of the facts of the accident, see the document of the United States Coast Guard 'Report of Investigation into the Circumstances Surrounding the Explosion, Fire, Sinking and Loss of Eleven Crew Members Aboard the Mobile Offshore Drilling Unit Deepwater Horizon in the Gulf of Mexico, April 20-22, 2010' available online at *www.bsee.gov*. See also the Report to the President 'Deep Water. The Gulf Oil Disaster and the Future of Offshore Drilling', submitted by the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling on January 2011 and available online at *www.gpo.gov*.

[147] According to Smith, 'The Deepwater Horizon', cit., at 1477, the incident caused the greatest oil spill ever in the world and was defined by the President of the United States as 'the worst environmental disaster America has ever faced'.

[148] By reason of their purely domestic nature, a survey of the legal proceedings originating from the Deepwater Horizon oil spill falls outside the scope of this study. In that regard, see Noussia, 'Environmental Pollution Liability', cit. For some critical remarks specifically pertaining to the relevant compensation mechanisms, see Nicholas J. Lund, Niki L. Pace, 'Deepwater Horizon Natural Resource Damages Assessment: Where Does the Money Go?' (2011) 16 *Ocean & Coastal LJ* 327; Brendan Selby, 'In Re: Oil Spill by the Oil Rig "Deepwater Horizon" on the Gulf of Mexico, on April 20, 2010, Order, Aug. 26, 2011' (2012) 36 *Harvard Env. LR* 533; Ewenczyk, 'For a Fistful of Dollars', cit., at 268 ff.

[149] In the opinion of Thomas J. Schoenbaum, 'Liability for Damages in Oil Spill Accidents: Evaluating the USA and International Law Regimes in the Light of Deepwater Horizons' (2012) 24 *J Env. L* 395, at 398 *et passim*, the United States' regime was more efficient than civil liability regimes under international law for the purposes of compensation. In general terms, Marissa Smith, 'The Deepwater Horizon Disaster: An Examination of the Spill's Impact on the Gap in International Regulation of Oil Pollution from Fixed Platforms' (2011) 25 *Emory ILR* 1477, at 1481 ff., stresses the gaps in international law with regard to civil liability regimes for oil pollution and cases like the Deepwater Horizon incident.

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sels, offshore platforms, or something in between.[150] Assuming that mobile drilling units should be equated to offshore installations or structures, the drilling activity of the Deepwater Horizon was being conducted under the jurisdiction of the United States.[151]

However, although the oil spill polluted mainly the shores of the United States, it was hardly the only State affected. Leaving aside the risk of pollution for Cuba,[152] all States might be said to have an interest,[153] considering the seriousness of the harm and the collective importance of the protection of marine environment, and in particular of marine biological diversity. The widespread concern for the environmental harm caused by the oil spill is confirmed by the high number of proposals for cooperation, in relation to its management, that the United States received from States around the world, including from Europe and Asia.[154] And yet neither Cuba nor other States invoked the alleged customary obligation to prevent environmental harm. Nor did they rely on that rule in relation to the restorative measures adopted

[150] On this point and for further references, see James E. Hickey, 'Law-Making and the Law of the Sea. The BP Deepwater Horizon Oil Spill in the Gulf of Mexico', in Rain Liivoja and Jarna Petman (eds.), *International Law-Making. Essays in Honour of Jan Klabbers* (London/New York: Routledge 2014), 271, at 275-278.

[151] Although the United States is not a party to the UN Convention on the Law of the Sea (UNCLOS), pursuant to Art. 80, read in light of Art. 60, both of which may be deemed to reflect customary international law, the coastal State have the exclusive right to construct and to authorise and regulate the construction, operation and use of artificial islands in the continental shelf. As will be recalled, according to the codified version in Art. 77 UNCLOS, '[t]he coastal State exercises over the continental shelf sovereign rights for the purposes of exploring it and exploiting its natural resources', and Art. 81 clarifies that '[t]he coastal State shall have the exclusive right to authorize and regulate drilling on the continental shelf for all purposes'.

[152] This risk is reported by both T. Clark, 'Florida Keys and Cuba Wildlife under Threat as Currents Widen Impact of BP Oil Slick' (20 May 2010) *www.dailymail.co.uk*, and Rory Carroll, 'Cuba Braces to Contend with BP Oil Spill' (16 June 2010) *www.theguardian.com*. Indeed, it seems that Cuban State organs took the threat into consideration, such as General Ramon Espinosa, Vice-Minister of the Armed Forces, and Ramon Pardo, Head of Civil Defence.

[153] The possibility for third States to invoke the responsibility of the United States rests on the collective or *erga omnes* nature of the alleged customary obligation to prevent transboundary environmental harm. For some remarks in this respect, see *infra*, Section 2.3.2.

[154] States proposing assistance to the United States included Canada, Croatia, France, Germany, Ireland, Mexico, Netherlands, Norway, Romania, South Korea, Spain, Sweden and the United Kingdom, as reported by Josh Rogin, 'U.S. Not Accepting Foreign Help on Oil Spill' (6 May 2010) *www.foreignpolicy.com*. See also 'Here's the Real Reason America Refused International Help on the Oil Spill' (9 June 2010) *www.businessinsider.com*.

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by the United States. It seems, in actual fact, that United States' clean-up operation caused further environmental damage.[155]

1.2.9. *The Fukushima Daiichi Case*

When the Fukushima Daiichi nuclear plant in Japan was hit by a series of tsunamis on 11 March 2011 caused by an earthquake of magnitude 9, several explosions led to nuclear pollution, with the release of radiation into the atmosphere and the sea.[156] It spread out over one thousand eight hundred square kilometres, and all the inhabitants living in the vicinity of the plant were evacuated.

On this occasion too, no State invoked a breach of the alleged customary obligation to prevent transboundary environmental harm, even though the rule could perhaps have been relevant.[157] As regards

[155] As regards the adverse environmental impact of Corexit, the oil dispersant used by the United States, see Grant Wilson, 'Deepwater Horizon and the Law of the Sea: Was the Cure Worse than the Disease?' (2014) 41 *Boston College Env. Affairs LR* 63. With general reference to the United States' management of emergencies resulting from oil and gas exploitation in the outer continental shelf, see Andrew Hartsig, 'Shortcomings and Solutions: Reforming the Outer Continental Shelf Oil and Gas Framework in the Wake of the *Deepwater Horizon* Disaster' (2011) 16 *Ocean & Coastal LJ* 269; and Vinogradov, 'The Impact', cit., at 336 ff.

[156] In particular, the earthquake caused the automatic shutdown of the nuclear reactors. Nonetheless, they retained their heat: they could not be cooled because of a lack of energy due to the earthquake and the flooding of the emergency power generators due to the tsunami. The resulting exposure of the nuclear rods led to an accelerating raise in their temperature until the fusion point was reached. As a result, various chemical reactions including the release of hydrogen – highly inflammable – triggered a chain of explosions and thus a leak of radiation. With specific respect to the marine pollution, according to Darian Ghorbi, 'There's Something in the Water: The Inadequacy of International Anti-Dumping Laws as Applied to the Fukushima Daiichi Radioactive Water Discharge' (2012) 27 *Am. Univ. ILR* 473, at 478, the emergency operators themselves contributed to the marine contamination, dumping tons of radioactive water into the ocean from storage facilities in order to fill these facilities with the more radioactive water that had been used to cool the reactors. On the circumstances of the accident in general, see Kanami Ishibashi, 'The Fukushima Daiichi Nuclear Power Plant Accident: A Provisional Analysis and Survey of the Government's International and Domestic Response' (2011) 17 *Asian YBIL* 149, 149-152; James Gardner Long, 'Independent Unaccountability: The IAEA's "Step Backward" in Regulating International Reactor Safety in the Wake of the Fukushima Daiichi Disaster' (2013) 36 *Suffolk Transn. LR* 155, at 156-160. For further details, see also IAEA 'The Fukushima Daiichi Accident. Report by the Director General' (2015) GC(59)/14, at 23 ff.

[157] It is thus difficult to agree with Yasunobu Sato, 'Nuclear Power and Human Security. Lessons from the Fukushima Daiichi Nuclear Power Plant Accident', in

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Japan's conduct, it is doubtful that the construction itself of the plant in a coastal area would satisfy the due diligence requirement that is usually deemed to result from that rule. As regards the damage, although some doubts have been expressed concerning the seriousness of the transboundary effects of the incident,[158] it has also been estimated that the radioactivity released was greater than that resulting from the Chernobyl disaster.[159] As a matter of fact, increases in radioactivity levels were recorded in neighbouring States, including China, Russia and South Korea, as well as in the United States and Europe.[160] Indeed, Japan admitted the transboundary impact of the disaster and apologised to neighbouring States for the airborne and marine nuclear pollution.[161] Moreover, the adverse effects of radioactive pollution at sea were hardly contained,[162] and the collective nature of the interest in the protection of the marine environment must be borne in mind.

Again, the legal consequences of the Fukushima Daiichi incident

Patrick Keyzer, Vesselin Popovski and Charles Sampford (eds.), *Access to International Justice* (London/New York: Routledge 2015), 241, at 248, that '[t]here is no international law to govern the contamination caused by the Fukushima accident even if other countries suffer from this contamination', unless the existence of the purported obligation to prevent transboundary environmental harm under customary international law is questioned. On the abstract possibility of applying this rule in the Fukushima case, see Giuseppe Cataldi, 'L'accident de la centrale nucléaire de Fukushima au Japon et la question du déchargement du matériel radioactif en mer', in Gemma Andreone, Andrea Caligiuri and Giuseppe Cataldi (eds.), *Law of Sea and Environmental Emergencies* (Napoli: Editoriale Scientifica 2012), 259, at 264-265, who however stresses the weakness of the obligation.

[158] In the report 'The Fukushima Daiichi', cit., at 108, the IAEA observed that '[h]ighly sensitive radiation monitoring networks detected extremely low levels of radioactivity attributable to the accident as far away as Europe and North America' and that 'the effects of these releases on the level of global environmental background radioactivity were negligible'. See also Citelli, 'Questioni', cit., especially at 77, 91 and 106.

[159] See Ishibashi, 'The Fukushima Daiichi', cit., at 150-152, in whose view the radioactivity that spread as a result of the Fukushima Daiichi accident was six times higher than that propagated from Chernobyl.

[160] See Yeo Hoon Park, 'International Legal Implications of the Fukushima Daiichi Nuclear Power Plant Incident' (2011) 1 *Asian LJ* 1, at 4-5; and Long, 'Independent Unaccountability', cit., at 163.

[161] See 'Japan apologizes to S. Korea for radioactive contamination' (16 May 2011) *www.english.yonhapnews.co.kr*; and Park, 'International Legal Implications', cit., at 5, especially note 36 for further references.

[162] See Park, 'International Legal Implications', cit., at 4-5; and Sato, 'Nuclear Power', cit., at 248. The IAEA, 'The Fukushima Daiichi', cit., at 108-109, reported the breadth of the marine nuclear pollution due to the accident, but also its progressive dilution and low level.

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involved only inter-individual proceedings, before domestic courts and tribunals. Hence, individuals who suffered from nuclear pollution claimed compensation in Japan, and liability was imposed on the private operator of the Fukushima Daiichi plant, the Tokyo Electric Power Company.[163] Moreover, since the assets of the Company were insufficient to compensate the damage, the Nuclear Damage Liability Facilitation Fund was set up, with shares distributed equally between the Japanese Government and all twelve nuclear power operators in the country.[164]

1.3. *Doubts concerning the Customary Nature of Prevention of Transboundary Environmental Harm*

1.3.1. *The Weight of State Practice in the Arguments against the Existence of a Customary Rule on Prevention*

The inconsistencies within State practice illustrated above have not passed unnoticed in legal writings. Hence, placing emphasis on the centrality of State practice in determining customary international law, a few authoritative scholars have denied the existence of a customary obligation to prevent environmental harm.[165]

Those authors have highlighted that 'transboundary pollution seems much more the rule than the exception in interstate relations',[166] and that 'States generally do not "ensure that the activities within their jurisdiction do not cause damage" to the environments of others'.[167] They have also stressed States' reluctance to

[163] As regards domestic compensation proceedings, see Park, 'International Legal Implications', cit., at 11-12; Joel Rheuben, 'Government Liability for Regulatory Failure in the Fukushima Disaster: A Common Law Comparison' (2014) 23 *Pacific Rim LPJ* 113, at 118-125; Sato, 'Nuclear Power', cit., at 245.

[164] For further information on the functioning of the Fund, see Rheuben, 'Government Liability', cit., at 124-125.

[165] As noted by Duvic-Paoli, *The Prevention Principle*, cit., at 93: 'Although the large majority of the scholarship considers that the customary character of prevention makes little doubt, attention nevertheless should be given to authors who disagree'.

[166] See Bodansky, 'Customary (and Not So Customary)', cit., at 110-111, who answers in the negative the question as to whether putative customary international rules on the protection of the environment, including the prohibition of transboundary harm, 'represent regularities in State behavior' (ibid., at 110).

[167] See Oscar Schachter, *International Law in Theory and Practice* (Dordrecht/Boston/London: Martinus Nijhoff Publishers 1991), at 364; and Id., 'The Emergence of International Environmental Law' (1991) 44 *JI Affairs* 457, at 462, who also asserted that '[t]o say that a State has no right to injure the environment of

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acknowledge the responsibility for transboundary environmental harm, and found a manifest instance of this in the conduct of the former Soviet Union in the aftermath of the 1986 Chernobyl incident.[168] In their view, therefore, no customary rule requires States to ensure that activities under their jurisdiction or control do not cause harm to the environment of other States or of areas beyond the limits of national jurisdiction.[169] In other words,

another seems quixotic in the face of the great variety of transborder environmental harms that occur every day' (ibid., respectively at 365 and 463). Similarly, see John H. Knox, 'The Myth and Reality of Transboundary Environmental Impact Assessment' (2002) 96 *AJIL* 291, at 292-295, especially at 293 ('[that] each state must ensure that such activities do not harm the environment outside its territory […] has the problem – an uncomfortable one, for a would-be principle of customary international law – that it does not seem to enjoy the necessary support in state practice'); Benedetto Conforti, Massimo Iovane, *Diritto internazionale* (12th ed., Napoli: Editoriale Scientifica 2021), at 245-247, especially at 247 ('ciò che ci sembra si possa dire è che esista una spinta della giurisprudenza internazionale verso la formazione di una norma consuetudinaria, oppure, se si vuole, che si sia di fronte ad un "principio emergente", ma che tale norma o principio richieda di essere sostenuto dalla *prassi degli Stati* per consolidarsi' – emphasis in original). Indeed, Conforti had constantly maintained this position: see, for example, Benedetto Conforti, *Diritto internazionale* (7th ed., Napoli: Editoriale Scientifica 2006), at 200-201.

[168] See again Conforti, Iovane, *Diritto internazionale*, cit., at 246, stressing also that, in those cases where States had granted indemnification for transboundary harm, they were keen to make it clear that it was *ex gratia*. Although he does not expressly deny the existence of a customary obligation to prevent environmental harm, Simon Tay, 'Transboundary Pollution in a Global Economy: General Principles and Problems in Practice', in S. Jayakumar et al. (eds.), *Transboundary Pollution*, cit., 36, at 38-42, who observes that 'practice by States has not consistently upheld and applied State responsibility to incidents of transboundary pollution' (ibid., at 40), and hence concludes that 'while Principle 21 and other neighbourly responsibilities for transboundary pollution are honoured on paper, they are largely neglected in practice' (ibid., at 42).

[169] In addition to the references provided above, see in general Franco Florio, *Spazi marini e principi di diritto internazionale* (Milano: Giuffré 1977), at 134-139, who argued that principles such as abuse of rights, *sic utĕre tuo ut alienum non laedas* and *neminem laedere* do not give rise to international rights and obligations but allow for the application of equity; Karl Zemanek, 'Causes and Forms of International Liability', in Bin Cheng and Edward D. Brown (eds.), *Contemporary Problems of International Law. Essays in Honour of Georg Schwarzenberger on His Eightieth Birthday* (London: Stevens and Sons 1988), 319, at 326, who, in arguing that 'there exists, at present, no generally recognised norm of customary law concerning liability for acts not prohibited by international law', includes a general duty of prevention considering the need that 'specific duties to prevent specific emissions are proven', as well as the 'unrealistic expectation' that the breach of that duty might immediately cease as a result of State responsibility, which is unrealistic because 'structural

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'Principle 21 of the Stockholm Declaration […] has not become State practice'.[170]

Perhaps due to its limited acceptance in legal scholarship, the view that there is no customary obligation for States to prevent transboundary environmental harm has barely been taken into account for the purpose of refuting it, aside from occasional incidental remarks.[171] Some writings even suggest that the customary status of the alleged obligation of prevention has been unanimously endorsed, as if nobody disagreed.

It must be admitted that most arguments rejecting the existence of a customary obligation to prevent environmental harm were formulated some time ago; however, this does not mean that the problem of the inconsistencies within State practice has been overcome in the meantime. Specifically, denial of the customary nature of the purported obligation of prevention has become rarer in the wake of the case law of the International Court of Justice mentioned above, including in particular the *Pulp Mills* judgment.[172] Nonetheless, as will be seen, that case law is far from conclusive as regards the classification of prevention of environmental harm as an obligation established by a customary rule. In any case, it is doubtful whether international case law could make up for the paucity of State practice in establishing customary international law, even if it is the case law of the International Court of Justice. That is especially the case as the Court has never examined the relevant State practice and *opinio*

industrial emissions are concerned'; Greg Lynham, 'The *Sic Utere* Principle', cit., at 189, who concludes that 'there is no customary legal obligation by which a State can be held responsible for using its territory in a manner which causes harm to other States'.

[170] See again Schachter, *International Law*, cit., at 364; and Id., 'The Emergence', cit., at 462.

[171] See for instance Günther Handl, 'Transboundary Impacts', in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds.), *The Oxford Handbook of International Environmental Law* (Oxford: Oxford University Press 2007), 531, at 534, who simply notes that '[t]hose who deny the rule's customary legal status do not base their own assertions on broad empirical evidence, but rather make bald assumptions about State practice'. He goes on to deny the very relevance of the objection to the customary status of the alleged obligation of prevention of transboundary environmental harm, considering its close connection with State sovereignty: see *infra*, Section 2.1, note 1. As will be seen, though, such a link may itself be questioned (*infra*, Section 2.3).

[172] Many authors have viewed the case law of the International Court of Justice as providing conclusive evidence of the customary status of prevention: see *supra*, Section 1.1.1.

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juris when referring to prevention of environmental harm as a customary rule.[173]

The current relevance of the problem of the lack of State practice is confirmed by the fact that it has finally been addressed in a recent monograph, and it is no coincidence that it is a monograph that seeks to fill the gap in legal scholarship on prevention of environmental harm.[174] Remarkably, the author of that book concedes that 'the level of inconsistencies [in State practice] is so high that it could cast doubts on the customary character of prevention'.[175] She thus proposed three arguments in order to address the problem. First, the paucity of State practice is said to 'highlight[…] the existence of implementation challenges [and] the relative vagueness of prevention', rather than 'necessarily question the customary status of prevention'.[176] Secondly, she states that 'custom has never been defined, and identified, by how the international legal system responds to its violation', which should hold especially true of prevention, as it 'has emerged as an alternative to the ill-adapted curative approach'.[177] Thirdly, and more importantly, she argues that the discrepancy between the widespread view that prevention of transboundary environmental harm is a customary obligation and the lack of State practice 'puts into light the inadequacy of traditional theories on custom', with the result that '[i]f one accepts […] an understanding of custom that makes way of actual practice, then it explains why prevention has been recognized as a customary norm despite discrepancies in State practice'.[178]

However, none of these arguments appears to be persuasive. As far as the first argument is concerned, difficulties in implementation and the vagueness of prevention may certainly be deemed to be among the reasons for the paucity of relevant State practice. That said, the fact remains that, under the two-element approach, practice is necessary in order to establish a customary rule. Moreover, as already pointed out, had there been consistent State practice the content of prevention of environmental harm would have been progressively clarified, and this means that implementation difficulties and vagueness are not only *causes* but also *consequences* of the lack of State practice, and end up confirming rather than justifying its

[173] See *infra*, Section 5.2.
[174] See Duvic-Paoli, *The Prevention Principle*, at 2. See also *supra* Section 1.1.2.
[175] See Duvic-Paoli, *The Prevention Principle*, at 93-94.
[176] Ibid., at 94.
[177] Ibid., at 94-95.
[178] Ibid., at 95.

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insufficiency.[179] As regards the second argument, the key issue is not the 'enforcement' of the alleged rule on prevention of environmental harm, including reactions to its breach, but rather its application in specific cases, which might even involve only an invocation of the rule. Similarly, a focus on prevention rather than reparation does not imply that breaches of the alleged customary obligation of prevention should be overlooked. And aside from this consideration, it must be remembered that specific instances of transboundary environmental harm have occurred against the backdrop of the continuing degradation of the environment,[180] which suggests that these are not isolated cases. Turning now to the third argument, it appears to be circular in deriving the inadequacy of the traditional approach to custom based on practice from the general acceptance, in legal scholarship, of the customary character of prevention. In other words, the validity of the customary status of the alleged rule on prevention has been assumed as the basic premise, whereas the problem was precisely to verify whether it could withstand the inconsistencies in State practice.

This third argument does however appear to have merit in having appreciated that the issue of the relevance of the discrepancies in State practice for the status of prevention can be traced back to the methodological problem of how to identify customary international law. It is thus necessary to address this issue, insofar as is possible within the scope of this study.

1.3.2. *The Issue of Inconsistencies in State Practice in the Light of the Methodological Problem of How to Determine Customary International Law…*

The significance of inconsistencies in State practice for the construction of prevention of environmental harm as an obligation established by a customary rule rests on the specific approach adopted to identifying customary international law. An analysis of legal writings reveals that the common argument in favour of the customary status of the purported obligation of prevention relies, more or less explicitly, on approaches that de-emphasise the importance of the actual practice of States. By contrast, where the alleged rule's customary status has been denied, discrepancies in the relevant State practice have been stressed.

[179] See *supra*, Section 1.2.2.
[180] See *supra*, Section 1.2.1.

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In essence, the divergence between the two positions concerning the existence of a customary obligation to prevent transboundary environmental harm mirrors the difference between the 'traditional' two-element approach, based on the identification of a consistent general practice (the objective or material element, also known as *diuturnitas*, *usus* or *repetitio facti*) accepted as law (the subjective or psychological element, more frequently called *opinio juris ac necessitatis*), and 'modern' approaches, based on the conclusiveness or quasi-conclusiveness of only one of those elements,[181] usually affording greater weight to *opinio juris*.[182] Despite the difficulties in drawing a sharp distinction between forms of general practice and forms of *opinio juris*,[183] the emphasis on the latter may essentially be understood as referring to the increasing reliance on written instruments, including soft law acts and, in particular, solemn declarations, from which States' views may be inferred. Although they may also be regarded as instances of practice, they clearly differ from the behaviour of States in actual cases.[184] By extension, considered from the

[181] The terminology, albeit widespread, is specifically borrowed from Michael Wood, 'First Report on Formation and Evidence of Customary International Law' (2013), UN Doc. A/CN.4/663, at 45-56, paras. 95-101. See also Anthea Elizabeth Roberts, 'Traditional and Modern Approaches to Customary International Law: A Reconciliation' (2001) 95 *AJIL* 757, especially at 758, who refers to 'traditional custom' (which 'results from general and consistent practice followed by States from a sense of legal obligation') and 'modern custom' (which 'is derived by a *deductive* process that begins with general statements of rules rather than particular instances of practice', emphasis in original). Rather than properly 'modern', however, the 'identity crisis' of customary international law – as based on a general practice and *opinio juris* – has now a history going back in time: it is superfluous to recall the famous works of Bin Cheng, 'United Nations Resolutions on Outer Space: "Instant" International Customary Law?' (1965) 5 *Indian JIL* 23; and René-Jean Dupuy, 'Coutume sage et coutume sauvage', in *Mélanges offerts à Charles Rousseau. La communauté internationale* (Paris: Pedone 1974), 75.

[182] See Wood, 'First Report', cit., at 49-52, para. 98. For example, a definition of customary international law based only on *opinio juris* is proposed by Brian D. Lepard, *Customary International Law. A New Theory with Practical Applications* (Cambridge: Cambridge University Press 2010), especially at 97-111.

[183] Any attempt to draw such a distinction would be meaningless as a result: see Luigi Condorelli, 'Consuetudine internazionale', in *Digesto delle discipline pubblicistiche* vol. III (Torino: UTET 1989), 490, at 495-496, and 497.

[184] See especially Massimo Iovane, 'Some Reflections on Identifying Custom in Contemporary International Law' (2018) 9 *Federalismi* 2, at 5, who refers to 'normative references that are often disconnected from the actual practice of States' and thus 'could be defined as practice of an abstract nature, as they do not correspond to behaviour actually observed by the States in their mutual relations, nor to claims made in relation to specific disputes'. See also Niels

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viewpoint of the emancipation from State practice, the growing confidence also in international case law may be regarded as one of the new attitudes towards the identification of customary international law,[185] although obviously international case law does not represent a form of States' *opinio juris*.

Accordingly, if one accepts the traditional two-element approach to determining customary international law, then the arguments in favour of the existence of a customary obligation to prevent transboundary environmental harm are hardly convincing. Conversely, if one admits the possibility that customary international law can be identified despite the paucity of or even in the absence of any consistent general practice, on the basis of other factors (i.e., written instruments and, specifically, soft law acts), it is difficult to deny that there is an obligation to prevent transboundary environmental harm under customary international law.

The resort to modern approaches to identifying customary international law with respect to prevention of transboundary environmental harm is no coincidence. Such approaches have mostly been applied in those fields where collective interests are at stake,[186]

Petersen, 'Customary Law without Custom? Rules, Principles, and the Role of State Practice in International Norm Creation' (2008) 23 *Am. Univ. ILR* 275, at 278-284; and Luigi Condorelli, 'Customary International Law. The Yesterday, Today, and Tomorrow of General International Law', in Antonio Cassese (ed.), *Realizing Utopia. The Future of International Law* (Oxford: Oxford University Press 2012), 147, at 150, observing the recent trend of international courts and tribunals 'not [to] carefully review the practice of states, understood as the sum of actual conduct of those through which the state acts, but opt instead to highlight factors that at first glance are among the *opiniones juris*', to wit 'positions solemnly taken, widespread recognition consecrated in documents adopted by large majorities, or even unanimously, multilateral agreements with very broad participation, and the like'.

[185] This tendency is consistent with the theory of judicial lawmaking, although does not overlap with it entirely. Whereas the former relies on the evidential value of international case law to assert the existence of a customary rule, the latter suggests that international courts and tribunals exercise public authority in creating and developing actors' normative expectations: for an overview, see Armin von Bogdandy, Ingo Venzke, 'Beyond Dispute: International Judicial Institutions as Lawmakers', in Armin von Bogdandy and Ingo Venzke (eds.), *International Judicial Lawmaking. On Public Authority and Democratic Legitimation in Global Governance* (Berlin/Heidelberg: Springer 2012), 3, at 12-15.

[186] See also Hanna Bourgeois, Jan Wouters, 'Methods of Identification of International Custom: A New Role for *Opinio Juris*?', in Riccardo Pisillo Mazzeschi and Pasquale De Sena (eds.), *Global Justice, Human Rights and the Modernization of International Law* (Cham: Springer 2018), 69, at 70 ('international law has shifted

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viz. international human rights law, international humanitarian law, international criminal law, and international environmental law.[187] Therefore, methods other than the two-element approach have been argued to be specific to those fields, as if there were particular ways of identifying customary law with regard to specific sets of rules or 'self-contained regimes'.[188] The problem concerning the identification of customary international law thus ends up being connected, to some degree, with the phenomenon of the expansion and ensuing 'fragmentation' of international law.[189]

In this context, it should be borne in mind that scholars have stressed from the outset the distinguishing features of international

increasingly towards areas in which human values and moral considerations play a much more significant role […]. This evolution prompted numerous authors to seek an alternative 'modern' method of ascertaining customary international law that also considers 'intra-State' practice or practice by certain non-State actors, emphasises *opinio juris* over practice and verbal practice over physical practice, or even displaces practice altogether by *opinio juris*').

[187] See Wood, 'First Report', cit., at 7-8, para. 19, and at 51-52, para. 98. By way of illustration only, the words of Antonio Cassese, *International Law* (2nd ed., Oxford: Oxford University Press 2005), are worth quoting: although he upheld the two-element approach (ibid., at 157-160), in his opinion '*[u]sus* and *opinio*, as elements of customary law, play a different role in a particular branch of international law, the humanitarian law of armed conflict' (ibid., at 160). In particular, 'the expression of legal views by a number of States and other international subjects about the binding value of a principle or a rule, or the social and moral need for its observance by States, may be held to be conducive to the formation of a principle or customary rule, even when there is no widespread and consistent State practice, or even no practice at all, to back up those legal views' (ibid., at 161). Cassese found the ultimate justification for this conclusion in 'the need – in the area of the law of warfare – for humanitarian demands to keep a balance between military activities and their devastating impact on human beings, even before such humanitarian demands have been translated into practice' (ibid.). See also Robert Kolb, 'Selected Problems in the Theory of Customary International Law' (2003) 50 *NILR* 119, at 120-130: 'the time has come […] to articulate different types (and thus elements) of [custom] in relation to different subject matters and areas' (ibid., at 128).

[188] On the notion of self-contained regime as 'any interrelated cluster (set, regime, subsystem) of rules on a limited problem together with the rules for the creation, interpretation, application, modification, or termination – in a word, administration – of those rules' or as a branch of international law allegedly regulated by its own principles, see the Report of the Study Group of the International Law Commission, finalised by Martti Koskenniemi, on the Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law (2006), UN Doc. A/CN.4/L.682, at 81, para. 152.

[189] According to Iovane, 'Some Reflections', cit., at 4, 'the related proliferation of international courts' has also contributed to 'causing a change in the methods and characteristics of norm creation in international law' and to 'putting the traditional notion of customary international law into crisis'.

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environmental law, especially in respect of its sources. Soft law instruments are said to play a characteristically important role in international environmental law, and in the formation and determination of relevant customary rules as well.[190] A remarkable instance of soft law provisions playing such a role has been found specifically in principle 21 of the Stockholm Declaration: although it is non-binding per se, the provision is claimed to have eventually evolved into a corresponding customary obligation to prevent transboundary environmental harm.[191]

1.3.3. *…and Their Relevance Despite the Ongoing Difficulties in Definitively Solving the Problem*

On account of the inconsistencies within State practice, the solidity of the construction of prevention of transboundary environmental harm as a customary obligation depends on the validity of an approach to customary international law that de-emphasises the importance of State practice, and in particular State behaviour in actual reality and in concrete cases. However, despite the centrality of the problem of how to determine customary international law, it can only be addressed to the extent that it is possible within the confines of this study. Hence, no attempt will be made to reach any conclusion as to whether the marginalisation of State practice within arguments in favour of the customary character of prevention is or is not methodologically sound.

The intent is more modestly to illustrate that, since the two-element approach has not been generally abandoned, and has likewise not been definitively replaced by alternative methods that dispense with State practice, the construction of prevention as an obligation established by a customary rule appears to show some weakness owing to inconsistencies within State practice. As a result, one may at least express doubts regarding it. In other words, despite its widespread acceptance within scholarship, the view that prevention of transboundary environmental harm amounts to a customary obligation is not fully convincing and may reasonably be called into question.

Indeed, the two-element approach continues to be upheld in most international law treatises,[192] and the International Court of Justice

[190] See especially Pierre-Marie Dupuy, 'Soft Law and the International Law of the Environment' (1991) 12 *Michigan JIL* 420.

[191] See Dupuy, Viñuales, *International Environmental Law*, cit., at 40-41.

[192] See Malcolm N. Shaw, *International Law* (8th ed., Cambridge: Cambridge University Press 2017), at 53-66; Dominique Carreau, Fabrizio Marrella, *Droit in-*

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has repeatedly endorsed it.[193] A recent confirmation of that approach may be found in the work of the International Law Commission on the identification of customary law. As is known, the ILC Draft Conclusions on Identification of Customary International Law were adopted in 2018.[194] Their aim is to 'offer practical guidance on how the existence of rules of customary international law, and their content, are to be determined'.[195]

Among the several issues with which the International Law Commission engaged when dealing with that topic, it addressed the question as to 'whether there are different approaches to the forma-

ternational (12th ed., Paris: Pedone 2018), at 313-320; Francesco Salerno, *Diritto internazionale. Principi e norme* (5th ed., Milano: Wolters Kluwer 2019), at 159-164; Conforti, Iovane, *Diritto internazionale*, cit., at 41-44. Indeed, some authors not only uphold the two-element approach, but also expressly criticise modern approaches to customary international law: see Carlo Focarelli, *International Law* (Cheltenham/Northampton: Edward Elgar 2019), at 116-126, who refers to an 'instrumental use' or a 'moralisation" of *opinio juris* (ibid., at 123-126); and Fulvio Maria Palombino, *Introduzione al diritto internazionale* (Bari/Roma: Laterza 2019), at 14-29, who refers to unorthodox conceptions ('concezioni eterodosse', ibid., at 28-29). Some authors admit other methods for identifying customary international law, but do not however reject the two-element approach: according to Enzo Cannizzaro, *Diritto internazionale* (5th ed., Torino: Giappichelli 2020), at 118-127, there are different categories of customary international law and, correspondingly, different processes of formation or methods of identification, including the two-element approach.

[193] ICJ, *North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands)*, judgment of 20 February 1969, *I.C.J. Reports 1969*, 3, at 44, para. 77; *Continental Shelf (Libyan Arab Jarnahiriya/Malta)*, judgment of 3 June 1985, *I.C.J. Reports 1985*, 13, at 29, para. 27; *Military and Paramilitary Activities in and against Nicaragua (Nicaragua* v. *United States)*, judgment of 27 June 1986, *I.C.J. Reports 1986*, 14, at 97, para. 183; *Legality of the Threat or Use of Nuclear Weapons*, advisory opinion of 8 July 1996, *I.C.J. Reports 1996*, 226, at 253, para. 64; *Jurisdictional Immunities of the State (Germany* v. *Italy; Greece intervening)*, judgment of 3 February 2012, *I.C.J. Reports 2012*, 99, at 122, para. 55. In fact, however, the Court has not always investigated the relevant State practice and *opinio juris* when asserting the customary status of any given rule, as will be seen specifically with regard to prevention of environmental harm (*infra*, Section 5.2). In general, see Stefan Talmon, 'Determining Customary International Law: The ICJ's Methodology between Induction, Deduction and Assertion' (2015) 26 *EJIL* 417.

[194] Draft Conclusions on Identification of Customary International Law, with Commentaries, in Report of the International Law Commission on the Work of Its Seventieth Session (2018), UN Doc. A/73/10, 122.

[195] The determination of customary international law was considered to be 'not only of concern to specialists in public international law: others, including those involved with national courts, are increasingly called upon to identify rules of customary international law' (Draft Conclusions on Identification of Customary International Law, cit., at 122, para. 2).

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tion and evidence of customary international law in different fields of international law'.[196] In this respect, considering the connection mentioned above with the phenomenon of fragmentation in international law, the Draft Conclusions on Identification of Customary International Law might be regarded as a continuation of the previous codification work tackling the issue of fragmentation.[197]

The International Law Commission offered a well-defined solution to the problem of how to identify customary international law. In accordance with the Draft Conclusions, the two-element approach remains the dominant method, which applies irrespective of the field of international law to which the purported customary rule belongs: the systematic unity of international law is thereby safeguarded.[198]

[196] See Wood, 'First Report', cit., at 7-8, para. 19 (emphasis added). In the work of the International Law Commission on the identification of customary international law, attempts to substitute the traditional two-element approach with modern approaches seem to be confined to legal writings and hence to be rare in international practice, including international case law. According to the Special Rapporteur Michael Wood, 'Second Report on Identification of Customary International Law' (2014), UN Doc. A/CN.4/672, at 11-12, para. 28, 'there have been suggestions in the literature, *occasionally echoed in practice*, that in such fields as international human rights law, international humanitarian law and international criminal law, among others, one element may suffice in constituting customary international law, namely *opinio juris*' (footnotes omitted; first emphasis added). As will be pointed out, however, the passages in the case law of international courts and tribunals, including the International Court of Justice, that are commonly considered to provide evidence of the existence of a customary obligation of States to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction, are not based on the two-element approach or, at any rate, on any enquiry into general practice and *opinio juris* (see *infra*, Chapter 5).

[197] The problem of the determination of customary international law was not addressed in the aforementioned Report of the Study Group of the International Law Commission on the fragmentation of international law, which focuses on relations between rules against the backdrop of the Vienna Convention on the Law of Treaties.

[198] The International Law Commission observed that the application of the two-element approach 'in all fields of international law […] is consistent with the unity and coherence of international law, which is a single legal system and is not divided into separate breaches with their own approach to sources' (Draft Conclusions on Identification of Customary International Law, cit., at 126, para. 6). In this regard, Lorenzo Gradoni, 'La Commissione del diritto internazionale riflette sulla rilevazione della consuetudine' (2014) 97 *Riv. dir. int.* 667, at 670-677, persuasively argues that the fundamental purpose of the International Law Commission was to re-establish unity within the methodology for identifying customary international law and thus to avert any risk of fragmentation.

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According to draft conclusion 2, '[t]o determine the existence and content of a rule of customary international law, it is necessary to ascertain whether there is a general practice that is accepted as law (*opinio juris*)'. The provision is included in part two of the Draft Conclusions, which tellingly sets out the 'basic approach' to identifying customary international law.[199]

The Draft Conclusions on Identification of Customary International Law leave no doubt regarding the fallacy of 'extreme' modern approaches, including specifically methods that rely exclusively on one element, with the other being disregarded outright. Not only does the two-element approach represent the basic method for identifying customary law, but '[e]ach of the two constituent elements is to be separately ascertained', which 'requires an assessment of evidence for each element'.[200]

Nonetheless, the disagreement between those authors who assert and those who deny the existence of a customary obligation to prevent transboundary environmental harm takes place in a 'grey zone', where neither the objective nor the subjective element has been completely ignored: what lies at the heart of that disagreement is *not whether*, *but how much* certain forms of evidence should count. As noted above, the former commentators have stressed not only soft law instruments and international case law, but also the restatement of principle 21 in numerous treaties, which may be considered as a form of general practice in addition to *opinio juris*.[201] On the other hand, the latter have emphasised the incoherence of State practice, without contesting the – relative – weight of treaties, soft law instruments and international case law. Moreover, as hinted above, the forms of evidence for the objective and subjective elements tend to

[199] Whereas part one of the Draft Conclusions on Identification of Customary International Law provides an introduction, parts three to seven deal respectively with general practice, *opinio juris*, the significance of certain materials for the identification of customary international law, the persistent objector rule and particular customary international law.

[200] Conclusion 3, para. 2, of the Draft Conclusions on Identification of Customary International Law.

[201] Such a restatement cannot in itself be deemed to be indicative of the existence of a corresponding obligation established by a customary rule. As will be illustrated, prevention of environmental harm does not usually constitute an obligation under treaty provisions that reaffirm principle 21: see *infra*, Section 4.2. A different issue is whether the specific environmental obligations laid down in treaties may provide evidence of the existence of a broader customary obligation to prevent transboundary environmental harm, to the extent that the former are consistent with the latter: see *infra*, Section 3.3.3.

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overlap,[202] with the result that, since the value of neither element is expressly rejected, traces of evidence of both elements may be found in both positions concerning the existence of a customary obligation to prevent transboundary environmental harm.

The methodological problem illustrated thus becomes one of the burden of proof, as it is in those legal writings where efforts have been made to reconcile the traditional and modern approaches.[203] It is believed, in those writings, that although a general practice and *opinio juris* are both necessary, their relative evidential value varies depending on the specific circumstances. However, there is a question as to how either should be weighted in order to determine customary international law and, from a broader perspective, how much any material providing evidence for or against the existence of an alleged customary rule should be weighed up. Once again, a decisive answer cannot be found.

In this respect, the Draft Conclusions on Identification of Customary International Law are of no help. The International Law Commission made it clear that 'the draft conclusions do not deal in general terms with the question of a possible burden of proof of customary international law'.[204] This notwithstanding, one may observe that, when this issue is prominent, the Draft Conclusions concede

[202] The International Law Commission observed that '[t]here is some common ground between the forms of evidence of acceptance as law and the forms of State practice' and that 'in part, this reflects the fact that the two elements may at times be found in the same material' (Draft Conclusions on Identification of Customary International Law, cit., at 141, para. 3).

[203] For some of the said reconciliatory solutions, see Frederic L. Kirgis, 'Custom on a Sliding Scale' (1987) 81 *AJIL* 146; Roberts, 'Traditional and Modern Approaches', cit., at 770 ('the advantages and disadvantages of traditional and modern custom are 'dynamic' because criticisms of traditional custom tend to correspond to advantages of modern custom and vice versa […]. This tension leads to the issue of whether the two approaches can be reconciled in a single interpretative theory'), and 774-788; Bourgeois, Wouters, 'Methods of Identification', cit., at 85 ('without replacing the uniform theory of customary international law by sectoral theories of customs in different branches of international law, we take the view that varying weight can be accorded to practice and *opinio juris* in different branches of international law'). On the other hand, according to Eduardo Savarese, *Certezza del diritto e diritto internazionale. Coerenza e identità tra fonti e argomentazione* (Napoli: Edizioni Scientifiche Italiane 2018), at 133-147, especially at 142-147, there are simply different perspectives in relation to the identification of customary international law: in his opinion, rather than a unitary view it is necessary to keep those perspectives distinct and thus find a balance between the 'institutional' viewpoint and the viewpoint of judicial and quasi-judicial organs that ascertain international law.

[204] Draft Conclusions on Identification of Customary International Law, cit., at 124, para. 6.

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adjustments to the two-element approach. The Commission affirmed that 'the type of evidence consulted (and consideration of its availability or otherwise) depends on the circumstances, and certain forms of practice and certain forms of evidence of acceptance as law (*opinio juris*) may be of particular significance, according to the context'.[205]

Therefore, it might consistently be maintained that, in international environmental law, soft law acts and international case law coupled with repetition in numerous treaties are 'of particular significance' in proving the existence of a customary obligation to prevent transboundary environmental harm, despite the paucity of and inconsistencies in State practice. It might equally be maintained, though, that the requirement of general practice cannot be underestimated, even if the protection of the environment is at stake.

In other words, despite the firm reaffirmation of the two-element approach, the Draft Conclusions leave some flexibility in terms of the assessment of the evidence for the two elements, so much so that modern approaches to the identification of customary international law cannot be absolutely distrusted.[206] It is noteworthy that the International Law Commission regarded such flexibility as necessary for 'the two-element approach to be applied […] *in all fields* of international law'.[207] This suggests that the approach is not equally suitable for all areas of international law as, otherwise, no tempering of it would be needed.

Indeed, the degree of adjustment seems to depend not only on 'the nature of the rule and the particular circumstances in which the evidence in question is to be found', but also on a more nuanced parameter: 'the overall context'.[208] Without mentioning such terms as 'regime' or 'branch', the International Law Commission used the concepts of 'matter' and 'subject matter' to explain this criterion: the requirement of the 'overall context reflects the need to apply the two-element approach *while taking into account the subject matter that the alleged rule is said to regulate*. This implies that in each case

[205] Draft Conclusions on Identification of Customary International Law, cit., at 127, para. 3.

[206] See also Bourgeois, Wouters, 'Methods of Identification', cit., at 71 ('the [International Law Commission] has left more room than one may think at first sight for a method which may further humanitarian and ethical interests while simultaneously upholding the unity and coherence of international law').

[207] Draft Conclusions on Identification of Customary International Law, cit., at 127, para. 2 (emphasis added).

[208] Conclusion 3, para. 1, of the Draft Conclusions on Identification of Customary International Law.

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any underlying principles of international law that may be applicable to the matter ought to be taken into account'.[209]

It is plainly apparent that it makes little difference in substance whether one speaks in terms of the 'subject matter' rather than a 'branch' or 'regime' of international law. Despite the reaffirmation of the two-element approach, it is eventually conceded that this approach might be altered depending on the areas of international law with which the alleged customary rule is connected. Hence, variations in the method for identifying customary international law have not been completely excluded: for those authors who propound modern approaches to customary international law, it is possible to assert the special status of the matters relevant to the fields to which such approaches have been argued to apply, including international environmental law. The reference made by the International Law Commission to the consideration of the underlying principles at stake is likewise telling because, as already pointed out, modern approaches to customary international law have often been proposed precisely on the basis of the specificity of the principles or values underpinning certain areas of international law.

This confirms that one could hardly go further than question, on the methodological front, the construction that prevention of transboundary environmental harm amounts to an obligation established by a customary rule. Despite adopting the two-element approach, features of modern approaches may creep into the examination when assessing evidence.

From a broader perspective, the work of the International Law Commission ultimately confirms the difficulty in rooting the two-element approach, or any other method of identifying customary law, in any foundation. The attempt by the International Law Commission to 'determine how to determine' customary international law might in itself raise perplexities. The relevant work has been considered here with a view to showing some of the main issues relating to the methodological problem concerning customary international law. However, one may ask, with reason, whether the Commission should or could have embarked upon such an enterprise. Even assuming the existence of what has been described as a 'framework custom', alleged to govern the identification of customary international law,[210] the quest for such a custom would in turn rest on the

[209] Draft Conclusions on Identification of Customary International Law, cit., at 127, para. 3 (emphasis added).

[210] See John Finnis, *Natural Law and Natural Rights* (2nd ed., Oxford: Oxford University Press 2011), at 244: 'the requirements, preconditions, and forms of custom-formation are themselves determined, in large part, by custom (i.e. by a frame-

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identification of customary international law. This means that determining how to determine customary international law opens up a vicious circle.[211] It is thus plain why the Draft Conclusions on Identification of Customary International Law do not purport to be 'overly prescriptive': the International Law Commission made it clear that they simply 'reflect the approach adopted by States, as well as by international courts and organizations and most authors'.[212]

Against this background, it is remarkable that, some years before the International Law Commission started its work on customary law, another authoritative institution, namely the International Law Association, essentially rejected the two-element approach, without however adhering to a method that emphasised the *opinio juris* element. It codified a definition of customary rule that consisted essentially in the State practice element,[213] with the subjective element being relevant only exceptionally.[214]

work custom whose source is similar in form to the customs for the formation of which it itself provides the framework)'.

[211] See, in greater detail, Gradoni, 'La Commissione del diritto internazionale', cit., at 685-695, who stresses that it is doubtful whether there is any 'framework custom' and argues that, under contemporary international law, the very conditions for its existence are lacking (ibid., at 682-685). On the connection between the absence of special procedures for identifying customary international law, its uncertainty, and its 'identity crisis', see Id., 'Un-procedural Customary Law' (2019) 10 *JI Disp. Settl.* 175, especially at 189-191.

[212] Draft Conclusions on Identification of Customary International Law, cit., at 123, para. 4.

[213] ILA, London Statement of Principles Applicable to the Formation of General Customary International Law and Accompanying Commentary attached to the Final Report of the Committee, as Amended at the London Conference, held on 15-29 July 2000, adopted by Res. 16/2000 and available at *www.ila-hq.org*. One may read in the Statement that 'it is not *usually* necessary to demonstrate the existence of the subjective element before a customary rule can be said to have come into being' (at 9-10, emphasis in original). It is noteworthy that, in contrast to the International Law Commission which focussed on the *identification* of customary international law, the International Law Association dealt with its *formation*. Regardless of whether and to what extent formation and identification differ, the International Law Association admitted that, 'where it can be shown that an *opinio juris* exists about a practice, that will be sufficient' to prove the existence of an established rule of customary international law, but made it clear that 'this tells us nothing about the *necessity* of this subjective state for the *formation* of a *new* rule of customary law; and neither does it follow that, if an established practice exists […] it is also *necessary* to prove the separate existence of an *opinio juris* about that practice' (ibid., Section 16(c), all emphases in original).

[214] Such exceptional circumstances are set forth in Section 17 of the Statement of Principles. In most cases, it is 'a sort of *opinio non juris*' that comes into consid-

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In summary, it appears to be clear that the discrepancies within State practice cast doubt on the construction of prevention of transboundary environmental harm as an obligation established by a customary rule. All things considered, including the marginalisation of State practice under that construction, the general disregard for the status of prevention under general international law, as well as the uncertainties surrounding its content, there already seem to be sufficient grounds to explore whether an alternative classification of prevention may be better suited to reflect the reality. Moreover, as will be seen in the next Chapter, a further weakness may be found in the common view of prevention as an obligation under a rule of customary international law.

eration, as it prevents a certain type of conduct from contributing to the formation of a rule of customary international law, whereas *opinio juris* proper would only be relevant in the event of ambiguous conduct.

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Chapter 2

Connection with Non-Environmental Obligations

Summary: 2.1. The Issue of Non-Environmental Obligations Requiring the Prevention of Transboundary Environmental Harm. – 2.2. Territorial Sovereignty and Prevention of Transboundary Harm to the Environment. - 2.2.1. A Common Misconstruction: The No-Harm Rule as the Origin of Prevention of Transboundary Environmental Harm. - 2.2.1.a. The *Trail Smelter* Case. - 2.2.1.b. The Ensuing Evidential Value of Non-Environmental Practice: *Island of Palmas, Corfu Channel* and *Lac Lanoux*. - 2.2.2. Objective Theory of Sovereignty and Principles of Law: *Sic Utěre Tuo Ut Alienum Non Laedas*, Good Neighbourliness, Abuse of Rights. – 2.3. Protection of the Environment Per Se as a Collective Interest. - 2.3.1. Critique of the Connection between the No-Harm Rule and Prevention of Transboundary Environmental Harm. - 2.3.2. Protection of the Environment Per Se as the Interest Underpinning Prevention of Transboundary Environmental Harm in Principle 21. - 2.3.3. Further Evidence of the Collective Nature of the Interest Underpinning Prevention of Transboundary Environmental Harm in Principle 21. - 2.3.4. Reconceptualising Prevention of Transboundary Environmental Harm. – 2.4. The Interaction between Prevention of Environmental Harm and Non-Environmental Obligations. - 2.4.1. Territorial Sovereignty in Environmental Cases concerning Transboundary Harm: The Need to Keep Protection of the Environment Distinct. - 2.4.1.a. Practice Following the Stockholm Declaration: The *Nuclear Tests* Case and the Cosmos 954 Incident. - 2.4.1.b. Recent Practice: The *Aerial Herbicide Spraying* and *Construction of a Road in Costa Rica* Cases. - 2.4.1.c. Pollution of International Watercourses. - 2.4.2. Pre-existing Non-Environmental Obligations Other than the No-Harm Rule, with Particular Regard to Freedom of the High Seas.

2.1. *The Issue of Non-Environmental Obligations Requiring the Prevention of Transboundary Environmental Harm*

In addition to relying on a method for determining customary international law that de-emphasises the actual practice of States, coupled with discrepancies within State practice itself and the hurdles in the way of any attempt to demonstrate that the two-element approach to customary law has been replaced with a different method, there is another aspect of the common characterisation of prevention of transboundary environmental harm as a customary obligation that, on closer scrutiny, does not appear to be convincing. That is the view that the no-harm rule and ultimately territorial sovereignty lay the foun-

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dations for prevention of environmental harm, with the award in the *Trail Smelter* arbitration being the most prominent evidence of such a development. Indeed, even though it prima facie concerns the origins of prevention, that view has a bearing on the problem of its status too. Authors have found it easy to assert the existence of a customary rule imposing an obligation to prevent transboundary environmental harm, once it has been connected with such an essential feature of the international legal system as territorial sovereignty.[1]

Leaving aside the perplexities raised by the possibility, within the context of the international law sources, of inferring an international obligation by analogy,[2] it is plainly apparent that the grounding in territorial sovereignty ends up corroborating the existence of the alleged obligation of prevention. If nothing else, it implies that practice surrounding the obligation to respect other States' territorial sovereignty, including practice unrelated to protection of the environment, becomes relevant to prevention of transboundary environmental harm as well.

The issue of the connection between prevention and territorial sovereignty leads to the broader question as to whether a *peculiar* interest underpins prevention of environmental harm, as was historically affirmed in the 1972 Stockholm Conference, and therefore distinguishes it from each State's obligation to respect territorial sovereignty of other States. The key issue here is whether increasing consciousness about degradation of the environment during the 1960s and 1970s brought the international community to perceive the harm to the environment *in itself*, as a result of the emergence of a *new* interest. It will be argued below that such a specific interest does indeed exist and lies in protection of the environment per se, which is a collective or community interest.

[1] In the telling words of Günther Handl, 'Transboundary Impacts', in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds.), *The Oxford Handbook of International Environmental Law* (Oxford: Oxford University Press 2007), 531, at 534, 'the denial of the no harm rule's customary status is also irrelevant. The international legal status of the basic rule regarding significant transboundary impact is directly related to the sovereign equality of states as an axiomatic premise of the international legal order […]. Its validity, thus, does not depend on confirmation through the usual inductive process of proving customary international law'.

[2] The analogy is as follows: transboundary harm to the environment must be prevented in the same way as transboundary harm to the territory of other States must. However, analogy in international law is controversial: see Mario Giuliano, 'Il problema dell'analogia nell'ordinamento giuridico internazionale' (1941) 20 *Riv. dir. int.* 69; and more recently Silja Vöneky, 'Analogy in International Law', in *MPEPIL online* (2008). Regardless, the difference in rationale between the no-harm rule and prevention of environmental harm seems to exclude any analogy being drawn between them: see *infra*, Section 2.3, especially 2.3.1.

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Principle 21 of the Stockholm Declaration accordingly shows the *discontinuity* between mutual respect for territorial sovereignty and protection of the environment per se: the latter cannot be reduced to a mere *ratione loci* expansion of the former. Protection of the environment per se manifests a collective interest and is symptomatic of the shift from the international law of coexistence to the international law of cooperation and, eventually, interdependence, in the aftermath of the Second World War. Thus, the position of those authors who assert that such 'rupture' occurred only recently, thanks to the emergence of the 'principle of preventive action' as opposed to 'classic' prevention of transboundary environmental harm under principle 21, will likewise be disputed.

Be that as it may, obligations that seek to safeguard interests different from protection of the environment may, on occasion, demand the prevention of transboundary harm and hence indirectly protect the environment. They relate not only to territorial sovereignty, but also to States' rights in international areas. Therefore, from a broader perspective, it is the relationship of prevention of transboundary environmental harm, as enshrined in principle 21, with pre-existing non-environmental obligations that needs to be explored.

This issue is engaged by the contemporary conception of the environment as 'the totality of the physical conditions in which a human society lives'.[3] As the etymology of the term shows, the environment is that which surrounds *something*, so much so that environmental harm will plausibly result also in damage to that which lies *within* the environment, and depends partially or entirely on those 'physical conditions'. If that something represents an interest protected by a general obligation that in fact entails prevention of harm under the prevailing circumstances, the interaction between that interest and the interest in the protection of the environment per se must be assessed.

2.2. *Territorial Sovereignty and Prevention of Transboundary Harm to the Environment*

2.2.1. *A Common Misconstruction: The No-Harm Rule as the Origin of Prevention of Transboundary Environmental Harm*

Despite the importance that is generally attached to principle 21 of the Stockholm Declaration in the evolution of international protection of the environment, it is a commonly held belief that prevention of transboundary environmental harm, as enshrined therein, is

[3] *Shorter Oxford English Dictionary* vol. 2 (6th ed., Oxford: Oxford University Press 2007), at 845.

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rooted in a pre-existing obligation under international law: the no-harm rule. As will be illustrated below, an authoritative formulation of the no-harm rule has been identified in a passage from the award given by the Arbitral Tribunal in the *Trail Smelter* case in 1941, well before environmental consciousness started to spread between the 1960s and 1970s.[4] The Arbitral Tribunal essentially stated that States are prevented from using or permitting the use of their territory in such a manner as to cause serious injury *in or to the territory* of other States.

Accordingly, the ultimate reason for prevention of transboundary environmental harm apparently lies in territorial sovereignty. By reason of its territorial focus, the no-harm rule is akin to mutual respect for territorial sovereignty, namely to each State's obligation to respect the territorial sovereignty of other States, which appears to form part of the very content of territorial sovereignty.[5] In particular, the sovereign right of States to exploit their natural resources would be impaired, if each State were free to use or allow the use of its territory without concern for any adverse effects for the natural resources of other States.

That position has been frequently endorsed in legal scholarship. Not only has it been adhered to by the authors who deal specifically with prevention of transboundary environmental harm,[6] but it can

[4] See *infra*, Section 2.2.1.a.

[5] Although defining the content of territorial sovereignty has traditionally been a thorny issue, it is generally considered to include the general obligation of States to respect the territorial sovereignty of other States. For example, in the opinion of Eelco Nicolaas van Kleffens, 'Sovereignty in International Law' (1953) 82 *Rec. cours* 5, at 86-87, 'oneness' as a feature of territorial sovereignty implies mutual respect for territorial sovereignty: 'If sovereignty is one and exclusive, it follows that others – states and individuals – must respect it'. Indeed, mutual respect for territorial sovereignty appears to be the formulation in broader and positive terms of the negative obligation complementary to the *ius excludendi alios*: the obligation of States to refrain from penetrating into or acting inside the territory of another State. According to Mario Giuliano, 'Lo Stato, il territorio e la sovranità territoriale' (1954) 6 *Comunicazioni e studi* 19, especially at 48-50, territorial sovereignty consists precisely in the *ius excludendi alios* and the corresponding obligation.

[6] In the telling words of Leslie-Anne Duvic-Paoli, Jorge E. Viñuales, 'Principle 2: Prevention', in Jorge E. Viñuales (ed.), *The Rio Declaration on Environment and Development. A Commentary* (Oxford: Oxford University Press 2015), 107, at 108, 'the prevention principle, as formulated in Principle 21 of the Stockholm Declaration and, later, in Principle 2 of the Rio Declaration, does not stem from a direct concern over the protection of the environment, but rather from a desire to respect the territorial sovereignty of neighbouring States when exploiting natural resources'. See also Pierre-Marie Dupuy, *La responsabilité internationale des États*

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also be found in writings that more generally address international protection of the environment.[7]

It seems that the International Court of Justice too has taken the view that prevention of transboundary environmental harm is derived from non-environmental obligations and, perhaps, from mutual respect for sovereignty. The issue of the 'origins' of prevention of transboundary environmental harm was addressed in the *Pulp Mills* case:[8] in its judgment, the International Court of Justice held that the alleged customary rule on prevention (namely the obligation of every State 'to use all the means at its disposal in order to

pour les dommages d'origine technologique et industrielle (Paris: Pedone 1976), at 34 ('le principe d'utilisation non dommageable du territoire constitue, *à la fois le corollaire et la contrepartie de l'exercice exclusif des compétences territoriales*', emphasis in original); Jan Willisch, *State Responsibility for Technological Damage in International Law* (Berlin: Dunker und Humblot 1987), at 73-74 ('the concept of territorial sovereignty appears to be the principal starting point in determining the unlawfulness of technological activities which detrimentally affect the territory of another State', since, as stated at 46-47, 'some obligations which impose restraints on technological activities […] can be derived from, and have their ultimate rationale in, the concept of territorial integrity'); Phoebe Okowa, *State Responsibility for Transboundary Air Pollution in International Law* (Oxford: Oxford University Press 2000), at 65 ('it is generally accepted that territorial sovereignty confers a licence on a state to exploit and enjoy the resources within its territorial confines. But the freedom is double-edged, in so far as it also requires source states to respect equally the sovereignty of others […]. It follows from this principle that the state is responsible for polluting activities directly operated by it as well as those under private control'); Handl, 'Transboundary Impacts', cit., at 533 ('Rules of international law governing transboundary environmental impacts […] give expression to the fact that territorial sovereign rights in general are correlative and interdependent and consequently subject to reciprocally operating limitations'); and Benoit Mayer, *The International Law on Climate Change* (Cambridge: Cambridge University Press 2018), at 69 ('the no-harm principle derives almost automatically from the principle of sovereign equality').

[7] See Alessandro Fodella, 'I principi generali', in Alessandro Fodella and Laura Pineschi (eds.), *La protezione dell'ambiente nel diritto internazionale* (Torino: Giappichelli 2009), 95, at 97-98; Tim Stephens, *International Courts and Environmental Protection* (Cambridge: Cambridge University Press 2009), at 122 ('The notion that states should not permit the use of their territory to damage the environment of others was a logical extension of the concept of state sovereignty'); Jean-Maurice Arbour, Sophie Lavallée, Hélène Trudeau, *Droit international de l'environnement* (Cowansville: Editions Yvon Blais 2012), at 110 ('L'un des corollaires immédiates du principe de souveraineté sur les ressources naturelles est le principe de prévention qui oblige chaque État à ne pas laisser utiliser son territoire de manière à causer des dommages à l'environnement d'autres États ou dans des espaces internationaux').

[8] ICJ, *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, judgment of 20 April 2010, *I.C.J. Reports 2010*, 14.

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avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State') is derived from 'the due diligence that is required of a State in its territory'.[9] In doing so, it quoted an extract from its previous judgment in the *Corfu Channel* case to explain such a requirement, which ultimately consisted in 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States'.[10] Of course, the 'other State's right' at stake in that precedent was the United Kingdom's right of innocent passage through Albanian waters: as will be pointed out, the case did not concern protection of the environment.[11]

In the case law of the International Court of Justice, a more explicit grounding of prevention of transboundary environmental harm in mutual respect for territorial sovereignty may be observed in some individual opinions. Specifically, in her separate opinion in the judgment on the joined cases *Certain Activities Carried out by Nicaragua in the Border Area* and *Construction of a Road in Costa Rica along the San Juan River*,[12] Judge Donoghue stated that, even though '[a]s a consequence of territorial sovereignty a State of origin [i.e., a State "that itself plans and engages in an activity that could pose a risk of transboundary harm"] has a broad freedom with respect to projects in its own territory',[13] nonetheless '*the equal sovereignty of other States* means that the State of origin is not free to ignore the potential environmental impact of the project on its neighbours'.[14] She referred in particular to '*rights that follow from the equal sovereignty* of a potentially affected State'.[15] By the same token, in relation to prevention of transboundary environmental harm as well as sustainable development, Judge Bhandari affirmed that 'a logical corollary of the foundational principle under international law that each nation is sovereign over its own territory, is that if one nation deleteriously

[9] Ibid., at 55-56, para. 101. For the authoritative French text, see *infra*, note 100 in Section 5.2.2.a., where the passage will be analysed in greater detail.

[10] *Pulp Mills on the River Uruguay*, judgment, cit., at 55-56, para. 101. In the authoritative French text: 'l'obligation, pour tout Etat, de ne pas laisser utiliser son territoire aux fins d'actes contraires aux droits d'autres Etats'.

[11] See *infra*, Section 2.2.1.b.

[12] ICJ, *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua* v. *Costa Rica)*, judgment of 16 December 2015, *I.C.J. Reports 2015*, 665.

[13] Separate Opinion of Judge Donoghue, at 2, para. 6.

[14] Ibid., emphasis added.

[15] Ibid., emphasis added.

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affects the territory of another, certain obligations and/or liabilities might arise'.[16] To be sure, in alleging a violation of its territorial sovereignty along with several environmental rules, Nicaragua itself had seemingly suggested that the purported obligation to prevent transboundary environmental harm was derived from the obligation to respect the territorial sovereignty of other States.[17]

Assuming the connection between mutual respect for territorial sovereignty and prevention of transboundary environmental harm, principle 21 of the Stockholm Declaration then apparently expanded the no-harm rule in a twofold respect,[18] specifically as regards the provenance and location of the harm. As far as the provenance is concerned, whereas the no-harm rule only applies to activities that take place *in the territory of a State*, principle 21 refers more broadly to activities carried out *within the jurisdiction or control of a State*, regardless of whether they are conducted within or outside its territory. That entails, for instance, that also harm caused by a flag vessel of a State when sailing in the territorial sea of another State or on the high seas would fall within the scope of principle 21. As regards the location of the harm, whilst it is the harm *to the territory* of other States exclusively that comes into consideration under the no-harm rule, principle 21 concerns harm to the *environment of areas beyond the borders of national jurisdiction* in addition to harm to the *environment of other States*. Thus, harm to the environment of the high seas, the international seabed, outer space or Antarctica is relevant too.[19]

[16] Separate Opinion of Judge Bhandari, at 4, para. 15.

[17] 'Costa Rica is also violating another essential principle stemming from the very idea of territorial sovereignty, that of the non-harmful use of the State territory […] which has been first expressed in the 1972 Stockholm Declaration' (Memorial of the Republic of Nicaragua, 19 December 2012, at 141-142, paras. 4.33-4.34). In dealing with the alleged breaches of environmental obligations, Nicaragua had also asserted that 'the obligation not to cause transboundary harm […] is traceable to the sovereignty of a state over its territory' (ibid., at 187, para. 5.60). Indeed, Nicaragua had refrained from providing 'authorities supporting' the obligation not to cause transboundary environmental harm: it had asserted that those authorities were the same as those already provided with regard to the 'principle of non-harmful use of the State territory' as a corollary of territorial sovereignty (ibid.).

[18] See David M. Ong, 'International Environmental Law's "Customary" Dilemma: Betwixt General Principles and Treaty Rules' (2006) 1 *Irish YIL* 3, at 13-15; and Pierre-Marie Dupuy, Jorge E. Viñuales, *International Environmental Law* (2nd ed., Cambridge: Cambridge University Press 2018), at 66.

[19] See Fodella, 'I principi generali', cit., at 98-99; Duvic-Paoli, Viñuales, 'Principle 2: Prevention', cit., at 117 ('the obligation not to cause harm to the environment beyond national jurisdiction changes the perspective of the obligation: the State is not only required to prevent transboundary harm in order to respect the sovereignty

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The aspect of the location of harm is of particular significance for deriving prevention of transboundary environmental harm from the no-harm rule. Once couched in the words of principle 21, prevention of transboundary environmental harm is said to have been released from the logic of respect for the territorial sovereignty of other States, which was typical of the no-harm rule. The inclusion within principle 21 of harm to the environment of areas falling beyond the limits of national jurisdiction is asserted to have re-shaped the no-harm rule from an environmental perspective.[20]

Furthermore, according to some authors, prevention of transboundary environmental harm did not stop evolving after the no-harm rule was expanded through principle 21. A new norm is said to have recently come into being: the so called 'preventive principle', or 'principle of preventive action'. It is claimed to differ from principle 21 in respect of its scope, as it covers harm to the environment *in general*, including even the environment *within* the territory of the State of origin of the harm. This is because, so the argument goes, the rationale for the principle of preventive action lies in the minimisation of environmental harm as such.[21]

of other States but is also obliged to protect the environment as such, including those areas such as the global commons which have no connection to State sovereignty').

[20] According to Stephens, *International Courts*, cit., at 151, '[t]he most visible impact of the *Trail Smelter* case upon international law is to be found in principle 21 of the Stockholm Declaration. However, in that principle the duty to prevent damage to other states was given a clearly environmental dimension not evident in the *Trail Smelter* case'.

[21] In the words of Philippe Sands et al., *Principles of International Environmental Law* (4th ed., Cambridge: Cambridge University Press 2018), at 212, 'the prevention obligation is distinguishable from Principle 21/Principle 2 in two ways. First, the latter arise from the application of respect for the principle of sovereignty, whereas the preventive principle seeks to minimise environmental damage as an objective itself. This difference of underlying rationale relates to the second distinction: under the preventive principle, a state may be under an obligation to prevent not only transboundary harm, but also damage to the environment within its own jurisdiction'. See also Fodella, 'I principi generali', cit., at 101-104, and Laura Pineschi, 'I principi del diritto internazionale dell'ambiente: dal divieto di inquinamento transfrontaliero alla tutela dell'ambiente come *common concern*', in Rosario Ferrara and Carlo Emanuele Gallo (eds.), *Trattato di diritto dell'ambiente. Le politiche ambientali, lo sviluppo sostenibile e il danno* (Milano: Giuffré 2014), 93, at 110 and especially 140-147, who draws a distinction between prevention of transboundary environmental harm as enshrined in principle 21 and a principle of prevention in an absolute sense. On the other hand, Saverio Di Benedetto, *Sovranità dello Stato sulle risorse naturali e tutela degli equilibri ecologici nel diritto internazionale generale* (Torino: Giappichelli 2018), at 158-190, has recently argued against the current

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2.2.1.a. *The* Trail Smelter *Case*

Within the legal scholarship, the shift from mutual respect for territorial sovereignty to prevention of transboundary environmental harm usually appears to be a sort of 'natural evolution', whereby 'traditional' respect for territorial sovereignty *simply* adapted to a 'new' need emerging in the 1960s, namely protection of the environment.[22] Authors have not carefully explained how that shift took place.

Nonetheless, the 1941 decision on the *Trail Smelter* case seems to have played a significant role in promoting the belief that prevention of transboundary environmental harm results from mutual respect for territorial sovereignty.[23] This is essentially because the *Trail Smelter* arbitration could be described as an *ante litteram* environmental case: the relevant dispute arose before the rise of the 'environmental question'; today on the other hand, it would probably be regarded as an international environmental law case.

The relevant circumstances are well known: in the late 1920s, the United States complained that fumes discharged by a smelter operating in Canada had been causing damage to its territory.[24] Although

existence of a customary obligation for States to prevent harm to the environment within their own territory, and expressed doubts about the very possibility of such an obligation coming into being in the near future.

[22] See Duvic-Paoli, Viñuales, 'Principle 2: Prevention', cit., at 109 ('as environmental problems with their local, transboundary, and global dimensions became better understood, the transboundary perspective of the no-harm rule appeared insufficient. The 1960s witnessed a fundamental change in human perceptions of life on Earth and the ensuing necessity to protect nature, which, in turn, provided the socio-political foundations for a shift in the legal paradigm'). As will be seen, the 'no-harm rule' is closely linked to mutual respect for territorial sovereignty.

[23] *Trail Smelter Case (United States, Canada)*, awards of 16 April 1938 and 11 March 1941, 3 *RIAA* 1905, respectively 1911 and 1938. The 1941 award did not amount to a review of the 1938 award, although the United States had – unsuccessfully – asked the Arbitral Tribunal to reconsider the decision made in 1938 (ibid., at 1948-1957). The Arbitral Tribunal gave the 1938 award upon expiry of the – already extended – time limit: at that time the Arbitral Tribunal had deemed it possible to rule only on the first of the four questions submitted (ibid., at 1912). It therefore issued a second award concerning the three remaining questions at later stage, in 1941. For an illustration of the case and an overview of some of the issues arising from it see John E. Read, 'The Trail Smelter Dispute' (1963) 1 *Canadian YIL* 213.

[24] For further details on the circumstances of the *Trail Smelter Case* see Kevin J. Madders, 'Trail Smelter Arbitration', in Rudolf Bernhardt (ed.), *Encyclopedia of Public International Law* vol. IV (Amsterdam: North-Holland 2000), 900, at 900-902; Russell A. Miller, 'Trail Smelter Arbitration', in *MPEPIL online* (2007),

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the operation of the smelter in Trail had in fact been affecting the surrounding area for a long time, the situation worsened during the second half of the 1920s owing to the expansion of the smelter. Sulphur dioxide emissions increased and were being directed into the atmosphere.[25] In 1935, in order for the dispute to be eventually settled, Canada and the United States entered into a special agreement establishing an arbitral tribunal.[26]

When addressing this path-breaking precursor environmental dispute and, in particular, the question concerning the future activity

para. 2. For a perspective broader than the legal one, see D.H. Dinwoodie, 'The Politics of International Pollution Control: The Trail Smelter Case' (1972) 27 *IJ* 219. For some critical remarks on the status of the *Trail Smelter* arbitration as a precendent with respect to inter-individual disputes over transboundary environmental harm, see John H. Knox, 'The Flawed *Trail Smelter* Procedure: The Wrong Tribunal, the Wrong Parties, and the Wrong Law', in Rebecca M. Bratspies and Russell A. Miller (eds.), *Transboundary Harm in International Law. Lessons from the Trail Smelter Arbitration* (Cambridge: Cambridge University Press 2006), 66.

[25] Owing to the legal, practical, moral and political obstacles on the bringing of a claim against the smelter before national courts, the United States citizens drew their Government's attention to the matter. Therefore, the United States and Canada started negotiating in 1927 and eventually submitted the issue to the pre-existing International Joint Commission. However, the United States rejected the report issued by the International Joint Commission, because it did not stipulate any ban or limitations on future damage resulting from fumigation from the Trail Smelter (the report is available at *www.ijc.org*). For an overview see *supra*, the references in note 24. As particularly regards hindrances to any inter-individual dispute before the national courts in either the United States or Canada, see also Martijn van der Kerkhof, 'The Trail Smelter Case Re-examined: Examining the Development of National Procedural Mechanisms to Resolve a Trail Smelter Type Dispute' (2011) 27 *Merkourios IE Env. L* 68.

[26] Convention for Settlement of Difficulties Arising from Operation of Smelter at Trail, B.C., signed at Ottawa on 15 April 1935 and entered into force on 3 August 1935, at the exchange of ratifications. The text of the Treaty may be consulted in 3 *RIAA* 1907, at 1907-1910. Pursuant to Art. III of the Special Agreement, four questions were submitted to the Arbitral Tribunal. First, it was required to determine whether damage had occurred in the United States because of the activities of the Smelter after 1 January 1932 and, in the event, what indemnity should be paid. Secondly, if the first part of the first question was answered in the affirmative, the Tribunal was to decide whether the Smelter should be required to stop causing harm in the United States. Thirdly, if the second question was answered in the affirmative, the Tribunal would have to indicate what measures or regime, if any, the Smelter should adopt or maintain. Fourthly, on the basis of any decision or decisions rendered by the Tribunal with respect to the second and third questions, what indemnity or compensation should be paid.

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of the smelter,[27] the Arbitral Tribunal enunciated what is usually referred to as the 'no-harm rule' (or principle).[28] It held that:

> under the principles of international law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes *in or to the territory of another* or the properties or persons therein, when the case is of serious consequence and the injury established by clear and convincing evidence.[29]

Therefore, the Arbitral Tribunal found that Canada was under a duty to ensure that the operation of the smelter was compliant with

[27] It is noteworthy that Canada had already accepted to pay indemnification with respect to any previous damage under the Special Agreement, specifically in Art. I as regards the damage that had occurred in the United States prior to 1 January 1932, and Art. III, para. 1, as regards any subsequent damage, subject to ascertainment and quantification. It is difficult to establish on which grounds Canada had agreed to indemnify the United States. No explanation is provided either in the Special Agreement or in the Canadian letter of reference to the International Joint Commission (see *supra*, note 25) as far as the damage that had occurred before 1 January 1932 is concerned (letter of 17 August 1928). In its Statement of Facts submitted within the proceedings before the Arbitral Tribunal, Canada pointed out that the matter at issue was not an inter-state dispute, since it was 'a case in which a Canadian corporation, carrying on, in British Columbia and elsewhere, an ordinary legitimate industrial undertaking, was alleged to be committing a private wrong, or a series of private wrongs, against more than one United States citizen in the State of Washington' (Trail Smelter Question, Statement of Facts Submitted by the Agent for the Government of Canada, 3 May 1936, at 4, para. 3), which seemingly excluded any relevance of State territorial sovereignty to the dispute. Regardless, according to Willisch, *State Responsibility*, cit., at 62, 'Canada agreed to her liability, because she had infringed upon *the territorial integrity* of the United States by permitting noxious fumes to escape to US territory and to cause serious damage therein' (emphasis added).

[28] For example, see Dupuy, Viñuales, *International Environmental Law*, cit., at 63 ('The classic formulation of the no-harm principle in an environmental context appears in the *Trail Smelter* case'). On the other hand, according to Patricia Birnie, Alan Boyle, Catherine Redgwell, *International Law and the Environment* (3rd ed., Oxford: Oxford University Press 2009), 137, 'it is erroneous to refer to a "no harm" rule' because of the inexistence of a rule that 'prohibits transboundary harm'. Such an observation is concerned with the question as to whether the – purported – obligation to prevent transboundary environmental harm is positive or negative: the 'no-harm rule' seems, considered literally, to impose a *prohibition* on transboundary harm, which is unacceptable to those authors who classify the obligation to prevent transboundary environmental harm as a positive (or due diligence) obligation. However, the expression 'no-harm rule' is simply used here to refer to prevention of transboundary harm to the territory of other States, as is commonly understood.

[29] *Trail Smelter Case*, award of 11 March 1941, cit., at 1965 (emphasis added).

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this obligation: under the circumstances, Canada had to require the smelter to avoid causing any damage through fumes in the United States.[30]

Within the legal scholarship, the no-harm rule as formulated by the Arbitral Tribunal seems to be commonly considered as a first manifestation of prevention of transboundary environmental harm,[31] as ultimately enshrined in principle 21 of the Stockholm Declaration,[32] quoted above.[33] Accordingly, the award in the *Trail Smelter* arbitration has consistently been cited as a foundational award in the evolution of international protection of the environment.[34]

The connection between the no-harm rule as formulated in the *Trail Smelter* case and principle 21 implies the link between mutual respect for territorial sovereignty and prevention of transboundary environmental harm. This is because, in the *Trail Smelter* case, the rationale of the no-harm rule and of the specific obligation for

[30] Ibid., at 1965-1966.

[31] See Willisch, *State Responsibility*, cit., at 60 ('Whether or not the award of the Trail Smelter Arbitration is conclusive in every respect, it remains true that the passage […] has been most widely accepted over the past forty years as the foundation of state responsibility for air pollution in particular and for transnational environmental damage in general'); and René Lefeber, *Transboundary Environmental Interference and the Origin of State Liability* (The Hague/London/Boston: Kluwer Law International 1996), at 20 ('the statement of the obligation to prevent and abate transboundary environmental interference in the *Trail Smelter* case is considered to be the most prominent source').

[32] See Malgosia A. Fitzmaurice, 'International Protection of the Environment' (2001) 293 *Rec. cours* 9, at 106 ('Principle 21 of the Stockholm Declaration arose from the decision of the Arbitral Tribunal in the *Trail Smelter* Arbitration'); and Alexandre Kiss, Dinah Shelton, *Guide to International Environmental Law* (Leiden/Boston: Martinus Nijhoff Publishers 2007), at 90.

[33] See *supra*, Section 1.1.1.

[34] See Fitzmaurice, 'International Protection', cit., 30 ('the 1941 *Trail Smelter* arbitration […] has proved to be of fundamental importance for the development of international environmental law in relation to transboundary air pollution'); and Stephen C. McCaffrey, 'Of Paradoxes, Precedents, and Progeny: The Trail Smelter Arbitration 65 Years Later', in Bratspies and Miller (eds.), *Transboundary Harm*, cit., 34, who affirms that '[t]his ringing declaration, uttered by a Tribunal years ahead of its time, became the wellspring of international environmental law' (ibid., at 39) and refers to the 'wide array of progeny of the *Trail Smelter* arbitration', including 'the classic reformulation of the Tribunal's formula […] in Principle 21 of the 1972 Stockholm Declaration' (ibid., at 41). The importance of the *Trail Smelter* arbitration in international protection of the environment has been asserted even by authors who underscore the difficulties in interpreting the award: see Jaye Ellis, 'Has International Law Outgrown Trail Smelter?', in Bratspies and Miller (eds.), *Transboundary Harm*, cit., 56.

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Canada to ensure that the smelter did not cause transboundary harm to the United States lies precisely in mutual respect for territorial sovereignty.[35]

Specifically, the Arbitral Tribunal described the *Trail Smelter* dispute as a case concerning 'territorial relations':[36] it immediately accepted that the relevant obligation lay in 'the duty of a State to respect other States and their territory', as affirmed in several 'international decisions, in various matters, from the Alabama case onward, and also earlier ones'.[37] Yet, the problem was to determine whether that obligation was applicable in a case involving pollution.[38] Absent any international decisions on air or water pollution, the Arbitral Tribunal gave consideration to decisions of the Supreme Court of the United States.[39] That was permitted by the Special Agreement, which provided that the Arbitral Tribunal should apply 'the law and practice followed in dealing with cognate questions in the United States of America as well as international law and practice'.[40] Since

[35] Such a conclusion is not undermined by the fact that, in the 1938 decision and with regard to the damage that had occurred between January 1932 and October 1937, the Arbitral Tribunal rejected the United States' claim for damages that was based on an alleged violation of sovereignty (*Trail Smelter Case*, award of 16 April 1938, cit., at 1932-1933): although some weight was attached to this rejection by Alfred P. Rubin, 'Pollution by Analogy' (1971) 50 *Oregon LR* 259, at 265-266, in the words of Willisch, *State Responsibility*, cit., at 62, '[i]t does not follow […] that the interference by fumes did not constitute an infringement upon the sovereign integrity of the U.S.'. Indeed, it was due to the interpretation of the term 'damages' by the Arbitral Tribunal: since the United States had itemised only the money expended on the investigation of the consequences of the Trail Smelter's operation as damages relevant to the violation of its sovereignty, the Arbitral Tribunal stated that they fell outside the meaning of 'damages' under the Special Agreement. Accordingly, it found it 'unnecessary to decide whether the fact proven did or did not constitute an infringement or violation of sovereignty of the United States under international law *independently of the Convention* [for Settlement of Difficulties Arising from Operation of Smelter at Trail]' (*Trail Smelter Case*, award of 16 April 1938, cit., at 1932, emphasis added): such decisions would exceed the limits of the Special Agreement as far as the notion of 'damages' is concerned.

[36] *Trail Smelter Case*, award of 11 March 1941, cit., at 1963.

[37] Ibid.

[38] Ibid.

[39] Ibid., at 1963-1964.

[40] Art. IV of the Special Agreement. In addition, the Arbitral Tribunal was required to take into account the desire of the Parties to the dispute 'to reach *a solution just* to all parties concerned' (emphasis added): therefore the issue of equity also came into consideration. According to Karin Mickelson, 'Rereading *Trail Smelter*' (1993) 31 *Canadian YIL* 219, it is necessary to take account of

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transboundary pollution was only of *factual* relevance, the Arbitral Tribunal chose mutual respect for sovereignty in order to establish an analogy between the *Trail Smelter* dispute and domestic cases. Hence, it deemed certain cases settled by the Supreme Court of the United States to be relevant, and thus applicable to the dispute at issue, as they were 'controversies concerning quasi-sovereign rights' of the states that were component units of the United States as a federal State.[41]

It is noteworthy that, in citing only one air pollution case alongside other United States precedents relating to watercourses, the Arbitral Tribunal quoted extensively from a passage in which the right of a component state to have 'the last word as to whether its mountain shall be stripped of their forests and its inhabitants shall breathe pure air' had been contrasted with the 'fair and reasonable demand on the part of a sovereign [i.e., another component state] that the air over its territory should not be polluted on a great scale'.[42] The United States Supreme Court had not been concerned – and could hardly have been concerned at that time, in 1907 – with protection of the environment. Indeed, it had pointed out that a demand by a component state that its forests not be 'destroyed or threatened by the act of persons beyond its control' did not depend on whether those forests were 'better or worse, and whatever destruction they may have suffered', as quoted in the *Trail Smelter* decision.[43] From a broader perspective, protection of not only the environment but also human health was seemingly irrelevant in the precedent which the Arbitral Tribunal relied on. This confirms that, within its reasoning, it gave absolute pre-eminence to mutual respect for the quasi-sovereign rights of the component states of the United States.[44]

factors other than legal considerations, such as specifically political, economic, and social factors, in order to assess the value of the *Trail Smelter* case. It is interesting to note that reciprocity of risk was enumerated among those extra-legal factors (ibid., at 228-229), which entails mutual respect between equally sovereign States.

[41] *Trail Smelter Case*, award of 11 March 1941, cit., at 1964.

[42] Ibid.

[43] Ibid., at 1965.

[44] The quotation of this United States precedent in the Trail Smelter case includes a passage in which the Supreme Court held that the 'quasi-sovereign right' of the affected component state was not dependent even on its implications for citizens, since it would have been for that component state to determine whether 'by insisting upon this claim, [it was] doing more harm than good to [its] own citizens' (*Trail Smelter Case*, award of 11 March 1941, cit., at 1965).

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2.2.1.b. *The Ensuing Evidential Value of Non-Environmental Practice:* Island of Palmas*,* Corfu Channel *and* Lac Lanoux

Once a connection has been established between prevention of transboundary environmental harm and mutual respect for territorial sovereignty through the no-harm rule (as formulated in the *Trail Smelter* award), the practice concerning the latter becomes relevant to the former too. One can thus observe such practice being cited in scholarship in relation to prevention of transboundary environmental harm, even though protection of the environment did not come into consideration. On some occasions, there has not even been any issue of damage of a transboundary nature. As noted above, the International Court of Justice too mentioned a precedent that did not concern protection of the environment when searching for the origins of prevention of transboundary environmental harm.[45]

The great weight of the practice relating to mutual respect for territorial sovereignty is plain to see: it vests prevention of transboundary environmental harm with an ancient and systematic character.[46] This is because mutual respect for sovereignty is a foundational feature of international law and, more to the point, the traditional international law of coexistence.[47] As the International Court of Justice held in its judgment in the *Corfu Channel* case, '[b]etween independent States, respect for territorial sovereignty is an *essential foundation* of international relations'.[48] Indeed, mutual respect for territorial sovereignty

[45] See *supra*, Section 2.2.1.

[46] According to Carlo Focarelli, *International Law* (Cheltenham/Northampton: Edward Elgar 2019), at 9-10, the proposition that 'every state must control its territory and prevent private individuals from using it to cause harm to and/or in other states' is one of the 'four pillars' of the modern international system, as first emerged in Italy between mid-fourteenth and mid-fifteenth centuries. These 'four pillars' are all connected with territorial sovereignty, the other three being the following ones: 'every human being must be subject to the jurisdiction of a state', 'there must be no space on Earth falling outside the jurisdiction of a state', and 'in their mutual relations, states are responsible for the conduct of individuals acting on their behalf within their jurisdiction'.

[47] See especially Wolfgang Friedmann, 'General Course in Public International Law' (1969) 127 *Rec. cours* 39, at 91-92 ('The principal object of this, the classical system of international law of co-existence, is the formulation of the conditions of diplomatic intercourse *and, in particular, of mutual respect for national sovereignty*' – quotation at 91, emphasis added); Id., 'Droit de coexistence et droit de coopération. Quelques observations sur la structure changeante du droit international' (1970) 6 *Rev. belge dr. int.* 1, at 5-6. On the centrality of territorial sovereignty in the coexistence of States, see also Andrea Gioia, 'Territorio in diritto internazionale', in *Digesto delle discipline pubblicistiche* vol. XV (Torino: UTET 1999), 257, at 262.

[48] ICJ, *Corfu Channel Case* (*United Kingdom* v. *Albania*), judgment of 9 April

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is also linked to legal equality between States, which entails reciprocal restrictions aimed at preventing a State from exercising sovereignty so as to encroach upon the exercise of sovereignty by another.[49]

By comparison, protection of the environment per se is a recent interest or need: environmental consciousness spread worldwide only during the second half of the twentieth century. Moreover, although international protection of the environment has gained increasing traction since the 1960s and 1970s, it is difficult to equate this with the importance of mutual respect for territorial sovereignty as a premise of States' coexistence and the international legal system itself.[50]

It is therefore evident that, when determining whether or not there is a customary obligation to prevent transboundary environmental harm, international practice in relation to mutual respect for territorial sovereignty might make the difference, depending on whether it is included or excluded. Should that practice be factored in, the position of those authors who assert the existence of a customary obligation to prevent transboundary environmental harm would readily be corroborated,[51] even under the two-element approach to the determination of customary international law.[52] In this respect, it is telling that two authors, who deny the existence of a customary obligation to prevent transboundary environmental harm owing to the lack of uniform and consistent State practice, concede the existence of that obligation as far as international watercourses

1949, *I.C.J. Reports* 1949, 4, at 35, emphasis added. In the authoritative French text: '[e]ntre États indépendants, le respect de la souveraineté territoriale est l'une des bases essentielles des rapports internationaux'.

[49] On the articulation of sovereignty and equality in the law of coexistence, see Georges Abi-Saab, 'Whither the International Community?' (1998) 9 *EJIL* 248, at 254.

[50] The difference between respect for territorial sovereignty and protection of the environment per se in terms of the very structure of international law would hold true also in the face of the objection that environmental degradation threatens the survival of humankind. Such a consideration requires a legal evaluation in order to establish rules under international law, whereas the existence of territorial sovereignty is a constitutive factor of today's international legal system: mutual respect for territorial sovereignty represents a minimum condition for the coexistence of States.

[51] See *supra*, Section 1.2.1.

[52] In respect of the objective element of customary international law, it should be borne in mind that the lack or paucity of practice relating to prevention of transboundary environmental harm has been deemed to be the primary weakness of the view that there is a pertinent customary obligation: the possibility of including the practice concerning mutual respect for territorial sovereignty is thus of essential importance.

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are concerned:[53] as will be pointed out, practice relevant to the prevention of freshwater pollution is firmly based on mutual respect for territorial sovereignty.[54]

Provided that, once prevention of transboundary environmental harm has been derived from the no-harm rule, both the *opinio juris* and practice in relation to the latter can be related to the former, it is not absurd to suppose that the purported connection between principle 21 and the no-harm rule has driven scholars to underestimate the issue of the status of prevention of transboundary environmental harm under general international law.[55] The grounding of principle 21 in the no-harm rule may have induced some authors to nonchalantly link the evidence on customary international law concerning territorial sovereignty to prevention of transboundary environmental harm as well.

As far as the international case law is concerned, one of the earliest decisions that has been cited with reference to prevention of transboundary environmental harm is the award in the *Island of Palmas* arbitration,[56] given on 4 April 1928.[57] The case dealt with sovereignty over an island in the Philippines Archipelago, specifically the Island of Palmas (also known as Miangas), which was claimed by both the United States, on the basis of the Treaty of Peace with Spain, concluded on 10 December 1898, and the Netherlands, on the basis

[53] Benedetto Conforti, Massimo Iovane, *Diritto internazionale* (12th ed., Napoli: Editoriale Scientifica 2021), at 247.

[54] See *infra*, Section 2.4.1.c.

[55] See *supra*, Section 1.1.1.

[56] For instance, the *Island of Palmas* arbitration provides the starting point for Dupuy, *La responsabilité internationale*, cit., at 259-264, in demonstrating the inadequacies of the traditional due diligence obligations of prevention, including '[le] principe d'utilisation non-dommageable du territoire' as primarily derived from the *Trail Smelter* case; it is also used by Willisch, *State Responsibility*, cit., at 43-44, to address the question as to whether the 'concept of sovereignty imposes legal restraints on technological activities which physically affect foreign States'. The award in the *Island of Palmas* case is also cited by Karine Bannelier, 'Foundational Judgment or Constructive Myth? The Court's Decision as a Precursor to International Environmental Law', in Karine Bannelier, Theodore Christakis and Sarah Heathcote (eds.), *The ICJ and the Development of International Law: The Lasting Impact of the* Corfu Channel *Case* (London/New York: Routledge 2012), 242, at 242-243, as a precedent transposing the maxim *sic utĕre tuo ut alienum non laedas* to international law 'as a corollary of sovereignty', before the judgments in the *Trail Smelter*, the *Corfu Channel* and the *Lac Lanoux* cases 'built the backbone of international environmental law by giving it its well-known cardinal principle'.

[57] *The Island of Palmas Case (or Miangas)* (*United States* v. *The Netherlands*), award of 4 April 1928, 11 *RIAA* 831.

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of *effectivité*. Even though no transboundary damage was at stake, the award has been seen as relevant to prevention of transboundary environmental harm in that, when focusing on the notion of sovereignty in relation to territory, the arbitrator inferred an obligation of every State to protect the rights of other States, including the right to territorial integrity, also with regard to the activities taking place inside its own territory.[58]

Value has also been attached to a passage from the judgment of 9 April 1949 issued by the International Court of Justice in the *Corfu Channel* case.[59] In fact, as pointed out above, the International Court of Justice itself linked that precedent to prevention of transboundary environmental harm in the *Pulp Mills* judgment.[60] However, the *Corfu Channel* case did not concern protection of the environment,[61] even though 'transboundary' harm was somehow at issue: British

[58] In the words of the arbitrator, Max Huber: 'Territorial sovereignty […] involves the exclusive right to display the activities of a State. This right has as corollary a duty: the obligation to protect within the territory the rights of other States, in particular their right to integrity and inviolability in peace and in war, together with the rights which each State may claim for its nationals in foreign territory' (*Island of Palmas Case*, cit., 839).

[59] On the purported relevance of the *Corfu Channel* case to prevention of transboundary environmental harm see Malgosia A. Fitzmaurice, 'The Corfu Channel Case and the Development of International Law', in Nisuke Ando, Edward McWhinney and Rüdiger Wolfrum (eds.), Liber Amicorum *Judge Shigeru Oda* vol. 1 (The Hague/London/New York: Kluwer Law International 2002), 119, at 146 ('The principle of respect for the rights of other States […] which in this case was formulated by the Court in its celebrated words […] has in fact become a founding principle of international environmental law, which has been incorporated into foundational documents of international environmental law such as the Stockholm Declaration'); Karine Bannelier, 'Foundational Judgment', cit., at 244 ('giving to international environmental law the true contemporary dimension of the due diligence principle […] the *Corfu Channel* case could be held as a foundational judgment for international environmental law'); Michael Waibel 'Corfu Channel Case', in *MPEPIL online* (2013), para. 23 ('the obligation to not knowingly injure another State […] has a profound impact, among others, on the law of State responsibility and international environmental law. It is found for instance in Principle 21 Stockholm Declaration').

[60] See *supra*, Section 2.2.1.

[61] Therefore, according to Massimo Iovane, *La riparazione nella teoria e nella prassi dell'illecito internazionale* (Milano: Giuffré 1990), at 290-291, the *Corfu Channel* case has been 'inexplicably' connected with protection of the environment. As pointed out by Fitzmaurice, 'International Protection', cit., at 106, 'the principle contained in *Corfu Channel* case that every State has a duty not to knowingly allow its territory to be used for the acts contrary to the rights of other States […] is very broad and in fact relates to general obligations of States under international law, rather than to specific obligations arising under international environmental law'.

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vessels had been damaged as a result of a form of 'utilization' of Albanian territory.[62] In particular, the explosion of several mines in the territorial waters of Albania had damaged two British warships in October 1946. The International Court of Justice was asked to ascertain whether Albania was responsible for that explosion and the ensuing damage and loss of life, and whether, if so, it was obliged to make reparation.[63] From the viewpoint of the evolution of international protection of the environment and prevention of transboundary environmental harm, weight has been given to the dictum on 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States',[64] although the right at stake was in actual fact the United Kingdom's right of innocent passage, as noted above.[65] One may find that obligation enumerated, within the judgment, alongside other 'general and well-recognised principles', such as elementary considerations of humanity and the freedom of maritime communication. The International Court of Justice took the view that, considered overall, these 'principles' provided the basis for the obligations incumbent on Albania to notify the existence of a minefield in its territorial waters and to warn the United Kingdom of an imminent danger.[66]

Finally, importance has been attached to a passage from the award

[62] However, according to Karine Bannelier, 'Foundational Judgment', cit., at 245, 'the damage is not transboundary since it is carried out on ships and British citizens inside the territorial waters of Albania and in an international strait'.

[63] Under the Special Agreement, the International Court of Justice was moreover required to assess whether the United Kingdom had for its part breached the Albanian sovereignty and whether, as a result, it had to make satisfaction, considering also that on 13 November 1946, following the explosions, British minesweepers swept the North Corfu Channel. On the value of the judgment in this respect see, *ex pluribus*, Mohamed Bennouna, 'The *Corfu Channel* Case and the Concept of Sovereignty', in Bannelier, Christakis and Heathcote (eds.), *The ICJ and the Development*, cit., at 16.

[64] *Corfu Channel Case*, judgment, cit., at 22. In the French text, which is the authoritative one, the quoted excerpt reads as follows: 'obligation, pour tout État, de ne pas laisser utiliser son territoire aux fins d'actes contraires aux droits d'autres États'.

[65] In the words of Greg Lynham, 'The *Sic Utere* Principle as Customary International Law: A Case of Wishful Thinking?' (1995) 2 *James Cook Univ. LR* 172, at 185, 'the right to which the court refers is not a right to be protected from transboundary harm, but on the contrary, a more well recognised intemational legal right of free passage. This is clearly apparent from the facts of the case'.

[66] *Corfu Channel Case*, judgment, cit., at 22. For some remarks on the impact of this finding on the issue of responsibility see Fitzmaurice, 'The Corfu Channel Case', cit., at 130-139.

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in the *Lac Lanoux* case, given by an arbitral tribunal on 16 November 1957.[67] Once again, no transboundary harm to the environment was in dispute: the Arbitral Tribunal had been asked whether, absent any agreement with Spain, it was lawful for France to divert water from Lake Lanoux, which lay entirely within the French territory, while returning the same amount of water to the Carol River before it ran across the Spanish border.[68] The core issue in the case was whether consultation was required in relation to the exploitation of an international watercourse.[69] Altough the Tribunal alluded to a principle prohibiting the upstream State from altering the natural conditions of the waters of a river in such a manner as to cause significant damage to the downstream State, it only did so in hypothetical terms,[70] and

[67] *Affaire du Lac Lanoux (Espagne, France)*, award of 16 November 1957, 22 *RIAA* 258.

[68] Art. 1 of the *Compromis d'arbitrage sur l'interprétation du Traité du Bayonne du 26 mai 1866 et de son Acte additionnel de la même date, concernant l'utilisation des eaux du lac Lanoux* between France and Spain, signed in Madrid and entered into force on 19 November 1956. As the Arbitral Tribunal observed, the core of the dispute concerned the change in the natural flow of an international watercourse and thus the management of a common natural resource, rather than transboundary environmental harm (*Affaire du Lac Lanoux*, cit., at 303): the Tribunal was faced with the questions as to whether the French redirection of water as such breached Spanish rights or, in any event, whether France breached the obligation to consult in advance with Spain (ibid., at 303-304). On the circumstances and some key aspects of the case see André Gervais, 'La sentence arbitrale du 16 Novembre 1957 réglant le litige franco-espagnol relatif à l'utilisation des eaux du lac Lanoux' (1957) 3 *Ann. fr. dr. int.* 178; and Achille Mestre 'Quelques remarques sur l'affaire du lac Lanoux', in *Mélanges offerts à Jacques Maury* vol. 1 (Paris: Dalloz & Sirey 1960), 261.

[69] In that regard see especially Françoise Duléry, 'L'affaire du lac Lanoux' (1958) 29 *Rev. gén. dr. int. pub.* 469. As observed by John G. Laylin, Rinaldo L. Bianchi, 'The Role of Adjudication in International River Disputes. The Lake Lanoux Case' (1959) 53 *AJIL* 30, at 45, the Arbitral Tribunal considered the two constituent elements of customary international law as far as consultation is concerned. Indeed, 'les Etats ont aujourd'hui parfaitement conscience de l'importance des intérêts contradictoires, que met en cause l'utilisation industrielle des fleuves internationaux, et de la nécessité de les concilier les uns avec les autres par des concessions mutuelles. La seule voie pour aboutir à ces compromis d'intérêt est la conclusion d'accords, sur une base de plus en plus compréhensive. La *pratique internationale* reflète la *conviction* que les Etats doivent tendre à conclure de tels accords' (*Affaire du Lac Lanoux*, cit., at 308, emphasis added). Such a rule would not be an obligation of result: 'la pratique internationale ne permet pas, jusqu'à présent, de dépasser cette conclusion; la règle suivant laquelle les Etats ne peuvent utiliser la force hydraulique des cours d'eau internationaux qu'à la condition d'un accord *préalable* entre les Etats intéressés ne peut être établie ni à titre de coutume, ni encore moins à titre de principe général du droit' (ibid., emphasis in original).

[70] In the words of the Arbitral Tribunal: '*en admettant* qu'il existe un principe

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denied the relevance of this principle to the case.[71] At any rate, considering the absence of any environmental issue, one must conclude that mutual respect for sovereignty represents the rationale underlying the – only incidentally – declared principle.[72] Nonetheless, this has ended up being linked, within legal scholarship, to prevention of transboundary environmental harm.[73]

interdisant à l'État d'amont d'altérer les eaux d'un fleuve dans des conditions de nature à nuire gravement à l'État d'aval […]' (*Affaire du Lac Lanoux*, cit., at 308, emphasis added).

[71] The Arbitral Tribunal held that 'un tel principe ne trouve pas son application à la présente espèce' (*Affaire du Lac Lanoux*, cit., at 308). Even if transboundary environmental harm had occurred, the Arbitral Tribunal would have arguably been reluctant to apply any obligations under *general* international law pertaining to prevention, including customary obligations: it referred exclusively to the applicable *treaty* rules on the assumption that Spain had complained about an irreversible pollution of the Carol River or a harmful modification of its chemical composition or characteristics as a result of the French diversion: '[o]n aurait pu soutenir que les travaux auraient pour conséquence une pollution définitive des eaux du Carol, ou que les eaux restituées auraient une composition chimique ou un température, ou telle autre caractéristique pouvant porter préjudice aux intérêts espagnols. L'Espagne aurait alors pu prétendre qu'il était porté atteinte, *contrairement à l'Acte additionnel*, à ses droit' (ibid., at 303, emphasis added). More broadly, pursuant to Art. 1 of the special agreement between France and Spain, the provisions of the Act additional to the Treaty of Bayonne of 26 May 1866 are the only sources of applicable law. Accordingly, the Arbitral Tribunal pointed out that '[l]es dispositions claires du droit conventionnel n'appellent aucune interprétation; le texte traduit une règle objective qui saisit la matière à laquelle elle s'applique; quand il y a matière à interprétation, celle-ci doit être opérée selon le droit international; celui-ci ne consacre aucun système absolu et rigide d'interprétation; il est donc permis de tenir compte de l'esprit qui a présidé aux traités pyrénéens, ainsi que des règles du droit international commun' (ibid., at 301).

[72] Astrid Epiney, 'Lac Lanoux Arbitration', in *MPEPIL online* (2006), para. 12, observed that the approach of the Arbitral Tribunal was 'in accordance with the principle that it is the territorial integrity and the sovereignty of the State which is protected by the principle not to cause substantial damage to the environment of other States'.

[73] It is telling that, whereas in early commentaries the *Lac Lanoux* case was regarded as a case on territorial sovereignty, subsequently greater importance was attached to it from the viewpoint of international protection of the environment. For example, shortly after the award was made, Laylin, Bianchi, 'The Role of Adjudication', cit., at 41-49, did not even include prevention of transboundary harm among the 'guideposts or precedents for the solution of later disputes' arising in relation to the award. On the other hand, more recently Epiney 'Lac Lanoux Arbitration', cit., para. 1, stressed that the case concerned the 'principle not to cause substantial damage to the environment of other States – or to areas beyond national jurisdiction'.

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2.2.2. *Objective Theory of Sovereignty and Principles of Law:* Sic Utĕre Tuo Ut Alienum Non Laedas*, Good Neighbourliness, Abuse of Rights*

The no-harm rule does not constitute the only angle from which a connection has been mooted between territorial sovereignty and prevention of transboundary environmental harm. Indeed, principle 21 of the 1972 Stockholm Declaration has been deemed to be a development of principles of law that are cognate with mutual respect for territorial sovereignty, viz. *sic utĕre tuo ut alienum non laedas*, good neighbourliness,[74] abuse of rights.[75]

Despite the evident likeness with the no-harm rule,[76] these principles differ from it in that they have usually been regarded as general principles of law recognised by civilised nations under Article 38(1)(c)

[74] Although the concept of good neighbourliness is not a unitary one, the relevant distinctions are negligible for the purposes of this study. For instance, Juraj Andrassy, 'Les relations internationales de voisinage' (1951) 79 *Rec. cours* 73, at 78-79, distinguishes between 'le droit de voisinage' and those 'relations internationales de voisinage' founded on treaty law and State consent, since the rules pertaining to the former 'ne dépendent pas de la volonté et du consentement des Etats limitrophes'. A distinction is also drawn between good neighbourliness and neighbourliness by Laurence Boisson de Chazournes, Danilo Campanelli, 'Neighbour States', in *MPEPIL online* (2006), para. 8, in that 'they are both applicable exclusively to States geographically close to one another and they provide for guidelines regulating the utilization of neighbour States' territories: the frontier zone in the case of the law of neighbourliness; and the whole State territory in the case of good-neighbourliness'.

[75] As is known, the theory of abuse of rights has been regarded as a specific application of the broader principle of good faith in relation to the exercise of rights: see, for instance, Bin Cheng, *General Principles of Law as Applied by International Courts and Tribunals* (London: Stevens and Sons 1953), at 121-136.

[76] Such a likeness makes it easy to understand why authors have sometimes identified or linked the no-harm rule with the *sic utĕre tuo* maxim or good neighbourliness. See, for instance, Dupuy, *La responsabilité internationale*, cit., at 35 ('[le principe d'utilisation non dommageable du territoire] hérité de la maxime *sic utere tuo ut alienum non laedas*, elle-même exhumée par la doctrine à l'occasion des rapport de voisinage'); and Jutta Brunnée, 'Sic utere tuo ut alienum non laedas', in *MPEPIL online* (2010), para. 9 ('The clearest manifestation, and most detailed elaboration, of the *sic utere tuo* idea in international law is the no harm rule, which has evolved in the contexts of the use of transboundary resources and environmental impacts'). Indeed, the famous dictum of the *Trail Smelter* arbitration was itself cited to support the existence of both international law of neighbourliness (see Andrassy, 'Les relations', cit., at 92-94) and the abuse of rights principle (see Cheng, *General Principles*, cit., at 130). According to Sands et al., *Principles*, cit., at 207, '[t]he general rule relied upon in the *Trail Smelter* case derives from an extension of the principle of good neighbourliness'.

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of the ICJ Statute.[77] On the other hand, the no-harm rule has commonly been considered as a general rule inherent within territorial sovereignty.[78] As for the relationship between these principles themselves, they tend to overlap, with the *sic utĕre tuo* maxim being a part of both good neighbourliness and abuse of rights.[79] Both of these dictate that the sovereign right of every State to use its territory is limited by the requirement not to cause damage to or within the territory of another State,[80] which is the proper meaning of the *sic*

[77] For example, Alexandre Kiss, 'Abuse of Rights', in *MPEPIL online* (2006), para. 9, observed that, 'since the concept of abuse of rights is known in many countries', the conclusion had been reached that 'it may be said to be a general principle of law'. In a similar vein, as regards the *sic utĕre tuo* maxim, Brunnée, 'Sic utere tuo', cit., para. 2, notes that '[t]here is general agreement that comparable concepts can indeed be found in Roman property rules, in contemporary civil and common law systems, as well as in other legal traditions, such as in Islamic or Jewish law'. Of course, the classification of those principles as general principles of law recognised by civilised nations is not without uncertainty: Andrassy, 'Les relations', cit., at 97-101, admitted that international rules governing neighbourliness could amount to general principles of law recognised by civilised nations, while arguing that 'le droit international de voisinage repose sur la coutume'.

[78] See *supra*, Section 2.2.1.

[79] In the words of Brunnée, 'Sic utere tuo', cit., para. 3, the *sic utĕre tuo* maxim 'is at times used interchangeably with, or is not sharply distinguished from, related concepts, such as abuse of rights or good neighbourliness'.

[80] It is interesting to note, however, that Di Benedetto, *Sovranità dello Stato*, cit., at 201-227, has recently argued that the principle of abuse of rights might now amount to an 'internal' limitation on States' sovereign right to exploit natural resources also in the event of harm to the environment *within their own territories*. In his opinion, as a result of the growing importance attached by States to ecological balance, the rule on territorial sovereignty has evolved in such a manner as to cover also the aim of protecting the environment (ibid., at 227-250), and hence a State's disregard for significant harm to the environment in its own territory would constitute an abuse of rights. Whereas this position concerns only situations involving harm to the environment within the State's own territory, as prevention of harm to the environment of other States and of areas beyond the limits of national jurisdiction is anchored in 'traditional' territorial sovereignty (ibid., at 87-90 and 131-136 respectively), it is remarkable that its overall outcome is not at variance with the thesis put forward in this study. As will be seen, prevention of harm to the environment per se, as a community interest, will be reconstructed as a general principle of international law which serves a guiding function and must be balanced against conflicting principles, such as exploitation of natural resources: this is substantially comparable to the idea of an environment-oriented evolution of territorial sovereignty. Nevertheless, since the principle of abuse of rights establishes a prohibition, it in actual fact implies a general obligation for States – however flexible it may be – to prevent harm to the environment within their own territory, a position that had originally been rejected (ibid., at 158-190). Therefore, the relevant difficulties would come into consideration

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utĕre tuo maxim.[81] Through the connection with the principles of *sic utĕre tuo*, good neighbourliness, or abuse of rights, prevention of transboundary environmental harm under principle 21 is rooted in territorial sovereignty,[82] as it is through the link to the no-harm rule. The implications are analogous too: the existence of a customary obligation to prevent transboundary environmental harm ends up being corroborated by these principles. This is due not only to the structural relevance highlighted of territorial sovereignty to the international legal system, but also to the long-standing and well-established nature of those principles in most national legal orders.[83]

all the same, for example with regard to the identification of the State entitled to react to a breach of the prohibition on the abuse of rights (cf. the situation at 181-183 with that at 258-261). By contrast, as will be illustrated below (see *infra*, Chapter 6), the reconstruction of prevention of environmental harm as a general principle of international law requires it to be established, as far as general international law is concerned, whether *specific* customary rules and obligations have emerged with regard to particular activities and types of activity or harm.

[81] According to Brunnée, 'Sic utere tuo', cit., para. 3, 'the majority view appears to be that it is the notion of abuse of rights that anchors the *sic utere tuo* principle, the latter being a particular manifestation of the former, broader, concept. The concept of good neighbourliness, too, is seen by many commentators as an expression of the abuse of rights principle, serving to restrict the exercise of territorial rights. In turn, good neighbourliness is usually said to be closely related to, but not identical with, the *sic utere tuo* maxim, amplifying or explaining it'. As far as the principle of good neighbourliness is concerned, see, for example, Andrassy, 'Les relations', cit., at 110-111 ('Il y a donc obligation générale de ne pas faire ou de ne pas laisser faire que soient provoqués des dommages au préjudice de l'Etat voisin'); and Boisson de Chazournes, Campanelli, 'Neighbour States', cit., para. 11 (including the 'prohibition to use or permit the use of the frontier zone in such a manner as to cause damage to the territory of the neighbour State' among the fundamental rules of the law of neighbourliness in international law).

[82] In the words of Brunnée, 'Sic utere tuo', cit., para. 4, '[a]ll three concepts [*sic utĕre tuo ut alienum non laedas*, good neighbourliness and abuse of rights] have in common the idea that a State's use of its territory is inherently limited by the rights of other States not to be harmed in the use of their territory'. See also Stephens, *International Courts*, cit., at 122 ('Whether expressed in the notion of relative as opposed to absolute sovereignty, the principle *sic utere tuo ut alienum non laedas*, the notion of good neighbourliness, or the doctrine of abuse of rights, the idea is essentially one of balancing the sovereign rights and interests of states engaged in polluting activities against the interests of states affected by such pollution' – footnotes omitted).

[83] The writings of Nicolas-Socrate Politis, 'Le problème des limitations de la souveraineté et la théorie de l'abus des droits dans les rapports internationaux' (1925) 6 *Rec. cours* 1, at 77-78, are worth recalling, in particular his definition of the principle of abuse of rights as a '[t]héorie moderne en la forme, mais d'origine très ancienne, qui, issue des faits, s'est imposée tour à tour à la jurisprudence, à la science,

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In a similar manner to the construction of principle 21 as a development of the no-harm rule, the conceptualisation of principle 21 as a development of the principles of *sic utĕre tuo*, good neighbourliness, or abuse of rights implies that prevention of transboundary environmental harm *includes and expands* prevention of harm to the territory of other States.[84] As far as the location of harm is concerned, those principles of law are accordingly, so the argument goes, subjected in principle 21 both to a restatement – in the part laying down prevention of transboundary harm to the environment

à la législation positive' (ibid., at 78). He tellingly asserted that 'la notion de l'abus est une conséquence du caractère évolutif du droit. A ce titre, elle est en quelque sorte inhérente au système juridique de toute société humaine, si incomplète, si rudimentaire qu'en soit l'organisation' (ibid., at 86). It is equally significant that Charles De Visscher, *Problèmes de confins en droit international public* (Paris: Pedone 1969), subsumed the theory of abuse of rights and neighbourliness obligations under the 'précepte élémentaire que dans les situations d'intérêt commun le droit de chacun trouve ses limites dans le droit d'autrui' (ibid., at 67) and unhesitatingly defined the *sic utĕre tuo* maxim as a 'principe de justice naturelle' (ibid., at 80). The Roman law tradition of limitations on landownership within the context of neighbourly relations also increases the weight of the principle of good-neighbourliness. In this regard, whereas the well-known regime governing the *actio aquae pluviae arcendae* comes immediately to mind, it admittedly concerns equally archaic rules governing neighbourliness in other respects, as is emphasised by Luigi Capogrossi Colognesi, 'Proprietà (diritto romano)', in *Enciclopedia del diritto* vol. XXXVII (Milano: Giuffré 1988), 160, at 192-194 and 213-216. In this regard, see Alan Watson, *The Law of Property in the Later Roman Republic* (Oxford: Oxford University Press 1968), at 155-175, on the *actio aquae pluviae arcendae*, and Antonio Palma, Iura vicinitatis. *Solidarietà e limitazioni nel rapporto di vicinato in diritto romano nell'età classica* (Torino: Giappichelli 1988), at 42-46, for an overview of the rationales underlying good neighbourliness in Roman law.

[84] For example, Lefeber, *Transboundary Environmental Interference*, cit., at 20, includes 'the adagium *sic utere tuo ut alienum non laedas*, the doctrine of abuse of rights […] and the principle of good neighbourliness' among the theories which 'provide a basis on which the international obligation to prevent and abate transboundary environmental interference can be founded'. As for the *sic utĕre tuo* maxim, according to Julio Barboza, *The Environment, Risk and Liability in International Law* (Leiden/Boston: Martinus Nijhoff Publishers 2011), at 4, principle 21 of the Stockholm Declaration and principle 2 of the Rio Declaration 'find their original source in a still more general principle – that of *sic utere tuo ut alienum non laedas* – which places a limit to the use and enjoyment of property' (footnotes omitted). As for good neighbourliness, Boisson de Chazournes, Campanelli, 'Neighbour States', cit., para. 14, assert that the 'law of neighbourliness in more recent times has directly contributed to the elaboration of a set of principles belonging to the field of international environmental law' and mention principle 21 among the principles of the Stockholm Declaration that 'have developed and endorsed fundamental principles of the law of neighbourliness'.

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of other States – as well as to enlargement – in the part laying down prevention of harm to the environment of areas beyond the limits of national jurisdiction.

Since territorial sovereignty constitutes the reason both for the no-harm rule as well as for the principles of law under discussion, criticism of the conceptualisation of principle 21 as a development of the no-harm rule in the next Section is intended to refer, *mutatis mutandis*, also to the grounding of prevention of transboundary environmental harm in the principles of *sic utĕre tuo*, good neighbourliness, or abuse of rights. As will be pointed out, the 1972 Stockholm Conference marked a turning point, with the result that prevention of transboundary environmental harm cannot be linked to any pre-existing rule or principle informed by territorial sovereignty.

In addition, the understanding of principle 21 as a development of the principles of *sic utĕre tuo*, good neighbourliness, or abuse of rights displays a further shortcoming in that their status as general principles of law recognised by civilised nations is asserted. In fact, the derivation of these principles from domestic legal orders depends on the assumption that a State's territory is an object of the State (*dominium*) and therefore territorial sovereignty in international law equates to the right of property in private law.[85]

Although the relationship between State and its territory is too vast a subject to be even briefly dealt with here, it should be borne in mind that the theory of territory as an object is only *one* of the theories advanced with regard to territory.[86] Despite having been accepted in the

[85] Whereas the *sic utĕre tuo* maxim and good neighbourliness principle are inherently rooted in landownership, the relevance of abuse of rights is not limited to this area. It is nonetheless significant that, irrespective of the historical formation of the underlying concept, the very term 'abus de droit' was seemingly coined within nineteenth century French case law specifically with reference to the right of property: see Salvatore Patti, 'Abuso del diritto' in *Digesto delle discipline privatistiche. Sezione civile* vol. 1 (Torino: UTET 1987), 1, at 2. At any rate, see Marco Gestri, 'Considerazioni sulla teoria dell'abuso del diritto alla luce della prassi internazionale' (1994) 77 *Riv. dir. int.* 5, especially at 46-51, expressing doubts on the possibility of applying the principle of abuse of rights in relation to substantive issues, including in particular transboundary environmental harm.

[86] As is known, other approaches to the relationship between State and territory include the theory of territory as subject (*imperium*) and the jurisdictional theory. For an overview of these, see Santiago Torres Bernárdez, 'Territorial Sovereignty', in Bernhardt (ed.), *Encyclopedia*, cit., 823, at 824-826, who however concludes that each of these theories 'embodies part of the truth, and their weakness resides precisely in their possessing a merely partial grasp of the territorial phenomenon' (ibid., at 826). Indeed, the issue regarding the nature of territory was hotly debated in the past, but has recently aroused less interest, as is noted by Gioia, 'Territorio', cit., at 261.

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past,[87] this theory has long been disputed within authoritative writings, both in itself and in terms of the possibility of drawing principles of law from domestic legal orders on the basis of a comparison between State territory and private land.[88] This is because the transposition of domestic principles into international law is generally deemed to be dependent on their compatibility with the characteristics of international law, including the characteristics of territory under international law. Therefore, once the fiction of territory as *dominium* has been dispensed with, doubts may be cast over the very applicability in the international legal system of private-law-derived principles relating to landownership. Consequently, the principles of *sic utĕre tuo*, good neighbourliness, or abuse of rights should be irrelevant for prevention of transboundary environmental harm in international law.

2.3. *Protection of the Environment Per Se as a Collective Interest*

2.3.1. *Critique of the Connection between the No-Harm Rule and Prevention of Transboundary Environmental Harm*

It is submitted here that the conception of prevention of transboundary environmental harm under principle 21 as an environmentally-oriented development of the no-harm rule is fallacious and

[87] From a broader perspective, the question as to the definability of territory as a State's object pertains to the issue concerning the existence of property rights in international law, which was addressed in particular in the past as well. In this regard, see Giovanni Maria Ubertazzi, *Studi sui diritti reali nell'ordine internazionale* (Milano: Giuffré 1949), at 15-26.

[88] The problem lies at the intersection between the theory of territory and the conception, in relation to private law, of general principles of law recognised by civilised nations under Art. 38(1)(c) of the ICJ Statute. Indeed, Hersch Lauterpacht, *Private Law Sources and Analogies of International Law. With Special Reference to International Arbitration* (London: Longmans, Green and Co. 1927), at 91-99, maintained the analogy between territorial sovereignty and the private law right of property within a broader argument in favour of recourse to private law in international law. Whereas an exhaustive exploration of that problem would fall outside the scope of the present study, it is worth recalling that Rolando Quadri, *Diritto internazionale pubblico* (5th ed., Napoli: Liguori Editore 1968), prominently rebutted the private-law-analogy with regard to territory in asserting his 'functional theory' (ibid., at 628-639), and insisted on the need to limit the international applicability of domestic private law principles to situations in which there is similarity between national law and international law (ibid., at 122-129). As far as good neighbourliness is concerned, he consistently concluded that not all of the relevant domestic rules could be applied in the international legal system as general principles of law recognised by civilised nations, precisely because those rules are mainly concerned with landownership (ibid., at 752).

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must be abandoned in that it neglects the distinctiveness of principle 21. As mentioned above, it relegates prevention of transboundary environmental harm to a stage – important as it may be – in the evolving process of prevention in international environmental law, viz. the intermediate stage between the no-harm rule and the so called 'principle of preventive action'.

It is worth emphasising that the fallacy and ensuing abandonment of this conception will have a notable influence on the issue of the status of prevention of transboundary environmental harm in general international law. It is the unitary understanding of the no-harm rule and principle 21 that has allowed scholars to consider the practice surrounding mutual respect for territorial sovereignty to be relevant also for prevention of transboundary environmental harm. Hence, the rejection of the connection between the no-harm rule and principle 21 implies that such practice is irrelevant. This in turn undermines the contention that prevention of transboundary environmental harm, as reflected in principle 21, is established by an obligation of customary international law.[89]

The distinctive feature of principle 21, which has been substantially disregarded, lies in the *collective nature* of the underlying interest, i.e., *the protection of the environment per se*, meaning the environment in its entirety, with respect to all of its constituent parts. From this perspective, protection of the environment amounts to a community interest: impairment of the environment *in and of itself* causes harm that is of concern to the international community as a whole. Accordingly, as will be illustrated below, the Stockholm Conference marked a turning point:[90] on that occasion, the need to prevent harm to the environment in itself was recognised for the first time. This need was new at that time or, at any rate, there had previously been lack of awareness of it.

The above observation that the collective nature of the interest underlying prevention of environmental harm has been disregarded must not be understood as implying that it has never been acknowledged within legal scholarship. On the contrary, the significance of principle 21 to the international community as a whole has long been

[89] See also Ong, 'International Environmental Law', cit., at 15-16, who, after stressing the difference between the no-harm rule and principle 21, suggests that the latter 'requires the provision of further evidence of application by State practice and judicial support of the full extent of its implications […] to establish its independent legal authority' (ibid., at 16).

[90] See *infra*, Section 2.3.2.

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stressed.[91] Indeed, the alleged customary obligation to prevent transboundary environmental harm has sometimes been deemed to be of an *erga omnes* nature,[92] at least as far as harm to the environment of areas beyond the limits of national jurisdiction is concerned.[93] On this view, the purported obligation to prevent transboundary environmental harm is owed to the international community as a whole, and the wrongdoer's responsibility for its breach could in principle be invoked by all States on behalf of the international community.[94]

Nevertheless, *as far as the origin of prevention of transboundary environmental harm is concerned*, authors seem to have overlooked the collective nature of its underlying interest. Although they have often emphasised the difference in rationale between the no-harm rule and principle 21, prevention of transboundary environmental harm has nonetheless been conceived of as a development of the no-harm rule.[95]

The aspect that has been underestimated is the fact that the unitary view of prevention of transboundary environmental harm and the no-harm rule turns out to be misleading, because it implies a

[91] See Paolo Picone, 'Obblighi reciproci ed obblighi *erga omnes* degli Stati nel campo della protezione internazionale dell'ambiente marino dall'inquinamento', in Vincenzo Starace (ed.), *Diritto internazionale e protezione dell'ambiente marino* (Milano: Giuffré 1983), 15, at 28-30, also in Paolo Picone, *Comunità internazionale e obblighi 'erga omnes'. Studi critici di diritto internazionale* (3rd ed., Napoli: Jovene 2013), 1, at 18-20.

[92] Albeit with regard to a broader 'obligation of prevention', see especially Leslie-Anne Duvic-Paoli, *The Prevention Principle in International Environmental Law* (Cambridge: Cambridge University Press 2018), at 321-323. On the general relevance of international environmental law for the consolidation of the concept of obligations *erga omnes*, see Maurizio Ragazzi, *The Concept of International Obligations* Erga Omnes (Oxford: Oxford University Press 1997), at 154-162.

[93] For example, according to Johan D. Van der Vyver, 'State Sovereignty and the Environment in International Law' (1992) 109 *South African LJ* 472, at 494, 'there can be little doubt that environmental dereliction which does have an impact on internationally defined res omnium communes violates a peremptory norm of general international law and may be prosecuted (by any state) as the breach of a duty erga omnes'. See likewise Pineschi, 'I principi', cit., at 112 and 140-147.

[94] For now, the issue of the classification of prevention of transboundary environmental harm as an obligation *erga omnes* is of course irrelevant: it presumes that such an obligation does indeed exist under customary international law.

[95] See again Duvic-Paoli, *The Prevention Principle*, cit., at 10 ('because prevention finds its origins in the no-harm rule, it still integrates it to varying degrees. However […] prevention is characterized by its own rationale and thus has evolved beyond the no-harm rule'). See also Dupuy, Viñuales, *International Environmental Law*, cit., at 63-67.

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merger of two interests that are *structurally* different. Whereas the interest in the protection of the environment per se, on which prevention of transboundary harm to the environment is based, has a collective relevance, the interest behind every State's obligation to respect other States' territorial sovereignty is of an individual nature. Thus, the no-harm rule may be reduced to bundles of bilateral relations between the State of origin of the harm and the State in whose territory the harm takes place. Such a bilateral structure is typical of the traditional international law of coexistence, in which specifically mutual respect for territorial sovereignty played a foundational role, as has been pointed out above.[96]

The misleading nature of this merger becomes plainly apparent once a comparison is made with the relationship between the treatment of foreign nationals and international protection of human rights. It would be far-fetched to assert that the rules governing the treatment of foreign nationals could lay the foundations for international human rights protection, the origins of which have been consistently identified in the awaking of consciences following the atrocities perpetrated during the Second World War.[97] Admittedly, the rules on the treatment of foreign nationals are based on the individual interest of the State of citizenship and on the idea of States' mutual respect for territorial sovereignty: they are typical of the international law of coexistence.[98] The relevant obligations hence give rise to bundles of bilateral relations between the territorial State, to whose jurisdiction a person is subject, and the State of which the person is a citizen. By contrast, human rights protection tends to

[96] See *supra*, Section 2.2.1.

[97] See Antonio Cassese, *International Law* (2nd ed., Oxford: Oxford University Press 2005), at 376-377; Ed Bates, 'History', in Daniel Moeckli, Sangeeta Shah and Sandesh Sivakumaran (eds.), *International Human Rights Law* (Oxford: Oxford University Press 2010), 17, at 27; Christian Tomuschat, *Human Rights. Between Idealism and Realism* (3rd ed., Oxford: Oxford University Press 2014), at 21-22; Focarelli, *International Law*, cit., at 411.

[98] As was stressed by Friedmann, 'General Course', cit., at 91, the 'set of rules designed to regulate the peaceful co-existence of all sovereign States' includes 'the responsibility of States for injury done to the persons or properties of the nationality of another State'. Indeed, this rule is somehow inherently linked to the no-harm rule, over and above the fact that both of them belong to the international law of coexistence: it would make little sense if States were obliged to respect foreigners residing in or passing through their territory (or the property of such persons situated in their territory), whilst being free to use or permit the use of their territory in such a manner as to cause significant harm to persons and property in the territory of other States.

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give rise to integral or collective obligations (*erga omnes* or, as for human rights treaties, *erga omnes partes*), because the underlying interest resides in the protection of human beings as such – which resembles protection of the environment per se.

Finally, the contradictory nature of the understanding of prevention of transboundary environmental harm as a development of the no-harm rule likewise emerges from another standpoint relevant to their underlying interests, namely *the kind of limitation* applicable to each State's sovereignty over its own natural resources. In particular, such a unitary understanding dictates that the limitation triggered by prevention of transboundary environmental harm must *at the same time* be both intrinsic and extrinsic to States' sovereignty over natural resources. In fact, it should be borne in mind that prevention of transboundary environmental harm necessarily entails a limitation of territorial sovereignty. The articulation of principle 21 tellingly mirrors the contrast between States' sovereignty over natural resources and prevention of transboundary environmental harm: the former is restated *as a right* whereas the latter is set forth *as a related responsibility*.[99]

That said, when anchored in the no-harm rule, principle 21 implies a limitation that is logically inherent within territorial sovereignty, insofar as every State's right to exploit its natural resources is limited by the *equal sovereign right* of other States to exploit their own natural resources, which would be impaired by transboundary environmental harm. However, the limitation must also be extrinsic to territorial sovereignty, as far as harm to the environment of areas beyond the limits of national jurisdiction is concerned. Therefore, as mentioned above, the rationale of the limitation would appear puzzlingly to be at the same time both intrinsic and extrinsic to territorial sovereignty. On the other hand, once it has been anchored in protection of the environment per se, the limitation implied by prevention of environmental harm is always – and thus *coherently* – extrinsic to territorial sovereignty, as regards both harm to the environment of other States and harm to the environment in international areas. In neither case can the limitation be founded on territorial sovereignty, because it does not rest on the repercussions of environmental harm on the territorial sovereignty of other States. Whether or not another State's territory is involved, it is the environment in itself that comes into consideration.

[99] On that articulation, see also Duvic-Paoli, *The Prevention Principle*, cit., at 46-48.

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In conclusion, by virtue of its underlying interest in protection of the environment per se, principle 21 cannot be regarded as constituting the middle ground between the no-harm rule and the so called 'principle of preventive action' within the purported process of evolution of prevention of transboundary environmental harm. Not only does the link between principle 21 and the no-harm rule prove to be deceptive or contradictory, but the focus on protection of the environment per se also reveals that, in this respect, there is no difference between principle 21 and this 'principle of preventive action'. As the aim to protect the environment per se is from the outset the distinctive interest underpinning prevention of transboundary environmental harm, one cannot agree with the view that principle 21 has now been superseded by the alleged 'principle of preventive action'.

2.3.2. *Protection of the Environment Per Se as the Interest Underpinning Prevention of Transboundary Environmental Harm in Principle 21*

Since the fallacy of grounding prevention of transboundary environmental harm in the no-harm rule is caused by disregard for the collective interest in the protection of the environment per se, as the distinctive feature of principle 21 of the Stockholm Declaration,[100] it is necessary to demonstrate that the interest underlying principle 21 is in fact protection of the environment per se, as a community interest. To this end, with a view to understanding that provision, the interpretative canons typical of written treaties, as codified by the Vienna Convention on the Law of Treaties, can be applied by analogy considering that, while being non-binding (a characteristic one cannot lose sight of), the Stockholm Declaration is a written act adopted by States participating in an international conference.[101]

[100] Declaration of the United Nations Conference on the Human Environment, in Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, A/CONF.48/14/Rev.1.

[101] In other words, based on the interpretative criteria set forth in the Vienna Convention, one cannot go so far as to regard the provisions of the Stockholm Declaration as binding rules by virtue, for instance, of the more prescriptive than hortatory tone of the language, unless the Declaration itself is re-classified. Such an approach is consistent with the most prudent solution upheld in international case law and legal scholarship: the application of the interpretative canons of the Vienna Convention to acts other than treaties should be possible to the extent that it is not incompatible with the distinguishing features of those acts, which hence ought to be taken into account. As is well-known, the issue has been dealt with especially

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Starting with the wording of principle 21, in spite of the distinction apparently drawn between harm to the environment of other States and harm to the environment of areas beyond the limits of national jurisdiction, the common denominator for their prevention might still be found in the protection of the environment per se, as a community interest.

It is true that the collective nature of the underlying interest is more directly apparent from the reference to the environment of areas beyond national jurisdiction, as these are themselves, by definition, of collective relevance. Nonetheless, the interest in the protection of the environment per se likewise underpins the part of principle 21 that concerns the environment of other States, as a comparison with the classic formulation of the no-harm rule in the *Trail Smelter* arbitration plainly shows. In its famous dictum in that case, the Arbitral Tribunal cited an injury in or to the territory of *another State*: although this might have been due to the specific circumstances of

in relation to resolutions of the UN Security Council and unilateral acts of States, including reservations to treaties and declarations accepting the jurisdiction of the International Court of Justice, whereas little heed has seemingly been paid to the interpretation of soft law. Suffice it to say that, generally speaking, there appear to be two main alternatives: on the one hand, the application by analogy of the interpretative criteria of the Vienna Convention as such; on the other hand, the more cautious recourse to those criteria simply to find 'some guidance', with the consequence that they must be adapted to the characteristics of the acts concerned. However, the difference between the two alternatives, while clear in theory, may in fact tend to blur. Moreover, the very features of the act to be interpreted might be identified in various ways. In both respects, the advisory opinion issued by the Seabed Dispute Chamber of the International Tribunal for the Law of the Sea is illustrative (SDC, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, advisory opinion of 1 February 2011, *ITLOS Reports 2011*, 10). As for the former, in considering how to interpret the Regulations adopted by the International Seabed Authority (ISA), the Chamber held that 'the interpretation rules set out in the Vienna Convention may, *by analogy, provide guidance* as to their interpretation' (ibid., at 29, para. 60, emphasis added). As for the latter, the Chamber stressed that those Regulations 'are binding texts negotiated by States and adopted through a procedure similar to that used in multilateral conferences' (ibid.): on that account, it seemingly assimilated them to treaties. Thus the Chamber did not mention that, while being formally approved by the ISA Assembly as the plenary organ comprising of all its members, the Regulations are previously adopted on a provisional basis by the Council, which is the executive organ of the ISA and only has thirty-six members: see Articles 160(2)(f)(ii) and 162(2)(o)(ii) UNCLOS. Accordingly, the ISA Regulations bear perhaps little resemblance to treaties, and are more akin to UN Security Council resolutions. In effect, the Chamber referred to the case law of the International Court of Justice concerning the interpretation of Security Council resolutions (ibid.).

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the case at issue, in fact the reference to the environment of *other States*, in principle 21, meant that the possibility that the environment of not only one other State but of *many States* is damaged must be considered. Therefore, 'the environment of other States' might potentially be the environment of all States, viz. all the States *other than the State of origin* of the harm. It might be meant as referring ultimately to the environment in its entirety, which is obviously of concern to 'other States' – in the sense of all States different from the State of origin – and, hence, to the international community as a whole. Accordingly, the relevant part of principle 21 should not be regarded as a mere restatement of the no-harm rule and thus linked to mutual respect for territorial sovereignty.

The context of principle 21 also indicates that protection of the environment per se represents its underlying interest. This is because this idea is pervasive throughout the Stockholm Declaration on the Human Environment. At the Stockholm Conference, under the aegis of the United Nations, the prominent issue was to acknowledge the need to protect the environment. The Conference has commonly been regarded as the starting point for international environmental law. What is remarkable here is how it revealed the rise of protection of the environment per se, as a community interest.

In particular, the name itself of the Conference and of the Declaration, entitled 'the human environment', expresses a perception of the environment as an interconnected unity.[102] Once the environment has been

[102] The fact that the first United Nations conference dealing with the environment was dedicated to the *human* environment has sometimes been criticised as entailing an anthropocentric approach, which would be inadequate for the protection of the environment itself: see Pineschi, 'I principi', cit., at 102-103. In fact, the preamble to the Stockholm Declaration portrays man as 'both the creature and moulder of his environment', which is described as instrumental in giving man 'physical sustenance and afford[ing] him the opportunity for intellectual, moral, social and spiritual growth' (para. 1). Similarly, the natural environment is said to be 'essential to [man's] well-being and to the enjoyment of basic human rights – even the right to life itself' (ibid.), with the result that protection of the environment constitutes a 'major issue' in that environmental degradation 'affects the well-being of peoples and economic development throughout the world' (preamble, para. 2). Accordingly, since '[o]f all things in the world, people are the most precious' (ibid., para. 5), the problem with 'man's capability to transform his surrounding', when '[w]rongly or heedlessly applied', is first the ensuing harm to 'human beings', whereas the harm to the environment only comes into consideration on a secondary basis (ibid., para. 3). Indeed, the anthropocentric approach was already apparent in Res. 1346 (XLV), 30 July 1968, of the Economic and Social Council, in which it recommended that the UN General Assembly convene an international conference to address the 'problems of the human environment'. The preamble states that it is 'in the interest of man' that intensified action was needed to

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conceived of as *the environment of all mankind*, then its protection will amount to a collective interest and, within the international legal system, to an interest vested in the international community as a whole. Indeed, the movement of opinion that led to the Stockholm Conference was based on a universal conception of the environment and arose out of the realisation that there was not just a threat, but in actual fact a *common* global threat, with the result that an action was necessary on international level.[103] The preamble to the Stockholm Declaration hence ends with a call for international cooperation: a 'growing class of environmental problems' is cited which 'will require extensive co-operation among nations and actions by international organizations *in the common interest*', since those problems 'are regional or global in extent *or because they affect the international realm*'.[104]

Accordingly, there is generally no indication in the Stockholm Declaration regarding the location of environmental harm, and the terms 'human environment' or 'the environment' *tout court* are mostly used.[105] This is true not only with regard to the general relationship between man and the environment,[106] but may also be observed in those parts that specifically deal with issues such as development,[107] urbanisation,[108] demographic growth,[109] entrustment of national institutions,[110] science and technology,[111] education,[112]

limit or eliminate the impairment of the environment and to protect and improve the natural surroundings. Rather than focussing on the degradation of the environment, the Economic and Social Council declared that it was concerned with its adverse consequences on 'the condition of man, his physical and mental well-being, his dignity and his enjoyment of basic human rights' (ibid., preamble).

[103] As is stressed by Alexandre Kiss, Jean-Didier Sicault, 'La Conférence des Nations Unies sur l'environnement (Stockholm, 5/16 juin 1972)' (1972) 18 *Ann. fr. dr. int.* 603, at 605, 'pour la première fois dans l'histoire un problème a été spontanément posé par l'opinion publique […] comme concernant l'humanité toute entière, comme mettant en cause son existence même ou, du moins, comme compromettant son avenir. Il y a, certes, la prise de conscience devant le danger mais il y a aussi la prise de conscience que ce danger est commun'.

[104] Stockholm Declaration, Section I, para. 7 (both emphases added).

[105] See also Van der Vyver, 'State Sovereignty', cit., at 493 ('The Stockholm Declaration likewise did not confine its directives to interstate or transfrontier conflict situations when it emphasized the need to safeguard natural resources of the earth').

[106] See principle 1.

[107] In several respects, see principles from 8 to 14.

[108] See principle 15.

[109] See principle 16.

[110] See principle 17.

[111] See principle 18.

[112] See principle 19.

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transfer of information, experience and technologies,[113] consideration of prevailing national values,[114] international cooperation,[115] and the role of international organisations.[116]

The terms 'earth' and 'nature' are sometimes employed as well, which even more so embody the idea of the environment as a unity. To be specific, the 'natural resources of the earth' must be protected under principle 2, the 'capacity of the earth to produce vital renewable resources' must be maintained under principle 3, and the 'non-renewable resources of the earth' must be preserved from exhaustion under principle 5. As regards protection and management of wildlife and its habitat, 'nature conservation […] must […] receive importance', according to principle 4.

The idea of protection of the environment per se is also apparent from those principles that specifically deal with environmental harm in addition to principle 21 (the wording of which has been analysed above) and related principle 22, which deals with the development of 'international law regarding liability and compensation for victims of pollution and other environmental damage'.[117] By way of illustration, under principle 6, the 'discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted'. In the same vein, States are invited by principle 7 to 'take all possible steps to prevent pollution of the seas by [hazardous] substances'. Finally, according to principle 26 '[m]an and his environment must be spared the effects of nuclear weapons and all other means of mass destruction'.

The preparatory works confirm that the idea of protection of the environment per se lies at the heart of principle 21. In the original proposal made by the Working Group of the Preparatory Committee, rather than prevention of harm to the environment of other States or of areas beyond the limits of national jurisdiction, it is the 'need to ensure the preservation and enhancement of the human environment' that, without any further qualification, was cited as the limitation of every State's sovereignty over its natural resources.[118] Equivalent pro-

[113] See principle 20.
[114] See principle 23.
[115] See principle 24.
[116] See principle 25.
[117] Principle 22 will be discussed in more detail *infra*, Section 6.3.5.
[118] As reported by Louis B. Sohn, 'The Stockholm Declaration on the Human Environment' (1973) 14 *Harvard ILJ* 423, at 488, the draft statements of the Working Group read as follows: 'Each State has inalienable sovereignty over its natural

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posals were advanced by several States in the subsequent discussion within the Working Group.[119]

The fact that, in the end, the current version of principle 21 was adopted does not indicate that the idea of protection of the environment per se was rejected within the *travaux préparatoires*. First, as pointed out above, the formulation of the second sentence of principle 21 is consistent with that idea. Secondly, the final version was seemingly the outcome of a compromise aimed at avoiding abuses, including abuses of 'a right to protection of the environment'. It has been reported that certain States attempted to take the objective of environmental protection to extremes: the proposal was made that sovereignty should include the right of every State 'to take all necessary and appropriate measures to protect its environmental integrity'.[120] Concerns were thus expressed that such a right might be exercised arbitrarily owing to the vagueness of the very notion of 'environmental integrity'.[121] For their part, developing countries feared excessive limitations on territorial sovereignty, and some of them were disinclined to accept any limitations at all.[122] In this context, it is obvious that a reference to protection of the environment in general terms would have been perceived as entailing too wide a limit on every State's sovereign right to exploit its natural resources, and even a risk of abuses. That said, there is no reason to doubt that the need to preserve and enhance the environment per se, as the limitation of territorial sovereignty originally proposed, did indeed remain the interest underpinning principle 21.[123]

resources; Each State has the responsibility to exercise its sovereignty over its natural resources in a manner compatible with the need to ensure the preservation and enhancement of the human environment'.

[119] For instance, Sweden suggested that States 'must use their power to preserve and enhance the human environment' and the Netherlands proposed that each State 'shall take due account of the effects of its activities on the ecological balance of biosphere' (as reported again by Sohn, 'The Stockholm Declaration', cit., at 490).

[120] Ibid., at 488-489.

[121] Ibid., at 489. Indeed, in Sohn's opinion, these concerns were unfounded since the exercise of every State's right to its own environmental integrity must be subject to compliance with the Charter of the United Nations and the general principles of international law.

[122] Ibid., at 488. On the tensions between the aspirations of developed countries and the needs of developing countries at the Stockholm Conference, as well as the strength of the latter owing to their cohesion, see Kiss, Sicault, 'La Conférence', cit., at 623-625.

[123] While conceding that '[i]t would have been better […] if some clearer guideline had been inserted in the first part of Principle 21', Sohn, 'The Stockholm Dec-

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From a broader perspective, the fact that the Stockholm Conference was held at the start of the 1970s, specifically in 1972, should not pass unnoticed. This is not only due to the rise, throughout the 1960s, in the need to address environmental degradation as a result of the unprecedented technological and industrial development following the Second World War. Moreover, it was during the 1970s, following the shift from mere coexistence towards cooperation in international law,[124] that the existence of goods and interests belonging to the international community as a whole was acknowledged,[125] within the context of the so-called international law of interdependence: as has been noticed within legal scholarship, it is against this backdrop that the Stockholm Conference took place.[126] Admittedly, it is worth observing that, only two years before the Conference, the International Court of Justice had for the first time referred to the category of *erga omnes* obligations in its famous *obiter dictum* in the *Barcelona Traction* case.[127]

2.3.3. *Further Evidence of the Collective Nature of the Interest Underpinning Prevention of Transboundary Environmental Harm in Principle 21*

The collective nature of the interest underpinning prevention of transboundary harm to the environment is apparent not only from

laration', cit., at 492, held that '[a]n over-broad interpretation of [States'] sovereign right [to exploit their natural resources] would be inconsistent with the rest of the Declaration which emphasizes the fact that no part of the global environment can be separated from that rest and that it has to be preserved and improved', with the result that '[d]estruction and depletion of irreplaceable resources are clearly condemned by the Declaration, even when there is no effect abroad, and a state cannot engage in such activities behind the shield of misconceived sovereignty'.

[124] On this shift, see especially Friedmann, 'General Course', cit., at 91-109; Id., 'Droit de coexistence', cit. See also Abi-Saab, 'Whither the International Community?', cit., at 254-265.

[125] Some authors have emphasised the concept of solidarity in order to describe the emergence and protection of community values and interests in international law, including in relation to environmental protection: see Rüdiger Wolfrum, 'Solidarity amongst States: An Emerging Structural Principle of International Law', in Pierre-Marie Dupuy et al. (eds.), *Common Values in International Law. Essays in Honour of Christian Tomuschat* (Kehl: N.P. Engel Verlag 2006), 1087; and Holger P. Hestermeyer, 'Reality or Aspiration? Solidarity in International Environmental and World Trade Law', in Holger P. Hestermeyer et al. (eds.), *Coexistence, Cooperation and Solidarity.* Liber Amicorum *Rüdiger Wolfrum* vol. I (Leiden/Boston: Martinus Nijhoff Publishers 2012), 45.

[126] See Picone, 'Obblighi reciproci ed obblighi *erga omnes*', cit., at 25-29.

[127] ICJ, *Barcelona Traction, Light and Power Company, Limited* (*Belgium* v. *Spain*), judgment of 5 February 1970, *I.C.J. Reports 1970*, 3, at 32, paras. 33-34.

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principle 21 of the Stockholm Declaration. It is also corroborated by further evidence, which illustrates that the idea of protection of the environment per se, as a community interest, took root in the wake of the Stockholm Conference, in particular over the course of the following decade.[128] Overall, the hypothesis proposed above that principle 21 should not be regarded as a development of the no-harm rule, nor as the predecessor of the so-called 'principle of preventive action', is confirmed.

The Charter of Economic Rights and Duties of States, adopted by the UN General Assembly in 1974, is particularly illustrative in this respect.[129] As has been stressed in legal scholarship,[130] it is interesting to note that Article 30, which deals with 'the protection, preservation and enhancement of the environment', is included in the two-provision chapter entitled 'Common Responsibilities Towards the International Community': protection of the environment was thus conceived of as a community interest, viz. a duty owed to the international community as a whole. The spirit of that chapter is plainly apparent in the light of the only other provision contained in it: Article 29 deals with the exploration and exploitation of the resources of the international seabed area as the 'common heritage of mankind'.[131]

Considering that Article 30 reiterates prevention of transboundary environmental harm, as formulated in principle 21 of the Stockholm Declaration, one must infer that the collective nature of the interest in the protection of the environment per se was inherent in prevention of transboundary environmental harm. In fact, just two years after the Stockholm Conference, the overwhelming majority of States agreed, within Article 30 of the Charter, to include prevention of transboundary environmental harm among the common responsibilities towards the international community.[132]

[128] The analysis is limited to this period in that the issue here is to demonstrate that protection of the environment per se, as a concern for the international community as a whole, was the *original* interest underpinning prevention of transboundary environmental harm under principle 21.

[129] UNGA Res. 3281 (XXIX) of 12 December 1974.

[130] See Picone, 'Obblighi reciproci ed obblighi *erga omnes*', cit., at 30.

[131] The Charter is comprised of a preamble and four chapters dealing respectively with 'Fundamentals of International Economic Relations', 'Economic Rights and Duties of States', 'Common Responsibilities towards the International Community', and 'Final Provisions'.

[132] Res. 3281 (XXIX), cit., was adopted by 120 votes to 6, with 10 abstentions. In particular, Belgium, Denmark, Germany, Luxembourg, the United Kingdom and the United States voted against, whereas Austria, Canada, France, Ireland, Israel,

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In addition, the Charter of Economic Rights and Duties of States confirms the perception of the distinction between prevention of transboundary environmental harm and the no-harm rule, at least as far as shared natural resources are concerned. Whereas prevention of transboundary harm to the environment, being rooted in a collective interest, is classified as a common responsibility towards the international community, it is under a different provision appearing elsewhere (Article 3) that States are invited to cooperate in exploiting shared natural resources in order to achieve their optimum use and in order for each State to avoid 'causing damage to the legitimate interests of others'.[133] Whilst being couched in general terms and including interests other than exploitation, such as navigation in international watercourses, Article 3 must be understood as referring also to transboundary harm in or to the territory of other States, provided that their interest in exploitation is impaired. This is suggested by the fact that the right to use natural resources as part of each State's sovereignty is codified in the previous provision, Article 2.[134]

Finally, it should be observed, as a general consideration, that the Charter of Economic Rights and Duties of States is of great evidential value in that it was promoted by developing States as one of the founding instruments of the New International Economic Order.[135]

Italy, Japan, the Netherlands, Norway and Spain abstained. However, an analysis of both the plenary meetings (UN Doc. A/PV.2315 and Corr.1, and A/PV.2316) and the meetings of the Second Committee (UN Doc. A/C.2/SR.1649, A/C.2/SR.1650 and A/C.2/SR.1651) of the General Assembly indicates that, as might be expected, the reason for disagreement did not lie in prevention of transboundary environmental harm and more generally in Article 30. As the pertaining Report of the Second Committee shows (UN Doc. A/9946 and Corr.1), some States (namely Belgium, France, Germany, Greece, Italy, Japan, the United Kingdom and the United States) submitted an amendment 'for the insertion of the words "in accordance with pertinent international norms, regulations and obligations" between the words "All States have" and "the responsibility" in the fourth sentence of article 30' (ibid., at 18). Although the amendment was rejected by 91 votes to 22, with 12 abstentions (ibid., at 23), Article 30 was eventually adopted by 126 votes to none, with only 3 abstentions (ibid., at 25).

[133] Article 3 is included in chapter II, which deals specifically with the economic rights and duties of States.

[134] Pursuant to Art. 2(1), '[e]very State has and shall freely exercise full permanent sovereignty, including possession, use and disposal, over all its wealth, natural resources and economic activities'.

[135] See UNGA Res. 3201 (S-VI) of 1 May 1974, 'Declaration on the Establishment of a New International Economic Order', para. 6: 'The United Nations […] must have an even greater role in the establishment of a new international economic order. The Charter of Economic Rights and Duties of States, for the preparation

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The fact that such a document categorises prevention of transboundary environmental harm under the common responsibilities towards the international community stands out in that developing countries were largely opposed to protection of the environment. As mentioned above, they feared that it could encroach upon their sovereignty over natural resources as well as their right to development.[136]

The work of the International Law Commission also confirms that protection of the environment per se, as a community interest, was already a distinguishing feature of prevention of transboundary environmental harm during the 1970s. In 1976, within the context of the work on State responsibility, the International Law Commission provisionally adopted Article 19, which introduced the distinction between two categories of internationally wrongful act: international crimes and international delicts, with the former resulting 'from the breach by a State of an obligation so essential for the protection of fundamental interests of the international community that its breach is recognized as a crime by that community as a whole'.[137] As a residual category, any wrongful act other than an international crime would amount to an international delict.[138] Under Article 19(3)(d), the International Law Commission included, among the instances of international crime, the 'serious breach of an international obligation of essential importance for the safeguarding and preservation of the human environment, such as those prohibiting massive pollution of the atmosphere or of the seas'.[139] Leaving aside the uncertainties arising in relation to the wording of Article 19 and surrounding the very notion of 'international crime',[140] which the International Law

of which the present Declaration will provide an additional source of inspiration, will constitute a significant contribution in this respect'. Section VI of UNGA Res. 3202 (S-VI) of 1 May 1974, 'Programme of Action on the Establishment of a New International Economic Order', also refers to the Charter of Economic Rights and Duties of States, which is described as 'an effective instrument towards the establishment of a new system of international economic relations based on equity, sovereign equality, and interdependence of the interest of developed and developing countries'. On the New International Economic Order see also *infra*, Section 3.2.2.

[136] Admittedly, Art. 30 is the only one that deals with protection of the environment, and within it environmental policies are subordinated to the right to development: 'The environmental policies of all States should enhance and not adversely affect the present and future development potential of developing countries'.

[137] Report of the International Law Commission on the Work of Its Twenty-Eighth Session (1976), UN Doc. A/31/10, at 75.

[138] Ibid.

[139] Ibid.

[140] In particular, the prerequisite of the 'seriousness' of the breach was far from

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Commission eventually abandoned,[141] it is noteworthy that protection of the environment per se was classified as a fundamental interest of the international community,[142] without giving any weight to the location of the environmental harm and, in particular, any mention of whether it occurs in areas beyond the limits of national jurisdiction.

clear, both in itself and in respect of its relationship with the 'essential nature' of the obligation breached: see Giuseppe Palmisano, 'Les causes d'aggravation de la responsabilité des États et la distinction entre «crimes» et «délits» internationaux' (1994) 98 *Rev. gén. dr. int. pub.* 629. From a broader perspective, the relationship between *jus cogens*, *erga omnes* obligations, and international crimes committed by States is a debated issue: see Gabriella Carella, *La responsabilità dello Stato per crimini internazionali* (Napoli: Jovene 1985); Giorgio Gaja, 'Obligations *Erga Omnes*, International Crimes and *Jus Cogens*: A Tentative Analysis of Three Related Concepts', in Jospeh H.H. Weiler, Antonio Cassese and Marina Spinedi (eds.), *International Crimes of State. A Critical Analysis of the ILC's Draft Article 19 on State Responsibility* (Berlin/New York: de Gruyter 1989), 151; André de Hoogh, 'The Relationship between *Jus Cogens*, Obligations *Erga Omnes* and International Crimes: Peremptory Norms in Perspective' (1991) 42 *Austrian JPIL* 183; Id., *Obligations* Erga Omnes *and International Crimes. A Theoretical Inquiry into the Implementation and Enforcement of the International Responsibility of States* (The Hague/London/Boston: Kluwer Law International 1996); Nina H.B. Jørgensen, *The Responsibility of States for International Crimes* (Oxford: Oxford University Press 2000); Linos-Alexander Sicilianos, 'The Classification of Obligations and the Multilateral Relations of International Responsibility' (2002) 13 *EJIL* 1127; Paolo Picone, 'La distinzione tra norme internazionali di *jus cogens* e norme produttive di obblighi *erga omnes*' (2008) 91 *Riv. dir. int.* 5; James Crawford, 'International Crimes of States', in James Crawford, Alain Pellet and Simon Olleson (eds.), *The Law of International Responsibility* (Oxford: Oxford University Press 2010), 405; Id., *State Responsibility: The General Part* (Cambridge: Cambridge University Press 2013), at 362-394. For a comprehensive review and further references, see Maria Irene Papa, *I rapporti tra la Corte internazionale di giustizia e il Consiglio di sicurezza* (Padova: CEDAM 2006), at 499-507.

[141] It is superfluous to recall that the category of international crimes was replaced by that of 'serious breaches of obligations under peremptory norms of general international law' in the Draft Articles on Responsibility of States for Internationally Wrongful Acts, in Report of the International Law Commission on the Work of Its Fifty-Third Session (2001), UN Doc. A/56/10, 26.

[142] The importance of draft Art. 19(3)(d) from the standpoint of the emergence of goods and interests of the international community as a whole is especially underlined by Picone, 'Obblighi reciproci ed obblighi *erga omnes*', cit., at 31-32. Nonetheless, Fitzmaurice, 'International Protection', cit., at 144-149, is sceptical as regards the possibility of classifying breaches of environmental norms under the category of 'international crimes': 'Even if the concept of international crimes would not have been abandoned in Articles on State Responsibility, it is very doubtful that this notion would have covered severe pollution of the atmosphere or of the seas' (at 149).

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The reference to 'the human environment' in general rather than the environment *in international areas* stands out in that it was the result of an intentional choice of the International Law Commission. The original proposal by Special Rapporteur Roberto Ago envisaged, in the area of environmental protection, the serious breach of an international obligation aimed at 'the conservation and the free enjoyment for everyone of a resource common to all mankind' as an international crime:[143] plainly, the Special Rapporteur had in mind the global commons or resources in international areas, such as the high seas or outer space.[144] Although the available documentation does not shed any light on the reasons that led the Drafting Committee to make this change,[145] the replacement of the 'common resources' with 'the human environment' is significant as such.[146] In this regard,

[143] It was stated that the obligation should be 'established by a norm of general international law accepted and recognized as essential by the international community as a whole': see Roberto Ago, 'Fifth Report on State Responsibility' (1976-II-1) *YILC* 3, at 54, para. 155. Provided that they had this feature, also serious breaches of obligations concerning 'respect for the principle of the equal rights of all peoples and of their right to self-determination' and 'respect for human rights and fundamental freedoms' would amount to international crimes (ibid.). Finally, the breach 'of an international obligation established for the purpose of maintaining international peace and security' would also constitute an international crime (ibid.).

[144] Therefore, one member of the International Law Commission, Zenon Rossides, suggested that the term 'resource common to all mankind' be replaced with 'the more appropriate one "resources which constitutes the common heritage of mankind"': see the Summary Record of the 1375th Meeting (UN Doc. A/CN.4/SR.1375), (1976-I) *YILC* 78, at 83, para. 35. For a tentative reconstruction of the history of the proposal by the Special Rapporteur see *infra*, note 147.

[145] The debate within the International Law Commission focused on the very notion of 'international crime', rather than on its specific manifestations: see the Summary Record of the 1371st to 1376th Meetings, (1976-I) *YILC* 54, at 55-91, as well as the Draft Article on State Responsibility: Texts Adopted by the Drafting Committee (UN Doc. A/CN.4/L.243 and Add.1 and Add.1/Corr.1), (1976-I) *YILC* 234, at 239-253.

[146] As was stressed by one member of the International Law Commission, Nikolai A. Ushakov, 'the reference to "preservation of the human environment" suggest[s] the biosphere in general' (Texts Adopted by the Drafting Committee, cit., at 248, para. 10); accordingly, considering also that the expression '"massive pollution of the atmosphere or of the seas" did not refer to an existing concept', he suggested that 'it would be wiser to delete from subparagraph (*d*) the words "such as those prohibiting massive pollution of the atmosphere or of the seas"' (ibid.). Indeed, the replacement was not free from any criticism, but was maintained all the same in the end. The Chairman himself, Abdullah El-Erian, stated that he had 'misgivings about the replacement of the notion of a "resource common to all mankind", which was in the original text of paragraph 3 (*c*), by the notion of "human environment"

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it is worth noting that the International Law Commission included the Stockholm Declaration amongst its argumentation in support of the conclusion that international obligations flowing from the majority of environmental rules were 'intended to safeguard interest so vital to the international community that a serious breach of those obligations cannot fail to be seen by all members of the community as an internationally wrongful act of a particular serious character, as an "international crime"'.[147]

A final piece of evidence indicating that protection of the environment per se, as a community interest, is the interest that has underpinned prevention of transboundary environmental harm from the outset is offered by the World Charter for Nature, adopted by the General Assembly in 1982.[148] Article 21(d) of the Charter essentially restates prevention of transboundary harm to the environment, as

contained in the text of paragraph 3 (*d*) prepared by the Drafting Committee' (ibid., at 244, para. 48). In more general terms, another member of the International Law Commission, Frank X.J.C. Njenga, affirmed that he 'failed to see why the present draft article omitted a most important aspect of the Special Rapporteur's text, namely, the concept of "the conservation and the free enjoyment for everyone of a resource common to all mankind"', because '[i]f the Commission wished to formulate a text that would be applicable in the future, it could not ignore an idea of that nature' (ibid., at 246-247, para. 79).

[147] Report of the International Law Commission on the Work of Its Twenty-Eighth Session, cit., at 109, para. 32. Indeed, one might even go further and speculate that the Stockholm Conference had a decisive influence on the shift from the original proposal of the Special Rapporteur to the final version of Art. 19, which was provisionally adopted by the International Law Commission in 1976. This is because the proposal by the Special Rapporteur Roberto Ago, including the part concerning the conservation and free enjoyment of resources common to mankind, was seemingly based on a description of the content of international peremptory norms or *jus cogens* that had been given *prior to the 1972 Stockholm Conference*, specifically in his Introduction 'Droit des traités à la lumière de la Convention de Vienne', in (1971) 134 *Rec. cours* 297, at 324, note 37. There one may read that 'une certaine unité de vues existe en ce qui concerne la détermination des règles que la conscience universelle considère aujourd'hui comme règles de *jus cogens*. En font partie le règles fondamentales concernant la sauvegarde de la paix et notamment celles qui interdisent le recours à la force ou à la menace de la force; les règles fondamentales de caractère humanitaire (interdiction du génocide, de l'esclavage, de la discrimination raciale, protection des droits essentiels de la personne humaine en temps de paix et en temps de guerre); les règles qui interdisent les atteintes à l'indépendance et à l'égalité souveraine de Etats; *les règles qui assurent à tous les membres de la communauté internationale la jouissance de certains biens communs (haute mer, espace extra-atmosphérique, etc.)*' – emphasis added. In fact, the quoted passage was cited by Ago, 'Fifth Report', cit., at 32, note 148.

[148] UNGA Res. 37/7 of 28 October 1982.

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enshrined in principle 21 of the Stockholm Declaration, couching it in nature-oriented terms:[149] States are invited to '[e]nsure that activities within their jurisdiction or control do not cause damage to the *natural systems* located within other States or in the areas beyond national jurisdiction'.[150] The restatement is of great significance,[151] given that the idea of the environment as a unity is pervasive throughout the World Charter for Nature.[152]

It is tellingly proclaimed in the opening provision of the Charter that '[n]ature shall be respected and its essential processes shall not be impaired'.[153] On this view, the location of environmental harm is irrelevant: principles of conservation are said to apply to '*[a]ll areas of the earth*, both land and sea'.[154] Specifically, the 'genetic viability *on the earth* shall not be compromised' and 'population levels of *all life forms*, wild and domesticated, must be at least sufficient for their survival'.[155] The reference to nature in the very name of the Charter

[149] According to Duvic-Paoli, *The Preventive Principle*, cit., at 114, the replacement of the term 'environment' with 'natural systems' represents 'a modification that favours an ecosystemic approach to harm'.

[150] Emphasis added.

[151] Res. 37/7, cit., was adopted by 111 votes to 1 (the United States), with 18 abstentions (Algeria, Argentina, Bolivia, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Ghana, Guyana, Lebanon, Mexico – which subsequently informed the Secretariat that it had intended to vote in favour – Paraguay, Peru, Philippines, Suriname, Trinidad and Tobago, and Venezuela), and the record of the voting indicates that Art. 21(d) of the Charter was not objected to as such. Indeed, Art. 21(d) was already present, as Art. 21(b), in the Draft World Charter for Nature as submitted by then Zaire in the letter of 2 June 1980 addressed to the Secretary-General (UN Doc. A/35/141) and had remained unchanged since then. In general, the United States had – unsuccessfully – requested that the item be delayed because they had 'some problems with the text', which were partly 'caused only by mistakes in translation from the original French text into English', while other problems were said to be 'more substantive in nature' (UN Doc. A/37/PV.48, 833, at 839, paras. 177-178). They interestingly opposed the reference to duties of individuals (ibid., at 844, para. 261) and the use of 'shall' instead of 'should' (ibid., at 845, para. 262). Several Amazonian States which eventually abstained, specifically Brazil, Bolivia, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela (with Brazil speaking also on behalf of the others) had focused in particular on the disregard for developmental interests (ibid., at 842, paras. 220-222, 229) and disputed the mandatory language along with certain 'philosophical and doctrinal principles which [did] not enjoy unanimous support' (ibid., paras. 224-227).

[152] See likewise Duvic-Paoli, *The Preventive Principle*, cit., at 113, who observes that the World Charter for Nature 'embodies a concern for environmental protection *stricto sensu* irrespective of other considerations'.

[153] Art. 1 of the World Charter for Nature.

[154] Art. 3 of the World Charter for Nature (emphasis added).

[155] Art. 2 of the World Charter for Nature (both emphases added).

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underlines the idea that the environment should be protected per se and in its entirety.[156] Not only is the belief solemnly expressed that '[e]very form of life is unique, warranting respect *regardless of its worth to man*',[157] but those 'habitats shall be safeguarded' that are necessary for the survival of all forms of life:[158] ecosystems, organisms, and resources used by man 'shall be managed […] not in such a way as to endanger the integrity of those *other* ecosystems or species with which they coexist'.[159]

It is finally worth considering that prevention of transboundary environmental harm is seemingly connected with another provision of the World Charter for Nature – Article 11 – and this relatedness confirms that the underlying interest of prevention lies in the protection of the environment per se, irrespective of the location of harm.[160] According to Article 11, '[a]ctivities which might have an impact on nature shall be controlled, and the best available technologies that minimize significant risks to nature or other adverse effects shall be used'.[161] This provision thus refers to harm to nature in general terms, including harm occurring *within* the jurisdiction of the State of origin, should it affect the environment in itself, as a community interest. Article 11 is plainly connected with Article 21(d), because 'activities which might have an impact on nature', under the former, coincide or essentially coincide with activities which might cause harm to the 'natural systems' of other States or of areas beyond the limits of national jurisdiction, under the latter. This overlap may be explained by the fact that Article 11 is an operative provision, whereas Article 21(d) is included in the implementing section of the World Charter for Nature. All in all, one is led to conclude that,

[156] However, an anthropocentric approach to protection of the environment is still apparent within the World Charter for Nature. By way of illustration, in the preamble of both the resolution adopting the World Charter for Nature and the Charter itself, emphasis is placed on the 'benefits' deriving from nature. The preamble to the Charter again expresses an awareness that '[m]ankind is part of nature and life depends on the uninterrupted functioning of natural systems *which ensure the supply of energy and nutrients*'. A connection is also drawn between degradation of nature and 'the breakdown of the economic, social and political framework of civilization' as well as between conservation of nature and the maintenance of peace and justice.

[157] Preamble of the World Charter for Nature (emphasis added).

[158] Art. 2 of the World Charter for Nature.

[159] Art. 4 of the World Charter for Nature (emphasis added).

[160] In the words of Duvic-Paoli, *The Preventive Principle*, cit., at 114, 'Principle 11 confirmed the a-territorial perspective of the Charter'.

[161] Art. 11 of the World Charter for Nature.

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in the World Charter for Nature too, prevention of transboundary environmental harm is understood as broadly relating to activities which might cause harm to nature or the environment per se.[162]

2.3.4. *Reconceptualising Prevention of Transboundary Environmental Harm*

In light of the above, it is now necessary to tentatively propose a reconsideration of the concept of transboundary environmental harm as enshrined in principle 21 of the Stockholm Declaration. This principle should not be regarded as an intermediate stage between the no-harm rule and the purported principle of preventive action, nor should it be classified partly as a restatement and partly as a *ratione loci* expansion of the no-harm rule. However, it is still necessary to address the issue as to what the actual meaning of transboundary environmental harm under principle 21 is.

In this respect, a caveat is in order. The remarks set out below are based on the argument that the interest underpinning principle 21 lies in the protection of the environment per se, as a community interest. The research into this interest has sought to critically assess the commonly held grounding of principle 21 in the no-harm rule: to this end, prevention of transboundary environmental harm was regarded *abstractly* as a proposition included within principle 21. Accordingly, the remarks provided below must not in any way be associated with the customary obligation purportedly reflected therein in the opinion of the majority of authors, because the very existence of such an obligation – if any – has not been verified yet in this study. Indeed, since the point at issue thus far has been simply the interest underpinning principle 21, no particular weight was given in the previous sections to the non-binding nature of the Stockholm Declaration, the Charter of Economic Rights and Duties of States, and the World Charter for Nature.

That said, in view of the interest in the protection of the environment per se, the concept of 'transboundary environmental harm' should be understood as referring to the transboundary *significance* of the harm, rather than being circumscribed to its transboundary *location*. When viewed through the lenses of the location of harm,

[162] See also Duvic-Paoli, *The Prevention Principle*, cit., at 113-114 ('the World Charter for Nature offers a codification of prevention in its more advanced form as a principle that adopts an ecosystemic approach to harm and seeks to avoid harm irrespective of its location').

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the term 'transboundary' necessarily qualifies the harm that occurs *outside* the jurisdiction of the State of origin of the harm. However, also environmental harm that takes place *within* its jurisdiction could be of 'transboundary' and even collective relevance, should it amount to harm to the environment per se, as a community interest. This accordingly closes the circle and principle 21 may be viewed as relating to prevention of harm to the environment in and of itself.

Consider by way of illustration massive deforestation of rainforests, either as permitted or as conducted by the relevant territorial State, viz. the State in whose territory the rainforest is situated. From the viewpoint of the territorial State, the rainforest is a national natural resource: its exploitation and eventual destruction constitute domestic matters. On the other hand, the far-reaching repercussions of deforestation of rainforests are now well known: it has adverse effects on global or regional environmental dynamics, including climate change, loss of biodiversity and desertification.[163] Therefore, the preservation and enhancement of rainforests should be of concern to the international community as a whole, even though they are situated in national territories.[164]

In more general terms, one might consider harm to species and ecosystems which, whilst living or located within the jurisdiction of States, contribute to biodiversity on a global level: even though they constitute biological resources as far as the territorial States are concerned, conservation of biological diversity should be an interest of the international community as a whole,[165] with the result that any

[163] For an illustration of the interests at stake in relation to deforestation and its impact on the environment as a whole, see for example Roseann Eshbach, 'A Global Approach to the Protection of the Environment. Balancing State Sovereignty and Global Interests' (1990) 4 *Temple ICLJ* 271, at 272-278; and Concetta Maria Pontecorvo, *Il 'regime' internazionale per la protezione delle foreste* (Napoli: Satura 2012), at 19-35.

[164] See Marco Gestri, *La gestione delle risorse naturali d'interesse generale per la Comunità internazionale* (Torino: Giappichelli 1996), at 89-90; and Pontecorvo, *Il 'regime' internazionale*, cit., at 56-58 and, as regards the issue of the legal classification of forest ecosystems considering the collective nature of the interest at stake, at 66-96. It is noteworthy that, in his opinion appended to the decision of the International Court of Justice in the case concerning *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)*, judgment of 2 February 2018, compensation, *I.C.J. Reports 2018*, 15, Judge ad hoc Dugard incidentally referred to an 'obligation not to engage in wrongful deforestation that results in the release of carbon in the atmosphere and the loss of gas sequestration services' in asserting that it was 'certainly an obligation *erga omnes*', since '[u]ndoubtedly this is a matter of concern to the international community as a whole' (Dissenting Opinion of Judge ad hoc Dugard, para. 35).

[165] Therefore, in the opinion of Dupuy, Viñuales, *International Environmental Law*, cit., at 235, the 1992 Convention on Biological Diversity 'combines conser-

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harm to relevant species and ecosystems would ultimately affect the environment per se. It is hence significant that principle 21 of the Stockholm Declaration is restated in a prominent provision of the Convention on Biological Diversity,[166] which has been ratified by the vast majority of States.[167] It appears to confirm that prevention of transboundary harm to the environment might be understood as referring also to resources within the jurisdiction of States,[168] so that the transboundary dimension of harm under principle 21 should be conceived of in the above-mentioned sense of its 'transboundary significance'.

On the basis of the conceptualisation proposed here, from now on the expression 'prevention of environmental harm' will mainly be used instead of 'prevention of transboundary environmental harm'.

2.4. *The Interaction between Prevention of Environmental Harm and Non-Environmental Obligations*

2.4.1. *Territorial Sovereignty in Environmental Cases concerning Transboundary Harm: The Need to Keep Protection of the Environment Distinct*

The enshrining of protection of the environment per se, as a community interest, within prevention of environmental harm under principle 21 of the Stockholm Declaration does not imply that this interest has become the one that is exclusively relevant in each and every case involving transboundary environmental harm. On the

vation with economic considerations': this 'combination' is stated to reflect the 'distinction between, on the one hand, the "conservation of biological diversity", which is a "common concern of humankind" and on the other hand the "sustainable use" of "biological resources" under the sovereignty of the State where they are located' (footnotes omitted).

[166] Convention on Biological Diversity, adopted on 5 June 1992 and entered into force on 29 December 1993, 1760 *UNTS* 79. Principle 21 is restated in Art. 3 of the Convention, entitled 'Principle' and including principle 21 only. On this provision, see also *infra*, Section 4.2.2.b.

[167] There are currently 196 Parties to the Biodiversity Convention.

[168] Had this not been the case, the very insertion of principle 21 in the Biodiversity Convention could hardly been explained, along with the importance attached to it. Indeed, from the classical viewpoint of the transboundary location of the harm, Gestri, *La gestione*, cit., at 58-59, expresses perplexities on this score: considering the restrictions applicable in relation to the conservation and management of biological resources, he contends that the Biodiversity Convention goes well beyond principle 21, to such an extent that its restatement might appear to be outdated (ibid., note 178).

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contrary, one must not exclude the possibility that territorial sovereignty, as the individual interest underlying each State's obligation to respect other States' territorial sovereignty, still comes into consideration, *either alone or in addition* to that community interest. In fact, the same conduct, i.e., carrying out or allowing an activity that causes transboundary harm, might be prejudicial to both territorial sovereignty and protection of the environment per se, although they represent two different interests. In this regard, the understanding of the environment as the conditions surrounding *something else* should be borne in mind: it may well be that transboundary harm to the environment entails harm to territorial sovereignty too.

Whereas the particular interest at stake is a matter that must be determined on a case-by-case basis, it is argued here that, generally speaking, it is important to keep protection of the environment per se separate from mutual respect for territorial sovereignty. This is due not only to the specificity of the respective interests: the distinction is also relevant to both the identification of the applicable rules of international law as well as to the entitlement to claim that they have been breached and to invoke the wrongdoer's responsibility. In contrast to the no-harm rule, rules of prevention based on protection of the environment per se, that is to say on a community interest, should give rise to obligations *erga omnes*, with the consequence that all States would in principle be entitled to invoke the wrongdoer's responsibility for their breach.[169] Therefore, even in the event that mutual respect for territorial sovereignty and protection of the environment per se are both relevant, they ought to be kept separate as the legal position of States may vary depending upon the rule under consideration, with some States being individually concerned.[170]

[169] Whilst the ability of all States to invoke the breach of an obligation *erga omnes* is a foundational feature of the relevant regime, it is argued by Picone, 'Obblighi reciproci ed obblighi *erga omnes*', cit., at 82-89, that it is a *tendential* one, as there may be differences between States in terms of their entitlement to react to the wrong. See, more recently, Id., 'The Distinction between *Jus Cogens* and Obligations *Erga Omnes*', in Enzo Cannizzaro (ed.), *The Law of Treaties beyond the Vienna Convention* (Oxford: Oxford University Press 2011), 411, at 424: 'the rules which impose obligations *erga omnes* could theoretically allocate entitlement to react by individual states in a different way, so that possible reaction by all would constitute "nothing more than a trend"'.

[170] The *distinction* between legal bases as well as the *twofold* entitlement of the individual State concerned are underlined by Maria Irene Papa, 'Protezione diplomatica, diritti umani e obblighi *erga omnes*' (2008) 91 *Riv. dir. int.* 669, at 688-693, as regards the relationship between diplomatic protection and human rights obligations of an *erga omnes* nature, with the former being founded on an individual

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As will be seen, international practice confirms that the obligation to respect other States' territorial sovereignty has continued to come to the fore within environmental cases involving transboundary harm also since the Stockholm Conference, despite the increasing sensitivity to protection of the environment worldwide. The continuing relevance of territorial sovereignty to environmental cases involving transboundary harm hence suggests that the application of mutual respect for territorial sovereignty in early cases was not contingent: it has an autonomous bearing on cases involving environmental harm.

On the other hand, practice reveals inconsistencies in respect of the relationship between territorial sovereignty and protection of the environment per se. In some cases, prevention of environmental harm has been subsumed under mutual respect for territo-

State interest and the latter being founded on a collective interest of the international community as a whole. In broader terms, see Paolo Picone, 'Il ruolo dello Stato leso nelle reazioni collettive alle violazioni di obblighi *erga omnes*' (2012) 95 *Riv. dir. int.* 957, especially at 974-978. As regards the Articles on Responsibility of States for Internationally Wrongful Acts, it is true that the distinction between the 'injured State' and 'any State other than an injured State' reflects a differentiation between reactions to the breach of an obligation owed to the international community as a whole. Be that as it may, the International Law Commission did not refer to any differences between the interests potentially arising as a result of the concurrent breach of several obligations of a different nature. By contrast, in defining the notion of 'injured State' under Art. 42(b)(i), it seemingly relied on *factual* elements, with only *one* obligation, viz. a 'collective obligation', being relevant: 'the nature or extent of the special impact that a State must have sustained in order to be considered "injured" have to be assessed on a case-by-case basis, having regard to the object and purpose of the primary *obligation* [in the singular] breached and the *facts* of each case' (Report of the International Law Commission on the Work of Its Fifty-Third Session, cit., at 119, para. 12, emphasis added). Hence, it appears that the International Law Commission did not fully explore the example that it had itself provided: in the event of pollution of the high seas, those coastal States 'whose beaches may be polluted by toxic residues or whose coastal fisheries may be closed' would be the injured States (ibid.). Whereas one might agree with this conclusion, it is objectionable that the International Law Commission did not distinguish between the interests involved, and seemingly assumed that one provision only would be breached, specifically Art. 194 of the United Nations Convention on the Law of the Sea (ibid.). Conversely, it is reasonable to argue that, in the case at issue, the coastal States affected would be materially concerned as holders of *individual* interests underpinning their sovereign rights over the territory and the territorial sea: a breach of the obligations specifically aimed at the protection of those rights, including the no-harm rule, might be presumed. The individual interests of the coastal States would be added to the collective interest in the protection of the environment per se (see *infra*, Section 2.4.2).

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rial sovereignty, in apparent accord with the notion that principle 21 constitutes a development of the no-harm rule. In other cases however, it has been kept distinct, even though the basis for the distinction has been anything but consistent. On occasion, the difference has seemingly been regarded as a matter of significance of the harm, with only the purported customary obligation to prevent transboundary environmental harm requiring serious harm in order to apply, whereas the obligation to respect other States' territorial sovereignty could be triggered by any transboundary harm, irrespective of its severity.[171]

It is submitted here that these inconsistencies result from the disregard for, or the inadequate consideration of, the specificity of protection of the environment per se as the community interest underpinning prevention of environmental harm under principle 21. In this context, it is regrettable that the potential for invoking two *autonomous* legal bases, in the event that both territorial sovereignty and protection of the environment per se may be relevant, has thus far been barely considered.

2.4.1.a. *Practice Following the Stockholm Declaration: The* Nuclear Tests *Case and the Cosmos 954 Incident*

With regard to the continuing relevance of mutual respect for territorial sovereignty for cases involving transboundary environmental harm after the Stockholm Conference and, in general, the rise of environmental consciousness worldwide, the positions of Australia and New Zealand in the *Nuclear Tests* case stand out.[172] As is known, in 1973, each of them brought a case against France before the International Court of Justice to complain about French nuclear testing in the South Pacific. Transboundary environmental harm was a prominent issue: the application concerned the spread of radioactive emissions, including in Australia and New Zealand, as a result of nuclear tests that France had been conducting in French

[171] In the event, mutual respect for territorial sovereignty seems to have been invoked only strategically, as a subordinate argument: had the defendant been successful in demonstrating the marginality of the harm and the ensuing inapplicability of the purported customary obligation to prevent transboundary environmental harm, then the applicant would have relied on the alleged breach of the obligation to respect the territorial sovereignty of other States.

[172] ICJ, *Nuclear Tests (Australia* v. *France)*, judgment of 20 December 1974, *I.C.J. Reports 1974*, 253, and *Nuclear Tests (New Zealand* v. *France)*, judgment of 20 December 1974, *I.C.J. Reports 1974*, 457.

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Polynesia between the 1960s and 1970s.[173] For its part, France asserted that the radioactivity of the tests were negligible and that there were no adverse effects on human health.[174] In the end, in 1974, the International Court of Justice found that it was not required to issue a decision on the merits, because the claim no longer had any object after France had announced that it would cease atmospheric nuclear testing.[175]

The weight of mutual respect for territorial sovereignty is primarily apparent from the allegation of a breach of territorial sovereignty by both Australia and New Zealand. However, the difference between their positions illustrates the complexity touched on above in the relationship between respect for territorial sovereignty and prevention of environmental harm. This latter was assessed differently by Australia and New Zealand.[176]

In the Australian complaint, respect for territorial sovereignty and prevention of transboundary harm to the environment were invoked jointly, and seemingly merged with each other, in accordance with the conception of prevention of transboundary environmental harm as a corollary of mutual respect for territorial sovereignty. Australia complained about a breach of the general obligation 'to respect the sovereignty over and in respect of its territory *and thus* to abstain from

[173] For further details about the circumstances of the case see Arthur Watts, 'Nuclear Tests Cases', in *MPEPIL online* (2007), para. 11

[174] See *Nuclear Tests*, *(Australia* v. *France)*, judgment, cit., at 258, para. 18; *Nuclear Tests (New Zealand* v. *France)*, judgment, cit., at 462, para. 18.

[175] See *Nuclear Tests (Australia* v. *France)*, judgment, cit., at 272, para. 62; *Nuclear Tests (New Zealand* v. *France)*, judgment, cit., at 478, para. 65.

[176] From a broader perspective, the rights invoked by Australia and New Zealand did not fully coincide. Australia complained about a breach of every State' right to be free from atmospheric nuclear weapons tests; its territorial sovereignty and right to determine what acts could take place within its territory; and freedom of the high seas (see the Application Instituting Proceedings, 9 May 1973, para. 49, and the Request for the Identification of Interim Measures of Protection Submitted by Australia, 9 May 1973, para. 3). New Zealand alleged a violation of the right of all members of the international community that no nuclear test giving rise to radioactive fallout be conducted; the right of all members of the international community to the preservation of the environment from unjustified artificial radioactive contamination; the right that no radioactive material enter its territory and that of the Cook Islands, Niue or the Tokelau Islands; the right that no radioactive material cause harm to their people and Government; and its right to freedom of the high seas (see the Application Instituting Proceedings Submitted by the Government of New Zealand, 9 May 1973, para. 28, and the Requests for the Indication of Interim Measures of Protection Submitted by the Government of New Zealand, 14 May 1973, para. 2).

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producing alterations in the Australian environment (atmosphere, soil, waters) by deposit on its territory and the dispersion in its airspace of radioactive fall-out'.[177] In sum, Australia did not invoked any obligation pertaining specifically to protection of the environment.[178]

On the other hand, the New Zealand's complaint appears to be more in keeping with the view that mutual respect for territorial sovereignty and prevention of transboundary harm to the environment constitute two separate legal bases: the right of all members of the international community to have the environment protected against 'unjustified artificial radioactive contamination', which is clearly connected to – although does not coincide fully with – prevention of environmental harm,[179] came into consideration on a self-standing basis, *in addition* to territorial sovereignty.[180] New Zealand tellingly classified the right to preservation of the environment and the right 'that no radioactive material enter the territory of New Zealand' under two different categories. The right of all the members of the international community to the preservation of the environment was said to 'reflect a community interest in the protection […] of the global environment', to such an extent that 'the corresponding obligation imposed on France (and on any other nuclear power) is owed in equal measure to New Zealand and to

[177] Memorial on Jurisdiction and Admissibility Submitted by the Government of Australia, 29 October 1973, para. 432 (emphasis added).

[178] Australia only mentioned principle 21 of the Stockholm Declaration in order to demonstrate the increasing sensitivity of the international community towards protection of the environment. In addition, Australia referred to the reports of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), and the resolutions of the General Assembly of the United Nations (*Request for Interim Measures*, cit., paras. 10-40). It explicitly asserted that those references were intended 'to recall the evolution of [the] general apprehension' of the international community regarding nuclear weapons tests (ibid., paras. 9-10).

[179] New Zealand included the 1972 Stockholm Declaration among the manifestations of the *opinio juris* that proved the existence of that right (Memorial on Jurisdiction and Admissibility Submitted by the Government of New Zealand, 29 October 1973, para. 189). In effect, as will be seen *infra* (Section 6.4.3), it appears that a prohibition of nuclear weapon tests that cause significant environmental harm has emerged in customary international law, on the basis of prevention of environmental harm *qua* general principle of international law.

[180] In the words of New Zealand: 'the rights of all members of the international community, including New Zealand, to the preservation of unjustified artificial radioactive contamination of the terrestrial, maritime and aerial environment and, in particular, of the environment of the region in which the tests are conducted and in which New Zealand, the Cook Islands, Niue and the Tokelau Islands are situated' (Memorial of New Zealand, cit., para. 190).

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every other member of the international community. It is an obligation *erga omnes*'.[181] On the contrary, the right 'that no radioactive material enter the territory of New Zealand' and, in particular, New Zealand's right 'to control the level of radioactivity in its territory, territorial waters and air space' were derived from New Zealand' sovereignty. New Zealand thus made it clear that it was not 'the sole possessor' of that right, but that all the same it could not 'be said that the nuclear testing which France has undertaken in the past, and may undertake in the future, will necessarily involve the violation of the same rights possessed by all the countries', because 'whether French nuclear testing in the atmosphere will involve a violation of the rights of any particular country, is largely a function of its geographical location'.[182]

In addition to the *Nuclear Tests* case, the Cosmos 954 incident is also notable. There, the self-standing significance of territorial sovereignty was confirmed in that it was invoked in a case that appeared to involve transboundary environmental harm, although without any obligation to prevent environmental harm being asserted. Specifically, on 24 January 1978, radioactive waste crashed into Canadian territory following the disintegration of the Soviet nuclear-powered satellite Cosmos 954, after entering into contact with the atmosphere. In order to restore the contaminated land, Canada needed to locate, rescue, remove and study radioactive debris:[183] on that basis, it claimed compensation from the Soviet Union.[184]

Had prevention of environmental harm under principle 21 been a development of the no-harm rule, then it would plausibly have been prominent in this case. The Stockholm Declaration had been solemnly adopted shortly before, in 1972, and thus principle 21 could hardly not have sprung to mind. Canada might have asserted that the Soviet Union had breached the purported customary obligation reflected therein. In fact, it could have argued that the Soviet Union had failed to ensure that the activity of launching a nuclear power satellite would not cause harm to the environment of other States, such as Canada. Admittedly, Soviet calculations were plausibly incorrect, since the satellite was expected to burn out entirely in the atmosphere and, had this not occurred, the waste should have fall-

[181] Ibid., para. 191 (emphasis added).

[182] Ibid., para. 192.

[183] See the 'Statement of Claim', Annex A to Note No. FLA-268 of 23 January 1979, (1979) 18 *ILM* 899, at 902-905.

[184] Ibid., at 908.

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en into the area of the Aleutian Islands, resulting in pollution that should have been marginal.[185]

Nevertheless, Canada did not invoke any purported customary obligation to prevent transboundary environmental harm and the Soviet Union's responsibility for its breach.[186] Instead, aside from international agreements,[187] Canada relied on the principle of sovereignty as a basis for compensation, alongside the standard of absolute liability for space activities and the criteria for calculating compensation itself.[188] According to Canada, '[t]he intrusion of the Cosmos

[185] The Aleutians are a chain of volcanic islands extending south-west from the Alaska Peninsula.

[186] The consultation between Canada and the Soviet Union consisted mainly in an exchange of technical information: see the 'Texts of Diplomatic Communications between the Department of External Affairs and the Embassy of the Union of Soviet Socialist Republics', Annex B to Note No. FLA-813, (1979) 18 *ILM* 909, at 910.

[187] Canada invoked the Convention on International Liability for Damage Caused by Space Objects (adopted on 29 March 1972 and entered into force on 1 September 1972, 961 *UNTS* 188) and the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (adopted on 27 January 1967 and entered into force on 10 October 1967, 610 *UNTS* 205): Canada and the Soviet Union were parties to both of them. As is known, Art. II of the Convention on International Liability for Damage Caused by Space Objects provides that '[a] launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft in flight'. In this regard, see the 'Statement of Claim', cit., at 905, para 15. With respect to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Canada invoked Article VII of the Treaty, by virtue of which '[e]ach State Party to the Treaty that launches or procures the launching of an object into outer space, including the Moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air space or in outer space, including the Moon and other celestial bodies'. In this regard, see the 'Statement of Claim', cit., at 907, para 20.

[188] See the 'Statement of Claim', cit., at 907, paras. 22 and 23. Canada invoked the absolute liability regime as contained in the 1972 Convention on International Liability for Damage Caused by Space Activities, and observed that a high number of States had accepted the absolute liability principle in relation to nuclear power space activities and that such principle extended to other dangerous activities and was enshrined by several treaties. With respect to the criteria for calculating compensation, Canada mentioned them in general, without referring specifically to compensation of environmental damage: 'fair compensation is to be paid, by including in its claim only those costs that are reasonable, proximately caused by the intrusion of the satellite and deposit of debris and capable of being calculated with a reasonable degree of certainty' (ibid., at para. 23).

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954 satellite into Canada's air space and the deposit on Canadian territory of hazardous radioactive debris from the satellite constitute[d] a violation of Canada's sovereignty'.[189] That violation was said to be 'established by the mere fact of the trespass of the satellite, the harmful consequences of this intrusion being the damage caused to Canada by the presence of hazardous radioactive debris and the interference with the sovereign right of Canada to determine the acts that will be performed on its territory'.[190]

In the end, on 2 April 1981, the Soviet Union and Canada concluded a Protocol, whereby the Soviet Union pledged to pay to Canada 3 million Canadian dollars and Canada in turn undertook to accept it,[191] even though the amount was smaller than that claimed.[192] The agreement was 'in full and final settlement of all matters connected with the disintegration of the Soviet satellite "Cosmos-954" in January 1978 […] including the claim advanced by Canada in this respect'.[193]

The Protocol is silent concerning the legal basis for the Soviet payment,[194] with the result that it was offered *ex gratia* in the opinion of some authors.[195] Since the Soviet Union never admitted its responsibility for a wrongful act, it could likewise be argued that the Soviet payment was founded on the treaty regime of strict liability

[189] See the 'Statement of Claim', cit., at 907, para. 21.

[190] Ibid. Canada went on to make it clear that '[i]nternational precedents recognize that a violation of sovereignty gives rise to an obligation to pay compensation': it seems therefore difficult to share the opinion of Barboza, *The Environment*, cit., at 55, affirming that 'Canada made no reference to the breach of an obligation or of fault of the U.S.S.R. to support its claim'.

[191] Protocol in Respect of the Claim for Damages Caused by the Satellite 'Cosmos 954', Canada-Soviet Union (adopted and entered into force 2 April 1981, 1470 *UNTS* 269).

[192] According to Canada the compensation amounted to C$ 6.041.174,70: see the 'Statement of Claim', cit., at 908, para. 24.

[193] Articles I and II of the Protocol in Respect of the Claim for Damages Caused by the Satellite 'Cosmos 954'.

[194] Indeed, as is noted by Okowa, *State Responsibility*, cit., at 118, '[t]he final settlement made no reference to the legal basis of the original claim'.

[195] See Okowa, *State Responsibility*, cit., at 73 ('The claim was settled *ex gratia* and the Soviet Union never admitted liability') and, in the same vein, at 182 and 192; and Marco Citelli, 'Questioni di diritto e organizzazione internazionale ai tempi di Fukushima: norme e meccanismi in caso di incidente nucleare' (2013) 68 *Com. Int.* 77, at 95. Albeit cautiously, Sands et al., *Principles*, cit., at 763, inferred 'that the settlement was agreed on the basis of all the legal arguments proposed by Canada' from the fact that a reference to Canada's claim had been inserted in the Protocol.

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for space activities. Indeed, the Soviet Union had declared from the ouset that it would view the Cosmos 954 incident from the perspective of international treaties 'regulating the activities of States in the outer space'.[196]

2.4.1.b. *Recent Practice: The* Aerial Herbicide Spraying *and* Construction of a Road in Costa Rica *Cases*

More recent practice too confirms that States have continued to consider mutual respect for territorial sovereignty to be applicable within environmental cases involving transboundary harm. Accordingly, this trend can hardly be dismissed as one typical of the period in which a consciousness of environmental degradation was still emerging. In other words, it would be difficult to account for the invocation of the obligation of mutual respect for territorial sovereignty in cases involving transboundary environmental harm that took place in the 1970s simply by observing that, at that time, States had still been 'waiting' for the formation or consolidation of a general obligation to prevent transboundary environmental harm corresponding to principle 21 of the Stockholm Declaration.

In relation to this more recent practice, it is worth considering the *Aerial Herbicide Spraying* case brought before the International Court of Justice in 2008.[197] In this case, Ecuador complained that Colombia had caused or allowed the deposit of toxic chemical herbicides on Ecuadorian territory through aerial spraying in bordering regions, in order to eradicate illicit narcotics crops. Ecuador alleged the breach of various obligations, concerning inter alia protection of the environment, human rights and indigenous peoples' rights. The case was eventually removed from the list after the Parties reached an agreement in 2013.[198]

The fact that is of interest here is that, in a case involving transboundary environmental harm, Ecuador complained about the violation of its territorial sovereignty *in addition* to the breach of

[196] The Soviet Union had specifically declared that it would consider the question of the damage caused by the disintegration of the satellite 'as a party to the 1972 Convention on international liability for damage caused by cosmic objects' and 'in strict accordance with the provisions of that Convention': see the 'Unofficial Translation of the Note of March 21, 1978, from the Embassy of the Union of Soviet Socialist Republics at Ottawa' (1979) 18 *ILM* 922, at 923.

[197] Application Instituting Proceedings, 31 March 2008.

[198] ICJ, *Case concerning Aerial Herbicide Spraying (Ecuador* v. *Colombia)*, order of 13 September 2013, *I.C.J. Reports 2013*, 278.

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the purported environmental obligation to prevent transboundary harm.[199] On the one hand, Colombia's conduct was alleged to be incompatible with certain rights as manifestations of Ecuador's sovereignty over its territory. Specifically, Ecuador invoked the following as a territorial sovereign: the right 'to determine its own economic, social and environmental policy',[200] the right 'to determine its own level of protection for the environment and for human health',[201] the 'exclusive right to determine what acts take place in its territory […] [and] whether – and if so, to what extent – its population should be exposed to the risks of polluting or other harmful effects resulting from the spraying of the herbicides',[202] and the 'permanent sovereignty over its natural and biological resources'.[203] On the other hand, Ecuador insisted on the *self-standing* application of the purported general obligation to prevent transboundary environmental harm, although its derivation from the obligation of every State to respect territorial sovereignty of other States was obscurely alluded to.[204] It asserted that the 'duty to respect a State's sovereignty […]

[199] 'Ecuador's territorial sovereignty and integrity have been repeatedly violated by the deposit of toxic herbicides on its territory by Colombia' (Memorial of Ecuador, vol. 1, 28 April 2009, at 262, para. 7.10). It should be emphasised that, although Ecuador also alleged that Colombia had conducted some spraying activities inside Ecuadorian airspace, the allegation concerning the violation of Ecuador's territorial sovereignty was not limited to those activities, which were given marginal weight compared to the spraying activities conducted close to or up to the Ecuadorian border: it is only '*in addition* to the violation of territorial sovereignty arising from the deposit and dispersion of herbicides in Ecuador' that Ecuador alleged that Colombia had '*further* violated Ecuador's territorial sovereignty when its herbicide spraying activities have involved instances of direct overflight into the airspace of Ecuador' (ibid., at 266, para. 7.17).

[200] Memorial of Ecuador, cit., at 260, para. 7.8. See also the Reply of Ecuador, vol. 1, 31 January 2011, at 374-375, para. 5.13.

[201] Memorial of Ecuador, cit., at 261, para. 7.9. See also the Reply of Ecuador, cit., at 374, para. 5.13 ('a State has the sovereign right to apply higher standards of environmental protection than its neighbouring countries and to be respected, free of foreign intervention, in doing so').

[202] Memorial of Ecuador, cit., at 264, para. 7.13. See also the Reply of Ecuador, cit., at 372, para. 5.10 ('The obligation to respect a State's territorial sovereignty involves not only the duty for other States to not intervene in the internal affairs of other States, but the exclusive right to display the activities of a State').

[203] Memorial of Ecuador, cit., at 265, para. 7.15. See also the Reply of Ecuador, cit., at 373-374, paras. 5.11-5.12.

[204] In the part dealing with the alleged violation of territorial sovereignty, a subsection of Ecuador's Memorial was devoted to 'Sovereignty and Environmental Harm'. There a sort of derivation seems to transpire from the fact that, having cited 'every State's obligation not to allow knowingly its territory to be used for acts

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is independent from other international obligations and provides grounds for a specific cause of action in international law'.[205]

Be that as it may, the distinction between mutual respect for territorial sovereignty and prevention of transboundary environmental harm was not founded on any *structural* difference between their underlying interests. This means that, in the end, the potential illustrated above of such a distinction was not explored in the case. Rather, the distinction was seemingly considered to be one of degree: violation of territorial sovereignty was said not to 'depend on proving the same degree of harm as […] damage to the environment'.[206] In this respect however, the Ecuadorian position revealed inconsistencies as it was unclear whether the application of territorial sovereignty could be triggered even by 'non-significant' harm, in contrast to the application of the purported obligation to prevent transboundary environmental harm.[207]

The case concerning the *Construction of a Road in Costa Rica along the San Juan River*, before the International Court of Justice too, is also worth considering.[208] Nicaragua complained that Costa Rica had violated Nicaragua's territorial sovereignty by construct-

contrary to international law', as affirmed by the International Court of Justice in the judgment in the *Corfu Channel* case (*supra*, Section 2.2.1.b), Ecuador referred to '[m]ore specific rules of international law […] regarding harm caused or threatened to the territory and environment of other States as a result of polluting or other environmentally-damaging activities' (Memorial of Ecuador, cit., at 266-267, paras. 7.18-7.19). Ecuador went on to mention principle 21 of the Stockholm Declaration (ibid., at 267-268, para. 7.20) and the Australian position 'link[ing] environmental harm with violation of a State's sovereignty' in the *Nuclear Tests* case (ibid., at 268, para. 7.21).

[205] Reply of Ecuador, cit., at. 376-377, para. 5.15.

[206] Ibid., at 377, para. 5.15.

[207] On the one hand, when addressing the alleged violation of its territorial sovereignty, Ecuador insisted on the gravity of the transboundary harm at stake: 'Ecuador's action is prompted by the severity of the environmental and human consequences suffered in its territory as a result of Colombia's uncontrolled – or inadequately controlled – activities' (Reply of Ecuador, cit., at 375, para. 5.14). On the other hand, after arguing that the degree of harm required when territorial sovereignty is at stake is not as high as the requisite degree of harm for environmental damage, Ecuador asserted that '[e]ven if Colombia's dismissive portrayal of the spray's harms were true, which they are not, minor irritations caused to a large number of people in Ecuador, over extended periods of time and as a consequence of the use of a pesticide that is prohibited from being used by aerial spraying around the world, gives rise to a violation of a State's sovereignty' (ibid., at 377, para. 5.15).

[208] As far as prevention of environmental harm is specifically concerned, the case will be examined *infra*, Section 5.2.2.b.

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ing a road in parallel to San Juan River (which runs in Nicaraguan territory), specifically 'by dumping soils and sediments, trees and vegetation into the San Juan' and by modifying 'the drainage of the surrounding wetlands', which in turn was said to have had significant adverse effects on 'the level and the quality of the water of the San Juan River'.[209]

The concurrent relevance of mutual respect for territorial sovereignty and prevention of transboundary environmental harm is evidenced by the fact that Nicaragua alleged that the conduct of Costa Rica amounted both to a breach of its territorial sovereignty and to a breach of environmental rules, including the 'obligation not to cause significant transboundary harm' as expressed in principle 21 of the Stockholm Declaration.[210] As pointed out above, Nicaragua seemingly deemed prevention of transboundary environmental harm to be a corollary of territorial sovereignty, which thus constituted its ultimate rationale.[211] However, it is worth stressing that, according to Nicaragua, each State's obligation to respect other States' territorial sovereignty remained a separate one.[212]

In the end, the International Court of Justice held that no violation of Nicaragua's territorial sovereignty had occurred. Nonetheless, in doing so it did not assess the relationship between the obligation to respect other States' sovereignty and prevention of transboundary environmental harm. The rejection of Nicaragua's allegation was plausibly due to the fact that, when addressing it, the Court had

[209] Memorial of Nicaragua, cit., 139-141, paras. 4.29-4.32, quotations at 141, para. 4.32. With regard to the alleged violation of Nicaragua's territorial sovereignty, it was also affirmed that '[n]ous ne sommes plus ici dans le domaine de la protection de l'environnement mais dans celui, plus général, de la défense de la souveraineté territoriale. Celle-ci implique qu'un Etat n'utilise pas, ni ne laisse utiliser, son territoire à des fins dommageables par un pays voisin sans l'autorisation du souverain territorial' (Public Sitting held on 30 April 2015, CR 2015/16, at 55, para. 11). As will be seen below in the text, Nicaragua also included the 'principle of non-harmful use of the territory' among environmental norms, thus alluding to the intertwining of respect for territorial sovereignty and prevention of transboundary environmental harm.

[210] Nicaragua considered the 'obligation not to cause significant transboundary harm' in dealing with the alleged breaches of environmental obligations (Memorial of Nicaragua, cit., 186-192, paras. 5.58-5.64).

[211] See *supra*, Section 2.2.1.

[212] It was stated that 'la conclusion nicaraguayenne relative à sa souveraineté territoriale ne porte ni exclusivement ni principalement sur la violation de règles protectrices de l'environnement' (Public Sitting held on 30 April 2015, cit., at 58, para. 21).

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already ascertained, as a general matter, that Nicaragua had failed to demonstrate that significant transboundary damage had occurred as a result of the construction of the road in Costa Rica.[213]

In addition, the consideration that, in finding that no violation of Nicaragua's territorial sovereignty had occurred, the International Court of Justice focused on the fact that Costa Rica had not exercised its sovereignty or carried out activities over Nicaraguan territory,[214] does not imply that the Court anchored the concept of territorial sovereignty in physical invasion and thus deemed it to be irrelevant in cases involving transboundary harm. The reasoning of the Court was probably prompted by the arguments put forward by Nicaragua itself. During the proceedings, in fact, Nicaragua had increasingly relied on what seems to be an absolute conception of territorial sovereignty, to the effect that a 'physical invasion' of its territory rather than mere transboundary harm was alleged to have occurred.[215] It asserted that, even assuming the absence of any long-term adverse effects of the construction of the road, 'the simple fact

[213] ICJ, *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua* v. *Costa Rica)*, judgment of 16 December 2015, *I.C.J. Reports 2015*, 665, at 737, para. 217 ('Nicaragua has not proved that the construction of the road caused it significant transboundary harm. Therefore, Nicaragua's claim that Costa Rica breached its substantive obligations under customary international law concerning transboundary harm must be dismissed').

[214] Ibid., at 738, para. 223 ('whether or not sediment deltas are created as a consequence of the construction of the road, Nicaragua's theory to support its claim of a violation of its territorial integrity via sediment is unconvincing. There is no evidence that Costa Rica exercised any authority on Nicaragua's territory or carried out any activity therein').

[215] Reply of the Republic of Nicaragua, 4 August 2014, at 159-170, paras. 5.3-5.21. Nicaragua had already alluded to the idea that the conduct of Costa Rica constituted a 'physical invasion' of its territory, in addition to causing transboundary harm: '[the] trespasses upon Nicaraguan territory by sediment and other debris from Costa Rica's road project constitute constant, and irreparable, prejudice to Nicaragua's rights of sovereignty and territorial integrity' (Public Sitting held on 5 November 2013, CR 2013/28, at 28, para. 15); 'these [sediment] deltas are literal, physical invasions, incursions by Costa Rica into Nicaragua's sovereign territory, incursions that Costa Rica has knowingly caused by its careless road construction methods' (Public Sitting held on 30 April 2015, cit., at 43, para. 5); 'if these quantities of sediment had been dumped by Costa Rica onto Nicaragua's land territory rather than into the river, this would be a violation of its territorial integrity, a trespass that no country would tolerate. Nicaragua submits that the fact that Costa Rica has knowingly undertaken an activity that will result in sediment being deposited into the river, also Nicaragua's territory, should likewise not be tolerated' (ibid., at 44, para. 8).

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of the release of sediments and other discharge in the River [was] a violation of Nicaragua's sovereignty',[216] given that '*[a]ny* artificial elements dumped on its territory [was] a violation of its territorial sovereignty'.[217]

2.4.1.c. *Pollution of International Watercourses*

Alongside specific instances involving transboundary environmental harm, the continuing relevance of territorial sovereignty to the issue of prevention is apparent in general terms from practice in relation to the pollution of international watercourses. An international watercourse is by definition located within the jurisdiction of different States: its pollution seems to necessarily imply transboundary harm to the territorial sovereignty of one or some of them.

It will thus come as little surprise that territorial sovereignty established the foundations for prevention of pollution of international watercourses in the past, before environmental awareness started to spread between the 1960s and 1970s.[218] In this respect, the Madrid Resolution adopted by the *Institut de droit international* in 1911 with regard to the exploitation of international watercourses is particularly telling.[219] Mutual respect for sovereignty was the reason underlying provisions that, whilst dating back more than one century, would today be regarded as relevant to prevention of transboundary environmental harm. Under that resolution, where a river marks the boundary between two States, neither may modify or allow individuals to modify the river in such a manner as to cause harm to the opposite bank, nor may any of them exploit or allow individuals to exploit the water of the river to such an extent as to seriously

[216] Reply of the Republic of Nicaragua, cit., at 162, para. 5.9.

[217] Ibid., at 163, para. 5.10 (emphasis in original).

[218] In late 1950s, the first principle governing international watercourses that William L. Griffin, 'The Use of Waters of International Drainage Basins under Customary International Law' (1959) 53 *AJIL* 50, derived from the relevant practice was still founded on mutual respect for territorial sovereignty: 'A riparian has the *sovereign right* to make maximum use of the part of a system of international waters within its jurisdiction, *consistent with the corresponding right of each co-riparian*' (at 77, both emphases added). This is because '[e]ach State possesses equal rights on either side of a boundary line. Thus riparians possess the right of exclusive jurisdiction and control over the part of a system of international waters in their territory, and these rights reciprocally restrict the freedom of action of others' (ibid., at 78).

[219] See the 'Texte de Résolutions adoptées en ce qui concerne la Réglementation internationale de l'usage des cours d'eau internationaux' (1911) 24 *Ann. Inst. dr. int.* 365.

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affect the exploitation of that river by the other State or its individuals.[220] By the same token, where a river crosses the territories of two or more States, any harmful alteration of the water or dumping of harmful materials into the river is prohibited.[221]

In the first part,[222] the resolution makes it clear that the rationale underlying these rules may be found in the condition of physical interdependence between watercourse States, which precludes full autonomy for either of them with respect to the part of the river situated in its own territory:[223] the rules set forth in the resolution are said to *derive* from this interdependence.[224] The view that the relationship between watercourse States in international law is equivalent to that of neighbouring landowners in private law was seemingly predominant within the *Institut de droit international*: international rules governing the relationship between watercourse States were thus inferred from the private law rules concerning the relationship between neighbours.[225] As pointed out above, the principle of good

[220] In the original French version: 'Lorsqu'un cours d'eau forme la frontière de deux États, aucun de ces États ne peut, sans l'assentiment de l'autre, et en l'absence d'un titre juridique spécial et valable, y apporter ou y laisser apporter par des particuliers, des sociétés, etc., des changements préjudiciables à la rive de l'autre État. D'autre part, aucun des deux États ne peut, sur son territoire, exploiter ou laisser exploiter l'eau d'une manière qui porte une atteinte grave à son exploitation par l'autre État ou par les particuliers, sociétés, etc., de l'autre'.

[221] In the original French version: 'Lorsqu'un cours d'eau traverse successivement les territoires de deux ou de plusieurs États […]. Toute altération nuisible de l'eau, tout déversement de matières nuisibles (provenant de fabriques, etc.) est interdit'.

[222] The resolution is divided into two sections: the first is dedicated to the underlying reasons ('Exposé des motifs'), whilst the second contains the operative part setting forth the purported rules ('Règles').

[223] In the original French version: 'Les États riverains d'un même cours d'eau sont, les uns vis-à-vis des autres, dans un dépendance physique permanente qui exclut l'idée d'une entière autonomie de chacun d'eaux sue la section de la voie naturelle relevant de sa souveraineté'.

[224] To be specific, the *Institut de droit international* deemed it appropriate to fill a gap in international law by laying down 'les règles de droit qui *découlent de l'interdépendance incontestablement existant entre États* riverains du même cours d'eau et entre États dont les territoires son traversés par la même cours d'eau' (emphasis added).

[225] The 'Travaux préparatoires de la session de Madrid de 1911' are notably indicative: see the 'Réglementation internationale des cours d'eau internationaux' (1911) 24 *Ann. Inst. dr. int.* 156. The Rapporteur, von Bar, affirmed that he had presented his theses '[e]n invoquant, en quelque sorte, les lois nationales des divers pays, concernant l'obligation des propriétaires de fonds: d'avoir, en faisant des constructions, certains égards pour les fonds voisins' (ibid., at 169). He pointed

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neighbourliness, as a general principle of law recognised by civilised nations, is another way by which prevention of transboundary environmental harm under principle 21 has been rooted in territorial sovereignty.[226]

The relevance of territorial sovereignty to prevention of pollution of international watercourses did not fade in the wake of increasing environmental sensitivity from the 1970s onwards. However, the perception gradually emerged that such pollution could *also* result in harm to the environment per se, over and above the individual interests of watercourse States. In this respect, the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses is noteworthy:[227] it includes both an obligation to prevent harm to other watercourse States as well as an obligation to prevent harm to the ecosystems of international watercourses.[228] Despite the reluctance of

out that his starting point was 'qu'il y a *interdépendance* des Etats riverain d'un même fleuve, et des Etats que traverse le même fleuve et qu'il y a analogie […] entre leurs relations (d'interdépendance) et celles des propriétaires d'immeubles contigus, en droit privé' (ibid., at 173-174, emphasis in original). In the words of another member of the Institute, Kaufmann, '[t]el est le principe du «Wasserrecht» en droit civil et en droit interne. Tel est aussi le principe – quant aux cours d'eau et lacs internationaux – en droit international' (ibid., at 187). Equally, at the session held on 19 April 1911 as regards the 'Réglementation internationale des cours d'eau internationaux au point de vue de l'exploitation de leurs forces motrices et de leur exploitation en général' (1911) 24 *Ann. Inst. dr. int.* 347, Fiore proposed that '[l]'Institut pourrait reconnaître dans le préambule que l'on doit appliquer, pour déterminer les droit respectifs des Etats, des règles analogues à celles que tiennes nos codes' (ibid., at 350-351). On that occasion, Strisower went further and made it clear that 'il ne s'agit pas d'une simple conséquence du respect réciproque des Etats, mais de relations de bon voisinage' (ibid., at 351), with von Bar replying that '[c]ette interprétation n'est pas tout-à-fait conforme a ma pensée. Il ne s'agit pas d'une simple *complaisance*, mais d'un *droit* de voisinage, car les voisins ont entre eux des droits' (ibid., at 351, emphasis in original).

[226] See *supra*, Section 2.2.2.

[227] Convention on the Law of the Non-Navigational Uses of International Watercourses (hereinafter, Watercourses Convention), adopted on 21 May 1997 by UNGA Res. 51/229 and entered into force on 17 August 2014.

[228] The obligation not to cause harm to other watercourse States and the obligation to protect the ecosystem of international watercourses are contrasted with each other with reference to the evolution of international law from coexistence to cooperation (see *supra*, Section 2.3.2) by Attila Tanzi, Maurizio Arcari, *The United Nations Convention on the Law of International Watercourses. A Framework for Sharing* (London/The Hague/Boston: Kluwer Law International 2001), at 11-24. In the opinion of these authors however, the latter obligation expands the original scope of the former (ibid., especially at 19-20): in relation to such a connection see the above critical remarks (*supra*, Section 2.3).

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States to ratify it,[229] the Watercourses Convention is of great value as a codification treaty:[230] it is based on the Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, which the UN International Law Commission previously adopted in 1994, having worked on the issue for more than twenty years since 1971.[231]

The continuing relevance of territorial sovereignty as an individual interest of States is apparent from Article 7 of the Watercourses Convention, which sets forth the obligation not to cause significant transboundary harm to other States, without any reference to the environment at all. It provides as follows: 'Watercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other

[229] State reluctance is especially evidenced by the lengthy period of time that passed before the Convention entered into force. It has seemingly continued since then, considering that, whereas the entry into force of the Watercourses Convention was conditional on the deposit of at least thirty-five instruments of ratification or accession, only thirty-six have done so at the time of writing.

[230] To be sure, following the Madrid Resolution various efforts were made to codify the international law governing international watercourses: it has been chosen to focus here on the Watercourses Convention because it represents the latest manifestation, on the universal level at least, of suchs efforts. The point here is to demonstrate specifically the 'survival' of the logic of mutual respect for territorial sovereignty in the field of pollution of international watercourses after the emergence of an environmental consciousness. Among the other codification works it is worth mentioning the 1961 Salzburg Resolution, (1961-II) 49 *Ann. Inst. dr. int.* 370, and the 1979 Athens Resolution, (1979-II) 58 *Ann. Inst. dr. int.* 196, both adopted by the *Institut de Droit International*, and the 1966 Helsinki Rules on the Uses of the Waters of International Rivers, adopted by ILA, Report of the Fifty-second Conference Held at Helsinki, August 14th to August 20th, 1966, 477. For an overview of these codification efforts see Stephen C. McCaffrey, 'The Progressive Development of International Water Law', in Flavia Rocha Loures and Alistair Rieu-Clarke (eds.), *The UN Watercourses Convention in Force. Strengthening International Law for Transboundary Water Management* (London/New York: Routledge 2013), 10, especially at 11-12.

[231] Draft Articles on the Law of the Non-Navigational Uses of International Watercourses and Commentaries thereto and Resolution on Transboundary Confined Groundwater, in ILC, Report on the Work of Its Forty-Sixth Session (1994), UN Doc. A/49/10, 89 (Draft Articles on International Watercourses). It must not be overlooked that the General Assembly entrusted the International Law Commission with the task of studying that subject in 1970, i.e., at a time when environmental consciousness was spreading as a community interest. One may read in Res. 2669 (XXV), 8 December 1970, that 'water, owing to the growth of population and the increasing and multiplying needs and demands of mankind, is of growing concern to humanity, that the available freshwater resources of the world are limited and that *the preservation and protection of those resources are of great importance to all nations*' (emphasis added).

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watercourse States'.[232] On the other hand, protection of the environment per se appears to be the reason underlying Article 20, which stipulates that watercourse States have the obligation to 'protect and preserve the ecosystems of international watercourses'.[233] In the commentary on the corresponding Draft Article 20, the International Law Commission observed that that provision was aimed to safeguard 'the ability of an ecosystem to function as a life-support system' and hence to prevent those forms of human interference that 'may irreversibly disturb the equilibrium of freshwater ecosystems, in particular, rendering them incapable of supporting human and other forms of life'.[234]

In sum, also in the field of international watercourses, despite the embedded relevance of territorial sovereignty, it is necessary to keep prevention of transboundary harm to the environment distinct from mutual respect for territorial sovereignty: the former is founded on protection of the environment as a community interest whereas the latter is based on territorial sovereignty as an individual interest. Nevertheless, the Watercourses Convention confirms the complexity of the relationship between the two interests and the misleading tendency to blur their difference to such an extent that territorial sovereignty seemingly ends up absorbing or prevailing over the community interest in the protection of the environment.

In particular, the International Law Commission conceived of Article 20 against the backdrop of the norm concerning the equitable utilisation of international watercourses,[235] as set forth in Article

[232] Corresponding draft Art. 7(1) differs in reading as follows: 'Watercourse States shall exercise due diligence to utilize an international watercourse in such a way as not to cause significant harm to other watercourse States'. On the evolution of this provision, see Maurizio Arcari, *Il regime giuridico delle utilizzazioni dei corsi d'acqua internazionali. Principi generali e norme sostanziali* (Padova: CEDAM 1998), at 206-229; Salman M.A. Salman, 'The Obligation not to Cause Significant Harm (Article 7)', in Laurence Boisson de Chazournes et al. (eds.), *The UN Convention on the Law of the Non-Navigational Uses of International Watercourses: A Commentary* (Oxford: Oxford University Press 2018), 95, at 100-115.

[233] As observed by Tanzi, Arcari, *The United Nations*, cit., at 243, 'the obligation of protection and preservation laid down in Article 20 places a special emphasis on the protection of watercourses *per se*, independent of the water-related economic interests of riparian States'. See also Dupuy, Viñuales, *International Environmental Law*, cit., at 132, noting that the Watercourses Convention, '*by virtue of Article 20*, follows a comprehensive approach to environmental protection' (emphasis added).

[234] Draft Articles on International Watercourses, cit., at 118, para. 2.

[235] The International Law Commission made it clear that '[t]he obligation to "protect" the ecosystems of international watercourses is a specific application of the requirement contained in article 5 that watercourse States are to use and develop

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5.[236] As a core principle of the entire Watercourses Convention,[237] the norm concerning equitable utilisation is grounded in the sovereignty of watercourse States,[238] with the consequence that, by syllogistic inference, the obligation to protect and preserve the ecosystems of international watercourses ends up being linked to sovereignty. The work of the International Law Commission plainly shows that the equitable utilisation norm is founded on sovereignty: in discussing it,[239] it focused almost exclusively on the sovereign equality of States, which 'results in every watercourse State having rights to the use of the watercourse that are qualitatively equal to, and correlative with, those of other watercourse States'.[240] The weight of the individual interests of watercourse States has even been enhanced in Article 5, when compared with the corresponding Draft Article 5. In fact, although the general standard of consistency 'with adequate protection of the watercourse' has been maintained, an explicit reference has been inserted to the need to take 'into account the interests of the watercourse States concerned'.[241]

An opportunity was missed to emphasise that prevention of

an international watercourse in a manner that is consistent with adequate protection thereof' (Draft Articles on International Watercourses, cit., at 119, para. 3).

[236] Art. 5 reads as follows: 'Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse'.

[237] The rule is laid down in the opening provision of part two, which deals with general principles. It was defined by the International Law Commission as '[o]ne of the most basic of these' (Draft Articles on International Watercourses, cit., at 97, para. 2).

[238] In the words of Tanzi, Arcari, *The United Nations*, cit., at 96, 'the bulk of [the equitable utilisation] principle consists in the idea that all co-riparians enjoy an equal right in the use of an international watercourse', which is stated to constitute an application of the principle of the sovereign equality of all States (ibid., at 14-15).

[239] See Draft Articles on International Watercourses, cit., at 98, paras. 8-9. The discussion of the concept of equitable utilisation comes after its explanation and is followed by a summary of the pertaining authorities (ibid., para. 7).

[240] Draft Articles on International Watercourses, cit., at 98, para. 8. In addition, the issue of the 'conflict of uses' came into consideration (ibid., para. 9).

[241] The other difference between Draft Art. 5 and Art. 5 lies in the fact that, in the latter, utilisation is qualified as 'sustainable' and not just as 'optimal'. In general, on the evolution of this provision, see Arcari, *Il regime giuridico*, cit., at 325-365; and Lucius Caflisch, 'Equitable and Reasonable Utilization and Factors Relevant to Determining Such Utilization (Articles 5 and 6)', in Boisson de Chazournes et al. (eds.), *The UN Convention*, cit., 77, at 79-89.

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transboundary harm to the environment, as enshrined in principle 21 of the Stockholm Declaration, reflects the new and collective interest in the protection of the environment per se. Conversely, the International Law Commission linked principle 21 with the no-harm rule: having founded the norm concerning equitable utilisation on sovereignty, it included as pertinent authorities, without distinction, both principle 21 and 'the principle that a State may not allow its territory to be used in such a manner as to cause injury to other States",[242] as apparent from, inter alia, the *Trail Smelter* arbitration.[243] The inability to regard principle 21 as being specifically based on protection of the environment per se, as a community interest, is confirmed by the fact that it is not enumerated among the principles of the Stockholm Declaration that are especially relevant to the obligation to protect and preserve the ecosystems of international watercourses under Article 20.[244]

The standpoint of protection of the environment per se, as may be identified in Article 20, is not developed further in the Watercourses Convention, nor has its nature – whether bilateral or integral – been clarified by the International Law Commission. As regards the former issue, although Article 20 sets forth the general obligation introducing part four of the Convention, which deals with protection of the environment,[245] the other articles contained in that part are founded on the individual interests of watercourse States.[246] Accordingly, under Article 21(2), pollution of international watercourses must be prevented, reduced and controlled to the extent that it "may cause signif-

[242] Draft Articles on International Watercourses, cit., at 99, para. 17, as for principle 21, and at 100, para. 23, as for the no-harm rule.

[243] Draft Articles on International Watercourses, cit., at 100, note 224.

[244] The Stockholm Declaration is cited as one of the authorities corroborating the obligation to protect and preserve the ecosystems of international watercourses. However, only principles 2 to 5 and 12 are referred to as being particularly relevant, the former dealing with natural resources and wildlife and the latter with the availability of resources to preserve and improve the environment.

[245] Part four of the Convention is entitled specifically 'Protection, preservation and management'. Owing to 'the general nature of the obligation contained in this article, the Commission was of the view that it should precede the other more specific articles in part four' (Draft Articles on International Watercourses, cit., at 118, para. 1).

[246] As will be seen immediately below in the text, these are Articles 21 and 22 of the Watercourses Convention. Part four of the Convention includes Articles 20 to 26. In particular, Articles 24 to 26 deal with consultations concerning management, cooperation on regulation, and the maintenance and protection of installations. As will be pointed out below, Article 23 deals with protection and preservation of the marine environment through measures concerning international watercourses.

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icant harm *to other watercourse States or to their environment*" and, under Article 22, measures necessary to prevent the introduction of alien or new species into an international watercourse are required to the extent that it may have detrimental effects 'resulting in significant harm *to other watercourse States*'.[247] As regards the latter issue, the commentary by the International Law Commission on Draft Article 20 is silent on whether prevention of harm to the ecosystems of international watercourses amounts to a collective interest, at least where a unique ecosystem is at stake. If it is a collective interest, then all States – or, at any rate, all the States parties to the Watercourses Convention – other than the wrongdoer might be deemed to be entitled to react to a breach of that obligation, perhaps subject to any reaction by the individual watercourse States involved.

A notable exception to the two weaknesses illustrated immediately above is represented by Article 23 of the Watercourses Convention, according to which, in essence, watercourse States must 'take all measures with respect to an international watercourse that are necessary to protect and preserve the marine environment'. First of all, the standpoint seems to be protection of the environment per se: the 'marine environment' is not classified in any further detail in terms of sea areas or the specific States concerned, and therefore it appears to be conceived of as a single whole.[248] Secondly, although the integral nature of the obligation was not stated by the International Law Commission in the commentary on the corresponding Draft Article 23, it tellingly made it clear that 'a watercourse State could conceivably damage an estuary through pollution of an international watercourse without breaching its obligation not to cause significant harm to other watercourse States'.[249] This explanation implies the self-standing nature of Article 7 and Article 23 as legal bases. It arguably alludes also to the possibility that all the States – at any rate, all the States parties to the Watercourses Convention – other than the wrongdoer may

[247] Both emphases added. On the discrepancy pointed out between Art. 20 and Art. 22, see also Tanzi, Arcari, *The United Nations*, cit., at 273-274: 'the reference to the no harm rule in Article 22 appears to be inconsistent with the ecosystemic approach which emerges from the obligation of protection and preservation of Article 20, which has not been made dependent on harm being caused to riparian States'.

[248] See Tanzi, Arcari, *The United Nations*, cit., at 275-276; and Owen McIntyre, 'Protection and Preservation of Freshwater Ecosystems (Articles 20-23)', in Boisson de Chazournes et al. (eds.), *The UN Convention*, cit., 193, at 205, who also stresses the relevance of Art. 23 'to the broader ecosystems protection objectives of the Convention'.

[249] Draft Articles on International Watercourses, cit., at 124, para. 2.

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in principle be entitled to invoke its international responsibility for freshwater pollution, should any breach of the obligation to protect and preserve the marine environment be alleged.

2.4.2. *Pre-existing Non-Environmental Obligations Other than the No-Harm Rule, with Particular Regard to Freedom of the High Seas*

Grounded in territorial sovereignty, the no-harm rule represents the non-environmental obligation that has influenced legal scholarship the most as regards the origin and status of prevention of environmental harm, as enshrined in principle 21 of the Stockholm Declaration. As illustrated above, a link has commonly been drawn between them, to the effect that prevention of transboundary environmental harm is derived from the no-harm rule: hence every State's obligation to respect other States' territorial sovereignty is said to have 'simply' developed in an environmentally-oriented way. It is on that connection that this Chapter has been focussed thus far.

However, in addition to the no-harm rule, other non-environmental obligations pre-existing the spread of environmental awareness may come into consideration in the event of transboundary environmental harm and may therefore theoretically intertwine with principle 21. In contrast to the no-harm rule, other non-environmental obligations may not be based on territorial sovereignty and their relevance for *traditional* cases of transboundary harm may be more limited. Thus, authors have given such obligations less weight as regards the origin and status of prevention of transboundary environmental harm. Accordingly, there will be no need, in the following pages, to dwell extensively on all non-environmental obligations other than the no-harm rule. It is sufficient to note that the same approach put forward above, with respect to the no-harm rule, ought to be adopted also, *mutatis mutandis*, when other non-environmental obligations are at stake. Prevention of environmental harm, as enshrined in principle 21, should consistently be kept distinct from them, by reason of the specificiy of its underlying interest, namely protection of the environment per se, as a community interest.

The freedom of the high seas is the most prominent instance among the said non-environmental obligations other than the no-harm rule. In effect, as regards harm to the marine environment beyond the limits of national jurisdiction, some authors have even contended that prevention of transboundary environmental harm is grounded

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in freedom of the high seas.[250] Of course, that freedom predates the rise of environmental concerns: as is known, it definitively emerged as the principle of the freedom of the seas in the eighteenth century, out of the 'battle of the books' and the clash between the claims of *mare clausum* and *mare liberum*.[251]

In fact, harm to the environment of the high seas might easily impair or prevent the full exercise of that freedom. The adverse effects that such harm might possibly have for freedom of fishing or scientific research are self-evident. Indeed, it should be borne in mind that, whilst not being absolute, freedom of the high seas has a broad scope: under the United Nations Convention on the Law of the Sea,[252] it includes, but is not limited to, freedom of navigation, freedom of over-flight, freedom to lay submarine cables and pipelines, freedom to construct artificial islands and other permitted installations, freedom of fishing, and freedom of scientific research for both coastal and land-locked States.[253] Each State is under an obligation not to subject any part of the high seas to its sovereignty.[254]

The construction of prevention of environmental harm in marine spaces beyond national jurisdiction as being grounded in freedom of the high seas clearly resembles the commonly held belief that prevention of transboundary environmental harm is grounded in the no-harm rule. It is thus open to the same criticism. The derivation of prevention of transboundary environmental harm from freedom of the high seas, in respect of the marine environment beyond the limits of national jurisdiction, entails some disregard for the collec-

[250] See especially Giuseppe Tesauro, *L'inquinamento marino nel diritto internazionale* (Milano: Giuffré 1971), at 95-96, who includes the prohibition on pollution among the limits to every State's freedom of the high seas by virtue of other States' interests in navigation and the exploitation of resources; as well as Giorgio Badiali, *La tutela internazionale dell'ambiente* (Napoli: Edizioni Scientifiche Italiane 1995), at 96-99, who defined the obligation not to pollute marine spaces beyond national jurisdiction as a logical development of freedom of the high seas (ibid., at 96).

[251] See Tullio Scovazzi, 'The Evolution of International Law of the Sea: New Issues, New Challenges' (2000) 286 *Rec. cours* 39, at 62-68; Andree Kirchner, 'Law of the Sea, History of', in *MPEPIL online* (2007), paras. 10-21; David J. Bederman, 'The Sea', in Bardo Fassbender and Anne Peters (eds.), *Oxford Handbook of the History of International Law* (Oxford: Oxford University Press 2012), 359, at 366-369.

[252] United Nations Convention on the Law of the Sea (UNCLOS), adopted at Montego Bay on 10 December 1982 and entered into force on 16 November 1994, 1833 *UNTS* 3.

[253] Art. 87 UNCLOS.

[254] Pursuant to Art. 89 UNCLOS, '[n]o State may validly purport to subject any part of the high seas to its sovereignty'.

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tive nature of the interest underpinning prevention of transboundary harm to the environment under principle 21.

Here too, the *structural* difference between an individual interest of States and an interest of the international community as a whole is of greatest importance. Even though the proper content of the right related to the freedom of the high seas has been defined in different ways,[255] the relations between all States that de facto enjoy that freedom and all States that are obliged not to interfere with it may, at any rate, be brought under bundles of bilateral relations. This is demonstrated by the fact that the obligation of non-interference may be breached with respect to only one or some States. By way of illustration, should a State hinder free navigation in any part

[255] It would be impossible to provide an account here of all of the pertinent theories. It is sufficient to point out that, from what appears to be a 'spatial' perspective, great importance is sometimes ascribed to the obligation of States not to subject parts of the high seas to their sovereignty, with the result that freedom of the high seas constitutes the very content of the corresponding right in a *positive* sense. For example, according to Douglas Guilfoyle, 'Article 89', in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea. A Commentary* (München: C.H. Beck/Hart/Nomos 2017), 687, at 687, '[t]he freedom of the high seas follows from the proposition that the high seas cannot be subjected to the juridical order of a particular State'. By that same token, Malcolm N. Shaw, *International Law* (8th ed., Cambridge: Cambridge University Press 2017), at 453, argues that '*[t]he essence* of the freedom of the high seas is that no state may acquire sovereignty over parts of them' (emphasis added), and according to Yoshifumi Tanaka, *The International Law of the Sea* (3rd ed., Cambridge: Cambridge University Press 2019), at 187-189, the freedom of activities on the high seas is simply 'a corollary of the fact that the high seas are free from the national jurisdiction of any State', which is therefore said to constitute the primary meaning of freedom of the high seas (the quotation is at 188). However, from a 'functionalist' perspective, each State's right to exercise exclusive jurisdiction over vessels that fly its flag on the high seas is stressed. A major contribution to establishing the outcomes of the application of the functionalist approach to marine spaces was made by Benedetto Conforti, *Il regime giuridico dei mari. Contributo alla ricostruzione dei principi generali* (Napoli: Jovene 1957), at 49-53, in whose opinion freedom of the high seas results *negatively* from the exclusive jurisdiction of every State over its vessels and the individuals therein on the high seas: such exclusive jurisdiction, rather than the freedom of the high seas in itself, constitutes the right corresponding to each State's obligation not to interfere with the vessels of other States. Similarly, Tullio Treves, 'High Seas', in *MPEPIL online* (2009), para. 12, argues that '[t]he international legal rule, drawn from the high seas being a space in which no sovereignty extends and in which States engage in activities through ships flying their flag, provides that States have the right to claim non-interference with their ships by other States on the high seas so that the flag State, in principle, has the monopoly of the exercise of sovereign power on its ships. *This is the essence of the freedom of the high seas*' (emphasis added).

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of the high seas for another State, several States or even all other States, the interests of these States would all come *separately* into consideration in that each and every State has in principle the right to be free from other States' sovereignty on the high seas. On the other hand, as already pointed out, protection of the environment per se amounts to a community interest: in the event of harm to the environment in itself on the high seas, States could not be regarded as though they were *individually* concerned.[256] In fact, it would necessarily be of direct relevance for the international community as a whole.[257]

Here too, the position that prevention of harm to the marine environment beyond the limits of national jurisdiction is founded on the freedom of the high seas seems to be contradictory, since it implies a limitation of that freedom which is, at the same time, both intrinsic and extrinsic.[258] The limitation is intrinsic in that it is founded on freedom of the high seas itself: in exercising it, each State should ensure that no environmental harm is caused where such harm might impair or impede the exercise of that equal freedom by

[256] The difference proposed above might appear to be less evident to those authors for whom *individual* rights of States, rather than *collective* rights to be exercised on behalf and in the interest of the international community as a whole, derive from obligations *erga omnes*. The issue is a thorny one: for an overview and numerous references, see Papa, *I rapporti*, cit., at 515-520. Be that as it may, the difference holds in that, irrespective of whether States are vested individually or collectively with rights correlative to the obligation to prevent harm to the environment in itself on the high seas (if any), it is the 'good' or interest at stake in the event of such harm that cannot be ascribed to States *uti singuli*: the interest in protection of the environment per se is ascribable only to the international community as a whole.

[257] This point is stressed by Picone, 'Obblighi reciproci ed obblighi *erga omnes*', cit., at 125-135, who finds significant evidence for it in the possibility, pursuant to Art. 218(1) UNCLOS, for *any* port State to exercise jurisdiction, namely enforcement powers, on foreign flag vessels – provided that they are voluntarily present in its ports – in respect of any discharges made by them on the high seas 'in violation of applicable international rules and standards established through the competent international organization or general diplomatic conference': the port State thus acts on behalf of and in the interest of the international community as a whole (ibid., especially at 130-133). On this role of the port State see also Doris König, 'The Enforcement of the International Law of the Sea by Coastal and Port States' (2002) 62 *ZaöRV* 1, at 6; Id., 'Article 218', in Proelss (ed.), *United Nations Convention on the Law of the Sea*, cit., 1487, at 1490; Yoshifumi Tanaka, 'Protection of Community Interests in International Law: The Case of the Law of the Sea' (2011) 15 *MPYUNL* 329, at 350-354; Id., *International Law of the Sea*, cit., at 355-357.

[258] On the same contradiction as regards the connection between the no-harm rule and prevention of environmental harm, see *supra*, Section 2.3.1.

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other States. At the same time, however, the limitation must also be extrinsic in that prevention of environmental harm on the high seas is construed as a development of freedom of the high seas as a result of the emergence of an environmental awareness between the 1960s and 1970s.

As regards the difference proposed here between protection of the environment per se and freedom of the high seas, New Zealand's position in the *Nuclear Tests* case, mentioned above, is noteworthy.[259] It drew a sharp distinction between freedom of the high seas and the right of each member of the international community to the preservation of the environment from radioactive contamination. They were seemingly subsumed under two divergent categories in accordance with the structural nature of their difference asserted here. On the one hand, as pointed out above,[260] New Zealand argued that the purported obligation corresponding to the right to the preservation of the environment was of an *erga omnes* nature by reason of the collective nature of the underlying interest: such a right was linked not only to the environment of the South Pacific region, where the French atmospheric nuclear tests had been conducted, but also to the global environment. On the other hand, freedom of the high seas was included in the same category as territorial sovereignty:[261] hence, it seems that both of them were linked to an interest of an individual nature.

Of course, harm to the environment in itself in marine spaces beyond national jurisdiction might hamper freedom of the high seas, depending upon the specific circumstances. Should that be the case, both the general obligation to prevent transboundary environmental harm – if any – and the freedom of the high seas would individually provide a basis for invoking the responsibility of the wrongdoer. Indeed, since the interests of States come *separately* into consideration with regard to freedom of the high seas, certain States might be *materially* or *individually* affected in this respect:[262] considering

[259] The position of Australia is less relevant here: it focussed on harm to the environment within its national jurisdiction, with the result that, as illustrated above (*supra*, Section 2.4.1.a), in the Australian complaint protection of the environment was essentially subsumed within the claim concerning territorial sovereignty.

[260] See *supra*, Section 2.4.1.a.

[261] Memorial of New Zealand, cit., paras. 191-192.

[262] Despite the classification of environmental harm on the high seas as a typical scenario in which an injured State is lacking, Paolo Picone, 'Le reazioni collettive ad un illecito *erga omnes* in assenza di uno Stato individualmente leso' (2013) 96 *Riv. dir. int.* 5, at 6-11 *et passim*, explores the possibility that, depending on the

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the location of the environmental harm on the high seas, the States that usually or most frequently enjoy freedom of the high seas in that part of the oceans – for instance owing to their geographical proximity – might be directly involved. In that event, since the two legal bases would be concurrent, those States would *primarily* be entitled to invoke the responsibility of the wrongdoer, by virtue of both their individual interest – relevant to freedom of the high seas – as well as the interest of the international community as a whole in the protection of the environment per se. The other States would be entitled to do so by acting 'only' *uti universi*, on behalf and in the interest of the international community as a whole, and not also by virtue of any interest of their own.

The position of New Zealand in the *Nuclear Tests* case is illustrative in this respect too. It conceded that it was not 'the only nation whose citizens are entitled to exercise well-established freedoms of the high seas' and that 'the actions taken by France to enable it to carry out atmospheric nuclear tests at Murora involve threats to the rights of all to exercise the freedoms of the high seas'.[263] However, New Zealand made it clear that '[w]hether or not the French action will involve a violation of the high seas rights of any particular country will depend on whether or not its citizens *have occasion* to attempt to exercise high seas freedoms in the vicinity of Mururoa'.[264] It is plausible that the citizens of New Zealand had specifically that occasion by reason of the country's geographical proximity.

content of the specific obligation *erga omnes* at stake, some States might be 'priority holders' of the collective interest engaged. See also, *mutatis mutandis*, Papa, 'Protezione diplomatica', cit., at 689, note 45, who does not exclude the possibility of a difference between States in terms of entitlement to react to the wrong, depending on the specific circumstances, in relation to the other characteristic case in which an obligation *erga omnes* is breached and there is no injured State, i.e., where a State is responsible for the violation of human rights obligations *erga omnes* with respect to its own citizens.

[263] Memorial of New Zealand, cit., paras. 192-193.

[264] Ibid., para. 193.

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Part II

Prevention of Environmental Harm as a General Principle of International Law

Chapter 3

General Principles of International Law and Protection of the Environment

Summary: 3.1. Preliminary Remarks on General Principles in the International Legal System. - 3.1.1. Looking at General Principles for an Alternative Classification of Prevention of Environmental Harm. - 3.1.2. General Principles Recognised *in Foro Domestico* under Article 38 of the ICJ Statute: Not an Obstacle to General Principles of International Law. - 3.1.3. Inconclusiveness of the Supposed Paucity of Practice to Exclude General Principles of International Law. - 3.1.4. Inherence of General Principles in Addition to Rules in Any Legal System. – 3.2. Overview of the Features of General Principles of International Law. - 3.2.1. General Principles of International Law in the Light of the Functional Distinction between Principles and Rules. - 3.2.2. Features of the Inspiring Function of General Principles of International Law. – 3.3. Theoretical Implications of the Reconstruction of Prevention of Environmental Harm as a General Principle of International Law. - 3.3.1. Prima Facie Suitability of Prevention of Environmental Harm to Qualify as a General Principle: The Programmatic Intent of the 1972 Stockholm Conference. - 3.3.2. Identification by Induction from Existing Rules: Distinguishing between General Principles and Mere Policies or Soft Law Recommendations. - 3.3.3. Verification of the Actual Operation of Prevention as a Principle: Distinguishing between General Principles and Customary Rules.

3.1. *Preliminary Remarks on General Principles in the International Legal System*

3.1.1. *Looking at General Principles for an Alternative Classification of Prevention of Environmental Harm*

It will be apparent from the above that, although it is a commonly held position, the construction of prevention of environmental harm as an obligation established by a customary rule reveals intrinsic weaknesses on closer examination. On the methodological front, it rests on an approach to the determination of customary law that marginalises the actual practice of States, whereas inconsistencies in practice, including the continuing degradation of the environment and various cases involving environmental damage, cast doubts on the customary nature of the alleged obligation of prevention in light of the two-element approach to the identification of customary law.

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On the substantive front, that construction assumes that prevention of environmental harm has its roots in the no-harm rule, which is debatable considering the difference in rationale, with the former being based on protection of the environment per se, as a community interest, and the latter on mutual respect for territorial sovereignty. Evidence of the existence of a customary obligation to prevent environmental harm cannot therefore be found within practice relating to traditional non-environmental obligations.

If one also considers the uncertainties as to the content and related aspects of prevention of environmental harm under its construction as a customary rule, it is not unreasonable to infer that that construction is inaccurate, and should be questioned as a result. In other words, one could legitimately question its adequacy as a satisfactory explaination of the reality, not because of exogenous factors (for instance, implementation difficulties), as the majority of authors usually maintain, but rather by virtue of its own inaccuracy.

This does not imply, however, that prevention of environmental harm is irrelevant to general international law and has no place in it. Thus, this study will now tentatively investigate whether an alternative classification of prevention is arguable, one that might offer new perspectives on still unsolved problems, without being undermined by the weaknesses illustrated above.

In this regard, the category of general principles comes to the fore, as part of general international law along with customary law. In particular, it will be argued in the following that prevention of environmental harm may be reconstructed as a general principle of international law, *rather than* as an obligation established by a customary rule.[1] As will be illustrated, it has operated as a principle in inspiring the formation of rules seeking to embody it, and it may be derived by abstraction from these rules.[2] International case law confirms that it has in fact come into consideration as a principle, and not as a rule, also in the context of contentious and advisory proceedings.[3]

For this purpose, an introductory examination of the category of general principles of international law is first and foremost necessary. As is known, the concept of general principles in international law

[1] Within legal scholarship, it would appear that only one author has suggested such a solution: see Daniel Bodansky, *The Art and Craft of International Environmental Law* (Cambridge/London: Harvard University Press 2010), at 199-203. By contrast, as will be seen *infra* (Section 3.3.3), some authors refer to prevention of environmental harm indistinctively as both a customary rule and a principle.

[2] See *infra*, Chapter 4.

[3] See *infra*, Chapter 5.

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is a matter for debate and has traditionally given rise to controversy, at least since the insertion of the 'general principles of law' in the Statute of the Permanent Court of International Justice (PCIJ) in 1920. It is telling that, one century later, in 2018, the topic 'General Principles of Law' was included on the Agenda of the International Law Commission. In fact, 'various practical and theoretical issues' were said to persist, along with ambiguity and a lack of clarity in the practice of States and international courts and tribunals, as well as a divergence of views in the legal literature.[4]

Of course, it is not the intention of this study to offer an overall discussion of the problem of general principles in international law. Admittedly, some of the fundamental issues can be traced back to broader problems pertaining to philosophy of law, rather than international law. Instead, the more modest point that will be made is that general principles *of international law* exist as principles inherent in and pertaining to the international legal system, and that they *essentially* differ from customary rules. That appears to be needed because, although the existence of general principles specific to international law has been increasingly acknowledged in legal scholarship,[5] there are dissenting voices, and principles are often encapsulated in customary international law in any case, as will be seen.

On balance, without purporting to exhaustively address the problem of the existence of general principles of international law, the analysis will be confined to the two main arguments that have been raised in an attempt to refute it: first, the exclusive relevance of general principles recognised *in foro domestico* under Article 38 of the ICJ

[4] See Marcelo Vázquez-Bermúdez, 'First Report on General Principles of Law' (2019), UN Doc. A/CN.4/732, at 5, para. 11. For an overview of the uncertainties surrounding general principles of law in international law, and for an attempt to subtantially address them from the perspective of legal argumentation in judicial reasoning, see Eduardo Savarese, *Certezza del diritto e diritto internazionale. Coerenza e identità tra fonti e argomentazione* (Napoli: Edizioni Scientifiche Italiane 2018), at 170-174 and 286-297.

[5] As observed by Beatrice I. Bonafé, Paolo Palchetti, 'Relying on General Principles in International Law', in Catherine Brölmann and Yannick Radi (eds.), *Research Handbook on the Theory and Practice of International Lawmaking* (Cheltenham/Northampton: Edward Elgar 2016), 160, at 161, 'it is now generally accepted that th[e] notion [of general principles] covers both general principles which are recognized by states in their domestic legal orders and principles of international law'. In this regard, see Fulvio Maria Palombino, *Introduzione al diritto internazionale* (Bari/Roma: Laterza 2019), at 51-57; Enzo Cannizzaro, *Diritto internazionale* (5th ed., Torino: Giappichelli 2020), at 132-143; Benedetto Conforti, Massimo Iovane, *Diritto internazionale* (12th ed., Napoli: Editoriale Scientifica 2021), at 52-58.

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Statute; secondly, the lack of sufficient practice to demonstrate that the international legal system has general principles of its own. Once those arguments have been tentatively rebutted, the conclusion that, like any legal system, international law is composed of principles in addition to rules will be confirmed.

3.1.2. *General Principles Recognised* in Foro Domestico *under Article 38 of the ICJ Statute: Not an Obstacle to General Principles of International Law*

The main argument against the existence of general principles of international law resides in the traditional interpretation of Article 38(1)(c) of the ICJ Statute. As is widely known, this provision stipulates that, in deciding on the disputes submitted to it, the International Court of Justice applies 'the general principles of law recognised by civilised nations', in addition to international treaties and customs. That expression was classically understood to refer to general principles recognised *in foro domestico*, namely those principles drawn from domestic legal orders, on condition that they are common to the majority of them and transposable into the international legal system.[6]

Such an interpretation of Article 38(1)(c) is historically traceable to the preparatory works concerning Article 38(3) of the PCIJ Statute, as carried out by the Advisory Committee of Jurists. After the proposal concerning 'general principles of law recognised by civilised nations' had been put forward,[7] an explanation was offered, within the said Committee, that that term was meant to refer to general

[6] Therefore, according to Marcelo Vázquez-Bermúdez, 'Second Report on General Principles of Law' (2019), UN Doc. A/CN.4/741, at 6-34, the identification of general principles of law derived from national legal orders requires a two-step analysis involving a determination of the existence of a principle common to the principal legal systems of the world, and then assessing the possibility of transposing that principle into the international legal system. In this connection, the importance of a comparative approach has been stressed within legal scholarship: see Rudolf B. Schlesinger, 'Research on the General Principles of Law Recognised by Civilized Nations. Outline of a New Project' (1957) 51 *AJIL* 734; and Wolfgang Friedmann, 'The Uses of "General Principles" in the Development of International Law' (1963) 57 *AJIL* 279, especially at 281-285.

[7] It is superfluous to recall that the amendment introducing the 'general principles of law recognised by civilised nations' was submitted by Mr Root (Procès-verbaux of the Proceedings of the Committee, June 16th-July 24th 1920, 15th meeting, 321, Annex 1, at 344). Instead, the original proposal put forward by the President of the Committee, Baron Descamps, included a reference to 'the rules of international

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principles recognised *in foro domestico*.[8] It is superfluous to recall that the current Article 38 of the ICJ Statute reproduces Article 38 of the PCIJ Statute almost verbatim, including the provision dealing with the general principles of law recognised by civilised nations in paragraph 1(c).[9] It has thus been maintained that this provision too should be regarded as an allusion to general principles of law derived from national legal orders only.[10]

The category of general principles recognised *in foro domestico* appears to have been considered as being somehow in conflict with that of general principles of international law, as though the former were incompatible with the latter, or they were mutually exclusive.[11] Sometimes it seems that general principles of international law have been perceived as constituting a ground-breaking notion when compared with the untroubled and familiar notion of general principles

law as recognised by the legal conscience of civilised nations' (ibid., 13th meeting, 281, Annex 3, at 306).

[8] See the Procès-verbaux of the Proceedings of the Committee, 15th meeting, cit., at 335. In particular, Lord Phillimore 'pointed out that the general principles […] were these which were accepted by all nations *in foro domestico*, such as certain principles of procedure, the principle of good faith, and the principle of *res judicata*, etc.'. The explanation was provided to Mr De Lapradelle, who had asked, in the event that 'customary law had already been dealt with', from where 'general principles [could] be derived, unless it were from the reading of judicial decisions and writers'.

[9] Aside from the modification to the numbering of Art. 38 of the PCIJ Statute, the only amendment made to it involved the insertion, in the opening paragraph of Art. 38 of the ICJ Statute, of a reference to the function of the Court to resolve the disputes submitted to it in accordance with international law: see Alain Pellet, 'Article 38', in Andreas Zimmermann et al. (eds.), *The Statute of the International Court of Justice. A Commentary* (2nd ed., Oxford: Oxford University Press 2012), 731, at 743-745.

[10] See Benedetto Conforti, 'Cours général de droit international public' (1988) 212 *Rec. cours* 9, at 77-80, and later *Diritto internazionale* (10th ed., Napoli: Editoriale Scientifica 2014), at 46-52 and 52-54, who admitted only general principles of law recognised *in foro domestico* (and characterised them as *sui generis* customary international norms). See also Francesco Salerno, 'Principi generali di diritto (diritto internazionale)', in *Digesto delle discipline pubblicistiche* vol. XI (Torino: UTET 1996), 524, at 529-531 (according to whom general principles of international law are part and parcel of customary international law, with general principles of law being only those derived from domestic legal systems).

[11] As affirmed by Malcolm N. Shaw, *International Law* (8th ed., Cambridge: Cambridge University Press 2017), at 73-74, '[i]t is not clear, however, in all cases, whether what is involved is a general principle of law appearing in municipal systems or a general principle of international law or indeed […] such principles of municipal law as are applicable to the relations between states'.

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drawn from domestic legal orders.[12] Indeed, in the context of the work of the International Law Commission on general principles of law, perplexities were raised in relation to principles of international law, whereas general principles drawn from domestic legal orders met no objection.[13]

Nevertheless, the argument that relies on the traditional interpretation of Article 38(1)(c) of the ICJ Statute in order to preclude the existence of general principles of international law could be disputed on several grounds. That provision provides no conclusive reason for denying the existence of general principles belonging to the international legal system *stricto sensu*. In fact, it has sometimes been concluded that general principles of international law might be brought under Article 38(1)(c) alongside general principles recognised *in foro domestico*.[14]

First, one might wonder whether the history of Article 38 should be given decisive weight. The *travaux préparatoires* are expected to play a merely supplementary role in the interpretation of treaties, to confirm the meaning resulting from the application of the 'general rule of interpretation', or to define the meaning where the outcome is manifestly absurd or unreasonable or in the event that the meaning is ambiguous or obscure.[15] Although there is room for discretion in de-

[12] It is significant that, in several international law treatises, the very issue of the existence of general principles of international law is essentially omitted, whereas the traditional conception of Art. 38(1)(c) as referring to general principles recognised *in foro domestico* is readily reaffirmed: see, for instance, Dominique Carreau, Fabrizio Marrella, *Droit international* (12th ed., Paris: Pedone 2018), at 333-332 and 335-340; Alexander Orakhelashvili, *Akehurst's Modern Introduction to International Law* (8th ed., London/New York: Routledge 2019), at 45-46; Francesco Salerno, *Diritto internazionale. Principi e norme* (5th ed., Milano: Wolters Kluwer 2019), at 230-233.

[13] In relation to the 'First Report on General Principles of Law', cit., some members of the International Law Commission questioned – without however radically excluding – the existence of general principles of law 'formed within the international legal system', which the Special Rapporteur had included in Draft conclusion 3 along with principles 'derived from national legal systems': see the Report of the International Law Commission on the Work of Its Seventy-First Session (2019), UN Doc. A/74/10, at 339, para. 261.

[14] See Giorgio Gaja, 'The Protection of General Interests in the International Community. General Course on Public International Law' (2012) 364 *Rec. cours* 9, at 34-35. In the work of the International Law Commission on general principles of law, see Vázquez-Bermúdez, 'First Report', cit., at 73, para. 253, who asserts that 'general principles of law in the sense of Article 38, paragraph 1 (*c*) […] comprise not only general principles of law derived from national legal systems, but also general principles of law formed within the international legal system'.

[15] Art. 32 of the Vienna Convention on the Law of Treaties (VCLT), adopted on

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termining whether recourse is necessary to the supplementary means of interpretation,[16] the term 'general principles of law recognised by civilised nations' contained in Article 38(1)(c) appears, in light of the general rule of interpretation, to be a broad expression which may *include* general principles of international law.[17]

In effect, the ordinary meaning of the provision is neutral in terms of, and thus permits, such conclusion: there is no mention of the *domestic* orders of States.[18] Furthermore, the opening part of Article 38, which encapsulates its rationale, indicates that the function of the International Court of Justice 'is to decide in accordance with international law'; regardless of whether this excludes any relevance of principles recognised *in foro domestico*, as was suggested in the past, the point is that, on that account, the conclusion that the meaning of Article 38(1)(c) should extend to general principles of international law could hardly be deemed to be manifestly absurd or unreasonable.[19] In sum, it seems that if Article 38(1)(c) is interpreted as referring to both general principles recognised *in foro domestico* and general principles of international law, this will appear to be ambiguous or obscure only to someone who *presupposes* that just one of those categories should be admitted, whilst the other should be ruled out.

Secondly, assuming that the preparatory works should be given conclusive weight in this case, it would be open to doubt whether,

23 May 1969 and entered into force on 27 January 1980, 1155 *UNTS* 331.

[16] Moreover, the distinction between confirmation and determination of the meaning of a provision tends in fact to blur.

[17] The wording of Art. 38(1)(c) lends itself to different interpretations, depending also on the conceptualisation of principles of law. For example, according to Bin Cheng, *General Principles of Law as Applied by International Courts and Tribunals* (London: Stevens & Sons Limited 1953), at 390, '[t]he general principles of law envisaged by Article 38 I (c) of the Statute of the World Court are indeed the fundamental principles of *every legal system*' (emphasis added), with the result that '[i]t is of no avail to ask whether these principles are general principles of international law or of municipal law'.

[18] As observed by Johan G. Lammers, 'General Principles of Law Recognized by Civilized Nations', in Frits Kalshoven, Pieter Jan Kuyper and Johan G. Lammers (eds.), *Essays on the Development of the International Legal Order. In memory of Haro F. Van Panhuis* (Alphen aan den Rijn: Sijthof & Noordhoff 1980), 53, at 67, '"[l]aw" in the concept "principles of law" may refer to national law, but also to international law, while "recognized by civilized nations" in its turn may involve a recognition *in foro domestico*, but also one on the international plane'.

[19] This conclusion would only be manifestly absurd or unreasonable if the inexistence of general principles of international law were previously demonstrated or, at any rate, maintained. However, as will be seen, such a position could hardly be justifiable in general terms (see *infra*, Section 3.1.4).

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within the Advisory Committee of Jurists, general principles of law were intended as an *exclusive* reference to principles derived from domestic legal orders. Whereas the above explanation based on general principles recognised in *foro domestico* was actually provided, it appears that principles of international law were also referred to during the work of the Committee.[20] Both categories of principle may thus be identified in Article 38(1)(c) of the ICJ Statute. From a broader perspective, it has been suggested that the preparatory works simply allow an inference, *in substance*, that general principles of law must not be arbitrarily determined: accordingly, domestic legal orders represent just *one* of the possible legal parameters for limiting the discretion of the Court.[21] It follows that general principles of international law were not meant to be left out, and should conversely be included.

Thirdly, even admitting that the *travaux préparatoires* were to be attached fundamental weight and the conclusion could indisputably be reached that general principles of law were originally understood

[20] See also Marija Đorđeska, *General Principles of Law Recognized by Civilized Nations (1922-2018). The Evolution of the Third Source of International Law through the Jurisprudence of the Permanent Court of International Justice and the International Court of Justice* (Leiden/Boston: Brill/Nijhoff 2020), at 19-22. For example, it is noteworthy that a member of the Advisory Committee of Jurists, Mr Fernandes, used the expression 'principles of international law' with regard to general principles of law and mentioned the American Declaration of Rights and Duties of Nations, as adopted by the American Institute of International Law in 1916. He seemingly had in mind *also* general principles derived from national legal systems, drawing a parallel between national and international affairs. Both principles recognised *in foro domestico* and those of international law were hence cited: see the Procès-verbaux of the Proceedings of the Committee, cit., 15th meeting, 321, Annex 2, 345, at 346.

[21] According to Bruno Simma, Philip Alston, 'The Sources of Human Rights Law: Custom, Jus Cogens, and General Principles' (1988) *Australian YBIL* 82, at 102, '[f]or the drafters of the Statute the decisive point was that such principles were not to be derived from mere speculation […]. The emphasis on acceptance *in foro domestico* was simply caused by the necessity to validate general principles in a reliable way; it cannot be read as closing the door to alternative means of objective validation'. Indeed, it seems that some members of the Advisory Committee of Jurists had alluded to natural law in relation to general principles, including the President, who referred to 'the legal conscience' of States (see *supra*, note 7), and thus concerns over an overly broad margin of discretion of the Court must not have appeared ill-founded. After all, the relevance of natural law to general principles under Art. 38(1)(c) has subsequently been resurrected: see Frances T. Freeman Jalet, 'The Quest for the General Principles of Law Recognized by Civilized Nations – A Study' (1963) 10 *UCLA Law Review* 1041, especially at 1049-1050 and 1071-1075 *et passim*. However, according to Đorđeska, *General Principles*, cit., at 21, Art. 38(1)(c) in fact prevents the Court 'from rendering arbitrary decisions by providing another set of norms upon which the Court could rely when no treaty or customary rule [is] available'.

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to refer exclusively to general principles recognised *in foro domestico*, Article 38 of the ICJ Statute should not be afforded excessive importance when reflecting on the sources of international law. One must not lose sight of the obvious fact that it is not a sort of 'constitutional provision' on the sources of international law, a fact which in no way undermines the value that has traditionally been reserved to Article 38 in relation to those sources. It is sufficent to recall that sources of international law other than those enumerated therein are well-established and have been acknowledged by the International Court of Justice itself,[22] which is primarily bound by that provision. It would be unreasonable to admit, in identifying the sources of international law, any departure from the list contained in Article 38, where the traditional interpretations of its wording could not be questioned. Indeed, that wording has been censured in other respects, such as the definition of international custom 'as evidence of a general practice accepted as law', rather than 'as *evidenced by* a general practice accepted as law'.[23] Therefore, irrespective of the meaning of Article 38(1)(c), this provision cannot be decisive in establishing whether or not the international legal system does have general principles of its own.[24]

3.1.3. *Inconclusiveness of the Supposed Paucity of Practice to Exclude General Principles of International Law*

Leaving aside any considerations concerning Article 38 of the ICJ Statute, a further reason to cast doubt on the existence of general prin-

[22] Such other sources comprise, to say the least, binding acts of international organisations and unilateral acts of States: see Luigi Condorelli, 'Fonti (diritto internazionale)', in Sabino Cassese (ed.), *Dizionario di diritto pubblico* vol. III (Giuffré: Milano 2006), 2554, at 2561-2563; and Pellet, 'Article 38', cit., at 762-774.

[23] See Tullio Treves, 'Customary International Law', in *MPEPIL online* (2006), para. 16 (emphasis added).

[24] It is worth noting that adherents to the traditional interpretation of Art. 38(1)(c) have not necessarily denied, as a consequence, the existence of general principles of international law *outside* that provision in addition to general principles derived from domestic orders. For example, see Pellet, 'Article 38', cit., at 835 ('This requirement of recognition of the general principles *in foro domestico* is the criterion which differentiates the principles of Art. 38, para. 1 (c) from […] the general principles of international law'). With regard to the PCIJ Statute, see previously Max Sørensen, *Les sources du droit international. Etude sur la jurisprudence de la Cour permanente de justice internationale* (Copenhague: Einar Munksgaard 1946), at 113: 'les principes du droit international […] ne s'identifient pas avec les principes généraux de droit envisagés par l'article 38,3 du Statut [qui] ne comprend que les principes fondés dans les ordres internes'.

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ciples of international law is said to lie in the paucity of the international practice attesting it. In other words, principles of international law are said not to have been sufficiently applied in State practice and international case law in order for their existence to be proven.[25]

Nevertheless, this line of reasoning is also not persuasive. It implies that the existence of general principles of international law, as a legal category, depends on practice; however, this premise itself first needs to be demonstrated. The fact that a particular source of law or legal category has not been applied or widely applied in the past does not imply that it does not exist. After all, the number of treaties has increased considerably in recent decades, but the existence or conceivability of treaty law in the early stages of international law has not been denied as a result. It thus seems that paucity of practice could hardly prevent the jurist from reconstructing the international legal system so as to include its general principles, and could likewise not prevent States and international courts and tribunals from relying on them.[26]

Furthermore, it would be incongruous to regard the 'quantity of practice' as a decisive factor in establishing whether the international legal system has any general principles of its own. This is because it has commonly been said that the identification of single general principles of international law does not depend on practice, the irrelevance of which, so the argument goes, constitutes the essential difference between principles and customary international rules.[27] There would hence be some inconsistency if international practice

[25] One of the reasons why, as mentioned above (*supra*, Section 3.1.2.), 'there was less consensus among members [of the International Law Commission] on the second category of general principles of law, namely those formed within the international legal system', is that some of them 'considered that practice was not sufficient to demonstrate the existence of this category of general principles of law': see the Report of the International Law Commission on the Work of Its Seventy-First Session, cit., at 339, para. 261.

[26] And yet, the Special Rapporteur on general principles of law asserts that 'the issue of basing the Commission's work on sufficient practice must be treated with great care, especially in a topic dealing with one of the sources of international law': see Vázquez-Bermúdez, 'Second Report', cit., at 37, para. 116. In order to maintain the category of general principles of international law, he therefore addresses concerns raised within the International Law Commission by explaining the reasons for the difficulties in identifying the relevant practice (ibid., at 37-38, paras. 117-119).

[27] This is stressed, in particular, by Niels Petersen, 'Customary Law without Custom? Rules, Principles, and the Role of State Practice in International Norm Creation' (2008) 23 *Am. Univ. ILR* 275, at 294-308. On the distinguishing features of general principles of international law see *infra*, Section 3.2, and on the importance of keeping them distinct from customary international law see *infra*, Section 3.3.3.

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were decisive in excluding the existence of the entire category of general principles of international law, whilst being marginal in the identification of single principles.

At any rate, it is far from certain that international practice is insufficient, and this aspect is difficult to assess anyway. One could hardly be certain that, every time the expression 'principle of international law' arises, it is or is not a manifestation of practice confirming the recourse to the category of general principles of international law. As a matter of fact, the term 'general principles of international law' is ambivalent: it might conceivably be used not to refer to the corresponding category, but rather as a generic reference, inter alia, to customary rules and even general principles recognised *in foro domestico* – once they have been transposed in international law – or to judicial dicta of particular importance or with very broad scope.[28] It depends on the conception of general principles of international law and general international law.[29]

By way of illustration, Article 21(1) of the Rome Statute is worth considering, which sets out the law applicable by the International Criminal Court (ICC).[30] Although 'principles of international law' are mentioned alongside rules, there is little agreement as to whether that counts as an instance of practice confirming recourse to the category of general principles of international law. In particular, according to Article 21(1)(b), the ICC applies, where appropriate, 'treaties and *the principles and rules of international law*, including the established

[28] In the context of the work of the International Law Commission on general principles of law, this terminological issue is raised by Vázquez-Bermúdez, 'First Report', cit., at 9-10, para. 38, as '[a] crucial methodological question', since '[t]erms such as "principle", "general principle", "general principle of law", "general principle of international law" and "principle of international law" are often found in practice and in the literature, usually without a clear indication as regards the source of such principles'. In order to deal with that difficulty and select the relevant materials, the Special Rapporteur expressly adopts an approach that takes into account the overall pertinent circumstances (ibid., at 10, para. 39): this solution stands out due to its intuitiveness, but one might ask whether it always proves to be conclusive. See also, as far as general principles of international law are concerned, Vázquez-Bermúdez, 'Second Report', cit., at 38, para. 118. On the methodological difficulties in identifying general principles within international case law, see also Đorđeska, *General Principles*, cit., at 193-216, who however submits a list of the general principles established by the Permanent Court of International Justice and the International Court of Justice (ibid., at 352-360).

[29] On the ambiguities surrounding the expression 'general international law' see *supra*, Introduction, Section III.

[30] Rome Statute of the International Criminal Court, adopted on 17 July 1998 and entered into force on 1 July 2002, 2187 *UNTS* 3.

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principles of the international law of armed conflict'.[31] Some authors have considered Article 21(1)(b) to corroborate the existence of general principles specific to international law as an autonomous category,[32] as general principles recognised *in foro domestico* are kept distinct: they are included within paragraph 1(c) of that provision.[33] However, other authors have regarded the expression 'principles and rules of international law' as a hendiadys referring to customary international law,[34] with the result that general principles of law drawn from national legal orders are the only ones relevant.

3.1.4. *Inherence of General Principles in Addition to Rules in Any Legal System*

Once the arguments founded on the traditional interpretation of Article 38(1)(c) and on the insufficiency of practice have been dealt with, it is hard to see why general principles of international law

[31] In the first place, under letter (a), it is called on to apply the Statute, the Elements of Crimes, and its Rules of Procedure and Evidence.

[32] For example, having concluded that '[o]n the basis of the wording of Art. 38 (1) (c) ICJ Statute, its legislative history, as well as its object and purpose, the view seems to be more tenable that general principles may be derived not only from municipal law, but also from international law', Rüdiger Wolfrum, 'General International Law (Principles, Rules, and Standards)', in *MPEPIL online* (2010), para. 28, adds that '[t]his reasoning is enforced by Art. 21 ICC Statute, which clearly distinguishes between general principles derived from international and those from national law'. See also Elena Carpanelli, 'General Principles of International Law: Struggling with a Slippery Concept', in Laura Pineschi (ed.), *General Principles of Law. The Role of the Judiciary* (Cham: Springer 2015), 125, at 128.

[33] If there is no applicable law under Art. 21(1)(a) and (b), the International Criminal Court applies 'general principles of law derived by the Court from national laws of legal systems of the world including, as appropriate, the national laws of States that would normally exercise jurisdiction over the crime, provided that those principles are not inconsistent with this Statute and with international law and internationally recognized norms and standards'.

[34] See Alain Pellet, 'Applicable law', in Antonio Cassese, Paola Gaeta and John R.W.D. Jones (eds.), *The Rome Statute of the International Criminal Court: A Commentary* vol. II (Oxford: Oxford University Press 2002), 1051, at 1070-1072, suggesting that 'the letter of Article 21(1)(b) of the Statute should not be accorded an unmerited importance […] there is little doubt that this provision refers, exclusively, to customary international law' (ibid., at 1071), so much so that it is possible to 'consider that the double reference [to principles and rules] is a verbal tic, a "ready-made" expression meant to refer to custom' (ibid., at 1072); and Vladimir-Djuro Degan, 'On the Sources of International Criminal Law' (2005) 4 *Chinese JIL* 45, at 80 ('Under "principles and rules of international law", it should be understood to include customary rules of general international law').

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should be ruled out. In fact, since any legal system is now commonly assumed to have its own principles in addition to rules, it is reasonable to conclude that principles of international law exist in exactly the same way as principles specific to any other legal system.[35]

The assumption that any legal system is composed of both rules and principles, while being relevant to international law, is an issue that typically pertains to philosophy of law. As a consequence, any exploration of it, even if concise, would fall far beyond the scope of this study. However, it is unavoidable at least to consider the distinction between principles and rules: it is self-evident that, on account of the above assumption, the definition and very conceivability of legal principles, including general principles of international law, ends up depending on their difference from legal rules. With a view to drawing such a dividing line, a prudent stance would involve what might be described as a 'functional approach', which seems to be apparent overall within the most prominent writings concerning this issue.[36]

Building on the renowned studies of Dworkin, it seems safe to affirm that the function of a rule resides in the evaluation of a fact, action or situation: a certain qualification is attached to it, so that the subjects of the relevant legal system are obliged either to do, or not to do, something. Hence a rule applies 'in an all-or-nothing fashion' to the fact that can be brought under it: a particular prescription relates to a particular situation. On the other hand, the function of a principle is to provide *a value-oriented or ideal direction*: it might be defined as an addressing precept, specifically 'a consideration inclining in one direction or another'. In contrast to rules, principles are not conduct- or result-oriented, and therefore 'do not set out legal consequences that follow automatically when the conditions provided are met'.[37]

[35] In the authoritative words of Gaetano Arangio-Ruiz, 'The Normative Role of the General Assembly of the United Nations and the Declaration of Principles of Friendly Relations, with an Appendix on the Concept of International Law and the Theory of International Organisations' (1972) 137 *Rec. cours* 419, at 495-496, '[i]t seems reasonable to believe that as in any legal system, also within the body of international law one identifies principles and standards in addition to rules in a narrow sense'.

[36] The expression 'functional approach' is used here in an effort to synthesise the views of those authors who support the parallel presence of rules and principles in legal systems. In this regard, it is worth noting that the value of a functional distinguishing criterion was commended by Vezio Crisafulli, 'Per la determinazione del concetto dei principî generali del diritto' (1941) 21 *Riv. int. fil. dir.* 230, at 238-240.

[37] All of the quotations following note 36 in the text are from Ronald Dworkin,

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In spite of their divergent function, rules and principles are not entirely separate as if they were non-communicating components of a legal system. On the contrary, they do interact with each other.[38] Rules are shaped by principles in that they follow certain 'directions'; in turn, principles underlie rules in substantiating their inner meaning.[39] Thus, bodies of consistent rules may be arranged abstractly in the light of their inspiring or guiding principles.[40] From abstraction to abstraction, the fundamental general principles of the relevant legal system might ultimately be derived.

The inherence of principles within legal systems has a bearing on their identification too.[41] Indeed, it is always possible for the judge

'The Model of Rules' (1967) *Univ. Chicago LR* 14, at 25-26, also in Id., *Taking Rights Seriously* (Cambridge: Harvard University Press 1977), at 24-25. Robert Alexy, *A Theory of Constitutional Rights* (reprinted Oxford: Oxford University Press 2010), at 44-69, similarly defines rules as 'norms which are always either fulfilled or not', but peculiarly qualifies principles as 'norms which require that something be realized to the greatest extent possible given the legal and factual possibilities', and more specifically as '*optimization requirements*, characterised by the fact that they can be satisfied to varying degrees, and that the appropriate degree of satisfaction depends not only on what is factually possible but also on what is legally possible' (ibid., at 47-48, emphasis in original, footnotes omitted). On the distinction between rules and principles endorsed in the text, see also Tomaso Perassi, *Introduzione alle scienze giuridiche* (reprinted Padova: CEDAM 1967), at 10-13; and Angelo Falzea, 'I principi generali del diritto' (1991) 37 *Riv. dir. civ.* 455, at 457-458.

[38] Interestingly, Gilles J. Martin, 'Principles and Rules', in Ludwig Krämer and Emanuela Orlando (eds.), *Principles of Environmental Law. Elgar Encyclopedia of Environmental Law* vol. VI (Cheltenham/Northampton: Edward Elgar 2018), 13, places emphasis on the importance of the interaction between principles and rules in order to understand their respective roles, given the difficulties in identifying absolute criteria for drawing a distinction between them. However, he admits that 'it is by their different functions that environmental principles and rules appear to be most easily differentiated' (ibid., at 17): whereas rules 'oblige their addressees to adopt a specific behavior in a given situation' (ibid.), principles have an 'orienting' and 'programmatic' function (ibid., at 17-18).

[39] See Béla Vitanyi, 'La signification de la "généralité" des principes de droit' (1976) 80 *Rev. gén. dr. int. pub.* 536, at 537: 'Sur les principes sont greffées les règles particulières, qui sont à la vérité la concrétisation des idées renfermées dans les principes. En d'autres termes les règles particulières d'un système de droit représentent l'application des idées exprimées par les principes aux situations réglementées, l'adaptation des conceptions fondamentales à la nature des rapports spécifiques'.

[40] See Martin, 'Principles and Rules', cit., at 20-21, who stresses, with regard to environmental law, that every principle 'gives coherence to the rules which may adhere to it', with the result that, 'taken all together', environmental principles 'give coherence to environmental law as a whole' (ibid., at 20).

[41] See again Crisafulli, 'Per la determinazione', cit., 41, at 47-63 and, especially, 157, at 157-162.

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or jurist to reconstruct and determine the general principles of the relevant legal system, because they may be inferred from patterns of rules or from the legal system as a whole.[42] Accordingly, even though principles might be expressly laid down, in which case they tend to be enshrined in the formal constitution as far as domestic legal orders are concerned, principles can always be detected as they do in fact exist irrespective of whether they have been explicitly set out.

As regards the international legal system, the above confirms that general principles of international law *must exist* as they underlie the rules of international law and, potentially, the international legal system as a whole. To say the least, general principles of international law may certainly be derived, by abstraction, from sets of consistent customary and treaty rules. In this connection, the function of principles of providing value-oriented directions is derived from the international legal system as it stands, and may simply be revealed by the judge or jurist.

3.2. *Overview of the Features of General Principles of International Law*

3.2.1. *General Principles of International Law in the Light of the Functional Distinction between Principles and Rules*

Although it is primarily aimed at distinguishing them from rules, the definition of general principles of international law on the basis of their function does have consequences in terms of the conception of principles against the backdrop of the sources of international law.[43] However, owing to the limits of this study, it is not possible to conduct an in-depth investigation into the highly controversial questions concerning the status of general principles within the sources of international law. Hence, an attempt will be made only to redefine those questions in a manner that is consistent with the briefly illustrated difference between rules and principles,[44] as endorsed above,

[42] Indeed, Sergio Cotta, 'I principi generali del diritto: considerazioni filosofiche' (1991) 37 *Riv. dir. civ.* 495, at 496-499, especially at 498, stressed the importance of studying the principles of a legal system, as this is not only a theoretical precondition for understanding, coordinating and applying the rules of that system, but also a practical condition for the realisation of its law.

[43] On the influence of the theory of norms on the theory of the sources of international law see Lorenzo Gradoni, 'Consuetudine internazionale e caso inconsueto' (2012) 95 *Riv. dir. int.* 704, note 2 and at 718-720.

[44] An attempt to systematise the many issues concerning general principles of international law on the basis of a functional approach is also made by M. Cherif

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in order to be able to view the classification of prevention of environmental harm as a general principle of international law in context.

First, as regards the place of general principles among the sources of international law, the relevance of the question as to whether general principles of international law themselves amount to a *source* seems to fall away.[45] Athough the answer to this question ultimately depends on the very notion of 'source of law', the said function of general principles excludes the possibility that they may be *immediately* binding in the sense of prescribing a particular conduct or result and laying down an obligation to do, or not to do, something. As pointed out above, whereas rules have such binding effects, general principles consist in value-oriented directions. In other words, they do not create rights and obligations. Therefore, if the concept of 'source of law' is anchored to the directly binding nature of the posited norm, then general principles of international law cannot be included among the sources of law in the international legal system. On the other hand, the *legal nature* of general principles and the fact that they belong to the international legal system could hardly be denied, considering their interaction with international rules, which are informed by principles and from which principles may be inferred.[46]

In this respect, the issue of the foundation for general principles of international law should evidently become less significant too, as it is important mainly when obligations are at stake. Insofar as general principles of international law emerge from patterns of rules that have been informed by them, they do exist in the international legal system, and may be observed and revealed by the judge or jurist.

Bassiouni, 'A Functional Approach to "General Principles of International Law"' (1990) 11 *Michigan JIL* 768.

[45] Indeed, this question has more broadly concerned the general principles of law recognised by civilised nations under Art. 38 of the ICJ Statute. For an overview of the main opinions adopted within legal scholarship in the past, see Béla Vitanyi, 'Les positions doctrinales concernant le sens de la notion de "principes généraux de droit reconnus par les nations civilisées"' (1982) 86 *Rev. gén. dr. int. pub.* 48, at 56-110.

[46] In the words of Arangio-Ruiz, 'The Normative Role', cit., at 497, 'the frequent statement of scholars and practitioners that principles […] are *sources* of international law is either just another way of saying that principles are part of the normative "stuff" of the legal system or simply a consequence of the fact that the word source is used in a special sense'. Therefore he concludes that principles 'are really not *in themselves* sources, in the sense of law-making – formal or informal – *processes*. They are rather the direct or indirect 'product' of the ordinary law-making processes of international law' (all emphases in the original). On the broader meaning of the term 'source of law' in relation to general principles, see also Robert Kolb, 'Principles as Sources of International Law (with Special Reference to Good Faith)' (2006) 53 *NILR* 1, especially at 1-13.

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Secondly, as regards the relationship between general principles of international law and the sources of international law, the *subsidiary place* traditionally reserved to general principles turns out to be an *accidental consequence* of their function, rather than their inherent status. General principles of international law, especially when included in Article 38(1)(c) of the ICJ Statute, are said to be subsidiary in that they play a supplementary role:[47] their function is to fill in the lacunae within international law,[48] should neither customary nor treaty rules be applicable in any given case.[49] Nonetheless, once

[47] The assumption that general principles play only a supplementary role in filling the lacunae in the international legal system can be traced back to the preparatory works for Art. 38 of the ICJ Statute, and the inclusion within it of the general principles of law recognised by civilised nations. They were included specifically in order to avoid findings of *non liquet* in cases in which no positive rule of international law – a customary or a conventional rule – could be applied. Still, as pointed out above, the importance of Art. 38 and the relevant *travaux préparatoires* should not be exaggerated, because it does not amount to a sort of constitutional provision defining the sources of international law. Moreover, it is not entirely certain whether Art. 38(1)(c) could be understood to refer both to general principles of law recognised *in foro domestico* and to general principles of international law. Should the answer be in the negative, the latter would be unaffected by the solution limiting the function of general principles under Art. 38 to gap-filling.

[48] Indeed, within legal scholarship, a number of functions of general principles of international law have been identified in addition to the gap-filling function, specifically interpretation, inspiration, conflict-solution and harmonisation. The performance of a plurality of functions, including the supplementary one, was likewise suggested by the International Law Commission in its work on general principles of law: see the Report of the International Law Commission on the Work of Its Seventy-First Session, cit., at 334, para. 232 ('Some members indicated that general principles of law could have other possible functions, such as to serve as an interpretative tool, and that they serve as sources of rights and obligations'). However, the issue has not been specifically addressed yet: at the time of writing, the report of the Special Rapporteur dealing with them has not yet been submitted and the relevant debate has not yet commenced.

[49] In truth, any person who is convinced of the completeness of international law by virtue of the so-called Lotus closing rule or, conversely, admits the possibility of a *non liquet*, will arguably not be prone to accepting gap-filling principles. Yet, the relationship between the Lotus closing rule, *non liquet*, and gap-filling principles is a complex one, so that the said conclusion – refusal of gap-filling principles – is just one of the possible outcomes. The Lotus closing rule, under which anything that is not prohibited is permitted, could be deemed to be not only a positive norm of international law associated with State sovereignty, but also, alternatively, a gap-filling principle in itself. It is significant that, already during the work of the Advisory Committee of Jurists, Mr Ricci Busatti observed as follows in relation to cases in which a positive rule of international law is lacking: 'That which is not forbidden is allowed; *that is one of the general principles of law* which the Court shall have to

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the distinctive function of general principles of international law has been found to lie in the provision of value-oriented directions, such gap-filling use is a mere consequence of that function, a consequence which may *or may not* occur depending on the circumstances of the case: it is not a defining feature of general principles of international law. Therefore, they cannot be deemed to be inherently subordinate to customary international law and treaty law because of their supplementary role.

The reason why the gap-filling use of general principles of international law amounts to a consequence of their directive or inspiring function is plain to see. Since principles underpin and inform patterns of rules, to such an extent that the former may be derived from the latter by abstraction, it is logical to consider underlying principles in the event that none of the relevant rules is properly applicable, in order to enable that gap to be filled. Were the underlying principles to be ignored, the judge or jurist would run the risk of reaching an arbitrary solution, specifically a solution that is inconsistent with the overall rationale of the law regulating either the matter at stake or similar matters.

Upon closer consideration, one might observe that, in the light of the above-mentioned distinction between rules and principles, general principles of international law are never properly 'applied', even in order for a lacuna to be filled. This is because a general principle is used *to infer a rule* which – the rule, not the principle – might solve the case. In other words, the gap is filled by the rule derived from a principle, rather than by the principle itself. From this perspective, general principles of international law cannot be defined on the basis of a – gap-filling – function which they do not in fact ever perform.

Similar considerations apply in relation to another 'function' that is commonly ascribed to general principles of international law:

apply' (Procès-verbaux of the Proceedings of the Committee, cit., 14th meeting, 307, at 314, emphasis added). After the proposal on 'general principles of law recognised by civilised nations' had been made, he pointed out that he would understand the term 'general principles of law' contained in it in the sense of encompassing the said principle (ibid., 15th meeting, cit., at 332). Moreover, irrespective of its classification, the very existence of such a closing rule is hotly debated. By that same token, it is open to question whether or not there is any general prohibition on *non liquet* in international law. Even if there is found not to be, one might still admit the possibility of an international court or tribunal having recourse to gap-filling principles, with the *non liquet* doctrine coming to the fore on a subordinate basis, should it be impossible to settle a dispute despite having had recourse to general principles. Admittedly however, such an eventuality appears to be quite remote.

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interpretation. The fact that general principles might be used as a tool for interpretative purposes is merely accidental and does not represent the *distinctive function* of general principles. Not only principles, but also rules, whatever their source is, may potentially be employed for interpretation. For instance, customary rules may be taken into account within the interpretation of treaties, although surely interpretation cannot be regarded as the specific function of customary international law. Indeed, international case law confirms that, as far as the interpretation of treaties is concerned, recourse to general principles of law has also been founded on the systemic approach under Article 31(3)(c) of the Vienna Convention on the Law of Treaties, in the same manner as recourse to customary or treaty rules. According to that approach, as is known, '[t]here shall be taken into account […] any relevant rules of international law applicable in the relations between the parties'.

Again, reliance on general principles for interpretative purposes is a consequence of their key function. Given that general principles underlie and inspire rules, the former may certainly be important when interpreting the latter. Therefore, should one construe narrowly the reference to 'rules' in Article 31(3)(c) so as to exclude general principles, they would come into consideration regardless in the interpretation of rules, by reason of their inspiring function. Moreover in order for this use of general principles to remain anchored in the Vienna Convention on the Law of Treaties, should that be deemed to be necessary, it could be traced back to the 'object and purpose' criterion, as set out in Article 31(1).

3.2.2. *Features of the Inspiring Function of General Principles of International Law*

Some aspects of general principles of international law have been tentatively clarified above in the light of the inspiring function that distinguishes principles from rules. This function itself now deserves further attention, having regard to the features of the international legal system, before proceeding to argue that prevention of environmental harm amounts to a general principle of international law. In particular, the inspiring function of principles seems to entail a somewhat *programmatic effect*, which appears to be at odds with the decentralised structure of the international legal system. Since the identification of general principles by induction from existing rules of international law implies that these rules have been inspired or informed by the former, then general principles must have *already* been orienting the formation of those rules. One might be under the

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impression that the creation of rules has been previously arranged by the operation of general principles.

Outside the realm of international law, the word 'programmatic' refers precisely to the effect that general principles of law have on the legislature: as a result of that effect, law-making should be coherent with those principles. Therefore, a programmatic effect is not only implicit, to some degree, in the inspiring function of general principles, but also may contribute to explaining the relationship between principles and rules: rules tend to reflect the directions set out in principles by reason of the programmatic effect that principles have previously exercised on lawmakers.[50] Hence, within domestic legal orders, programmatic principles are frequently enshrined in the constitution:[51] its foundational value fits in well with the directive function specific to principles, and allows them to exercise a programmatic effect on the lawmaker.[52]

Returning to international law, a question arises as to whether there may be some programmatic effect in a system that is of a decentralised structure. The answer must be that there is none, if one looks for written general principles laid down beforehand in order to provide directions to States in respect of the formation of customary law and treaties. In fact, that would be incompatible with the spontaneous nature of the formation of customary rules, as is usually acknowledged,[53] and in more general terms there is no formal constitution in the international legal system that might provide for such written principles.[54] The answer will also be negative if one

[50] The approach endorsed here is based on the contribution by Crisafulli, 'Per la determinazione', cit., 230, at 248-252, who went on to distinguish between programmatic principles and both implicit principles and express principles, which have already started to operate, albeit implicitly, when they are set down in writing.

[51] See Costantino Mortati, 'Dottrine generali e Costituzione della Repubblica Italiana', in *Enciclopedia del diritto* vol. XI (Milano: Giuffré 1962), 139, at 170-173 and 180-184.

[52] On the correlation between the function of general principles of law and the tendency to enshrine them in constitutional or, at any rate, high-ranking provisions, see Falzea, 'I principi generali', cit., at 468-470 (distinguishing between these fundamental or express principles and common or unexpressed principles as well as transnational principles).

[53] See the seminal study of Roberto Ago, *Scienza giuridica e diritto internazionale* (Milano: Giuffré 1950), especially at 78-100. For a critical opinion, see Gaetano Arangio-Ruiz, 'Customary Law: A Few More Thoughts about the Theory of "Spontaneuos" International Custom', in *Droit du Pouvoir, pouvoir du droit. Melanges offerts à Jean Salmon* (Bruxelles: Bruylant 2007), 93.

[54] It is noteworthy, however, that programmatic principles or equivalent categories, where acknowledged, have not necessarily been linked with the concept of a 'constitution' even by those authors who postulate that a *material* constitution

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looks for unwritten general principles that are conceived of as being deliberately created to guide the future formation of international rules, due to the absence of an over-arching legislative authority.[55]

It follows that it is up to the judge or jurist to infer general principles of international law from existing rules: the directive and inspiring function can only be detected *ex post*, once general principles have already informed more specific rules. Absent any rules embodying principles, no general principle of international law could be found. Accordingly, it appears that there cannot be any general principles of

exists in the international legal system. For example, according to Giorgio Balladore Pallieri, *Diritto internazionale pubblico* (8th ed., Milano: Giuffré 1962), at 16-26, especially 24-26, the international community was born with and as a result of a plurality of pristine norms or constitutional principles, which amounted to its constitution. Nonetheless, these constitutional norms or principles were distinguished from other principles with a resemblance to general principles of international law as defined in the text: these were the principles pervading the entire legal system, inspiring international norms and guiding their interpretation. As they were not deemed to be international *legal* norms, they could be regarded as 'constitutional' just *lato sensu*, by virtue of their substantive importance (ibid., at 25-26). At any rate, it should be borne in mind that the existence of a – material – constitution in international law has been highly controversial and has been hotly debated in the past. Within classical legal scholarship, that idea was rejected by Gaetano Morelli, 'Cours général de droit international public' (1956) 89 *Rec. cours* 437, at 450-451, identifying the foundation for international law and, in particular, its law-creating processes, in one *single* fundamental norm which must be presupposed. More recently, on the so-called 'constitutionalisation of international law', including through the constituent treaties of international organisations, see Anne Peters, 'Membership in the Global Constitutional Community', in Jan Klabbers, Anne Peters, Geir Ulfstein, *The Constitutionalization of International Law* (Oxford: Oxford University Press 2009), 153, at 201-219; and Bardo Fassbender, *The United Nations Charter as the Constitution of the International Community* (Leiden/Boston: Martinus Nijhoff Publishers 2009), especially at 77-115. Contra, see Carlo Focarelli, 'Costituzionalismo internazionale e costituzionalizzazione della *global governance*: alla ricerca del diritto globale' (2011) 42 *Pol. dir.* 207; and Paolo Picone, 'Capitalismo finanziario e nuovi orientamenti dell'ordinamento internazionale' (2014) 8 *Dir. um. dir. int.* 5, at 22-26.

[55] Within past contributions to the literature, it was maintained that principles, as the primary norms of international law, could be *spontaneously* and *instantly* established by the prevailing forces of the international community, including the most powerful States, for instance as a result of crises or significant events: see Rolando Quadri, 'Cours général de droit international public' (1964) 113 *Rec. cours* 237, at 319-335; and Id., *Diritto internazionale pubblico* (5th ed., Napoli: Liguori Editore 1968), at 106-108 and 119-122. The principal criticism of such a construction was that it would entail the creation of *general obligations* – indeed supreme obligations – regardless of any tradition, i.e., international practice, and by virtue of the mere volition of the most influential social actors.

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international law that have remained unrealised, although they might have been balanced against conflicting principles.

On the other hand, whereas an *ex ante* and 'deliberate' programmatic effect of general principles of international law must be excluded owing to the structural features of the international legal system, one may certainly note, in contemporary international law, a proliferation of 'programmatic moments', in which most States collectively express common positions with a view to influencing the development of international law. It must be stressed that the ensuing 'directions' do not themselves constitute general principles of international law: they may *or may not* inspire the formation of rules embodying them. And yet, these programmatic moments may give an impetus to the future emergence of general principles of international law, and may provide evidence of them. In this regard, their importance should not be overlooked.

It is reasonable to argue that programmatic moments have become increasingly frequent since international law evolved from classical coexistence into cooperation.[56] Under the classical international law of mere coexistence, it was rather rare for States to feel any need to collectively express common views on the future direction of international law. The core of international law was essentially mutual respect for the sovereignty of other States:[57] rules could fundamentally be traced back to this, and thus tended to be negative in requiring that States refrain from interfering with other States' sovereignty. The situation has changed when, following the Second World War, cooperation became necessary, for instance, for new independent countries' claims for economic and social justice, or to address unprecedented challenges of global survival, including the proliferation of nuclear weapons and the degradation of the environment.[58] Of course, cooperation requires shared perspectives: States started to perceive the pressing need to express future and common paths.

International economic law is one of the fields in which such a programmatic intent has flourished the most. In this regard, the initiative of establishing the New International Economic Order, dating back to

[56] The evolution of international law from coexistence to cooperation has as already been mentioned *supra*, Chapter 2, *passim*.

[57] As far as territorial sovereignty is concerned, the point has been emphasised *supra*, Section 2.2.1.b, in the text corresponding to note 47.

[58] As illustrated by Wolfgang Friedmann, 'General Course in Public International Law' (1969) 127 *Rec. cours* 39, at 93, '[t]he major challenges of survival and welfare […] have created many new areas of international concern which demand international co-operation.' On these challenges, see ibid., at 48-54.

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the early 1970s, is remarkable.[59] As is known, with developmental issues arising in the wake of decolonisation, developing States were resolute in influencing the evolution of international economic relations: the start of a new course of international economic law was proclaimed in a series of resolutions adopted by the UN General Assembly,[60] where developing countries were in a majority, acting *en bloc* as the Group of non-aligned countries, or Group of 77.[61] Irrespective of whether and to what degree the provisions of those resolutions eventually gave rise to general principles of international law,[62] the purpose of establishing new directions constituting a break with the pre-existing economic order and its relevant rules is beyond question.

As the example of the new economic order attests, the evolution of international law from coexistence into cooperation boosted the programmatic intent of States also from a formal or, so to speak, procedural standpoint. A phenomenon typical of international law of cooperation, the proliferation of international organisations and conferences provided States with congenial instruments for satisfying the need to express new values and approaches:[63] thanks to

[59] See especially Paolo Picone, 'Diritto internazionale dell'economia e costituzione economica dell'ordinamento internazionale', in Paolo Picone and Giorgio Sacerdoti (eds.), *Diritto internazionale dell'economia* (Milano: Franco Angeli Editore 1982), 31, at 65-68, who places emphasis on the emergence of a programmatic intent, alongside the initiative for the New International Economic Order, as a turning point in the evolution of international economic law.

[60] See UNGA Resolutions 3201 (S-VI) of 1 May 1974, 'Declaration on the Establishment of a New International Economic Order'; 3202 (S-VI) of 1 May 1974, 'Programme of Action on the Establishment of a New International Economic Order'; 3281 (XXIX) of 12 December 1974, 'Charter of Economic Rights and Duties of States'. For an analysis of these resolutions, and on the origins of the New International Economic Order, see Giorgio Sacerdoti, 'Nascita, affermazione e scomparsa del Nuovo Ordine Economico Internazionale: un bilancio trent'anni dopo', in Aldo Ligustro and Giorgio Sacerdoti (eds.), *Problemi e tendenze del diritto internazionale dell'economia.* Liber amicorum *in onore di Paolo Picone* (Napoli: Editoriale scientifica 2011), 127, at 129-139. See also Maria Rosaria Mauro, *Diritto internazionale dell'economia. Teoria e prassi delle relazioni economiche internazionali* (Napoli: Edizioni Scientifiche Italiane 2019), at 19-22.

[61] In the telling words of Robin C.A. White, 'A New International Economic Order' (1975) 24 *ICLQ* 542, at 543, '[t]hese documents are also prime examples of the new militancy at the United Nations of the developing countries'. For a contextualisation of developing States' needs and aspirations see Raffaele Cadin, *Profili ricostruttivi e linee evolutive del diritto internazionale dello sviluppo* (Torino: Giappichelli 2019), at 39-62.

[62] On the 'failure' of the New International Economic Order and its legacy, see again Sacerdoti, 'Nascita, affermazione e scomparsa', cit., at 142-152.

[63] See again Friedmann, 'General Course', cit., at 62: 'The creation of numerous specialised agencies of the United Nations, and other international organisations,

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their solemnity, declarations of principles proved to be the most appropriate means of affirming shared directions. Again, this does not mean that solemn declarations adopted by international organisations or conferences lay down, of themselves, general principles of international law. As will be pointed out, the relationship between the former and the latter is more intricate.[64]

It must be admitted that, when compared with declarations of principles, treaties – as the classical instrument of traditional international law – are far from suitable for expressing new directions.[65] To be sure, treaties may codify principles and, as will be seen, they may thus provide significant evidence of the existence of the general principles underpinning the rules contained in them.[66] Nevertheless, the fact remains that the statement of principles in treaties represents a sort of 'side effect', because the primary aim of treaty-making lies in the stipulation of *rules*. This is why, in treaties, the underlying principles tend to be relegated to the preamble, or to a separate section.

The incidental nature of the statement of principles in treaties also holds true as regards codification treaties aimed at the progressive development of international law.[67] In contrast to other treaties, such treaties are intended to exert an influence on the evolution of general international law: fresh 'principles' might be incorporated within them, alongside their embodying rules, in order for a certain approach under international law to be promoted. However, just like any other treaty,

[…] marked the transition of international law from the traditional system of formal rules of respect and abstention, designed to protect national sovereignty, to an incipient system of organised joint efforts for co-operation'.

[64] See *infra*, Section 3.3.2.

[65] It is worth stressing that the following limitations to treaties only concern their aptness to express new principles of international law. This is not to imply that treaties do not play any role in the reconstruction of general principles. On the contrary, as will be pointed out below, treaty rules are important for inferring principles as well as confirming the existence of principles in international law.

[66] See *infra*, Chapter 4.

[67] However, it should be borne in mind that codification treaties could hardly be regarded as instruments typical of the international law of coexistence, as codification has only spread in fairly recent times, i.e., after the Second World War, at the instigation of the UN General Assembly. In the words of Arthur Watts, 'Codification and Progressive Development of International Law', in *MPEPIL online* (2006), para. 10, '[w]ith the establishment of the UN in 1945 a significant change occurred in that a comprehensive approach to the codification of international law as a whole was envisaged in the United Nations Charter […] itself, and a standing mechanism for its achievement was put in place'. On early contributions to the codification of international law, see Charles de Visscher, 'La codification du droit international' (1925) 6 *Rec. cours* 329, at 408-428.

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a codification treaty too is primarily meant to lay down *rules*, although those rules are understood to reflect existing customary rules or, in situations involving progressive development, to crystallise emerging customary rules and promote the formation of new customary rules. Hence codification treaties were not a viable option for States to set out the desired novel directions of international law in black and white.

As a consequence, the fact that some provisions of ancient treaties endorse certain principles can hardly demonstrate that treaties have traditionally provided States with an instrument that is specifically intended to guide the future direction of international law: any statement of principles was merely accidental. A notable instance is the affirmation of the principle of humanity in the Martens clause of the Laws and Customs of War on Land (Hague II Convention).[68] The purpose of this Convention is not to set out that principle, but rather to regulate the pertinent subject matter through rules,[69] as the inclusion of the Martens clause in the preamble, and not in the operative part, confirms.[70]

3.3. *Theoretical Implications of the Reconstruction of Prevention of Environmental Harm as a General Principle of International Law*

3.3.1. *Prima Facie Suitability of Prevention of Environmental Harm to Qualify as a General Principle: The Programmatic Intent of the 1972 Stockholm Conference*

In light of the above, it is possible to identify a prima facie sign of the possibility of classifying prevention of environmental harm as

[68] Adopted on 29 July 1899 at the Hague and entered into force on 4 September 1900. In the authentic text in French, the Martens clause reads as follows: 'En attendant qu'un code plus complet des lois de la guerre puisse être édicté, les Hautes Parties Contractantes jugent opportun de constater que, dans les cas non compris dans les dispositions réglementaires adoptées par Elles, les populations et les belligérants restent sous la sauvegarde et sous l'empire des principes du droit des gens, tels qu'ils résultent des usages établis entre nations civilisées, *des lois de l'humanité* et des exigences de la conscience publique' (emphasis added).

[69] Specifically, the Hague II Convention includes only one substantive rule: it refers to the annexed Regulations in simply stipulating that the Parties shall issue instructions consistent with them (Art. 1). Hence the core provisions are laid down in the Annex, as the other provisions of the Convention deal with aspects relating to its operation, such as application *ratione personae* (Art. 2), ratification (Art. 3), accession (Art. 4), and denunciation (Art. 5). The point as to the purpose of the Convention, however, remains.

[70] The Martens clause was originally meant to be a merely auxiliary aspect of the Convention's architecture: see Theodor Meron, 'The Martens Clause, Principles of Humanity, and Dictates of Public Conscience' (2000) 94 *AJIL* 78, at 79-80.

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a general principle of international law in the programmatic moment associated with the 1972 Stockholm Conference. Although it does not constitute a conclusive proof, it provides a significant starting point for the reconstruction of prevention of environmental harm as a general principle of international law.

In particular, it was at the 1972 Stockholm Conference on the Human Environment that prevention of environmental harm was solemnly proclaimed in principle 21 of the Stockholm Declaration.[71] That Conference was the 'programmatic moment' of protection of the environment on the international level. During the 1960s, States felt the need to develop a new framework for refocusing international law in what was considered to be the right direction in order to face unprecedented degradation of the environment. Such a programmatic aspiration realised itself specifically at the Stockholm Conference.

To illustrate why States felt the need for a *new direction* within international law, it is essential to focus on the perception of degradation of the environment as a *new challenge*. It is worth stressing that the key issue is not the very existence of environmental degradation as a phenomenon, but rather *its perception* as a problem.[72] In fact, environmental issues were not uncommon before the 1960s, but it was only during those years that a comprehensive understanding of the precariousness of the environment and its repercussions started to spread: the sensitivity of the environment to industrial and technological development became a matter of deep concern. This study has already emphasised the fact that protection of the environment only emerged as a collective interest of the international community as a whole during the 1960s and 1970s.[73] It is now necessary to take one step further to expand the vision and observe that this is the consequence of a greater change in the conception of the environ-

[71] Previous references to prevention of transboundary environmental harm will not be considered as they were not based on protection of the environment per se, as a community interest: see *supra*, Chapter 2.

[72] See especially Daniel Bodansky, *The Art and Craft*, cit., at 18-21: 'The growth of international environmental law is sometimes portrayed as a simple cause-and-effect relationship between the growing scale of environmental problems and the political-legal response. But whether a particular phenomenon is considered a "problem" depends, in part, on human perceptions and values' (ibid., at 19).

[73] See *supra*, Section 2.3. Having been adopted for the first time in the Stockholm Declaration, the comprehensive approach to the environment was immediately strengthened in the Charter of Economic Rights and Duties of States and the World Charter for Nature (*supra*, Section 2.3.3).

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ment, a change in which international environmental law itself has its origins.[74]

In the late nineteenth century and the first half of the twentieth century, there was mainly a utilitarian approach to environmental issues.[75] It could hardly be regarded as a form of protection of the environment *stricto sensu*: instead, one might rightfully refer to the mere conservation of natural resources aimed at pursuing practical and frequently short-term goals, which fundamentally lay in the increase in economic productivity. Accordingly, rather than being considered as the root cause of degradation of the environment, exploitation of natural resources provided the ultimate reason for resource conservation. Indeed, as illustrated above, prevention of environmental harm was, in the past, exclusively anchored in mutual respect for the territorial sovereignty of States.[76]

An indicaton of this utilitarian approach is apparent in several treaties concerning conservation of wildlife, dating back to the early twentieth century. For instance, the Convention Designed to Ensure the Conservation of Various Species of Wild Animals in Africa was adopted in 1900:[77] the *reduction* in the number of the animals of cer-

[74] Accordingly, for further details of the rise of environmental consciousness during the 1960s, see also the overview of the history of international environmental law as included in general publications on international protection of the environment. In particular, see Peter H. Sand, 'The Evolution of International Environmental Law', in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds.), *The Oxford Handbook of International Environmental Law* (Oxford: Oxford University Press 2007), 29, at 31-35; Bodansky, *The Art and Craft*, cit., at 18-30; Pierre-Marie Dupuy, Jorge E. Viñuales, *International Environmental Law* (2nd ed., Cambridge: Cambridge University Press 2018), at 3-12; Philippe Sands et al., *Principles of International Environmental Law* (4th ed., Cambridge: Cambridge University Press 2018), at 21-33. See likewise Edith Brown Weiss, 'The Evolution of International Environmental Law' (2011) 54 *Japanese YIL* 1, at 1-6.

[75] The term 'utilitarian approach' is not intended here as a synonym for 'anthropocentric approach': the former is used to indicate the pragmatic nature of the objective pursued, whereas the latter refers more broadly to the focus on humans. Indeed, one could hardly say that 'eco-centrism' has replaced anthropocentrism in today's environmental protection. As far as the rise of environmental awareness in the 1960s is concerned, the persistence of an anthropocentric perspective in this new era of environmental policy is underscored by Jan Laitos, *Why Environmental Policies Fail* (Cambridge: Cambridge University Press 2017), at 55-58.

[76] See *supra*, Section 2.2.

[77] Convention Designed to Ensure the Conservation of Various Species of Wild Animals in Africa, Which Are Useful to Man or Inoffensive, adopted at London on 19 May 1900 and never entered into force. An English version of the Convention is available in Bernd Rüster and Bruno Simma (eds.), *International Protection of the Environment. Treaties and Related Documents* vol. IV (Dobbs Ferry: Oceana Publications 1975), 1605.

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tain species,[78] and even the *destruction* of the eggs of some of them were included in it among the measures to preserve the forms of animal life that were deemed to be of use.[79] In addition, the name of the 1902 Convention for the Protection of Birds Useful to Agriculture is itself telling: the choice to protect certain birds was dependent on their importance to agriculture as an economic activity.[80]

The situation did not change very much in the immediate aftermath of the Second World War. Conservation of natural resources was still pursued insofar as it could be instrumental in their further exploitation. In this regard, the Scientific Conference on the Conservation and Utilisation of Resources is particularly illustrative, considering that it was held under the auspices of the United Nations in 1949.[81] Its purpose was to exchange information and ideas among engineers, economists, and other technicians on how best to use resources so as to avoid unnecessary depletion or waste, and thus secure production growth. Indeed, the convening of the Conference was prompted not only by the impairment of natural resources due to war, but also by their importance in post-war reconstruction.[82] For example, conservation of forests was discussed, but with a focus on methods for maximising the yield of the relevant products.[83] It was also considered, from a different but equally utilitarian perspective, in that it could be useful for the conservation of other resources, including water.[84]

On the other hand, an environmental consciousness started to emerge gradually during the second half of the twentieth century. In 1950, the International Convention for the Protection of Birds – without any further qualifications – was adopted:[85] it replaced the

[78] Art. II(13) of the Convention Designed to Ensure the Conservation of Various Species of Wild Animals in Africa.

[79] Art. II(15) of the Convention Designed to Ensure the Conservation of Various Species of Wild Animals in Africa.

[80] Convention for the Protection of Birds Useful to Agriculture, signed at Paris on 19 March 1902 and entered into force on 20 April 1908. An English version of the Convention is available in Rüster and Simma (eds.), *International Protection of the Environment*, cit., 1615.

[81] See UN ECOSOC Res. 32 (IV), 28 March 1947.

[82] Ibid., preamble.

[83] See the Report on the Conference by the Secretary-General, in the Proceedings of the United Nations Scientific Conference on the Conservation and Utilisation of Resources, 17 August-6 September 1949, Lake Success, New York, vol. 1, Plenary Meetings (UN Doc. E/Conf.7.7), at XX.

[84] Ibid.

[85] International Convention for the Protection of Birds, signed at Paris on 18 October 1950 and entered into force on 17 January 1963, 638 *UNTS* 185.

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aforementioned Convention for the Protection of Birds Useful to Agriculture.[86] The preamble to the new treaty states that '*all birds* should as a matter of principle be protected',[87] which is to say not only those birds that are of use to economics. It is likewise noteworthy that, among the relevant reasons, 'the protection of nature' is mentioned in addition to 'the interests of science' and the 'economy of each nation'.[88] Another piece of evidence of an emerging environmental awareness may be found in the attention paid internationally to the problems of nuclear radiation and oil pollution as early as the 1950s. By way of illustration, the International Convention for the Prevention of Pollution of the Sea by Oil was adopted in 1954[89] and, under the 1958 Convention on the High Seas, States were obliged to draw up regulations and to take measures to prevent oil pollution and pollution from the dumping of radioactive waste.[90]

As mentioned above, however, it was in the 1960s that the 'environmental revolution' began, originating in the United States and Western countries.[91] It became clear to public opinion at that time that increasing industrial and technological development would pose a serious threat *to the environment in its entirety* and, ultimately, to the survival of mankind.[92] A broader view of the adverse effects of development spread, one which cast a wider net than the mere economic significance of the natural resources at stake.

In fact, public opinion played a prominent role in this revolution: it was a mass movement.[93] This explains why, alongside advances in scientific knowledge, the publication of Rachel Carson's book *Silent*

[86] Art. 11 of the 1950 International Convention for the Protection of Birds.

[87] Emphasis added.

[88] Preamble to the 1950 International Convention for the Protection of Birds.

[89] International Convention for the Prevention of Pollution of the Sea by Oil, adopted at London on 12 May 1954 and entered into force on 7 August 1958, 327 *UNTS* 3.

[90] Convention on the High Seas, adopted at Geneva on 29 April 1958 and entered into force on 30 September 1962, 450 *UNTS* 82. See Articles 24 and 25(1).

[91] For further details, see John McCormick, *Reclaiming Paradise: The Global Environmental Movement* (Bloomington/Indianapolis: Indiana University Press 1991), at 47-68.

[92] See Michael G. Schechter, *United Nations Global Conferences* (London/New York: Routledge 2005), at 27-29, especially at 27: 'Prior to the 1960s, little international attention had been paid to the challenges of the global environment […] it was only in the late 1960s that talk about the necessity to take *global* action became pervasive' (emphasis added).

[93] See Alexandre Kiss, Jean-Didier Sicault, 'La Conférence des Nations Unies sur l'environnement (Stockholm, 5/16 juin 1972)' (1972) 18 *Ann. fr. dr. int.* 603, at 603-607.

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Spring in 1962, dealing with the adverse impact of pesticides and insecticides, is a commonly cited driver of the movement: it was a best-seller of that time. Other publications were of great influence too, including Barry Commoner's *Closing Circle*, and Richard Falk's *Endangered Planet*, both published in 1971, as well as the Club of Rome's *The Limits to Growth*, in 1972.[94] It should be added that some environmental disasters provoked general shock, such as the Torrey Canyon incident in 1967.[95] The destructiveness of nuclear weapons also aroused widespread concerns.[96]

In this context, States too perceived that the issue of environmental protection was presenting itself in terms that, up to then, had been unknown: before, they had never been faced with the challenge of safeguarding the environment per se. In effect, the acknowledgement of a new challenge led the United Nations to convene the Stockholm Conference: this is evident from both the preparatory works as well as the final report of the Conference.

Starting with the arrangement of the Conference, it was the UN Economic and Social Council that called the attention of the General Assembly to the environment per se and recommended that a conference be convened to deal with environmental issues.[97] In the pertinent resolution, emphasis was placed on the 'continuing and accelerating' impairment of the quality of the environment. The Economic and Social Council proclaimed that it was itself convinced 'of the urgent need' for intensified action.[98] Thus, in upholding the Council's proposal and convening the conference, the General Assembly observed that 'the relationship between man and his environment [was]

[94] On the importance of *The Limits to Growth*, see also *infra*, Section 7.4.

[95] See *supra*, Section 1.2.3.

[96] See Alexandre Kiss, Dinah Shelton, *Guide to International Environmental Law* (Leiden/Boston: Martinus Nijhoff Publishers 2007), at 33-34; Bodansky, *The Art and Craft*, cit., at 26-28; Dupuy, Viñuales, *International Environmental Law*, cit., at 8-9.

[97] No provision of the UN Charter specifically addresses environmental matters: the environmental awareness discussed here was lacking in 1945, when the UN Charter was adopted. Be that as it may, protection of the environment was readily linked with the aim of international cooperation in solving international economic and social problems under Articles 1(3) and 55(b), UN Charter, which explains the role played by ECOSOC. Indeed, as observed by Ulrich Beyerlin, Jenny Grote Stoutenburg, 'Environment, International Protection', in *MPEPIL online* (2010), para. 7, 'only after the Stockholm Conference, the first conference to comprehensively deal with environmental problems of broad international significance, was environmental protection firmly established as falling within the competence of the UN system'.

[98] See UN ECOSOC Res. 1346 (XLV), 30 July 1968, preamble.

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undergoing *profound changes* in the wake of modern scientific and technological developments'.[99]

As far as the outcome of the Conference is concerned, the fact that the world was entering into a new phase is especially underlined in the Stockholm Declaration: '*a stage has been reached* when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale'.[100] The Declaration also states that protection and enhancement of the environment 'ha[d] *become* an imperative goal for mankind',[101] since evidence of man-made harm to the environment was seen to be growing.[102]

Faced with such a new challenge, States deemed it necessary to collectively express their views on how the environmental problems could be addressed: this encapsulates the programmatic moment. Specifically, the Stockholm Conference was conceived of as a means for pursuing two objectives: first, 'to encourage work in this field and to give it a *common outlook and direction*'; and secondly, 'to provide framework for a comprehensive consideration […] of the problems of human environment *in order to focus the attention of Governments* and public opinion on the importance of this question'.[103] In fact, a 'directive purpose' pervaded the Declaration.[104] It was adopted in light of 'the need for a common outlook and for common principles *to inspire and guide* the peoples of the world in the preservation and enhancement of the human environment'.[105]

The fact that the Stockholm Conference constituted the programmatic moment for international protection of the environment suggests the programmatic weight of prevention of environmental harm, as enshrined in principle 21 of the Declaration. This is confirmed by its connection with principle 22, in which development of international law is called upon. It states as follows:

[99] See UNGA Res. 2398 (XXIII) of 3 December 1968, preamble (emphasis added).

[100] Stockholm Declaration, Section I, para. 1 (emphasis added).

[101] Stockholm Declaration, Section I, para. 6 (emphasis added).

[102] Stockholm Declaration, Section I, para. 3.

[103] See UN ECOSOC Res. 1346 (XLV), cit., preamble (both emphases added). It is significant that the same wording was employed, with slight changes, by the UN General Assembly: see Res. 2398 (XXIII), cit., preamble. See also Dinah Shelton, 'Stockholm Declaration (1972) and Rio Declaration (1992)', in *MPEPIL online* (2008), para. 6.

[104] For further details, see Louis B. Sohn, 'The Stockholm Declaration on the Human Environment' (1973) 14 *Harvard ILJ* 423, at 423-435, especially at 434-435.

[105] Stockholm Declaration, preamble (emphasis added).

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> States shall cooperate *to develop further the international law* regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.[106]

Indeed, as already mentioned above,[107] the General Assembly ascribed to both principle 21 and principle 22 an 'effect of non-contradiction' which, to some degree and with great caution, is comparable with the programmatic effect of general principles. As has been illustrated, this programmatic effect implies that general principles influence the future formation of rules, in order that the latter be consistent with the former. Therefore, it is significant that the General Assembly declared that 'no resolution adopted at [its] twenty-seventh session [would] affect principles 21 and 22 of the Declaration of the United Nations Conference on the Human Environment'.[108] Naturally, General Assembly resolutions do not establish rules as they do not have any legally binding effects; similarly, principle 21 does not as such, i.e., *as a written provision of a soft law instrument*, amount to a general principle of international law. Be that as it may, the programmatic motif of prevention of environmental harm under principle 21 is more than perceptible.

As mentioned above however, the programmatic purpose of the Stockholm Declaration could only constitute evidence of the prima facie suitability of prevention of environmental harm as a general principle of international law: it does not enable any conclusion to that effect to be drawn. In order to arrive at such a conclusion, it is necessary to show that prevention of environmental harm is indeed apparent within existing rules of international law and has in fact operated as a principle rather than a rule in cases involving environmental harm. Before proceeding to such an analysis, further clarifications are needed in both respects.

3.3.2. *Identification by Induction from Existing Rules: Distinguishing between General Principles and Mere Policies or Soft Law Recommendations*

With a view to demonstrating that prevention of environmental harm amounts to a general principle of international law, it is necessary to verify whether it is possible to infer it from existing rules

[106] Emphasis added. On principle 22, see also *infra*, Section 6.3.5.
[107] See *supra*, Section 1.1.2.
[108] See UNGA Res. 2996 (XXVII) of 15 December 1972.

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that have been inspired by it and thus embody it. Accordingly, an examination of existing rules on prevention of environmental harm will be conducted in Chapter 4 in order to assess whether it can be discerned as a general principle within them.[109] The focus will be on written rules, viz. treaty rules and binding acts of international organisations, while customary rules will be considered at a later stage.[110]

The purpose of such an inquiry is twofold. First, it will seek to establish that prevention of environmental harm has been incorporated into the international legal system, with the result that it can be regarded as a *legal* principle, rather than as a mere policy or political principle. Secondly, it is intended to illustrate that prevention of harm to the environment has overcome the status of a provision within a soft law act, namely principle 21 in the Stockholm Declaration, and now amounts to a general principle of international law.

As regards the former, the importance of excluding the possibility that prevention of environmental harm may constitute nothing more than a policy results from the fact that the emergence during the 1960s of such a new challenge as the protection of the global environment might be said to have simply led to the adoption of policies or political directives. The fact that the problem of degradation of the environment started to arise and environmental awareness started to spread does not imply that any general principles of international law were formed in the field of protection of the environment.

These remarks are linked with a broader issue, namely the distinction between legal principles and policies or political directives.

[109] This approach essentially corresponds to the methods indicated by Vázquez-Bermúdez, 'Second Report', cit., at 39-46, paras. 122-145: general principles of international law may be identified 'by ascertaining that [they have] been widely incorporated into treaties and other international instruments' and 'by establishing that they underlie general rules of conventional or customary international law'. The third method is less relevant here, as it concerns 'principles inherent in the basic features and fundamental requirements of the international legal system' (ibid., at 48-51, paras. 146-157).

[110] This is because the purpose of this book is to reconstruct general international law on prevention of environmental harm: customary rules cannot simply be assumed and their analysis needs to be left temporarily to one side. Put differently, treaty rules and binding acts will constitute the starting point for assessing the existence of prevention as a general principle of international law. Once the possibility of classifying prevention of environmental harm as a general principle of international law has been demonstrated, this study will then investigate whether any customary rules that are informed by that principle do in actual fact exist: see *infra*, Chapter 6.

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This issue too, like several others that have arisen above in relation to general principles of international law, falls primarily within the ambit of philosophy of law. Provided that the function of legal principles is, in general, to express abstract positions directed in particular at lawmakers, it tends to overlap with the similar effects of political directives. Since the problem cannot be discussed in any detail here, and has apparently attracted little attention in international law scholarship, it is sufficent to note that, in philosophy of law, a distinguishing criterion has convincingly been found in the actual adherence of lawmakers to a particular direction.[111]

Accordingly, if there are sets of rules that follow a certain direction, this 'direction' will amount to a *legal* principle, not a mere policy, as the existence of those rules means that it has been incorporated into the legal system. Indeed, one might rightly conclude that political directives *transform* themselves into legal principles when they penetrate the relevant legal system.[112] Such incorporation coincides, in essence, with the very performance of the function of legal principles: what matters is the making or existence of embodying rules. Thanks to their tangible embodiment, legal principles tend to be more constant and well-founded than policies, which may be temporary and may change rapidly.[113]

The criterion described above can be borrowed and applied in the field of international law: the existence of patterns of customary or treaty rules traceable to the same 'direction' would appear to prevent this direction from being regarded as a policy beyond the confines of the law. As has been authoritatively suggested within legal scholarship, in order to establish whether any given proposition does indeed constitute a general principle of international law rather than a merely political directive, it must emerge from existing customary or treaty rules informed by that proposition.[114] This is the approach

[111] A solution of this type was proposed by Crisafulli, 'Per la determinazione', cit., 230, at 253-256.

[112] Ibid., at 254-255.

[113] Ibid., at 255-256.

[114] See Arangio-Ruiz, 'The Normative Role', cit., at 495-497, especially note 65: 'room could be found, among the policies, for very general propositions, in part perhaps *de lege ferenda*, emanating from occasional conferences or permanent bodies. These would fall among the so-called "political principles" […] we would say that the propositions in question […] are *formulations of policies* or *declarations of intention* (in the sense of policies) to be placed within the realm of *lex ferenda*. In some instances they may perhaps approach the status of *very* general principles ("programmatic") or legal policies'. According to the eminent author, 'we would qualify a proposition as a *legal* or *juridical* principle or as a *legal policy* (or "policy

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that will be upheld in this study: the 'entrance' of prevention of environmental harm into the international legal system will be argued in favour of on the basis of the existence of consonant sets of rules.[115]

As regards the latter of the two aspects mentioned, the one pertaining to the relationship between general principles and soft law, the key issue here is that, as has been pointed out since the outset, the Stockholm Declaration does not provide any conclusive evidence that any related general principles of international law have been formed, despite its guiding purpose. Similarly, the same holds true for other soft law acts in international environmental law, solemn as they may be. Therefore, the existence of sets of rules consistent with prevention of harm to the environment, should it be ascertained, would attest not only its incorporation in international law, but also that it has gone beyond the soft law status of principle 21 of the Stockholm Declaration.

The problem is intertwined, to some degree, with the issue of the distinction between legal principles and policies. This is because, as illustrated above, owing to the lack of any formal constitution and the intrinsic inadequacy of treaties as primary expressions of principles, new orientations aimed at influencing the evolution of international law tend to be set out in non-binding acts, and in particular in solemn declarations of principles adopted by international organisations and conferences. Overall, the relationship between general principles of international law and soft law is linked to the issue of the normative value of soft law and, specifically, of solemn declarations of principles, not to mention the very definition of soft law. Nonetheless, it is plain to see that a discussion of these aspects would lead this study too far astray.[116]

of the law") as it were *suceptible*, alone or, more plausibly, in conjunction with rules or less general principles, of giving rise to rights and duties within the given legal system, thus constituting a part of positive law in a wide sense' (ibid., all emphases in original).

[115] However, there is no denying that also meta-legal considerations play a role in the formation of general principles. In relation to this, the importance of civil society has been stressed: as regards its participation in the judicial formulation of general principles in the field of protection of the environment, see Massimo Iovane, 'La participation de la société civile à l'élaboration et à l'application du droit international de l'environnement' (2008) 112 *Rev. gén. dr. int. pub.* 465, at 482-488; and Id., 'Metodo costituzionalistico e ruolo dei giudici nella formulazione dei principi generali del diritto internazionale' (2008) *Ars Interpretandi* 103, at 115-120.

[116] Regrettably, the topic may not be discussed by the International Law Commission in its work on general principles of law. The relationship between general principles of law and other sources of international law was included among the

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As the analysis may be confined to declarations of principles, since the Stockholm Declaration is mainly at issue here, this study endorses the well-established opinion that they might contribute to the formation of general international law, but cannot in and of themselves determine its instant creation.[117] This solution has been supported especially with regard to customary international law.[118] However, it might refer *mutatis mutandis* to general principles of international law as well, as has in fact been authoritatively argued.[119] Hence, declarations of principles might simply stimulate the formation of general principles of international law: it is still necessary to verify the existence of sets of rules inspired by a particular principle in order to assess whether it exists.

It must however be admitted that whereas the binding nature of customary rules is in stark contrast with the non-binding effects of recommendations and declarations of principles, the same is not true of general principles of international law, which do not directly create rights and obligations. Nevertheless, there appear to be at least

issues to be considered by the Commission; however, only treaties and customary law were mentioned (see Vázquez-Bermúdez, 'First Report', cit., at 7-8, paras. 24-28, especially para. 24), with particular attention being paid to the latter (ibid., para. 28; see also the Report of the International Law Commission on the Work of Its Seventy-First Session, cit., at 334, para. 233). Moreover, soft law might not be included at all among the 'sources of international law'. At the time of writing, the relevant report of the Special Rapporteur has not yet been submitted.

[117] This is obviously an allusion to Bin Cheng, 'United Nations Resolutions on Outer Space: "Instant" International Customary Law?' (1965) 5 *Indian JIL* 23, especially at 35-40.

[118] See, among many others, Obed Y. Asamoah, *The Legal Significance of the Declarations of the General Assembly of the United Nations* (The Hague: Martinus Nijhoff 1966), at 47-61; Stephen M. Schwebel, 'United Nations Resolutions, Recent Arbitral Awards and Customary International Law', in Adriaan Bos and Hugo Siblesz (eds.), *Realism in Law-Making. Essays on International Law in Honour of Willem Riphagen* (Dordrecht/Boston/Lancaster: Martinus Nijhoff Publishers: 1986), 202, especially at 209-210; Benedetto Conforti, Carlo Focarelli, *Le Nazioni Unite* (12th ed., Milano: Wolters Kluwer Italia 2020), at 510-511.

[119] See Arangio-Ruiz, 'The Normative Role', cit., at 500, '[i]n conformity with the finding that Assembly resolutions are not binding legal instruments, declarations are not *per se* sufficient to create principles of international law. This follows from the fact that in so far do principles become part of the body of international law as they enter therein through the law-making processes of international society: mainly, as shown, through custom or agreement'. See also Jürgen Friedrich, *International Environmental 'Soft Law'. The Functions and Limits of Nonbinding Instruments in International Environmental Governance and Law* (Heidelberg: Springer 2013), at 144-157, especially at 156-157.

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two reasons why declarations of principles cannot as such create general principles of international law.

First, as pointed out above, the very existence of general principles of law depends on the existence of consistent patterns of customary and treaty rules: the inspiring or guiding function of principles becomes relevant for international law once international rules have come into existence as a result. Conversely, declarations of principles do exist in international law once they have been adopted by an international organisation or conference through a formal act, and their hortatory effects rest on the type of act in which they are included: declarations of principles are not dependent on the existence of rules that tangibly embody them. Secondly, as already pointed out, the ability for international organisations or conferences to 'adopt' general principles of international law would be at odds with the fundamentally decentralised nature of the international legal system. In effect, were this to be the case, they would essentially be vested with the competence to adopt not mere recommendations, which might *or might not* influence the future development of international law, but rather general principles of law which, by their very nature, guide and inspire the formation of rules, as they emanate from them.

3.3.3. *Verification of the Actual Operation of Prevention as a Principle: Distinguishing between General Principles and Customary Rules*

The possibility of inferring prevention of environmental harm from existing rules may not be sufficient, on its own, in order to demonstrate that it amounts to a general principle of international law. It is likewise necessary to verify that, in cases involving environmental harm, prevention has operated as a principle rather than as a rule. In this regard, the functional approach to the distinction between principles and rules should be borne in mind: prevention of environmental harm must not have come into consideration in order to evaluate the conduct at stake, but must have arisen, in practice too, as a value-oriented direction for balancing interests or as an underlying guiding principle to be taken into account. As a general principle of international law, prevention of environmental harm does not directly impose obligations on States.[120]

[120] In the words of Alexy, *A Theory*, cit., at 57, principles are 'not *definitive* but only *prima facie* requirements. It does not follow from the fact that a principle is relevant to a case that what the principle requires actually applies. Principles represent reasons which can be displaced by other reasons. How the relation between reason and counter-reason is to be stated is not decided by the principle itself' (emphasis

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Such an examination is necessary due to the fact that the distinction between written rules that embody prevention of environmental harm as a general principle of international law and written rules that, in setting forth more detailed regimes, provide evidence of a broader customary obligation to prevent environmental harm, may be blurred. It is worth noting that this latter scenario differs from the mere restatement of principle 21 of the Stockholm Declaration in a variety of treaties, which several authors have emphasised to support the existence of the alleged customary obligation to prevent environmental harm.[121] In itself, that restatement could hardly be regarded as indicative of such an outcome: it will be shown that prevention of environmental harm tends to serve an inspiring function specific to general principles in those treaties.[122]

Still, treaties and acts of international organisations that are consistent with prevention of environmental harm might be considered overall, beyond the restatement of principle 21, as symptomatic of the existence of a wider customary rule. In other words, once value has been ascribed to manifestations relevant to the identification of customary international law, the question then arises as to why treaties and binding acts of international organisations dealing with prevention of environmental harm should count in favour of the existence of an underlying general principle of international law, rather than a broader customary rule. After all, both treaties and acts of international organisations may serve as evidence for rules of customary international law, despite the rather complex relationship between the former and the latter.[123] As mentioned above, they may be viewed as instances of State practice,[124] and not just of *opinio*

in original). On the other hand, 'rules insist that one does exactly as required, they contain a decision about what is to happen within the realm of the legally and factually possible' (ibid.).

[121] See *supra*, Section 1.1.1.

[122] See *infra*, Section 4.2.

[123] Within legal scholarship, it is especially the relationship between treaties and customary law that has attracted attention owing to its complexity. Whilst treaties may derogate from customary law, they may all the same reflect a pre-existing customary rule, contribute to the crystallisation of a still-emerging customary rule, or provide impetus to the creation over time of a new customary rule. See in greater detail Richard R. Baxter, 'Treaties and Custom' (1970) 129 *Rec. cours* 25, at 36-91; Maurice H. Mendelson, 'The Formation of Customary International Law' (1998) 272 *Rec. cours* 155, at 294-346; Yoram Dinstein, 'The Interaction between Customary International Law and Treaties' (2006) 322 *Rec. cours* 243, at 346-382.

[124] As for the acts of international organisations, it appears to be open to debate whether they should be regarded as practice of the member States or

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juris, although they are qualitatively different from State behaviour in actual cases.[125]

In this study, it has already been stressed that, in various cases involving transboundary damage to the environment, prevention of environmental harm was not applied as an obligation in order to assess the lawfulness *vel non* of the conduct concerned.[126] Inconsistencies within State practice, as shown, cast doubt on the common classification of prevention of environmental harm as an obligation established by a customary rule. However, whereas this data does not support the conclusion that treaty rules consistent with prevention of environmental harm are indicative of the existence of a broader customary rule on prevention, discrepancies within State practice do not provide any argument in favour of the different conclusion that prevention of environmental harm does indeed amount to a general principle of international law.

In sum, the fact that prevention of environmental harm has not been applied as a customary rule within State practice does not mean, in itself, that it was relevant as a general principle. Accordingly, with

practice of the organisations concerned: for an overview, see Luigi Ferrari Bravo, 'Méthodes de recherche de la coutume internationale dans la pratique des États' (1985) 192 *Rec. cours* 233, at 296-299. The Draft Conclusions on Identification of Customary International Law, with Commentaries, in Report of the International Law Commission on the Work of Its Seventieth Session (2018), UN Doc. A/73/10, 122, do not seem to be free from ambiguity. For example, it is stated that '[a]lthough resolutions of organs of international organizations […] emanate, strictly speaking, not from the State members but from the organization, […] what is relevant is that they may reflect the collective expression of the views of such States' (ibid., at 147, para. 3). For some critical remarks, see Sean D. Murphy, 'Identification of Customary International Law and Other Topics: The Sixty-Seventh Session of the International Law Commission' (2015) 109 *AJIL* 822, at 827-831; Niels Blokker, 'International Organizations and Customary International Law. Is the International Law Commission Taking International Organizations Seriously?' (2017) 14 *Int. Org. LR* 1, especially at 7-10; Jed Odermatt, 'The Development of Customary International Law by International Organizations' (2017) 66 *ICLQ* 491, especially at 493-503. If acts of international organisations are classified as a form of State practice, this means that, with regard to each decision, the verbal acts of the individual member States are taken into account, including votes, abstentions, and the relevant explanations: see ILA, London Statement of Principles Applicable to the Formation of General Customary International Law and Accompanying Commentary attached to the Final Report of the Committee, as Amended at the London Conference, held on 15-29 July 2000, adopted by Res. 16/2000 and available at *www.ila-hq.org*, in particular Section 11(b).

[125] See *supra*, Section 1.3.2.

[126] See *supra*, Section 1.2.

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the aim of assessing how prevention of environmental harm has actually operated, the pertinent international case law will be examined in Chapter 5. This is because the reasoning of international courts and tribunals may be indicative of the value attached to prevention of environmental harm in settling disputes or addressing legal issues in advisory proceedings. After all, it is in the case law that the effects connected with the inspiring function of general principles of law, namely gap-filling or interpretative effects, may be best put to the test.[127]

It must be stressed at this juncture that, in the light of the broader distinction between principles and rules, as has been argued in favour of here, general principles of international law and customary rules differ *structurally* in terms of both function and effects.[128] If a proposition constitutes a customary rule, it cannot be a general principle of international law as well, and vice versa. Such a difference explains the importance of not allowing the dividing line between general principles and customary rules becoming blurred. From this perspective, the reconstruction proposed here of prevention of envi-

[127] Indeed, the role of the judge with regard to general principles has been stressed in legal scholarship. Đorđeska, *General Principles*, cit., at 31-53 *et passim*, goes even further and argues that general principles 'are the tools of international judicial law-making reserved for the [International] Court [of Justice] – and not the States or scholars – to use' (ibid., at 31)

[128] Within the context of the work of the International Law Commission on general principles of law, emphasis has also been placed on the importance of distinguishing between general principles of international law and customary international law: see Vázquez-Bermúdez, 'Second Report', cit., at 51, para. 159. According to the Special Rapporteur, however, '[t]he distinction between these two sources is based, first of all, on the method for their identification', rather than their function and effects (ibid., para. 160). Nonetheless, such an approach appears to be unsatisfactory. As for 'principles underlying general rules of conventional and customary international law', that criterion for drawing a distinction ends up being a merely quantitative one: whereas 'the "measure of deduction" for purposes of the two-element approach [and the identification of customary international law] seems to be very narrow', the 'deduction exercise is not an aid to ascertain the existence of a general practice accepted as law, but the main criterion to establish the existence of a legal principle' (ibid., at 52-53, at 167-168). As for 'principles that are widely recognized in treaties and other international instruments', it is of little help to observe that 'one does not need to look for a general practice and its acceptance as law', but for 'the clear acknowledgement through treaties and other international instruments of the existence of a legal principle of general scope of application' (ibid., at 52, para. 165). In sum, the peculiar function or 'nature' of general principles of international law *qua* principles appears to come into consideration only subordinately and on an exceptional basis: ibid., at 53, para. 169. Indeed, the Special Rapporteur has refrained from drawing a clear distinction between rules and principles: see Vázquez-Bermúdez, 'First Report', cit., at 44-46, paras. 146-152.

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ronmental harm as a general principle of international law distances itself from the position of those authors who have on occasion relied on general principles to define prevention, but in such a manner as to imply its merging into customary international law.

This is the case not only for those authors who refer to prevention of environmental harm as *both* a customary rule *and* a guiding principle,[129] without drawing any distinction between the two categories. More to the point, the focus on the difference between general principles and customary rules characterises the reconstruction proposed in this study in two respects.

First, the classification of prevention as a general principle of international law, as submitted here, excludes the possibility that it may *itself*, over time, turn into a customary rule. Instead, within legal scholarship, one author who denied the existence of a customary obligation to prevent environmental harm suggested that it might constitute a *still emerging* customary rule.[130] However, considering

[129] See Nicolas de Sadeleer, *Environmental Principles. From Political Slogans to Legal Rules* (Oxford: Oxford University Press 2002), who argues that prevention of environmental harm constitutes a 'directing principle', although its customary status is all the same accepted (ibid., at 62-68) and even deemed to be instrumental in providing the principle of prevention with autonomous normative value (ibid., at 310-319, especially at 315-316). The failure to distinguish between principles and customary international law is not the only reason why the solution proposed here that prevention of environmental harm is a general principle differs from de Sadeleer's opinion: although the notion of 'directing principles' bears some resemblance with the concept of general principles of international law adopted in this study (ibid., at 250: 'These principles mark a policy path to be followed, outline the context within which the law-maker must act, and guide the course of his passage'), the former are regarded as a new phenomenon, namely one typical of so-called 'post-modern law' (ibid., at 245-251). It thus appears to have been ignored that the operation of principles performing an inspiring or directive function may be observed within any legal system, with the result that principles as such could hardly be regarded as something new (see *supra*, Section 3.1.4). On the twofold classification of prevention of environmental harm as both a customary rule and a general principle, see also Leslie-Anne Duvic-Paoli, *The Prevention Principle in International Environmental Law* (Cambridge: Cambridge University Press 2018), at 302-313, who refers to prevention as a 'multifaceted norm': 'Prevention is the combination of different functions that it has fulfilled over time, without necessarily negating its previous manifestations. In its most restricted form, prevention is a policy of harm anticipation and a principle that, based on moral aspirations, guides the action of decision-makers and judges. But prevention has grown into a more complex norm, including an obligation, which, despite sometimes lacking precision, falls under the scope of the law of State responsibility' (ibid., at 313).

[130] See Conforti, *Diritto internazionale*, cit., at 235. That solution was coherent with the premise that general international law is comprised only of customary

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the relationship between general principles and rules, customary international law may interact with prevention as a general principle of international law in one fundamental way: customary rules may arise out of the principle of prevention of environmental harm, drawing inspiration and guidance from it. In that event, the principle of prevention is embodied within customary rules, to such an extent that it may be inferred from them. Nevertheless, this does not mean that prevention stops being a principle. There is no reason to assume that prevention of environmental harm should transform into a customary rule, nor does it make sense to wish that outcome. As long as the international legal system is composed of both principles and rules, the 'principle function' has an autonomy and completeness of its own. Although it is incapable of directly creating rights and obligations, a principle does not look forward to becoming a rule, but does on the contrary seek to inspire specific rules that embody it.

Secondly, the classification of prevention of environmental harm as a general principle of international law, viz. a value-oriented direction informing rules and emerging from them, implies that it could not be understood as a shortcut to determining the existence of a general *obligation* in international law. This clarification is of major importance in that legal writings have sometimes relied on the category of general principles of international law in cases in which the requirements of practice and *opinio juris* would prevent a customary rule from being identified, including the case of prevention of environmental harm.[131] This solution is not specific to international en-

international law, with principles drawn from domestic legal orders being regarded as *sui generis* customary rules (ibid., at 46-52) and the category of – substantive – principles of international law (conceived of in accordance with Rolando Quadri's theory) being excluded outright (ibid., at 52-54).

[131] See Riccardo Pisillo Mazzeschi, Alessandra Viviani, 'General Principles of International Law: From Rules to Values?', in Riccardo Pisillo Mazzeschi and Pasquale De Sena (eds.), *Global Justice, Human Rights and the Modernization of International Law* (Cham: Springer 2018), 113, at 144-145, including the 'prohibition of transboundary pollution', as enshrined in principle 21 of the Stockholm Declaration, among the 'principles recognized by the international community as binding', the identification of which is not stated to depend on practice (ibid., at 142-143). In broader yet significant terms, see Duvic-Paoli, *The Prevention Principle*, cit., at 309: 'Considering prevention as a general principle of international law […] also contributes to extending the traditionally narrowly construed scope of custom justifying the general application of a norm that might not fulfil the "two-element test" but that is generally recognized by the international community as a whole. It thus offers a complementary perspective on prevention by liberating it from the constraints of custom while recognizing its centrality in the international legal or-

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vironmental law.[132] Its 'potential' has been especially appraised in the field of international human rights law: in order to avoid 'betraying' the two-element approach to the determination of customary law, it has been contended that certain human rights obligations ought to be regarded as general principles, rather than customs, as their blatant and widespread violation prevents uniform and consistent practice from being identified.[133] Similarly, as already stressed, inconsistencies within State practice undermine the common view of prevention of transboundary environmental harm as an obligation established by a customary rule.

The reconstruction of prevention of environmental harm as a general principle of international law, as proposed in this study, is not intended to be a trick of that sort, which would bring this enquiry back to the methodological problem of how to determine customary international law.[134] In fact, insofar as general principles are regarded as a source of general obligations in the same way as customary international law, resorting to the former category on account of the paucity of practice would appear to be an expedient that leads to the same conclusion as would be reached on the basis of 'modern

der'. She defines prevention of environmental harm as a 'multifaceted norm' (see *supra*, note 129).

[132] See Pisillo Mazzeschi, Viviani, 'General Principles', cit., at 142-150, constructing an entire category of 'principles recognized by the international community as binding (and sometimes also peremptory)', comprising principles ranging from non-harmful use of territory to peaceful resolution of international disputes, and from the prohibition of the threat or use of force to self-determination of peoples.

[133] See the famous essay by Simma, Alston, 'The Sources', cit., at 98: 'instead of further manipulating the established concept of customary law based on an effective requirement of concrete practice, we ought to look for a different – and less damaging – way to explain the legal force of universally recognised human rights. If state conduct is to be entirely disregarded, as some authors suggest may be necessary at least in extreme cases, it would seem more logical and potentially more persuasive to proceed on the basis of some alternative theory of state obligation in the human rights field'. Hence the recourse to general principles (ibid., at 102-106): 'the concept of a 'recognised' general principle seems to conform more closely than the concept of custom to the situation where a norm invested with strong inherent authority is widely accepted even though widely violated' (ibid., at 102). See, contra, Pasquale De Sena, 'Prassi, consuetudine e principi nel campo dei diritti dell'uomo. Riflessioni internazionalistiche' (2014) 43 *Ragion pratica* 511, especially at 516-532, who refers to general principles of international *human rights* law, rather than of international law, having observed that, in international case law, the requirement of State practice still maintains weight where human rights clash with 'traditional' customary or treaty rules outside of the field of human rights.

[134] See *supra*, Section 1.3.

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approaches' to customary international law. One might call it a modern custom or a principle of international law: in the end however, despite the lack of State practice, a general obligation is identified that is binding on all States.[135] Nevertheless, as will be tentatively shown, such a conclusion would not reflect the reality: prevention of environmental harm has operated as a principle, rather than a rule, within international case law.

[135] Therefore, some authors who defend the two-element approach to customary international law have expressed concerns over the 'instrumental' recourse to general principles of international law. See Michael Wood, 'Customary International Law and the General Principles of Law Recognized by Civilized Nations' (2019) 21 *Int. Comm. LR* 307, at 316-321, in whose opinion that would 'risk undermining customary international law, since some may wish to argue that whenever there is insufficient State practice or *opinio juris*, there is nonetheless "recognition" in the sense of Article 38, paragraph 1(*c*) of the Statute' (ibid., at 321). However, his assumption seems to be that there is no difference between rules and principles (ibid., at 319-320): as pointed out above in the text, the structural distinction between rules and principles also allows a stark distinction to be maintained between customary rules and general principles of international law. The same assumption is likewise apparent in the critical words of Jan Klabbers, *International Law* (3rd ed., Cambridge: Cambridge University Press 2021), at 38: 'General principles of law are sometimes conceptualized as a sort of "custom lite", as rules which are perhaps a bit more 'necessary' […] than other rules, and for which therefore there would apply less strict demands on state practice and *opinio juris*'.

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Chapter 4

Inference of Prevention of Environmental Harm as a Principle from the Rules Embodying It

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4.1. *Introductory Observations on How to Find Evidence of the Guiding Function of Prevention of Environmental Harm*

This Chapter will seek to illustrate that the classification of prevention of environmental harm as a general principle of international law is corroborated by the fact that rules, specifically treaty rules and binding acts of international organisations, have been adopted as a consequence of the operation of that principle: those rules embody the value-oriented or ideal direction encapsulated in the principle. The reasons for this investigation have already been explained in the previous Chapter, and there is no need to address them again.[1]

[1] See *supra*, Section 3.3.2.

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Rather, it is now necessary to clarify how the guiding or inspiring effect of prevention of environmental harm as a general principle will be ascertained.

In particular, only those treaties and acts that contain a reference to prevention of harm to the environment will be examined. In this respect, the mention or restatement of principle 21 of the Stockholm Declaration, or the equivalent principle 2 of the Rio Declaration, is especially indicative as they solemnly enshrine prevention of environmental harm.

It is necessary to make such a selection owing to the core significance of prevention in the protection of the environment. Since the reparation of environmental harm is intrinsically difficult, if not impossible, it is evident that prevention is more appropriate for protection of the environment than a curative approach. Due to this pivotal role, one might even gain the impression that, in essence, prevention of environmental harm coincides with the very aim of protecting the environment. Although this might to some extent be true, one would do well not to jump to the shallow conclusion that the fact that a corpus of international environmental law does exist confirms, *sic et simpliciter*, the operation of prevention of environmental harm as a general principle inspiring the proliferation of environmental obligations. In truth, as will be argued below, whilst prevention of environmental harm is fundamental in relation to protection of the environment, its importance in international environmental law has gradually waned with the rise of the concept of sustainable development.[2]

The problem as to whether it is plausible to consider the restatement of prevention of environmental harm in treaties and acts of international organisations as evidence of the existence of a customary rule, rather than a general principle of international law, has already been alluded to as well.[3] It is worth adding that, whereas the provision referring to prevention of environmental harm will be interpreted in order to assess its role within the treaty or act, no conclusion will be drawn as to whether the reference *was intended* as the restatement of a customary rule or a general principle of international law. This is due not only to the difficulties inherent within such a discernment, which varies from case to case, but mainly to the fact that it would imply that a certain concept of general principles of international law must be universally accepted. For instance, considering the distinction between principles and rules endorsed

[2] See *infra*, Section 7.1.
[3] See *supra*, Section 3.3.3.

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in this study, the use of the modal verb 'shall' instead of 'should' could indicate that the restatement of prevention of environmental harm was meant to codify a customary rule, rather than a principle. However, this conclusion would rest on the above distinction, which treaty framers or international organisations might *or might not* have had in mind when concluding the treaty or adopting the act.

Accordingly, the focus will be placed on the actual role of any provisions referring to prevention of environmental harm in treaties and binding acts of international organisations in order to ascertain whether prevention of environmental harm *underpins* those treaties or acts. The fact that this role could be indicative of either the specification of a customary rule by detailed rules or of the embodiment of a general principle within rules will be left to one side for the time being: this issue will be addressed later in Chapter 6,[4] following the analysis of the operation of prevention of environmental harm within international case law in the next Chapter.

On the methodological front, it is also important to mention European Union law, which will be examined too, in addition to international treaties and binding acts of international organisations. In effect, EU law might provide evidence of the embodiment of prevention of environmental harm as a principle of international law. This is because, due to its international legal personality, the European Union is an addressee of general international law,[5] as well as contributing to its formation.[6] However, the inclusion of an in-

[4] See *infra*, Section 6.1.

[5] In the words of Alessandra Gianelli, 'Customary International Law in the European Union', in Enzo Cannizzaro, Paolo Palchetti and Ramses A. Wessel (eds.), *International Law as Law of the European Union* (Leiden: Martinus Nijhoff Publishers 2012), 93, at 94, 'the duty to respect international customary law is a consequence of the international personality of the Union, and the duty exists in international law independently from its recognition in the establishing instruments of the Union itself'. For more detail, see Id., *Unione europea e diritto internazionale consuetudinario* (Torino: Giappichelli 2004), at 87-108. On the other hand, the international legal personality of the European Union does not per se entail its entitlement with regard to each and every legal position coming into consideration under general international law. For example, a thorny issue is the entitlement of the European Union to react to breaches of obligations *erga omnes*. In this respect, see Angelo Davì, *Comunità europee e sanzioni economiche internazionali* (Napoli: Jovene 1993), at 467-505, especially at 494-505; and Paolo Palchetti, 'Reactions by the European Union to Breaches of *Erga Omnes* Obligations', in Enzo Cannizzaro (ed.), *The European Union as an Actor in International Relations* (The Hague/London/New York: Kluwer Law International 2002), 219.

[6] The word 'cross-fertilisation' has been tellingly used to describe this twofold relationship between the European Union and customary international law: see

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vestigation of EU law in this Chapter should not be understood as an underestimation of the peculiarities of the treaties establishing the European Union, nor is the European Union simplistically assimilated to an international organisation.[7] On the contrary, those peculiarities will be borne in mind.

4.2. *Prevention of Environmental Harm in Treaties*

4.2.1. *Consideration of Prevention of Environmental Harm in Preambles to Treaties*

4.2.1.a. *Preambles to Treaties and Inspiring Function*

It is reasonable to argue that, on several occasions, the affirmation of prevention of environmental harm in the preambles to treaties indicates that it is one of the relevant treaty's guiding principles. Hence the rules laid down in those treaties should ensure the embodiment of prevention of environmental harm as a general principle. This line of reasoning is founded on two features of preambles which suggest that, if certain conditions are met, the statement of prevention of environmental harm will be indicative of the inspiring value attached to it.

First, as bodies of recitals, preambles usually do not set out rules and thus appear to be suitable for setting out background considerations,[8] including ideal aspirations and, possibly, statements of guid-

Theodore Konstadinides, 'Customary International Law as a Source of EU Law: A Two-Way Fertilization Route?' (2016) 35 *YEL* 513. See also Gianelli, *Unione europea*, cit., at 109-129.

[7] Obviously, this is an allusion to the fact that the treaties establishing the European Union gave rise to an autonomous legal order, the definition of which is still hotly debated. For an overview, see Damian Chalmers, Gareth Davies, Giorgio Monti, *European Union Law* (3rd ed., Cambridge: Cambridge University Press 2014), at 200-222; Robert Schütze, *European Union Law* (2nd ed., Cambridge: Cambridge University Press 2018), at 43-74; Enzo Cannizzaro, *Il diritto dell'integrazione europea. L'ordinamento dell'Unione* (3rd ed., Torino: Giappichelli 2020), at 7-16.

[8] That represents the starting point for any investigation into the role that the preamble plays in the treaty. As underlined by Jan Klabbers, 'Treaties and Their Preambles', in Michael J. Bowman and Dino Kritsiotis (eds.), *Conceptual and Contextual Perspectives on Modern Law of Treaties* (Cambridge: Cambridge University Press 2018), 172, at 182, '[p]reambles are generally considered not to give rise to any particular rights and obligations under international law, and this circumstance immediately raises the functionalist question'. In discussing the issue of the 'binding content' of preambles, Makane Moïse Mbengue, 'Preamble', in *MPEPIL online* (2006), paras. 11-14, admits that '[g]enerally, in international law preambles are not capable of creating binding legal effects upon parties. Preambles are part of the *nar-*

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ing legal principles. Rules, on the other hand, tend to be set forth in the main body or operative part of the treaty. In this regard, one should beware of considering the repetition of prevention of environmental harm in the preambles to a number of treaties as an argument *demonstrating* its customary status. Of course, the position is different when well-established international rules are incorporated into preambles: they certainly do not lose their legally binding effects as a result. Indeed, preambles to treaties often refer to other treaties and to binding acts of international organisations.

Secondly, these 'background considerations' set out in the preambles to treaties frequently include the aims of the treaty and the reasons for its adoption.[9] In this regard, it should be borne in mind that the judge or jurist usually relies on the preamble in order to identify the object and purpose of the treaty.[10] In fact, although the

ratio, not of the *dispositio*, ie they do not have the function of laying down legal obligations' (ibid., para. 11). Indeed, their 'binding content' seems to fall under what he calls the 'incorporative function' (comprising the incorporation of non-binding provisions too), because the binding force of the proposition included in the preamble never results from the preamble itself (ibid., paras. 12-14). On the variety of the background considerations emerging in relation to treaty preambles, see Eric Suy, 'Le préambule', in Emile Yakpo and Tahar Boumedra (eds.), Liber Amicorum *Judge Mohammed Bedjaoui* (The Hague/London/Boston: Kluwer Law International 1999), 253, at 254-263.

[9] In the words of Mbengue, 'Preamble', cit., para. 1, '[a] treaty's preamble defines, in general terms, the purposes and considerations that led the parties to conclude the treaty'.

[10] This is well-established in international practice, including the case law of international courts and tribunals. As far as the International Court of Justice is concerned, it is worth recalling the *Asylum Case (Colombia/Peru)*, judgment of 20 November 1950, *I.C.J. Reports 1950*, 266, at 282 ('The object of the Havana Convention […] was, *as indicated in its preamble*, to fix the rules which the signatory States must observe for the granting of asylum in their mutual relations', emphasis added); the *Case concerning Rights of Nationals of the United States in Morocco (France* v. *United States)*, judgment of 27 August 1952, *I.C.J. Reports 1952*, 176, at 196 ('The purposes and objects of [the Madrid] Convention were stated in its Preamble'); and the case on *Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia)*, judgment of 17 December 2002, *I.C.J. Reports 2002*, 625, at 652, para. 51 ('The Court considers that the object and purpose of the 1891 Convention was the delimitation of boundaries between the parties' possessions within the island of Borneo itself, *as shown by the preamble to the Convention*', emphasis added). Apart from the International Court of Justice, an often cited case is *Golder* v. *United Kingdom*, Application no. 4451/70, judgment of 21 February 1975, para. 34, in which the European Court of Human Rights held that 'the preamble is generally very useful for the determination of the "object" and "purpose" of the instrument to be construed'. In legal scholarship, see especially Klabbers, 'Treaties and Their

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precise meaning of the expression 'object and purpose of the treaty' is itself a matter for debate and identifying it is anything but an easy task,[11] the relevance of preambles appears to be unquestionable. Therefore, as a treaty must be interpreted in light of its object and purpose according to the general rule of interpretation, the preamble has ended up serving a further interpretative function in addition to that explicitly provided for under the Vienna Convention on the Law of Treaties.[12] In fact, according to Article 31(2), the preamble is just one part of the text and, therefore, of the context to the provisions of the treaty.[13]

Obviously, one cannot infer from the affirmation of prevention of environmental harm in the preamble to a treaty that its *primary* objective is to lay down rules that embody it. The principal purpose of environmental treaties tends to be more specific and focused on their particular content. For instance, in terms solely of protection of the atmosphere, they may seek to protect the environment against the effects of changes to the ozone layer, to protect the climate system, or to protect the environment against the harmful impacts of persistent organic pollutants.

However, the key point here is that, alongside the specific objec-

Preambles', cit., at 184-188. See also Mark E. Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (Leiden/Boston: Martinus Nijhoff Publishers 2009), at 428 ('Article 31 does not state where the object and purpose may be sought. Traditionally, the preamble […] is resorted to'); and Oliver Dörr, 'Article 31. General Rule of Interpretation', in Oliver Dörr and Kirsten Schmalenbach (eds.), *Vienna Convention on the Law of Treaties. A Commentary* (2nd ed., Berlin/Heidelberg: Springer 2018), 559, at 583 ('The preamble to a treaty […] may assist in determining the object and purpose of the treaty, for it is the normal place where the parties would embody an explicit statement to that effect').

[11] See, among others, Vesna Crnic-Grotic, 'Object and Purpose of Treaties in the Vienna Convention on the Law of Treaties' (1997) 7 *Asian YBIL* 141; Jan Klabbers, 'Some Problems regarding the Object and Purpose of Treaties' (1997) 8 *Finnish YBIL* 138; Isabelle Buffard, Karl Zemanek, 'The Object and Purpose of a Treaty: An Enigma?' (1998) 3 *Austrian RIEL* 311; Ulf Linderfalk, 'On the Meaning of the "Object and Purpose" Criterion, in the Context of the Vienna Convention on the Law of Treaties, Article 19' (2003) 72 *Nordic JIL* 429, at 433-441.

[12] Vienna Convention on the Law of Treaties (VCLT), adopted on 23 May 1969 and entered into force on 27 January 1980, 1155 *UNTS* 331. It is superfluous to recall that Art. 31(1) VCLT reads as follows: 'A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context *and in the light of its object and purpose*' (emphasis added).

[13] Art. 31(2) VCLT clarifies that '[t]he context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, *including its preamble* and annexes […]' (emphasis added).

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tive of the treaty at issue, preambles set out the broader considerations that the drafters had in mind. Where a concordant principle is 'considered' in the preamble to a treaty, it seems plausible to argue that it underpins the treaty, which in turn is intended – not primarily, but also – to ensure that it is realised. Put differently, where a general principle is considered in the preamble to a treaty that regulates the relevant subject matter in line with that principle, albeit in relation to a particular aspect, that principle should have provided guidance to the framers. If not, it is difficult to imagine why the drafters took it into account. In effect, although the relationship between general international law and treaties is a complex one,[14] were the treaty to have been intended to derogate from a precept included in the preamble, such an intent would probably have been spelled out. In any event, there would be inconsistency rather than convergence between that proposition and the rules laid down in the treaty.

In the light of the characteristics of preambles to treaties illustrated above, it is reasonable to conclude that the affirmation of prevention of environmental harm within preambles provides evidence of its guiding function, where certain conditions are met. First, it is necessary to establish that prevention of environmental harm has not been recalled in the preamble to the treaty concerned as the provision of a soft law instrument, viz. the 1972 Stockholm Declaration or the 1992 Rio de Janeiro Declaration. If this cannot be established, then it cannot be assumed that prevention of environmental harm is being considered *qua* general principle of international law. Secondly, the treaty must be consistent with prevention of environmental harm and, therefore, stipulate rules that address a specific type of harm, or that regulate in detail a pertinent matter.

As will become more apparent below, the first condition is problematic in that, when the same words as principle 21 of the Stockholm Declaration (or principle 2 of the Rio Declaration) are used, the question arises as to whether the relevant recital in the preamble must be understood as a reference to the Stockholm Declaration (or the Rio Declaration) in itself, or as a reference to a corresponding general principle of international law. Although it is important not to place too much reliance on the mere wording of the relevant recitals, certain elements will be emphasised in order to draw a tentative distinction between the two cases.

The second condition must not be underestimated either: identifying the relationship between the precept included in the pre-

[14] See *supra*, Section 3.3.3.

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amble to a treaty and the treaty itself may prove to be difficult. Accordingly, the relationship between prevention of environmental harm and a treaty might be uncertain, even if the former is considered in the treaty's preamble and environmental issues are relevant. In this respect, the 2006 International Tropical Timber Agreement is worth considering.[15]

When the 2006 Tropical Timber Agreement replaced the homonymous treaty from 1994,[16] which had in turn replaced a previous agreement dating back to 1983,[17] a reference to prevention of environmental harm was included in the preamble.[18] Specifically, principle 1(a) of the Non-legally Binding Statement of Principles on Forests,[19] as adopted at the 1992 Rio de Janeiro Conference, is mentioned and its content is restated, which is identical to principle 21 of the Stockholm Declaration. Regardless of whether that recital was intended to incorporate a corresponding general principle of international law or simply the wording of a soft law instrument,[20] a guiding

[15] International Tropical Timber Agreement, 2006 (ITTA 2006), adopted at Geneva on 27 January 2006 and entered into force on 7 December 2011, 2797 *UNTS* 75. For an overview, see Concetta Maria Pontecorvo, *Il 'regime' internazionale per la protezione delle foreste* (Napoli: Satura 2012), at 144-153.

[16] International Tropical Timber Agreement, 1994, adopted at Geneva on 26 January 1994 and entered into force on 1 January 1997, 1955 *UNTS* 81.

[17] International Tropical Timber Agreement, 1983 (ITTA 1983), adopted at Geneva on 18 November 1983 and entered into force on 1 April 1985, 1393 *UNTS* 671.

[18] Preamble, para. d), ITTA 2006.

[19] Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, in Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, Res. 1, Annex 3, UN Doc. A/CONF.151/26/Rev.1 (Vol.1). For an overview, see again Pontecorvo, *Il 'regime' internazionale*, cit., at 204-212.

[20] As will be seen below, the term 'recognition' followed by the restatement of the content of principle 21 might suggest that prevention of environmental harm was considered in the abstract, whereas the reference to the Non-Legally Binding Statement of Principles on Forests seemingly construes it as the written provision of a soft law instrument. This latter element appears to be very weighty in the case of ITTA 2006, since its drafting history shows that a proposal to delete that reference was put forward, although it was ultimately retained: compare and contrast the Final working paper resulting from the second part of the Conference, at 2, with the Final working paper resulting from the third part of the Conference, at 2 (see, respectively, UN Conference for the Negotiation of a Successor Agreement to the International Tropical Timber Agreement, 1994, Third Part, Geneva, 27 June-1 July 2005, UN Doc. TD/TIMBER.3/L.4, and UN Conference for the Negotiation of a Successor Agreement to the International Tropical Timber Agreement, 1994, Third Part, Geneva, 27 June-1 July 2005, UN Doc. TD/TIMBER.3/L.6).

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value could hardly be attached to prevention of environmental harm: no provision of the Agreement expressly deals with harm to forests from the perspective of prevention.[21] The Agreement refers generically to sustainable management of tropical forests, and in particular timber producing forests,[22] whereas pure conservation is barely cited.[23] The focus of the Agreement appears to be on trade. Indeed, the 1983 Tropical Timber Agreement was initially conceived of essentially as a commodity treaty, albeit an atypical one.[24] Although attempts have been made over time to 'green up' the Agreement in order to place greater value on protection of forests, trade in tropical timber seems to have remained the primary concern in the end.[25] In this context, perhaps, the incorporation of prevention of environmental

[21] From a broader perspective, most of the Agreement's provisions are dedicated to the International Tropical Timber Organization (ITTO). The substantive obligations of the Parties are tellingly relegated to the miscellaneous chapter of the Agreement, in Art. 29. Aside from the implementation of the decisions adopted by ITTO's Council, it generically provides that 'Members shall, for the duration of this Agreement, use their best endeavours and cooperate to promote the attainment of its objectives and avoid any action contrary thereto'.

[22] The most important reference is perhaps to be found in Art. 1 ITTA 2006 concerning its aims: 'The objectives of the International Tropical Timber Agreement, 2006 […] are to promote the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests *and to promote the sustainable management of tropical timber producing forests*' (emphasis added).

[23] Specifically, promotion of conservation of timber producing forests is one of the means for achieving the objective of the Agreement and the need for conservation programmes in timber producing forests is one of the parameters that the International Tropical Timber Council, as the highest authority of ITTO, takes into account in establishing criteria and priorities for resource allocation: see, respectively, Art. 1(m) and Art. 21(4)(b). Conservation is also relevant to another means for pursuing the objectives of the Agreement, namely the promotion of and support for research and development aimed at increasing the capacity to conserve and enhance other forest values of timber producing forests, under Art. 1(f).

[24] In particular, ITTA 1983 differed from classic commodity treaties in not providing for price stabilisation measures. Nor were they included in the successor Agreements.

[25] See Brian Johnson, 'Chimera or Opportunity? An Environmental Appraisal of the Recently Concluded International Tropical Timber Agreement' (1985) 14 *Ambio* 42; Caroline Amilien, 'Conflicting International Policies in Tropical Timber Trade' (1995) 23 *Environmental Conservation* 29, at 30-31; Marco Gestri, *La gestione delle risorse naturali d'interesse generale per la Comunità internazionale* (Torino: Giappichelli 1996), at 92-96; Emmanuel Kasimbazi, 'Sustainable Development in International Tropical Timber Agreements' (1996) 14 *J Energy & Nat. Res. L* 137; Lauren Flejzor, 'Reforming the International Tropical Timber Agreement' (2005) 14 *RECIEL* 19; Gerry Nagtzaam, 'Into the Woods: Analyzing Normative

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harm into the preamble to the Agreement may be testament to the unobtrusive increase in the importance of its environmental aspect. Should this be the case, rather than inspire sets of more detailed rules, it would simply counterbalance the importance of sovereignty over forests as a natural resource to be exploited, which alone was embedded in the previous Tropical Timber Agreements.[26]

4.2.1.b. *Restatement of the Content of Principle 21*

Prevention of environmental harm is frequently proclaimed in the preamble to treaties *without any reference to principle 21*, with the result that its restatement is not formally linked to a non-binding instrument, specifically the Stockholm Declaration. Whilst having been reiterated verbatim, the wording of principle 21 is in fact detached from the relevant clause of the Stockholm Declaration, as though its content were absolute or independent of the provision in which it was initially enshrined.

The 'abstraction' of prevention of environmental harm is especially evident in those cases in which it is 'recognised', as this term immediately refers to the content of the proposition. By way of illustration, as early as in 1972 – the year in which the Stockholm

Evolution and the International Tropical Timber Organization' (2016) 5 *Arts and Social Sciences Journal* 85.

[26] It is noteworthy that principle 1(a) of the Non-Legally Binding Statement of Principles on Forests was already mentioned in the 1994 Agreement, but with regard to State sovereignty over natural resources only. Specifically, the general clause of Art. 1 ITTA 1994, dealing with its objectives, reads as follows: '*Recognizing the sovereignty of members over their natural resources*, as defined in Principle 1 (a) of the Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests' (emphasis added). The omission of the part of the second portion of the provision that deals with prevention of environmental harm must have been deliberate, and the same must hold true for its reinstatement in the 2006 Agreement. However, the parallel shift from the introductory clause of the objectives of the Agreement, in Art. 1 ITTA 1994, to the preamble to ITTA 2006 should not pass unnoticed. One gets the impression that the reference to sovereignty over natural resources was central when it was not coupled with prevention of environmental harm, becoming one of the many considerations stated in the preamble once prevention of environmental harm had been included. Indeed, sovereignty over natural resources was also considered, on its own, in Art. 1 ITTA 1983, which set forth its objectives ('With a view to achieving the relevant objectives adopted by the United Nations Conference on Trade and Development […] *and bearing in mind the sovereignty of producing members over their natural resources*', emphasis added): this obviously reinforces that impression.

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Conference was held – the responsibility of States to prevent harm to the environment, as formulated in principle 21, was 'recognised' in the preamble to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (hereinafter, London Convention).[27] Although the content of principle 21 of the Stockholm Declaration is restated, no reference is made to that provision or that instrument.[28]

As the London Convention lays down detailed rules on the prevention of marine pollution, the recognition of prevention of environmental harm in the preamble suggests that it served as inspiration: prevention of marine pollution by dumping is clearly a specific manifestation of prevention of harm to the environment.[29] Hence, prevention of environmental harm seems to underpin, as a principle, the rules set forth in the Convention, which rules embody it within a detailed regime. Alongside the prohibition on the dumping of waste or other matter, the substances the dumping of which is banned are listed in an annex, as are those substances the dumping of which requires a prior special permit. The dumping of all other waste or matter requires, on a residual basis, a prior general permit.[30] Moreover, aside from the provisions dealing with cooperation and further development of the relevant international law,[31] specific ex-

[27] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, adopted on 29 December 1972 at Washington, Moscow, London, and Mexico City, and entered into force on 30 August 1975, 1046 *UNTS* 120.

[28] Para. 3 of the preamble just reads as follows: 'Recognizing that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction'.

[29] In this respect, the fact that prevention of environmental harm is no longer restated in the preamble to the Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, adopted at London on 7 November 1996 and entered into force on 24 March 2006, is irrelevant. The Protocol supersedes the London Convention for the Parties to both the treaties, but in no way this excludes the possibility that, at the outset, the Convention was inspired by prevention of environmental harm. Instead, the removal of the reference to prevention of environmental harm in the shift from the London Convention to the Protocol might be assessed in light of the decreasing importance of prevention of environmental harm within international protection of the environment: see *infra*, Section 7.1.

[30] Art. IV(1) of the London Convention. See also *infra*, Section 6.3.2.

[31] They include Art. VIII (regional agreements); Art. IX (technical cooperation); Art. X (liability and settlement of disputes regarding dumping); Art. XI (consid-

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ceptions are stipulated,[32] whilst other rules deal with the designation of the national authorities competent to issue permits and to monitor.[33] The scope of the London Convention is specified as well.[34]

The abstraction of prevention of harm to the environment from principle 21 is less evident when it is 'reaffirmed' or 'recalled', rather than 'recognised'. The former terms might be meant to allude to a previous affirmation or statement of prevention of environmental harm and, ultimately, to principle 21 of the Stockholm Declaration. As already pointed out however, it may be difficult to draw conclusions from the mere wording. Indeed, it seems that the omission of any reference to principle 21 of the Stockholm Declaration still suggests a certain degree of abstraction.

For example, prevention of environmental harm is 'recalled' in the preamble to the Framework Convention on Climate Change.[35] This should seemingly be understood as a reference to one of its underlying precepts as a general principle: it is not the prior affirmation of prevention of environmental harm in the Stockholm Declaration that is 'recalled'. In this regard, it is noteworthy that, whereas the Stockholm Declaration is mentioned in the preamble, this occurs in a separate recital.[36] Remarkably, the preamble reiterates the formulation that would later be enshrined in principle 2 of the Rio Declaration: as the Rio Conference was held one month later, this is in itself a sign of the 'free-riding' character of prevention of harm to the environment as a principle.

Albeit indirectly, the Framework Convention on Climate Change lays down rules on the prevention of environmental harm: its reaffirmation in the preamble implies its inspiring function. As is known, the Convention mainly creates a framework for cooperation: only a limited number of commitments are set forth and doubts have even been raised concerning the legally-binding nature of some of them, owing to their general character.[37] Nevertheless, irrespective of their

eration of procedures for the settlement of disputes concerning the interpretation and application of the Convention); Art. XII (promotion of the protection of the marine environment); Articles XIV and XV (meeting of the Contracting Parties).

[32] Art. V of the London Convention.

[33] Art. VI of the London Convention.

[34] Art. VII of the London Convention.

[35] United Nations Framework Convention on Climate Change, adopted at New York on 9 May 1992 and entered into force on 21 March 1994, 1771 *UNTS* 107. See the preamble, para. 8.

[36] Preamble to the Framework Convention on Climate Change, para. 7.

[37] See *infra*, Section 6.3.1.

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inherent weakness and vagueness, those rules do embody prevention of environmental harm and are, by comparison, more detailed. In particular, the Convention stipulates that the Parties shall formulate and implement programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks, in addition to measures to facilitate adaptation to climate change.[38] Developed country Parties more specifically undertake to adopt policies and take measures to mitigate climate change by limiting anthropogenic emissions of greenhouse gases, and by protecting and enhancing greenhouse gas sinks and reservoirs.[39]

The Stockholm Convention on Persistent Organic Pollutants provides another instance of the 'reaffirmation' of prevention of environmental harm in the preamble, without any reference to the Stockholm or Rio Declarations.[40] In the preamble to this Convention too, the relevant provisions of the Rio Declaration are recalled in a recital separate from that 'reaffirming' prevention of environmental harm.[41] This is particularly striking, since other specific principles of the Rio Declaration are considered in the preamble along with the relevant provision of the Declaration, which is recalled as well. By way of illustration, the principle of common but differentiated responsibilities is mentioned 'as set forth in Principle 7 of the Rio Declaration',[42] and principle 16 is mentioned to reaffirm the polluter-pays principle.[43] Accordingly, the omission of any reference to principle 2 of the Rio Declaration, alongside the reaffirmation of prevention of environmental harm, is almost certainly intentional.

Thus, it is reasonable to argue that prevention of environmental harm is reaffirmed as one of the guiding principles of the Stockholm Convention on Persistent Organic Pollutants. It lays down detailed rules providing for the prevention of a *specific* source of pollution. The chemicals the release of which must be prohibited or reduced are listed in two separate annexes,[44] and the relevant exceptions are clearly stated. A

[38] Art. 4(1)(b) of the Framework Convention on Climate Change.

[39] Art. 4(2)(1) of the Framework Convention on Climate Change.

[40] Stockholm Convention on Persistent Organic Pollutants, adopted on 22 May 2001 and entered into force on 17 May 2004, 2256 *UNTS* 119. See the preamble, para. 10.

[41] Preamble to Convention on Persistent Organic Pollutants, para. 7.

[42] Preamble to Convention on Persistent Organic Pollutants, para. 13.

[43] Preamble to Convention on Persistent Organic Pollutants, para. 17.

[44] Art. 3 of the Convention on Persistent Organic Pollutants. See also Annexes A and B, dealing respectively with elimination and restriction.

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register is even established with regard to specific exemptions.[45] A third annex lists the chemicals that are formed and released unintentionally from certain anthropogenic sources, which are likewise specified,[46] for the purpose of their progressive reduction.[47] A framework for cooperation is created as well.

4.2.1.c. *Reference to Principe 21 and Restatement of Its Content*

The preambles to some treaties explicitly refer to principle 21 of the Stockholm Declaration or principle 2 of the Rio Declaration. However, their content is restated in full. This seemingly suggests a certain degree of abstraction in the concept of prevention of environmental harm in that, having cited principle 21 or principle 2, it would appear to be superfluous to repeat its content, unless that repetition were intended to emphasise it, as though it existed separately from the written provision enshrining it. Accordingly, the restatement of the content of principle 21 of the Stockholm Declaration, or principle 2 of the Rio Declaration, notwithstanding the reference to one of them, might suggest that it was understood to be somehow linked to general international law.

The preamble to the Convention on Long-range Transboundary Air Pollution is especially illustrative of this link.[48] It states as follows:

> *Considering* the pertinent provisions of the Declaration of the United Nations Conference on the Human Environment, and in particular principle 21, which expresses the common conviction that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction […].[49]

Prevention of environmental harm appears to be one of the principles underlying the Convention on Long-range Transboundary Air Pollution. This treaty aims to prevent a specific type of environmen-

[45] Art. 4 of the Convention on Persistent Organic Pollutants.

[46] Annex C to the Convention on Persistent Organic Pollutants.

[47] Art. 5 of the Convention on Persistent Organic Pollutants.

[48] Convention on Long-range Transboundary Air Pollution, adopted at Geneva on 13 November 1979 and entered into force on 16 March 1983, 1302 *UNTS* 217.

[49] Preamble to the Convention on Long-range Transboundary Air Pollution, para. 5.

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tal harm, namely that affecting the atmosphere over long distances. In particular, despite the paucity of substantive commitments, the Parties 'endeavour to limit and, as far as possible, gradually reduce and prevent air pollution including long-range transboundary air pollution'.[50] Moreover, the established framework for cooperation also seeks, albeit indirectly, to realise prevention of long-range transboundary air pollution and, ultimately, prevention of environmental harm.

The implementation of the Convention through its protocols confirms that prevention of environmental harm is one of its underlying guiding principles. Aside from the Protocol on the Financing of the Programme for Monitoring and Evaluation,[51] the other protocols address specific sources of atmospheric pollution with a view to reducing them, namely sulphur emissions,[52] nitrogen oxides,[53] emissions of volatile organic compounds,[54] heavy metals,[55] and persistent

[50] Art. 2 of the Convention on Long-range Transboundary Air Pollution. It is the first one of the obligations appearing in the section 'Fundamental Principles'. The other obligations enumerated in that section are the following: to develop policies and strategies as a means of combating the discharge of air pollutants (Art. 3); to exchange information on and review the relevant policies, scientific activities and technical measures (Art. 4); consultation between actually or potentially affected States and the States of origin of pollution (Art. 5).

[51] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Long-Term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-Range Transmission of Air Pollutants in Europe (EMEP), adopted at Geneva on 28 September 1984 and entered into force on 18 January 1988, 1491 *UNTS* 167.

[52] Two Protocols are dedicated to the reduction of sulphur emissions: the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at Least 30 per cent, adopted at Helsinki on 8 July 1985 and entered into force on 2 September 1987, 1480 *UNTS* 215; and the Protocol on Further Reduction of Sulphur Emissions, adopted at Oslo on 14 June 1994 and entered into force on 5 August 1998, 2030 *UNTS* 122.

[53] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes, adopted at Sofia on 31 October 1988 and entered into force on 14 February 1991, 1593 *UNTS* 287.

[54] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes, adopted at Geneva on 18 November 1991 and entered into force on 19 September 1997, 2001 *UNTS* 187.

[55] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Heavy Metals, adopted at Aarhus on 24 June 1998 and entered into force on 29 December 2003, 2237 *UNTS* 4.

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organic pollutants.[56] One last protocol deals with certain phenomena connected with atmospheric depositions or the concentration of pollutants, i.e., acidification, eutrophication and ground-level ozone.[57]

Generally speaking, the rules laid down in these protocols also contribute to embodying prevention of environmental harm as a general principle. In fact, they seek to implement the Convention on Long-range Transboundary Air Pollution: the connection between the consideration of prevention of environmental harm in the preamble to the Convention, on the one hand, and its Protocols, on the other, is self-evident. Moreover, prevention of environmental harm is 'reaffirmed' in the preambles to the three most recent protocols to the Convention.[58] These restate verbatim the content of principle 2 of the Rio Declaration, without any mention of that provision. This seems to suggest, as pointed out above, that they actually mean to refer to a corresponding general principle of international law. Indeed, a comparison with how the precautionary approach is dealt with in the preambles to the same protocols confirms this impression: in relation to the precautionary approach, principle 15 of the Rio Declaration is expressly mentioned and its content is not restated.[59] Again, it cannot be any coincidence that no reference was made to principle 2 of the Rio Declaration with regard to prevention of environmental harm.

Be that as it may, the preamble to the Convention on Long-range Transboundary Air Pollution is somewhat exceptional: expressions like 'common conviction' are not usually employed to introduce a reference to principle 21 of the Stockholm Declaration (or principle 2 of the Rio Declaration) in the preamble to a treaty. As mentioned above however, the restatement of its content implies a certain de-

[56] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants, adopted at Aarhus on 24 June 1998 and entered into force on 23 October 2003, 2230 *UNTS* 79.

[57] Protocol to the 1979 Convention on Long-range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-level Ozone, adopted at Gothenburg on 30 November 1999 and entered into force on 17 May 2005, 2319 *UNTS* 81.

[58] See the preamble to the Protocol on Heavy Metals, para. 9; the preamble to the Protocol on Persistent Organic Pollutants, para. 8; the preamble to the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone, para. 12.

[59] The relevant paragraph reads as follows: '*Resolved* to take measures to anticipate, prevent or minimize emissions of […], taking into account the application of the precautionary approach, as set forth in principle 15 of the Rio Declaration on Environment and Development'. Of course, the substances concerned change in accordance with the object of the Protocol.

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gree of abstraction and, ultimately, a connection with general international law. Accordingly, insofar as the treaty provides for the implementation of prevention of environmental harm, its guiding function is still apparent.

In this respect, the Vienna Convention for the Protection of the Ozone Layer is especially illustrative.[60] Whereas the provisions of the Stockholm Declaration are generically 'recalled' in the preamble, principle 21 is specifically mentioned, and its content is restated verbatim.[61] This Convention too essentially seeks to establish a framework for cooperation, with detailed regulation being left to its protocols. Nonetheless, the general obligation to take measures to protect the environment 'against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer' is clearly imbued with prevention of environmental harm.[62] The proclamation of prevention of environmental harm in the preamble thus seems to be indicative of its guiding function.

The Convention on the Transboundary Effects of Industrial Accidents provides another example.[63] In the preamble, although all of the pertinent provisions of the Stockholm Declaration are 'considered', only principle 21 is expressly cited, and its content is repeated in exactly the same words.[64] The embodiment of prevention of environmental harm is more evident here, as the Convention directly lays down substantive rules on prevention. Not only is a general obligation established to take appropriate measures for the prevention of industrial accidents,[65] but instances of preventive measure

[60] Vienna Convention for the Protection of the Ozone Layer, adopted on 22 March 1985 and entered into force on 22 September 1988, 1513 *UNTS* 293.

[61] Preamble to the Vienna Convention for the Protection of the Ozone Layer, para. 2, which states as follows: '*Recalling* the pertinent provisions of the Declaration of the United Nations Conference on the Human Environment, and in particular principle 21, which provides that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction and control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction"'.

[62] Art. 2(1) of the Vienna Convention for the Protection of the Ozone Layer.

[63] Convention on the Transboundary Effects of Industrial Accidents, adopted at Helsinki on 17 March 1992 and entered into force on 19 April 2000, 2105 *UNTS* 457.

[64] Preamble to the Convention on the Transboundary Effects of Industrial Accidents, para. 8.

[65] Art. 6(1) of the Convention on the Transboundary Effects of Industrial Accidents.

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are enumerated in an annex.[66] More detailed obligations also deal with the safe conduct of hazardous activities,[67] and the siting of new ones.[68] In this regard, it is worth observing that the relevant activities are defined precisely, in an annex, on the basis of a list identifying certain hazardous substances.[69] Furthermore, another annex enumerates the matters to be considered in the analysis and evaluation of hazardous activities.[70]

One last example may be found in the Convention to Combat Desertification.[71] In the preamble, the Rio Declaration is 'reaffirmed': principle 2 is hence expressly mentioned and its content is reproduced word for word.[72] Despite the complexity of the phenomenon of desertification, the inspiring value of prevention of environmental harm with regard to the Convention is still perceptible. For the purposes of that Convention, the term 'combating desertification' is taken to include activities aimed at prevention and reduction of land degradation,[73] which in turn comprises specific harm to the environment, namely the reduction in or loss of biological productivity, as resulting from land uses or processes such as soil erosion, deterioration of soil, and long-term loss of natural vegetation.[74] Therefore, the different obligations aimed at combating desertification are ultimately traceable, at least in part, to prevention of environmental harm, which thus reasonably constitutes one of the principles underpinning the Convention.

4.2.2. *Prevention of Environmental Harm in Treaty Provisions Setting Out 'Principles'*

4.2.2.a. *Statement of 'Principles' in Treaties and Inspiring Function*

As well as being considered in preambles, references to prevention of environmental harm in treaty provisions setting out principles

[66] Annex IV to the Convention on the Transboundary Effects of Industrial Accidents.
[67] Art. 6(2) of the Convention on the Transboundary Effects of Industrial Accidents.
[68] Art. 7 of the Convention on the Transboundary Effects of Industrial Accidents.
[69] Annex I to the Convention on the Transboundary Effects of Industrial Accidents.
[70] Annex V to the Convention on the Transboundary Effects of Industrial Accidents.
[71] United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, adopted at Paris on 14 October 1994 and entered into force 26 December 1996, 1954 *UNTS* 3.
[72] Preamble to the Convention to Combat Desertification, para. 15.
[73] Art. 1(b)(i) of the Convention to Combat Desertification.
[74] Art. 1(f) of the Convention to Combat Desertification.

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may likewise provide evidence of its guiding function as a general principle of international law. In fact, treaties often include a provision expressly concerning the relevant principles.

However, the ambiguity inherent within the term 'principle' means that it is not possible to conclude simply that, whenever prevention of environmental harm is included in a treaty provision setting forth principles, that treaty is permeated by prevention of environmental harm *as a general principle of international law*. As already pointed out, the term 'principle' might be employed generically to indicate a rule deemed to be of a primary importance or a rule with broad scope, rather than a general principle of international law *stricto sensu*.[75]

In this respect, outside the realm of international protection of the environment, the enshrinement of the prohibition of the threat or use of force in the UN Charter immediately comes to mind. As is known, although it is unanimously classified as a rule of customary international law, the prohibition is set forth in Article 2(4) of the Charter, which is entitled 'Principles'. Therefore, the provision of an article laying down principles actually reflects a well-established customary rule, rather than a mere guiding principle. Admittedly, when the prohibition of the threat or use of force was inserted in the UN Charter, it did not yet constitute a rule of customary international law. Still, the Parties clearly accepted it as an obligation: 'All Members shall refrain in their international relations from the threat or use of force'.

On the other hand, due to the variety of meanings that can be ascribed to the term 'principle', norms of a different nature may be incorporated into or stipulated under that heading and within the same treaty provision. Thus, in the example of Article 2 of the UN Charter, it also refers, in paragraph 1, to what has often been defined as a general principle of international law, and specifically a structural one, namely sovereign equality of States, although differing classifications have been likewise advanced. In effect, it seems that sovereign equality of States was intended to be a principle informing the very structure of the UN Organisation, rather than a rule: 'The Organization *is based* on the principle of the sovereign equality of all its Members'.[76]

To resolve the ambiguities illustrated above and to try and understand the significance of the 'principles' set out in a treaty, the

[75] See *supra*, Section 3.1.3.
[76] Emphasis added.

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wording of the provision expressing them may prove to be of help. In some cases the introductory clause or opening part of the provision clarifies that it proclaims the *guiding principles* underpinning the treaty, with the result that they should be distinguished from the rules laid down in the operative part of the treaty.

Indeed, clarifications of that sort appear to reflect the desire of the contracting States to exclude the possibility that the principles incorporated into a treaty provision may be equated with rules and hence regarded as legally binding commitments. This is because treaty provisions are primarily expected to set forth obligations.[77] For instance, it has been reported that the United States objected to the incorporation of a provision setting out principles in the Framework Convention on Climate Change, and expressed its concern at the uncertainty surrounding their legal status.[78] If, so the United States argued, those principles had merely been intended to indicate the considerations that the contracting Parties had in mind, they should have been included in the preamble; had they been intended as proper obligations, then this should be plainly apparent.[79] In the end, whilst the provision setting out principles was eventually inserted, it was modified during negotiations at the instigation of the United States, to the effect that specific reference was made to the merely guiding function of those principles.[80]

The separation between the principles underlying a treaty and the rules laid down in it tends to be marked by the position itself of the provision setting out those principles. Whilst appearing in the 'operative' part of the treaty, such a provision is frequently included in a separate section and, in any event, is often to be found at the beginning of the treaty, alongside preliminary or instrumental provisions concerning the use of terms, scope, or aims.

In this regard, one might gain the impression that a provision setting out the principles governing a treaty to some extent duplicates its preamble. This is the case even more so when it also proclaims the objectives of the treaty, or follows a provision to that effect. For example, looking again at the UN Charter, it has been observed that there is some overlap between the preamble and the provisions dealing with purposes and principles, and this overlap has ultimately been criticised.[81]

[77] See *supra*, Section 3.2.2.

[78] See Daniel Bodansky, 'The United Nations Framework Convention on Climate Change: A Commentary' (1993) 18 *Yale JIL* 451, at 501.

[79] Ibid.

[80] Ibid., at 502.

[81] According to Rüdiger Wolfrum, 'Preamble', in Bruno Simma et al. (eds.), *The Charter of the United Nations: A Commentary* vol. 1 (3rd ed., Oxford: Oxford

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Sometimes however, the 'principles' included in the provision which is specifically dedicated to them seemingly differ from those considered in the preamble, in that the former are 'less general' and immediately relevant to the particular aims of the treaty. By way of illustration, some of the treaties analysed above with reference to the preamble also include a provision setting out 'principles'. Whereas prevention of environmental harm is considered in the preamble, those 'principles' specifically deal, for instance, with mitigating climate change or desertification. As regards the Framework Convention on Climate Change, for example, the provision setting forth 'principles' incorporates the principle of common but differentiated responsibilities in the context of the protection of the climate system for the benefit of present and future generations,[82] and the precautionary approach 'to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects'.[83] In the same vein, the 'principles' proclaimed in the Convention to Combat Desertification include public participation in 'decisions on the design and implementation of programmes to combat desertification and/or mitigate the effects of drought'.[84]

Be that as it may, prevention of environmental harm is frequently stated within treaty provisions that set out 'principles'. It will be argued below that, in most cases, it fulfils a guiding function as one of the principles permeating the rules laid down in the treaty. These rules, in turn, contribute to the implementation of that principle.

4.2.2.b. *Restatement of Principle 21 as a 'Principle'*

In various treaties in which prevention of environmental harm is proclaimed in the provision setting out 'principles', the content of principle 21 of the Stockholm Declaration or principle 2 of the Rio Declaration is restated. However, no mention is made of either of them which, as already pointed out, seemingly suggests a certain degree of abstraction of prevention of environmental harm. In truth, it would be unusual for a provision contained in the operative part of a treaty to refer to a non-binding instrument.

University Press 2012), 101, at 101-102, '[t]he resulting coexistence of this Preamble and provisions concerning principles and purposes is somewhat inharmonious, since the former represents an occasionally inaccurate duplication of the purposes and the enumeration of governing principles'.

[82] Art. 3(1) of the Framework Convention on Climate Change.

[83] Art. 3(3) of the Framework Convention on Climate Change.

[84] Art. 3(a) of the Convention to Combat Desertification.

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By way of illustration, the content of principle 21 of the Stockholm Declaration is restated verbatim in Article 3 of the Convention on Biological Diversity,[85] without any reference to principle 21. Hence prevention of harm to the environment was seemingly conceived of as the inspiring principle of the Convention. In this regard, it is worth noting that Article 3 is a one-paragraph provision with the heading 'Principle': no proposition is set out in it other than prevention of environmental harm. Furthermore, although prevention is not included in the preamble to the Convention, Article 3 is one of its introductory provisions: the two preceding articles deal with the objectives of and use of terms within the Convention,[86] and Article 4 too appears to be preliminary as well, as it asserts the Convention's scope. Thus it might plausibly be argued that, having been included as a sort of 'premise' preceding the core operative part of the Convention, prevention of environmental harm amounts to a principle underpinning it.

Another example is provided by the ASEAN Agreement on Transboundary Haze Pollution.[87] Here the inspiring value ascribed to prevention of environmental harm is even plainer to see. Specifically, principle 2 of the Rio Declaration is restated, with slight interpolations,[88] in Article 3 of the Agreement. In setting forth 'Principles', that provision makes it clear that they will guide the Parties to the Agreement in its implementation. Article 3 is one of the preliminary provisions of the Agreement: the two previous articles concern the use of terms and its objectives.[89] Moreover, despite the ambiguity inherent within the term 'principle', Article 3 could hardly be deemed to refer to *rules* of a general nature. This follows not only from the guiding value attached to the 'principles' enshrined therein, but also from the fact that it is Article 4 that subsequently lays down 'gen-

[85] Convention on Biological Diversity, adopted at Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993, 1760 *UNTS* 79.

[86] Namely, Art. 1 ('Objectives') and Art. 2 ('Use of Terms').

[87] ASEAN Agreement on Transboundary Haze Pollution, adopted at Kuala Lumpur on 10 June 2002 and entered into force on 25 November 2003.

[88] Apart from the substitution of 'the Parties' for 'States', reference is made to 'harm to human health' in addition to damage to the environment: '*The Parties* have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment and *harm to human health* of other States or of areas beyond the limits of national jurisdiction' (both emphases added).

[89] They are Art. 1 ('Use of Terms') and Art. 2 ('Objectives').

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eral obligations' in the Agreement. Overall, one gets the impression that, having first clarified the objectives and underlying principles of the Agreement, the framers then proceeded to state the pertinent obligations.

Similar considerations lead to the conclusion that prevention of environmental harm likewise amounts to one of the guiding principles underlying the Framework Convention on Environmental Protection for Sustainable Development in Central Asia.[90] According to Article 4, prevention of environmental harm is included among the principles that the Parties adhere to with a view to achieving the objectives of the Convention. The content of principle 21 of the Stockholm Declaration is restated, without any reference being made to that provision or instrument. Indeed, the attachment of merely guiding value to prevention of environmental harm is confirmed, once again, by the positioning of Article 4 within the Convention. It is one of the preliminary provisions preceding the core operative part of the Convention, and appears alongside the articles that deal with terms, scope, and purpose. It is only in Article 5 that 'general obligations' are set forth so that, again, the expression 'principles' in Article 4 seems not to have been used to refer to rules of a general nature.

4.2.2.c. *Reference to the 'Principle of Prevention'*

In some cases, within the provision setting out 'principles' a treaty refers more synthetically to the 'principle of prevention', or the 'principle of preventive action', instead of restating the content of principle 21 of the Stockholm Declaration or principle 2 of the Rio Declaration. Nonetheless, such expressions certainly allude to prevention of environmental harm as enshrined in these provisions, which are widely regarded as the current formulations of the principle of prevention.

The terms 'principle of prevention' or 'principle of preventive action' seem to be particularly significant not only due to their conciseness. Within the context of protection of the environment, they appear to be more 'environmentally-centred' than principle 21 or principle 2. The former merely evoke prevention of environmental harm, without hinting at sovereignty over natural resources. By contrast, the latter covers the proclamation of States' sovereignty to

[90] Framework Convention on Environmental Protection for Sustainable Development in Central Asia, adopted at Ashgabat on 22 November 2006, not in force.

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exploit their natural resources alongside prevention of environmental harm.

On the other hand, owing to their brevity, such expressions shed little light on the content of prevention and even risk being deceptive. In particular, as already pointed out, the term 'preventive action' has been used within legal scholarship to refer to a broader rule that extends to harm to the environment within the jurisdiction of the State of origin, even in the absence of any transboundary effects. Such a conception is based on the assumption that principle 21 is concerned exclusively with *transboundary* environmental harm. However, as has been tentatively demonstrated above, what lies at the heart of principle 21 of the Stockholm Declaration is specifically protection of the environment per se, as a community interest; this means that the purportedly distinguishing feature of the principle of preventive action is barely discernible.[91]

That said, it seems that, whether referred to as the 'principle of prevention' or the 'principle of preventive action', prevention of environmental harm has performed a guiding function and has therefore been embodied within treaty rules. The Convention on the Protection of the Rhine provides an example of a reference to the principle of preventive action within the provision dealing with 'Principles'.[92] The attachment of a guiding value to prevention of environmental harm appears to be clear: according to Article 4, the Parties are guided by the principle of preventive action,[93] as well as the other principles listed in it. Article 5 restates this guiding function in providing that the Parties make the undertakings laid down in the provision 'in the light of the principles set out in Article 4'.[94]

Prevention of environmental harm has actually served as a guide. Although the provisions of the Convention mostly deal with the establishment and operation of the International Commission for the Protection of the Rhine, it also sets forth rules that embody prevention of environmental harm as a general principle. The Parties commit themselves to ensuring the control over discharges of waste water liable to affect water quality; the gradual reduction in discharges of hazardous substances; compliance with authorisations and emis-

[91] See *supra*, Section 2.3.

[92] Convention on the Protection of the Rhine, adopted at Berne on 12 April 1999 and entered into force on 1 January 2003, L 289 *OJEC* 31.

[93] In the French authentic text, 'les Parties contractantes s'inspirent [du] principe d'action préventive'.

[94] According to the French authentic text, 'en observation des principes cités à l'article 4'.

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sions limits, as well as their periodic examination and adjustment; a reduction in the risks of pollution from incidents or accidents; and control over technical measures liable to have a serious effect on the ecosystem.[95] While such measures constitute 'autonomous actions' of the Parties, they are likewise accompanied by a commitment by the Parties to implement the decisions of the Commission for the Protection of the Rhine[96] which, inter alia, may make proposals for specific measures in order to achieve the objectives of the Convention.[97] These objectives include the sustainable development of the Rhine's ecosystem through the maintenance and improvement of the quality of the waters by preventing, reducing or eliminating, as far as possible, pollution.[98]

The Framework Convention on the Protection and Sustainable Development of the Carpathians is worth considering too.[99] There, the 'prevention principle' is included in Article 2 dealing with 'General Objectives and Principles'. In this case however, a guiding value is not expressly attached to them: with the aim of achieving the objectives of the Convention, the Parties 'shall take appropriate measures […] *by promoting*' the principles mentioned thereafter.[100] Nevertheless, the provision must imply that the principles concerned underpin the measures taken by the Parties. Otherwise, it would be difficult to imagine how such principles could be supported by

[95] Art. 5(4) of the Convention on the Protection of the Rhine. In truth, the language of the provision is fairly ambiguous as regards the legal significance. In the French authentic text, the term 'engagement' is employed instead of 'obligation': 'Afin d'atteindre les objectifs cités à l'article 3 et en observation des principes cités à l'article 4, les Parties contractantes s'engagent […]'. However, that term should be typical of treaties as legally-binding instruments: as for the equivalent English word 'undertaking', see Anthony Aust, 'Alternatives to Treaty-Making: MOUS as Political Commitments', in Duncan B. Hollis (ed.), *The Oxford Guide to Treaties* (Oxford: Oxford University Press 2012), 46, at 48-49.

[96] Art. 5(5) of the Convention on the Protection of the Rhine.

[97] Art. 8(1)(b) of the Convention on the Protection of the Rhine. See also Art. 11, concerning the implementation of the decisions taken by the Commission. This provision, just like Art. 5 (see *supra*, note 94), shows some terminological ambiguities too. It is 'sous forme de recommandations' that the Commission for the Protection of the Rhine 'adresse aux Parties contractantes […] ses décisions', which however 'sont mises en œuvre conformément au droit interne des Parties contractantes'.

[98] Art. 3(1)(a) of the Convention on the Protection of the Rhine.

[99] Framework Convention on the Protection and Sustainable Development of the Carpathians, adopted at Kyiv on 22 May 2003 and entered into force on 4 January 2006, available at the official website *www.carpathianconvention.org*.

[100] Art. 2(2) of the Framework Convention on the Protection and Sustainable Development of the Carpathians (emphasis added).

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the Parties adopting appropriate measures. Therefore, it seems that prevention is one of the principles that must provide guidance to the Parties when they take measures aimed at pursuing the objectives of the Convention.

Indeed, in the areas relevant to the measures to be adopted,[101] prevention of environmental harm appears to have already informed the rules that the Convention itself lays down, despite its nature as a framework treaty to be supplemented by implementing protocols.[102] For instance, the Parties must pursue policies aimed at ensuring the conservation of biological diversity and take adequate measures to ensure a high level of protection of natural habitats, including species of flora and fauna and, in particular, endangered species.[103] Similarly, the Parties must pursue policies to prevent specific environmental harm consisting in the introduction of alien species and the release of genetically modified organisms posing a threat to the Carpathian ecosystems.[104] Furthermore, prevention of pollution underpins some of the rules concerning the management of water or river basins.[105]

[101] Under Art. 2(2) of the Framework Convention on the Protection and Sustainable Development of the Carpathians, they are the areas covered by Articles 4 to 13, i.e., the substantive part of the Convention.

[102] Pursuant to Art. 2(3) of the Framework Convention on the Protection and Sustainable Development of the Carpathians, '[t]o achieve the objectives set forth in this Convention and to ensure its implementation, the Parties may, as appropriate, develop and adopt Protocols'. See also Art. 18, dealing with protocols on the procedural front. In effect, protocols were adopted with specific regard to biodiversity (Protocol on Conservation and Sustainable Use of Biological and Landscape Diversity, adopted on 19 June 2008 and entered into force on 28 April 2010), forests (Protocol on Sustainable Forest Management, adopted on 27 May 2011 and entered into force on 21 October 2013), tourism (Protocol on Sustainable Tourism, adopted on 27 May 2011 and entered into force on 29 April 2013), transport (Protocol on Sustainable Transport, adopted on 26 September 2014 and entered into force on 14 January 2019), sustainable agriculture and rural development (Protocol on Sustainable Agriculture and Rural Development, adopted on 12 October 2017 and entered into force on 1 January 2020). The texts of these protocols are available on the official website *www.carpathianconvention.org*.

[103] Art. 4(1) of the Framework Convention on the Protection and Sustainable Development of the Carpathians.

[104] Art. 4(3) of the Framework Convention on the Protection and Sustainable Development of the Carpathians.

[105] Art. 6 of the Framework Convention on the Protection and Sustainable Development of the Carpathians, referring, inter alia, to 'policies and plans based on an integrated river basin management approach, recognizing the importance of pollution and flood management, prevention and control', 'adequate sanitation and treatment of waste water', and 'policies aiming at conserving natural watercourses, springs, lakes and groundwater resources as well as preserving and protecting wet-

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4.3. *Prevention of Environmental Harm in EU law*

4.3.1. *The Environmental Policy of the European Union*

Investigation of EU law too reveals the guiding value of prevention of environmental harm. Albeit concealed behind the complexity of the institutional and normative machinery of the European Union, it may be observed throughout the evolution of EU environmental policy. Therefore, before proceeding to assess prevention of environmental harm, it is not superfluous to recall the importance of the 1986 Single European Act in relation to this evolution. It actually marked a watershed as the first time that a policy title dealing with the environment had been incorporated into an instrument of EU law.[106]

Previously, in what might be called the 'early stage' of EU environmental policy, protection of the environment was not contemplated. Indeed, the 1957 Treaty Establishing the European Economic Community (EEC Treaty) did not even mention protection of the environment. This was only partly due to the predominantly economic focus of action by the European Communities at the outset. More specifically, when the European integration process began, environmental awareness had yet to emerge: as noted above, it started to spread more widely during the 1960s.

Be that as it may, the lack of any direct competence over protection of the environment did not hinder the adoption of environmental measures, once the intertwinement between economic development and degradation of the environment had become clear. From the 1970s onwards, action was taken in relation to protection of the environment by virtue of the residual competence under Article 235 of the EEC Treaty (now Article 252 TFEU). It was also based on former Article 100 on the approximation of laws with regard to competition and the functioning of the internal market (now Article 115 TFEU). Frequently, a combination of the two was relied on.

The situation changed when the Single European Act entered into force and the European Union was endowed with specific competence over protection of the environment.[107] More importantly for

lands and wetland ecosystems, and protecting against natural and anthropogenic detrimental effects such as flooding and accidental water pollution'.

[106] Art. 25 of the Single European Act.

[107] See Hans-Joachim Glaesner, 'The Single European Act: Attempt at an Appraisal' (1986) 10 *Fordham ILJ* 446, at 457-459; and Christian Zacker, 'Environmental Law of the European Economic Community: New Powers under the Single European Act' (1991) 14 *Boston College ICLR* 249, at 261-278. However, the

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the purposes of this study, the Single European Act introduced a provision including a reference to prevention of environmental harm as the principle of preventive action.[108]

Following the Single European Act, further steps were taken in the evolution of EU environmental law:[109] the policy title on the environment has been thoroughly amended, over and above the mere renumbering of the articles.[110] However, these amendments are of secondary importance here as they have not impinged upon the reference mentioned above to prevention of environmental harm.

Today, the principle of preventive action is enshrined in Article 191(2) TFEU, alongside the precautionary principle, the principle of rectification of environmental damage at source, and the polluter-pays principle. It is part and parcel of EU environmental policy, which is aimed at pursuing the preservation, protection, and enhancement of the quality of the environment; the protection of human health; the

incorporation of a title on the environment has been criticised as well: see Damien Chalmers, 'Environmental Protection and the Single Market: An Unsustainable Development. Does the EC Treaty Need a Title on the Environment?' (1995-1) *Legal Issues Eur. Integr.* 65, especially at 88-97.

[108] Art. 130r(2) of the EEC Treaty ('Action by the Community relating to the environment shall be based on the principle […] that preventive action should be taken […]').

[109] For an overview, see Ornella Porchia, 'Tutela dell'ambiente e competenze dell'Unione europea' (2006) 16 *Riv. it. dir. pub. com.* 17, at 17-27; Francesco Munari, Lorenzo Schiano di Pepe, *Tutela transnazionale dell'ambiente. Principi, regole, problemi* (Bologna: il Mulino 2012), at 69-78; Suzanne Kingston, Veerle Heyvaert, Aleksandra Čavoški, *European Environmental Law* (Cambridge: Cambridge University Press 2017), at 1-8.

[110] Significant changes were made by the 1992 Maastricht Treaty. Among them, the replacement of the requirement of unanimity with qualified majority voting in the Council is worth mentioning, even though the former is still necessary today in exceptional circumstances (see *infra*, note 114). Moreover, the precautionary principle was added to the environmental principles previously introduced under the Single European Act (namely, preventive action, rectification of environmental damage at source, and polluter-pays). Another major change was the 'formalisation' of the adoption of programmes of action on the environment, which will be discussed below (*infra*, Section 4.3.2). Further amendments were made by the 1997 Treaty of Amsterdam as regards both the policy title on the environment (including the switch from the cooperation procedure to the co-decision procedure) as well as the aims of the European Community (specifically, the introduction of the promotion of a high level of protection and improvement of the quality of the environment, and the reference to sustainable development). More recently, as a result of the 2007 Lisbon Treaty, a '*passerelle* clause' (see *infra*, note 114) and the objective of combating climate change were inserted into the policy title on the environment.

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prudent and rational use of natural resources; and the promotion of international measures to address regional and worldwide environmental issues, including climate change.[111] The environment is an area of shared competence between the European Union and the Member States.[112] As a rule, decisions on EU action on the environment are taken in accordance with the ordinary legislative procedure,[113] albeit subject to some exceptions.[114] The ordinary legislative procedure also applies to the adoption of general action programmes setting out priority objectives.[115] Finally, an environmental safeguard clause is enunciated, to the effect that Member States are allowed to maintain or introduce more stringent environmental measures, on condition that they are compatible with the EU Treaties and have been reported to the Commission.[116]

Indeed, protection of the environment has now acquired a pervasive relevance. By virtue of the integration principle under TFEU, it must be taken into account within the definition and implementation of *all* activities and policies of the European Union.[117] This is also restated in the Charter of Fundamental Rights.[118] Furthermore, while it is not included among the values of the European Union, protection of the environment is connected with its aims. In particular, Article 3(3) TEU provides that the European Union shall work for the sustainable development of Europe based on, inter alia, 'a high level of protection and improvement of the quality of the environment'.[119]

[111] Art. 191(1) TFEU.

[112] Art. 4(2)(e) TFEU.

[113] Art. 192(1) TFEU. The European Parliament and the Council act after consulting the Economic and Social Committee and the Committee of the Regions.

[114] Art. 192(2) TFEU. Specifically, a special legislative procedure requiring unanimity in the Council and consultation with the European Parliament, the Economic and Social Committee, and the Committee of the Regions applies in relation to primarily fiscal provisions; measures affecting town and country planning, quantitative management and the availability of water resources, land use (except for waste management); measures significantly affecting the choice of a Member State between energy sources and the overall structure of its energy supply. However, Art. 192(2) contains a so called '*passerelle* clause', stipulating that the ordinary legislative procedure may be made applicable to those matters.

[115] Art. 192(3) TFEU.

[116] Art. 193 TFEU.

[117] Art. 11 TFEU.

[118] Art. 37 of the Charter of Fundamental Rights of the European Union.

[119] Furthermore, as far as its external relations are concerned, the European Union shall contribute to 'the sustainable development of the Earth' pursuant to Art. 3(5) TUE.

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4.3.2. *Before the Single European Act: Prevention of Environmental Harm in Programmes of Action on the Environment*

When considering the early stage of EU environmental policy (before the Single European Act), the guiding function of prevention of environmental harm was mainly apparent within programmes of action on the environment. As mentioned above, absent any competence over the environment, the legal basis for the acts of the then European Community concerning the environment lay elsewhere, specifically in former Articles 100 and 235 EEC Treaty. From a broader perspective however, those environmental acts ensured the implementation of the action programmes, which set out principles in addition to objectives, projects, priorities and timetables.

Hence prevention of environmental harm was one of the principles that was realised through the acts implementing the action programmes. In this regard, it is reasonable to argue that it performed a guiding function. This is perhaps less direct than it is within the formation of treaties, owing to the complexity of the process leading from the action programme, through the relevant decision-making procedure, to the implementing acts. Nonetheless, such a guiding function can be detected all the same.

Prevention of environmental harm was already proclaimed in the First Programme of Action on the Environment, adopted in 1973.[120] Although the Stockholm Conference had been held the year before, the exact wording used in principle 21 of the Stockholm Declaration was not reiterated. This notwithstanding, there seems to be a clear allusion to it. Specifically, paragraph 6 of title II, entitled 'Principles of a Community Environment Policy', reads as follows: 'In accordance with the Declaration of the United Nations conference on the human environment adopted in Stockholm, care should be taken to ensure

[120] Programme of Action of the European Communities on the Environment, annex to the Declaration of the Council of the European Communities and of the Representatives of the Governments of the Member States Meeting in the Council of 22 November 1973, C 112 *OJEC* 1. The Programme was adopted following the Summit Conference of the Heads of State or of Government, which met in Paris on 19 and 20 October 1972, and the Conference of the Ministers of the Member States of the European Communities responsible for the Protection of the Environment, which met in Bonn on 31 October 1972. In particular, the former culminated in a Statement whereby the Community Institutions were invited 'to establish, before 31 July, 1973, a programme of action accompanied by a precise timetable'. Both Conferences are mentioned in the preamble to the Declaration adopting the First Programme of Action on the Environment.

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that activities carried out in one state do not cause any degradation of the environment in another state'.[121]

Leaving aside the first part of principle 21 concerning State sovereignty over natural resources, which was not restated in paragraph 6, the omission of any reference to the environment of areas beyond the limits of national jurisdiction is prima facie striking. On closer scrutiny however, this omission should not be understood as a reduction in the scope of prevention of environmental harm. On the contrary, a previous paragraph already provided for prevention of harm to the environment per se, irrespective of the location of harm: 'Any exploitation of natural resources or of a nature which causes significant damage to the ecological balance must be avoided'.[122] Indeed, apart from paragraph 6, the environment is never qualified within the principles of the action programme at issue as the environment of another State, with the result that the idea of the protection of the environment per se seemingly permeates those principles overall.[123]

The principles of the First Programme of Action, including those illustrated that are relevant to prevention of environmental harm, were restated verbatim in the Second Action Programme on the Environment, covering the period running from 1977 to 1981.[124] Although they were not restated in the Third Action Programme, which was the last one prior to the Single European Act,[125] they

[121] By the same token, a reaffirmation of the second part of principle 21 of the Stockholm Declaration is found by Johan G. Lammers, *Pollution of International Watercourses. A Search for Substantive Rules and Principles of Law* (The Hague: Martinus Nijhoff Publishers 1984), at 196, note 1, in the equivalent point of the Communiqué adopted by the 1972 Bonn Conference, cit., reading as follows: 'Ensure in the spirit of the UN Declaration on the Environment adopted at Stockholm that activities in one country do not cause damage to the environment in another' (as quoted ibid.).

[122] Para. 3(1) of the First Programme of Action, cit.

[123] For example, under para. 2(1), '[e]ffects on the environment should be taken into account at the earliest possible stage in all the technical planning and decision-making processes'.

[124] European Community Action Programme on the Environment (1977-1981), annex to Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States, meeting within the Council of 17 May 1977, C 139 *OJEC* 1. Title I is entitled specifically 'Restatement of the Objectives and Principles of a Community Environment Policy': see, in particular, paragraphs 15(1) and 18, reproducing respectively paragraphs 3(1) and 6 quoted above in the text.

[125] Action Programme of the European Communities on the Environment (1982-1986), annex to Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States, meeting within the Council, of 7 February 1983, C 46 *OJEC* 1.

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were confirmed in the resolution adopting that Programme,[126] and so should therefore be their guiding function.

A number of directives were adopted between 1973 and 1986 with a view to implementing the programmes mentioned above, and thus on the basis of prevention of environmental harm too. As is known, EU directives are only binding as regards the result to be achieved, whereas the choice of the form and methods of implementation is left to the discretion of the Member States.[127] Nonetheless, the fact that these directives were intended to give effect to the programmes of action on the environment is apparent. In effect, the programmes of action are considered in the preamble to each of those directives. By way of illustration, it is worth recalling the 1975 Directive concerning the quality of surface water,[128] the 1975 Directive on waste,[129] the 1979 Directive on the conservation of wild birds,[130] the 1984 Directive on air pollution,[131] and the 1985 Directive on environmental impact assessment.[132] Moreover, the preamble to the Directive on air pollution confirmed that 'the Council ha[d] already adopted several Directives *under these programmes*',[133] namely the 1973, 1977, and 1983 action programmes on the environment.

Whereas it is reasonable to argue, in light of the above, that the acts adopted by the then European Community in the period preceding the Single European Act were also aimed at realising prevention of environmental harm, a complication arises from its embedding in the programmes of action on the environment. Prevention of environmental harm eventually came into consideration as a principle incorporated into an act of the European Community, rather than as a general principle of international

[126] See the preamble to the Resolution adopting the third Action Programme, cit.: 'Whereas the Council confirmed the objectives and principles of Community environment policy in its declaration of 22 November 1973 and reconfirmed them in its resolution of 17 May 1977 […]'.

[127] See currently Art. 288 TFEU.

[128] Council Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for abstraction of drinking water in the Member States, L 194 *OJEC* 26.

[129] Council Directive 75/442/EEC of 15 July 1975 on waste, L 194 *OJEC* 39.

[130] Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, L 103 *OJEC* 1.

[131] Council Directive 84/360/EEC of 28 June 1984 on the combating of air pollution from industrial plants, L 188 *OJEC* 20.

[132] Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, L 175 *OJEC* 40.

[133] Emphasis added.

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law. From this standpoint, the 'atypical' nature of the programmes of action on the environment is immaterial, as is the adoption of the programme by declaration, as was the case for the First Programme of Action, or by resolution, as was the case for the Second and Third Programmes of Action. Each constituted an act of the European Community.

It seems that none of the directives concerning protection of the environment referred to prevention of environmental harm 'in abstraction'. Tellingly, the Directive on air pollution even mentioned the 'importance' of prevention insofar as it had been stressed in the action programmes on the environment.[134]

The firm anchoring of prevention of environmental harm in the programmes of action as acts of the then European Community should probably be considered against the backdrop of the autonomy of the EU legal order. After all, the European Community launched its environmental policy shortly after the seminal judgments of the Court of Justice affirming the EU legal system's own authority and primacy.[135] The extremely elaborate character of the EU institutional and normative framework, already stressed above, should also be borne in mind.

Be that as it may, the attachment of a guiding value to prevention of environmental harm still has great evidential weight: albeit incorporated into an act of the then European Community, prevention of environmental harm performed a function typical of a principle, rather than a rule. Indeed, its inclusion in a 'programme of action' appears to suggest specifically the programmatic nature of prevention of environmental harm as a principle. Such a guiding value would later be confirmed and corroborated by the amendments introduced by the Single European Act.

4.3.3. *Following the Single European Act: Preventive Action as a Foundational Principle of EU Environmental Policy*

As already pointed out, a policy title on the environment was incorporated into the EEC Treaty through the 1986 Single European Act. Prevention of environmental harm was provided for in the form

[134] Council Directive 84/360/EEC, cit., provided that: 'Whereas the 1973, 1977 and 1983 action programmes of the European Communities on the environment stress the importance of the prevention and reduction of air pollution […]' (footnotes omitted).

[135] The is obviously an allusion to the famous judgments of 5 February 1963, Case C-26/62, *Van Gend & Loos*, and of 15 July 1964, Case C-6/64, *Costa c. E.N.E.L.*

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of the principle of preventive action.[136] It is currently contained in Article 191(2) TFEU, which states as follows:

> Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.

This quotation plainly shows the foundational value of prevention of environmental harm within the environmental policy of the European Union: it *shall be based*, inter alia, upon the principle of preventive action. This value was attached to prevention of environmental harm from the outset, given that the same wording alluding to the foundation of the then European Community's environmental policy had previously been used in the Single European Act.

In this connection, the argument submitted here that prevention of environmental harm had previously performed a guiding function within the programmes of action on the environment appears to be confirmed. One can plausibly assert that it was merely formalised by the Single European Act. Whilst programmes of action on the environment have continued to be adopted since,[137] they are now meant only to set out 'priority objectives to be attained',[138] the overarching

[136] Their essential identity is widely acknowledged: see, for example, Kingston, Heyvaert, Čavoški, *European Environmental Law*, cit., at 99 ('A version [of the principle that preventive action should be taken] is also to be found in international environmental law, as expressed in Principle 21 of the Stockholm Declaration on the Human Environment 1972').

[137] Following the Single European Act, four other action programmes on the environment were adopted, namely the EEC Fourth Environmental Action Programme (1987-1992), annex to the Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States, meeting within the Council, of 19 October 1987, C 328 *OJEC* 1; Towards Sustainability: A European Community Programme of Policy and Action in Relation to the Environment and Sustainable Development, C 138 *OJEC* 5; Decision 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 Laying down the Sixth Community Environment Action Programme, L 242 *OJEC* 1; the 7th Environment Action Programme to 2020 – Living Well, within the Limits of Our Planet, annex to Decision 1386/2013/EU of the European Parliament and of the Council of 20 November 2013, L 354 *OJEU* 171. For an overview of the action programmes so far adopted by the European Union, see David Langlet, Said Mahmoudi, *EU Environmental Law and Policy* (Oxford: Oxford University Press 2016), at 28-33.

[138] Art. 192(3) TFEU.

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aims and principles of EU environmental policy having been codified in the TFEU.

In short, today's EU environmental action seeks to pursue the objectives laid down in Article 191 TFEU and is founded on the principles proclaimed in that provision, including the principle of preventive action. The guiding value of prevention of environmental harm is further corroborated by the fact that various EU acts clearly state that they intend to implement it.[139] The Court of Justice of the EU has also confirmed the grounding of a number of EU environmental acts on prevention of environmental harm.[140] This is fairly remarkable because their relationship might well be deemed to be implicit: the legal basis for those acts lies specifically in the policy title on the environment, which contains the principle of preventive action.

Nevertheless, although the stage following the Single European Act corroborates the foundational value and guiding function of prevention of environmental harm, its recognition in the Treaties raises the same problem as its prior inclusion within programmes of action. Again, prevention of environmental harm operates in the EU legal order not as a general principle of international law, but rather as a norm of EU law.[141] In truth, the enshrinement of the principle of preventive action in EU primary law complicates matters further: whereas the programmes of action preceding the Single European Act essentially amounted to soft law, the founding treaties of the

[139] See, for example, the preamble to Directive 2008/98/EC of 19 November 2008 on waste repealing certain directives, L 312 *OJEU* 3, at recital 30: '*In order to implement the precautionary principle and the principle of preventive action* enshrined in Article 174(2) of the Treaty [now Art. 191(2) TFEU], it is necessary to set general environmental objectives for the management of waste within the Community' (emphasis added).

[140] See recently, e.g., the judgment of 26 June 2019, Case C-723/17, *Craeynest*, para. 33 ('the rules laid down in Directive 2008/50 on ambient air quality put into concrete terms the EU's obligations concerning environmental protection and the protection of public health, which stem, inter alia, from […] Article 191(1) and (2) TFEU, according to which Union policy on the environment […] is to be based, inter alia, on the precautionary principle and on the principle that preventive action should be taken'). See also the opinion of Advocate General Kokott delivered on 16 January 2014, Case C-237/12, *Commission* v. *France*, observing that the so called Nitrates Directive 'is thus intended to realise the objective of improving the quality of the environment set out in the first indent of Article 191(1) TFEU and the principle of preventive action laid down in Article 191(2) TFEU' (para. 30).

[141] This is stressed by Munari, Schiano di Pepe, *Tutela transnazionale dell'ambiente*, cit., at 79-81.

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European Union represent the very 'constitution' of the EU legal order.

On the other hand, it is noteworthy that, *although being a norm of EU primary law*, prevention of environmental harm essentially performs only the guiding function typical of general principles, as has also been observed within legal scholarship.[142] Case law shows that limited legal effects have been attached to principles under Article 191(2) TFEU, and this trend is clearly apparent when the principle of preventive action is at stake.

As regards Article 191(2) in general, the possibility that it might have direct effect, in the sense of creating subjective rights that can be invoked before national courts, seems to have been ruled out. The environmental principles set forth in it may only establish a ground of review of the legality of EU law and, insofar as falling within its scope, of Member States' action.[143] Such a construction must be deeply embedded in the case law of the Court of Justice, because it is expressly referred to in the Explanation on Article 52(5) of the Charter of Fundamental Rights of the European Union.[144] That Explanation recalls, specifically, the case law concerning the precau-

[142] See especially Ludwig Krämer, *EU Environmental Law* (8th ed., London: Sweet and Maxwell 2016), at 14-17, according to whom the principles of Art. 191(2) constitute 'general guidelines for the Union's environmental policy, but not binding rules of law which apply to each individual Union measure' (ibid., at 15).

[143] No position is here taken on the question as to whether the application of EU environmental principles described in the text falls, all the same, within the direct effect doctrine, or must be subsumed under something else, namely the category of indirect effects or the supremacy of EU law doctrine. A thorough discussion of this issue would obviously lead this analysis too far astray: for the purposes of this study, the focus of concern resides in the function that the principle of preventive action has actually performed in the EU legal order, rather than the classification of that function under the theory of EU law. Among several works on the relationship between direct effect and supremacy as far as principles and programmatic norms are concerned, see Sacha Prechal, 'Direct Effect, Indirect Effect, Supremacy and the Evolving Constitution of the European Union', in Catherine Barnard (ed.), *The Fundamentals of EU Law Revisited: Assembling the Impact of the Constitutional Debate* (Oxford: Oxford University Press 2007), 35; Elise Muir, 'Of Ages in – and Edges of – EU Law' (2011) 48 *Common Mark. LR* 39; Daniele Gallo, *L'efficacia diretta del diritto dell'Unione europea negli ordinamenti nazionali. Evoluzione di una dottrina ancora controversa* (Milano: Giuffré 2018), especially at 192-202 and 213-255.

[144] Explanations Relating to the Charter of Fundamental Rights, C 303 *OJEU* 17. Under Art. 52(7) of the Charter, '[t]he explanations drawn up as a way of providing guidance in the interpretation of this Charter shall be given due regard by the courts of the Union and of the Member States'.

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tionary principle in order to illustrate, with regard to the difference between 'rights' and 'principles' of the Charter,[145] that

> Principles may be implemented through legislative or executive acts (adopted by the Union in accordance with its powers, and by the Member States only when they implement Union law); accordingly, they become significant for the Courts *only when such acts are interpreted or reviewed*. They do not however give rise to direct claims for positive action by the Union's institutions or Member States authorities.[146]

Therefore, the application of national legislation cannot be excluded by virtue of Article 191(2) *on its own*, i.e., in the absence of EU law adopted on the basis of Article 192(2) TFEU.[147]

[145] As is known, the distinction is controversial and has been, in itself, criticised within legal scholarship: see Chris Hilson, 'Rights and Principles in EU Law: A Distinction without Foundation?' (2008) 15 *Maastricht JECL* 193; Dóra Guðmundsdóttir, 'A Renewed Emphasis on the Charter's Distinction between Rights and Principles: Is a Doctrine of Judicial Restraint More Appropriate?' (2015) 52 *Common Mark. LR* 685; Jasper Krommendijk, 'Principled Silence or Mere Silence on Principles? The Role of the EU Charter's Principles in the Case Law of the Court of Justice' (2015) 11 *Eur. Const. LR* 321, especially at 330-339; Nicole Lazzerini, *La Carta dei diritti fondamentali dell'Unione europea. I limiti di applicazione* (Milano: Franco Angeli Editore 2018), at 155-163. It is widely accepted that the Explanation on Art. 52(5) sheds little light on the distinguishing features and effects of the principles laid down by the Charter.

[146] Emphasis added. The Explanation goes on to state that '[t]his is consistent […] with case-law of the Court of Justice (cf. notably case-law on the "precautionary principle" in Article 191(2) of the Treaty on the Functioning of the European Union: judgment of the CFI of 11 September 2002, Case T-13/99, *Pfizer v. Council*, with numerous references to earlier case-law […])'. Indeed, a strong connection with the environmental principles is apparent from the Explanation: Art. 37 of the Charter, guaranteeing a high level of environmental protection, is included among the examples of 'principles', as opposed to 'rights', set out in the Charter. On the other hand, doubts have been expressed within legal scholarship as to whether it is possible to fully equate the principle of a high level of environmental protection with the environmental principles under Art. 191(2) TFEU: see Alicja Sikora, 'The Principle of a High Level of Environmental Protection as a Source of Enforceable Rights' (2016) 52 *Cahiers dr. eur.* 399, especially at 403-404.

[147] As was tellingly held by the Court of Justice in the judgment of 9 March 2010, Joined Cases C-379/08 and C-380/08, *Raffinerie Méditerranée*, para. 39: 'Since Article 174 EC [now Art. 191 TFEU], which establishes the 'polluter pays' principle, is directed at action at Community level, that provision cannot be relied on as such by individuals in order to exclude the application of national legislation […] in an area covered by environmental policy for which there is no Community legislation adopted on the basis of Article 175 EC [now Art. 192 TFEU] that specifically covers the situation in question'. In a similar vein, Advocate General Kokott had argued, in

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A further qualification of the legal effects of Article 191(2) results from the limitation of the review of EU legislation, in the light of that Article, to the question as to whether a 'manifest error' of assessment has been committed.[148] Moreover, in accordance with settled case law, when Article 191 is at stake it is necessary to strike a balance between different objectives and principles, taking account of their complexity.[149] It is arguable that this is due to the very nature of general principles as precepts expressing value-oriented directions only and, consequently, to 'balancing' as the logical scheme specific to principles.

As regards the principle of preventive action in particular, it rarely constitutes a ground of review in itself, *notwithstanding all the limitations illustrated in relation to Article 191 TFEU in general*. The relevance of prevention of environmental harm seems to have been absorbed by the polluter-pays principle and, especially, the precautionary principle.[150] Although they are established on the same footing as environmental principles in Article 191(2), the

the same case, that 'Article 174 EC [now Art. 191 TFEU] simply sets out the general objectives of Community environment law, which the Community legislature must give substance to before they can be binding on the Member States. Article 174 EC [now Art. 191 TFEU] is not therefore a criterion for assessing the applicability of national rules' (opinion of 22 October 2009, para. 45, footnotes omitted). Indeed, in a more recent opinion, delivered on 30 March 2017, Joined Cases C-196/16 and C-197/16, *Comune di Corridonia*, para. 21, Advocate General Kokott placed greater emphasis on the merely interpretative weight of Art. 191: 'it must be observed that Article 191 TFEU […] cannot of itself be a yardstick for assessing Member State measures […] However, it may become relevant in the interpretation of secondary law'. See also the judgments of the Court of 4 March 2015, Case C-534/13, *Fipa Group*, paras. 39-42; and of 13 July 2017, Case C-129/16, *Túrkevei Tejtermelő Kft.*, paras. 36-38.

[148] As observed by Krämer, *EU Environmental Law*, cit., at 16, the environmental principles of Art. 191(2) 'cannot really be used to declare an EU measure void with the argument that it contradicts one of these principles'.

[149] See the judgment of the Court of 21 December 2016, Case C-444/15, *Associazione Italia Nostra*, para. 46: 'in view of the need to strike a balance between certain of the objectives and principles mentioned in Article 191 TFEU, and of the complexity of the implementation of those criteria, review by the Court must necessarily be limited to the question whether the European Parliament and the Council of the European Union […] committed a manifest error of appraisal'. See also the judgment of 1 October 2019 (Grand Chamber), Case C-616/17, *Blaise and Others*, para. 50.

[150] Difficulties in drawing a clear distinction between the principle of preventive action and, in particular, the precautionary principle are stressed, on the linguistic front as well, by Kingston, Heyvaert, Čavoški, *European Environmental Law*, cit., at 99-100, who conclude that the 'rich CJEU jurisprudence […] has evolved spe-

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case law shows that the principle of preventive action has frequently been 'replaced', in fact, by the precautionary principle and the polluter-pays principle.[151] In effect, these latter principles appear to be more specific, to such an extent that they are ultimately treated as if they had themselves implemented the principle of preventive action.[152]

The overall impression is that, in addition to performing its 'statutory' foundational and inspiring function, the principle of preventive action serves simply an interpretative purpose in the EU legal order. As pointed out above, the importance of general principles for the interpretation of rules is a consequence of their guiding value.[153] Reliance on the principle of preventive action in order to interpret the meaning of certain provisions of EU secondary legislation can thus be regarded as a corollary of its inspiring function, considering that, pursuant to Article 191(2) TFEU, that legislation is also based on the principle of prevention of environmental harm.[154]

cifically in the context of the precautionary principle, and the prevention principle has been the subject of far less jurisprudence' (ibid.).

[151] In the opinion of Krämer, *EU Environmental Law*, cit., at 25, the prevention principle and the precautionary principle 'are, in practice, almost always used together', with the twofold consequence that 'the added value of one to the other is not visible' and 'they should be used synonymously'.

[152] This is apparent not only from the case law of the Court of Justice of the European Union: see, for example, the preamble to Directive 2004/35/CE of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, L 143 *OJEU* 56, at recital 2: 'The prevention and remedying of environmental damage should be implemented *through the furtherance of the "polluter pays" principle*' (emphasis added). On the relationship between the polluter-pays principle and prevention of environmental harm see *infra*, Section 6.3.5.

[153] See *supra*, Section 3.2.1.

[154] For example, the principle of preventive action was especially relied on, alongside the precautionary principle, in order to exclude a strict interpretation of the term 'discard' within the context of Directive 2006/12 (repealed by Directive 2008/98): see the judgment of the Court of 12 December 2013, Joined Cases C-241/12 and C-242/12, *Shell Nederland*, para. 38 ('the term "discard" […] must be interpreted […] having regard to Article 191(2) TFEU, which provides that European Union policy on the environment is to aim at a high level of protection and is to be based, in particular, on the precautionary principle and the principle that preventive action should be taken. It follows that the term "discard", and therefore the concept of "waste" […] cannot be interpreted restrictively'). See more recently, to that effect, the judgments of the Court of 4 July 2019, Case C-624/17, *Tronex BV*, para. 18; and of 14 March 2019, Case C-399/17, *Commission* v. *Czech Republic*, para. 59.

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4.4. *Prevention of Environmental Harm within the Binding Acts of International Organisations*

4.4.1. *Structural Hindrances to the Adoption of Legally Binding Acts by International Organisations in the Field of Protection of the Environment*

The search for rules that embody prevention of environmental harm leads to an examination of the legally binding acts of international organisations. One must consider whether international organisations have adopted acts, which are binding by virtue of their constituent treaties, seeking to implement prevention of environmental harm. If so, its guiding function, already illustrated by the above analysis of treaties and EU law, would be corroborated, along with its legal nature as a result of its 'entry' into the international legal system through embodying rules.

It should be admitted that, leaving aside the European Union, which could hardly be fully equated with an international organisation, it is not easy to find legally binding acts of international organisations that can evidently be traced back to prevention of environmental harm. Nonetheless, this is not due to a 'failure' of the inspiring function of prevention of environmental harm as a general principle. Rather, preliminary conditions seem to be lacking in the first place.

As is known, there is no international organisation charged with protecting the environment, nothing like a 'World Environment Organisation' in the manner of the World Trade Organization or the World Health Organization. Within the United Nations system, including the specialised agencies, the entity specifically entrusted with addressing environmental issues is the United Nations Environment Programme (UNEP), which is a subsidiary body of the UN General Assembly, and indeed a mere programme, as the name itself suggests. It was established in 1972,[155] following a recommendation of the Stockholm Conference.[156] UNEP is mainly comprised of three organs: the United Nations Environment Assembly (UNEA), which has replaced the Governing Council, the Secretariat with an Executive Director, and the Environment Fund.

The governing body of UNEP, UNEA lacks the power to adopt

[155] UNGA Res. 2997(XXVII) of 15 December 1972.

[156] Resolution on Institutional and Financial Arrangements, in Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, UN Doc. A/CONF.48/14/Rev.1, at 29-31.

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legally binding acts – as obviously follows from the subordination of UNEP to the General Assembly. In fact, its tasks include the promotion of cooperation and the recommendation of policies; the direction and coordination of environmental programmes through general policy guidance; the review of periodic reports on the implementation of those programmes; the continuing review of the global situation of the environment; the promotion of scientific and professional contribution to environmental knowledge and information; the continuing review of the situation of developing countries in respect of the impact of environmental measures, of their economic difficulties in implementing environmental programmes, and of the compatibility of such programmes with their developmental needs; and the annual review and approval of the utilisation of the Environment Fund resources.[157] In addition to the absence of legally binding powers, the action of UNEA is further undermined by the paucity of resources,[158] as the Environment Fund is voluntary in nature.[159]

Attempts to strengthen the role of UNEP have been unsuccessful. In particular, at the 2012 Rio de Janeiro Conference (Rio+20), it was proposed to transform it into a specialised agency of the United Nations.[160] In the end however, calls for reform simply led to universal membership of the Governing Council, which was previously comprised of fifty-eight UN Member States only,[161] and to a change in its name to UNEA. Moreover, the General Assembly made it clear that these changes would 'in no way' alter the mandate and aims of UNEP, as well as the role and function of its governing body.[162] That being so, even if UNEP were eventually to be transformed

[157] UNGA Res. 2997(XXVII), cit., section I, para. 2. It deals with the tasks of the Governing Council as originally established; however, the subsequent change in its composition and name left those tasks unaffected, as will be seen below in the text.

[158] As stressed by Elvira Pushkareva, 'United Nations Environment Programme (UNEP)', in *MPEPIL online* (2014), para. 3, '[a] narrow mandate, a modest budget, and limited political support are considered to be UNEP's main problems'. In even more telling words, she notes that 'UNEP's limited financial resources are one the causes of UNEP's ineffectiveness' (ibid., para. 18).

[159] UNGA Res. 2997(XXVII), cit., section III.

[160] See Laura Pineschi, 'La Conferenza di Rio 2012: dallo *Zero Draft* a *The Future We Want*. Rio+20 o vent'anni trascorsi inutilmente?' (2012) 27 *Riv. giur. amb.* 795, at 805-812.

[161] They were elected by the UN General Assembly for three-year terms and on the basis of an equitable geographic distribution: see UNGA Res. 2997(XXVII), cit., section I, para. 1.

[162] UNGA Res. 67/251 of 13 March 2013, para. 1.

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into an international organisation, or were anything like a World Environment Organisation to be created, it is unlikely that either of them would be empowered to adopt legally binding acts.

As long as no international organisation specifically dealing with the environment exists, it will be necessary to look at 'non-environmental' international organisations in order to search for legally binding acts that embody prevention of environmental harm as an inspiring principle. Nonetheless, it seems that not so many constituent treaties of international organisations provide for the adoption of legally binding acts.[163] At any rate, the absence of any specific competence over protection of the environment essentially prevents those organisations endowed with binding powers from approving acts that are directly relevant to environmental protection. Against this background, it is clearly difficult for prevention of environmental harm to influence, as a guiding principle, the adoption of legally binding acts of international organisations, as the case of the UN Security Council significantly illustrates.

4.4.2. *The Case of the UN Security Council: An Unavoidable Limited Role for Prevention of Environmental Harm*

As is known, the UN Charter mainly confers on the Security Council, which is primarily responsible for the maintenance of international peace and security,[164] the power to adopt 'decisions', i.e., acts which are legally binding on all Member States.[165] Under Chapter VII of the UN Charter, in accordance with Article 41 in particular, the Security Council may decide on the adoption of 'measures not involving the use of armed force',[166] where it identifies 'the existence

[163] See Carlo Focarelli, *International Law* (Cheltenham/Northampton: Edward Elgar 2019), at 205; and Piero Pennetta, 'Atti normativi', in Piero Pennetta et al., *Diritto delle organizzazioni internazionali* (Milano: Wolters Kluwer Italia 2018), 249, at 277. And yet, a variety of acts may be subsumed under the category of 'legally binding acts': see Roberto Virzo, 'The Proliferation of Institutional Acts of International Organizations. A Proposal for Their Classification', in Roberto Virzo and Ivan Ingravallo (eds.), *Evolutions in the Law of International Organizations* (Leiden/Boston: Brill 2015), 293, at 314-319.

[164] Art. 24(1) of the UN Charter.

[165] Art. 25 of the UN Charter.

[166] Of course, this is not the only situation in which the Security Council is entitled to adopt legally binding acts. Pursuant to Art. 94(2) UN Charter, it may not only make recommendations, but also 'decide upon the measures to be taken to give effect' to a judgment rendered by the International Court of Justice, if a State party to the relevant case fails to comply with the obligations incumbent on it under the judgment and the other party has recourse to the Security Council. For a comprehensive analysis and further references, see Maria Irene Papa, *I rapporti*

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of any threat to the peace, breach of the peace, or act of aggression' pursuant to Article 39.

To date, leaving aside the connection between natural resources and armed conflicts in terms of sovereignty claims or competition,[167] three proper environmental issues have come to the fore in the Security Council's action based on Chapter VII. They involve damage to the environment and depletion of natural resources during the First Gulf War; wildlife poaching and trafficking; and the impacts of climate change on security.

4.4.2.a. *Iraq's Liability for Environmental Damage during the First Gulf War*

The serious and deliberate environmental damage resulting from Iraq's conduct during the First Gulf War, following the invasion of Kuwait, is well-known. In January 1991, Iraq opened the oil valves of terminals, causing the massive discharge of crude oil into the Persian Gulf and on land in Kuwait. In February 1991, having sabotaged hundreds of Kuwait's oil wells, Iraq burned over five hundred of them. The ensuing atmospheric pollution seriously affected the entire region.[168]

In addressing the situation arising in relation to the invasion and occupation of Kuwait by Iraq, which was deemed to constitute a 'breach of the peace',[169] the Security Council eventually dealt with the described environmental damage as well. Whereas in previous resolutions it had generically referred to Iraq's liability for 'any loss, damage or injury',[170] in Resolution 687(1991) it expressly included

tra la Corte internazionale di giustizia e il Consiglio di sicurezza (Padova: CEDAM 2006), at 103-142. See, more recently, Id., 'L'esecuzione delle sentenze della Corte internazionale di giustizia nel sistema dell'ONU', in Ennio Triggiani et al. (eds.), *Dialoghi con Ugo Villani* vol. I (Bari: Cacucci Editore 2017), 41; Fulvio Maria Palombino, 'I poteri del Consiglio di sicurezza in materia di esecuzione delle sentenze della Corte internazionale di giustizia', ibid., 35; Karin Oellers-Frahm, 'Article 94', in Simma et al. (eds.), *The Charter of the United Nations*, cit., 1957, at 1966-1971.

[167] For an overview, see Phoebe Okowa, 'Natural Resources in Situations of Armed Conflict: Is There a Coherent Framework for Protection?' (2007) 9 *Int. Comm. LR* 237; and Marco Pertile, 'The Changing Environment and Emerging Resource Conflicts', in Marc Weller (ed.), *The Oxford Handbook of the Use of Force in International Law* (Oxford: Oxford University Press 2015), 1077.

[168] See, for an outline, Anthony P.V. Rogers, *Law on the Battlefield* (2nd ed., Manchester: Manchester University Press 2004), at 178-179.

[169] UNSC Res. 660 (1990), 2 August 1990.

[170] UNSC Resolutions 674 (1990), 29 October 1990, para. 8, and 686 (1991), 2 March 1991, para. 2(b).

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'environmental damage and the depletion of natural resources'.[171] By the same Resolution, the Security Council decided to create a fund to pay compensation for the relevant claims, and to set up a commission charged with the task of administering it.[172] This would be the UN Compensation Commission, operating as a subsidiary organ of the Security Council.[173]

In contrast to what has been opined by one author,[174] it would appear that the extension of the notion of 'damage' relevant to Iraq's liability to environmental damage could hardly be regarded as an instance of Security Council action founded on protection of the environment. Hence, Resolution 687 could not be viewed as being based on prevention of environmental harm. As other authors have noted, the wording of the Resolution plainly shows that Iraq's liability for environmental damage resulted from 'its *unlawful* invasion and occupation of Kuwait'.[175] It is in connection with those wrongful acts that the Security Council's affirmation that Iraq was 'liable under international law' should be considered.

The above does not mean that Resolution 687 had no bearing on the evolution of international environmental law. Contrariwise, within legal scholarship, the practice of the UN Compensation Commission has been given weight as regards the evaluation of environmental damage, including the thorny issue of the assessment of ecological or 'pure' environmental damage.[176] From a broader per-

[171] UNSC Res. 687 (1991), 3 April 1991, para. 16.

[172] Ibid., para. 18.

[173] For a comprehensive overview see Andrea Gattini, 'The UN Compensation Commission: Old Rules, New Procedures on War Reparations' (2002) 13 *EJIL* 161; and Cymie R. Payne, 'Legal Liability for Environmental Damage: The United Nations Compensation Commission and the 1990-1991 Gulf War', in Carl Bruch, Carroll Muffett and Sandra S. Nichols (eds.), *Governance, Natural Resources, and Post-Conflict Peacebuilding* (London: Earthscan 2016).

[174] See Leslie-Anne Duvic-Paoli, *The Prevention Principle in International Environmental Law* (Cambridge: Cambridge University Press 2018), at 163-165, who considers the practice of the UN Compensation Commission as though it were related to the consequences of a breach of the presumed obligation of prevention.

[175] UNSC Res. 687 (1991), cit., para. 16 (emphasis added). On the anchoring of Iraq's liability in the invasion of Kuwait, rather than in the breach of an environmental obligation, see Marina Castellaneta, 'La responsabilità internazionale degli Stati per danni all'ambiente causati nel corso di conflitti armati' (1998) 81 *Riv. dir. int.* 632, at 638-644; and Yoram Dinstein, 'Protection of the Environment in International Armed Conflict' (2001) 5 *MPYUNL* 523, at 547-548.

[176] See Philippe Gautier, 'Environmental Damage and the United Nations Claims Commission: New Directions for Future International Environmental Cases?', in Tafsir Malick Ndiaye and Rüdiger Wolfrum (eds.), *Law of the Sea, Environmental*

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spective, State reactions to Iraq's conduct, as well as the behaviour of Iraq itself in the aftermath of the Gulf War, seem to have contributed to the emergence of a customary prohibition on the use of destruction of the environment as a weapon, which will be discussed later.[177]

4.4.2.b. *Wildlife Poaching and Trafficking as a 'Fuelling Factor'*

When the Security Council adopted two resolutions addressing, inter alia, wildlife poaching and trafficking for the first time in 2014, they immediately stood out.[178] In effect, they differed from previous decisions targeting the illicit exploitation of or trade in non-living natural resources. These may also provide illegal funds within the context of armed conflicts and, to that extent, had already been considered by the Security Council.[179] However, the environmental relevance of measures against wildlife poaching and trafficking is prominent:[180] in contrast to diamonds, oil and timber, wildlife cannot be regarded outright as a commodity or a mere good for trade.[181]

Specifically, with regard to the situation in the Central African

Law and Settlement of Disputes. Liber Amicorum *Judge Thomas A. Mensah* (Leiden/Boston: Martinus Nijhoff Publishers 2007), 177; and Peter H. Sand, 'Environmental Principles Applied', in Cymie R. Payne and Peter. H. Sand (eds.), *Gulf War Reparations and the UN Compensation Commission. Environmental Liability* (Oxford: Oxford University Press 2011), 170, at 180-184.

[177] See *infra*, Section 6.4.1.

[178] Hence they attracted the attention of several authors: see, e.g., Anne Peters, 'Novel practice of the Security Council: Wildlife Poaching and Trafficking as a Threat to the Peace' (12 February 2014) *EJIL: Talk!*, available at *www.ejiltalk.org*; Concetta Maria Pontecorvo, 'Consiglio di sicurezza e risorse naturali viventi: il *wildlife trafficking* come *fuelling factor* dei conflitti armati' (2014) *Ord. int. dir. um.* 938; Hugh S. Wilkins, 'Linking Environment with Peace and Security. Decisions on Sanctions on Illicit Wildlife Trafficking' (2014) 44 *Env. PL* 277. Indeed, the initiative itself had not passed unnoticed: see Cristophe Eick, 'The German-Gabonese Initiative on Poaching and Illegal Wildlife Trafficking: Is There a Role for the UN Security Council?' (2013) 56 *German YIL* 503.

[179] See Daniëlla Dam-de Jong, *International Law and Governance of Natural Resources in Conflict and Post-Conflict Situations* (Cambridge: Cambridge University Press 2015), at 273-329. As far as diamonds are concerned, see Valentina Grado, 'Strumenti internazionali volti a contrastare il legame tra minerali pregiati e conflitti armati' (2015) *Ord. int. dir. um.* 901, at 922-932.

[180] For a contextualisation of these measures, including forfeiture in particular, see Roberto Virzo, *La confisca nell'azione internazionale di contrasto ad attività criminali* (Napoli: Edizioni Scientifiche Italiane 2020), at 113-121.

[181] For a description of the link between wildlife poaching and trafficking and armed conflicts, see David H. Barron, 'How the Illegal Wildlife Trade Is Fueling Armed Conflict' (2015) 16 *Georgetown JI Affairs* 217.

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Republic (CAR), the Security Council decided that Member States should take measures to ban the entry or transit, and to freeze funds, financial assets and economic resources, of individuals and entities 'providing support for armed groups or criminal networks through the illicit exploitation of natural resources, including diamonds *and wildlife and wildlife products*, in the CAR'.[182] Similarly, in relation to the situation in the Democratic Republic of the Congo (DRC), the Security Council decided that UN Member States should apply travel bans and freeze the assets of individuals or entities 'supporting armed groups in the DRC through illicit trade of natural resources, including gold *or wildlife as well as wildlife products*'.[183]

Whilst those measures might be deemed to indirectly contribute to the furtherance of prevention of environmental harm in respect of loss of biological diversity or the extinction of endangered species, one cannot say that the Security Council's action was inspired by that principle or, in general, prompted by any environmental concerns. In fact, no reference to protection of the environment or prevention of environmental harm may be found in the relevant resolutions, or in the pertinent discussions within the Security Council.[184]

Nonetheless, as mentioned above, the marginal weight of prevention of environmental harm could hardly be considered as a failure of its guiding function. Rather, it should be read in light of the Security Council's mandate relating to the maintenance of international peace and security. As recalled above, Security Council action under Chapter VII is subject to the preliminary determination of a threat to the peace, a breach of the peace, or an act of aggression. Therefore, the relevance of wildlife poaching and trafficking rested on the specific role that the individuals and entities involved had been playing in the situations in the CAR and the DRC, which both per se amounted to a threat to international peace and security.

Wildlife poachers and traffickers were targeted only insofar as they were supporting armed groups and criminal networks through the illicit exploitation of and trade in wildlife.[185] As regards the situation in the DRC, the Security Council acknowledged 'the link-

[182] UNSC Res. 2134 (2014), 28 January 2014, para. 37(d), emphasis added.

[183] UNSC Res. 2136 (2014), 30 January 2014, para. 4(g), emphasis added.

[184] See UNSC 7103rd meeting of 28 January 2014, UN Doc. S/PV.7103, as regards Res. 2134 (2014), cit., and UNSC 7107th meeting of 30 January 2014, UN Doc. S/PV.7107, as regards Res. 2136 (2014), cit.

[185] From a broader perspective, it has been argued that the Security Council took an anthropocentric instead of eco-centric approach: see Peters, 'Novel Practice of the Security Council', cit. ('if human needs and interests were not in the fore-

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age between the illegal exploitation of natural resources, *including poaching and illegal trafficking of wildlife*, […] as one of the major factors fuelling and exacerbating conflicts', alongside illicit trade in natural resources, and the proliferation and trafficking of arms.[186] In the same vein, poaching and trafficking of wildlife were included 'among the factors that fuel[led] the crisis in the CAR'.[187]

4.4.2.c. *Climate Change as a 'Threat Multiplier'*

Since 2007, following the 2005 Declaration on strengthening the effectiveness of the Security Council's role in conflict prevention,[188] there has been much discussion within that organ concerning the connection between climate change and international peace and security. The Security Council held a number of open debates exploring climate-related risks and disasters as well as the relationship between the impacts of climate change and security, from the perspective of conflict prevention.[189] A question was thus raised regarding the part that the Security Council could play, were climate change per se to be defined as a threat to international peace and security.[190]

Although the Security Council enjoys a broad margin of discretion in establishing the existence of situations falling within the scope of Chapter VII and, in particular, a threat to the peace,[191] the Security Council has thus far refrained from classifying climate change, in itself, as a threat to international peace and security. Instead, the

ground, the Security Council would not have taken any robust action at all'). See also Pontecorvo, 'Consiglio di sicurezza e risorse naturali viventi', cit., at 956-957.

[186] UNSC Res. 2136 (2014), cit., preamble, 10th recital.

[187] UNSC Res. 2127 (2013), 5 December 2013, preamble, 9th recital. It is one of the premises of Res. 2134 (2014), cit., and is recalled in the 1st recital of the preamble.

[188] UNSC Res. 1625 (2005), 14 September 2005.

[189] See UNSC 5663rd meeting of 17 April 2007, UN Doc. S/PV.5663; UNSC 6587th meeting of 20 July 2011, UN Doc. S/PV.6587; UNSC 8307th meeting of 11 July 2018, UN Doc. S/PV.8307; and UNSC 8451st meeting of 25 January 2019, UN Doc. S/PV.8451.

[190] Within legal scholarship, see Francesco Sindico, 'Climate Change: A Security (Council) Issue?' (2007) 1 *Climate & Carbon LR* 29; Shirley V. Scott, 'Climate Change and Peak Oil as Threats to International Peace and Security: Is It Time for the Security Council to Legislate?' (2008) 9 *Melbourne JIL* 495; Peter Wittig, 'Climate Change and International Peace and Security: The Open Debate in the United Nations Security Council on 20 July 2011' (2011) 54 *German YIL* 627.

[191] For an overview and further references, see Nico Krisch, 'Article 39', in Simma et al. (eds.), *The Charter of the United Nations*, cit., 1272, especially at 1275-1276 and 1278-1293; and Benedetto Conforti, Carlo Focarelli, *Le Nazioni Unite* (12th ed., Milano: Wolters Kluwer Italia 2020), at 246-268.

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relevance of climate change, as a mere 'threat multiplier', depends on its repercussions for specific situations that already trigger the application of Chapter VII. In this regard, it is difficult to identify any influence of prevention of environmental harm, *qua* guiding principle, on Security Council action.

In fact, the above debates reveal some disagreement over whether it is possible for the Security Council to play an active part in international action on climate change, *irrespective of any specific situation* already covered by Chapter VII. In this regard, the position of Russia, as one of the five permanent members with a veto power in the Security Council,[192] deserves special attention.

Russia has constantly observed that, since appropriate forums for addressing climate change already exist, the Security Council 'should only deal with the consideration of questions that directly relate to its mandate'.[193] Hence it expressed its scepticism 'about the repeated attempts that have been made to place on the agenda of the Security Council the issue of the threat posed by climate change to international peace and security'.[194] In telling words, Russia affirmed that it was 'obliged to point out that climate change is not a universal challenge in the context of international security but should rather be addressed with regard to the specifics of each situation'.[195]

Accordingly, it is in connection with specific and already existing 'situations' that climate change has eventually come into consideration in some recent resolutions of the Security Council. Especially in the preamble to those resolutions, it has 'recognised' the adverse impacts of climate change on the stability of the Lake Chad Region,[196] of Somalia,[197] of Mali,[198] and on the situation in Darfur.[199] In respect of the last-mentioned only, the Security Council went further and requested the United Nations and Sudan to consider the

[192] This concerns, it is superfluous to recall, all matters other than the procedural ones under Art. 27 of the UN Charter.

[193] UN Doc. S/PV.5663, cit., at 17.

[194] UN Doc. S/PV.6587, cit., at 13.

[195] UN Doc. S/PV.8307, cit., at 16. Russia reasserted its position more recently as well: UN Doc. S/PV.8451, cit., at 16.

[196] UNSC Res. 2349 (2017), 31 March 2017, para. 26. In addition, the Security Council simply called upon the States of that region 'to strengthen their coordination and prioritisation' within climate-related programmes 'to enable [their] effective implementation' (ibid., para. 23). In more general terms, they were also called upon to take measures to address environmental challenges.

[197] UNSC Res. 2408 (2018), 27 March 2018, preamble, 18th recital.

[198] UNSC Res. 2423 (2018), 28 June 2018, preamble, 28th recital.

[199] UNSC Res. 2429 (2018), 13 July 2018, preamble, 21st recital.

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repercussions of climate change in their programmes 'including by undertaking risk assessments and risk management strategies', and the Secretary-General was thus requested 'to provide information of such assessments in mandated reporting as appropriate'.[200] This was coherent with the 2011 statement of the President of the Security Council, expressing concern over the possible adverse effects of climate change insofar as they might 'aggravate certain existing threats to international peace and security'.[201]

[200] UNSC Res. 2429 (2018), cit., para. 47. On the other hand, with regard to the situations in Somalia and Mali, the Security Council merely emphasised 'the need for adequate risk assessment and risk management strategies' by the respective governments and the United Nations: see, respectively, UNSC Res. 2408 (2018), cit., preamble, 18th recital; and Res. 2429 (2018), cit., preamble, 21st recital.

[201] Statement by the President of the Security Council of 20 July 2011, UN Doc. S/PRST/2011/15, 6th indent. The Secretary-General was specifically requested to include, in its reports to the Security Council, contextual information concerning any potential security implications of climate change (ibid., 8th indent).

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Chapter 5

Operation of Prevention of Environmental Harm as a Principle in International Case Law

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5.1. *Overview and Identification of the Relevant Cases*

5.1.1. *Mainly Incidental Relevance of General International Law for Environmental Litigation…*

Embodiment within rules is only one aspect of the operation of prevention of environmental harm as a general principle of international law. An analysis of international case law shows that courts and tribunals have not applied prevention of environmental harm as a customary obligation in order to assess the lawfulness of State conduct. Even in those cases in which prevention has been expressly referred to as a customary rule, mutual respect for territorial sovereignty was in actual fact at issue, rather than protection of the environment per se. Conversely, prevention of environmental harm has constantly been relied on as a general principle aimed at providing a value-oriented direction or ideal approach.

It should be admitted, however, that international courts and tribunals have not often had the opportunity to consider prevention of environmental harm from the standpoint of general international

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law. Aside from a couple of exceptions, treaty law has been found to be the applicable law in most cases involving environmental issues. Whilst this has not stopped prevention of environmental harm from coming to the fore on an incidental basis in a number of cases, especially before the International Court of Justice, in other cases prevention of environmental harm is not even referred to incidentally alongside the application of relevant treaty law.

For instance, most cases concerning the protection of the marine environment have been dealt with essentially on the basis of the 1982 United Nations Convention on the Law of the Sea (UNCLOS),[1] or related agreements. In those cases, international courts or tribunals have refrained from considering prevention of environmental harm under general international law. In effect, UNCLOS provides for a complex regime on the protection and preservation of the marine environment. Part XII, comprised of forty-six articles, is entirely dedicated to that issue, and this may have reduced the need to look to general international law in relation to prevention of environmental harm.

In this regard, the advisory opinions given within the framework of the International Tribunal for the Law of the Sea (ITLOS) are especially telling. In the 2011 opinion on the *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*,[2] the Seabed Dispute Chamber relied exclusively on the UNCLOS in order to find a basis for the obligation of sponsoring States to ensure compliance by sponsored contractors with the pertinent UNCLOS obligations and related instruments, as well as the terms of the relevant contracts.[3] That obligation was classified as a due diligence obligation, and in explaining its meaning the

[1] United Nations Convention on the Law of the Sea, adopted at Montego Bay on 10 December 1982 and entered into force on 16 November 1994, 1833 *UNTS* 3.

[2] SDC, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, advisory opinion of 1 February 2011, *ITLOS Reports 2011*, 10.

[3] Those provisions are Art. 139(1) UNCLOS, concerning the responsibility of States Parties to ensure compliance with Part XI UNCLOS dealing with the Area; Art. 153(4) UNCLOS, concerning the Authority's control over the activities in the Area; Art. 4(4) of Annex III to UNCLOS (Basic Conditions of Prospecting, Exploration and Exploitation), concerning the obligation of the sponsoring States to ensure compliance with the contracts and the UNCLOS obligations (ibid., at 38-39, paras. 99-102). The Chamber was requested not only to determine the obligations of States in respect of sponsorship activities in the Area. It was also asked to answer two questions resulting from those obligations, specifically to ascertain the extent of the liability of a State Party for any failure to comply with UNCLOS by an entity

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Chamber drew on the 2010 *Pulp Mills* judgment of the International Court of Justice.[4] In that case, the Court had referred to the 'principle of prevention' as a 'customary rule', and had then linked it with the notion of 'due diligence'.[5] When considering the *Pulp Mills* precedent, however, the Chamber focused solely on the definition of 'due diligence',[6] without even mentioning the principle of prevention.[7] Similarly, in the 2015 advisory opinion, *Request Submitted by the Sub-Regional Fisheries Commission* (SRFC),[8] ITLOS was asked to determine the obligations of flag States in relation to fishing activities and the conservation of living resources in the exclusive economic zones of the SRFC Member States, as well as the rights and obligations of coastal States in ensuring the sustainable development of shared stocks.[9] Again, the basis for those obligations was found in UNCLOS provisions.[10] ITLOS took into account the precedent ad-

sponsored by it, and to determine the measures that a sponsoring State is required to take in order to fulfil its responsibility under UNCLOS.

[4] Ibid., at 40-43, paras. 107-116, especially at 41, para. 111, and at 42, para. 115.

[5] The relevant passage will be discussed below (*infra*, Section 5.2.2.a).

[6] In the words of the Chamber, '[t]he central issue […] concerns the meaning of the expression "responsibility to ensure"' (*Responsibilities and Obligations*, advisory opinion, cit., at 40, para. 107), which according to the Chamber 'may be characterised as an obligation "of conduct" and not "of result", and as an obligation of "due diligence"' (ibid., at , 41, para. 110).

[7] In truth, the Chamber quoted the passages from the *Pulp Mills* judgment concerning not the 'principle of prevention', but rather the specific treaty obligations that the International Court of Justice had classified as due diligence obligations, namely those laid down in Articles 36 and 41 of the Statute of the River Uruguay.

[8] ITLOS, *Request for Advisory Opinion Submitted by the Sub-Regional Fisheries Commission*, advisory opinion of 2 April 2015, *ITLOS Reports 2015*, 4.

[9] The other two questions concerned the determination of flag States' obligations, as they related to the extent of liability of the flag State for illegal, unreported and unregulated fishing activities conducted by vessels sailing under its flag, and the flag State's liability in the event that a fishing license is issued by the coastal State within the framework of an international agreement with the flag State. This latter question also concerned, *mutatis mutandis*, the liability of an international organisation.

[10] That was particularly the case as regards the obligations of flag States, since 'the issue of flag State responsibility for IUU [illegal, unreported and unregulated] fishing activities is not directly addressed in the Convention': this notwithstanding, it was 'examined by the Tribunal in light of general and specific obligations of flag States *under the Convention* for the conservation and management of marine living resources' (*Request for Advisory Opinion*, advisory opinion, cit., at 34, para. 110, emphasis added). Indeed, the applicable law in the case was comprised of UNCLOS, the Convention on the Determination of the Minimal Conditions for Access and Exploitation of Marine Resources within the Maritime Areas under Jurisdiction of

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visory opinion of the Chamber and the *Pulp Mills* judgment insofar as those obligations were classified as due diligence obligations,[11] and did not make any reference to prevention of environmental harm as a principle or rule of general international law.

The above remarks are in no way intended to diminish the value of the above advisory opinions as regards the protection of the marine environment. The same holds true for other decisions in which predominantly UNCLOS was applied. Indeed, despite the lack of any references to prevention of environmental harm under general international law, or any elaboration on its nature and role, those opinions and decisions contain clues to other aspects of prevention of environmental harm or, from a broader standpoint, international protection of the environment.[12]

5.1.2. *…and Its Consequences: Terminological and Interpretative Issues*

As pointed out above, the fact that most cases concerning protection of the environment have been dealt with on the basis of treaty law has not prevented international courts and tribunals from referring, albeit incidentally, to prevention of environmental harm under general international law. The following analysis will focus on those cases where prevention of environmental harm came into consideration, with the aim of investigating its status and operation. However, before embarking upon this analysis, it is necessary to reflect in general on the incidental nature of the references to prevention of environmental harm, as it is not without consequences.

Where the law applicable in any given case was a treaty, courts and tribunals have not dedicated any particular attention to prevention of environmental harm under general international law, and hence have tended not to dwell upon it. In the – few – cases in which prevention of environmental harm has been expressly defined as a customary rule, State practice and *opinio juris* have not been investigated. Prevention of environmental harm has sometimes been cited without any consideration of its status, and the brevity of the

the SRFC Member States, and other relevant rules of international law not incompatible with UNCLOS (ibid., at 27, para. 84).

[11] As in the 2011 advisory opinion, the meaning of the terms 'to ensure' and 'due diligence obligation' was at stake (ibid., at 39-41, paras. 128-132).

[12] For example, on the importance of certain decisions for international cooperation in relation to the protection of the marine environment, see Roberto Virzo, 'In tema di misure cautelari comportanti obblighi di cooperazione per la protezione dell'ambiente marino' (2005) 88 *Riv. dir. int.* 383.

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reasoning surrounding the reference makes it difficult to understand whether prevention of environmental harm has come to the fore as a customary rule or as a general principle of international law. In this context, the ambiguity inherent within the term 'principle' only complicates matters.

Moreover, since the incidental nature of references to prevention of environmental harm under general international law results essentially from the limitation of the applicable law to one or more treaties, prevention of environmental harm has often been recalled for interpretative purposes only. To this end, both customary international law and general principles of international law may be taken into account, with the consequence that, once again, absent further clarification, it is difficult to understand how prevention of environmental harm has been characterised. In fact, it should be borne in mind that customary rules and general principles are both deemed to be relevant within the systemic approach to interpretation of treaties under Article 31(3)(c) of the Vienna Convention on the Law of Treaties.[13]

The above difficulties are illustratively apparent from the 2013 awards issued by an arbitral tribunal in the *Indus Waters Kishenganga* case.[14] The underlying dispute did not directly concern protection of the environment. Prevention of environmental harm was relied on for interpretative purposes only, and subject to further limitations stemming from the treaty under which the arbitration was instituted. The limitation under the applicable law was so significant that the passage concerning prevention of environmental harm should not be regarded as a precedent carrying weight beyond the specific circumstances of the case.

The *Indus Waters Kishenganga* arbitration arose with the initiation of arbitral proceedings between Pakistan and India in 2010. The heart of the dispute concerned the interpretation and application of the 1960 Indus Waters Treaty.[15] The Treaty was adopted by India, Pakistan and, as far as certain provisions were concerned, the

[13] Vienna Convention on the Law of Treaties (VCLT), adopted on 23 May 1969 and entered into force on 27 January 1980, 1155 *UNTS* 331. See *supra*, Section 3.2.1.

[14] PCA, *In the Matter of the Indus Waters Kishenganga Arbitration*, partial award of 18 February 2013, 31 *RIAA* 55; final award of 20 December 2013, 31 *RIAA* 309.

[15] Indus Waters Treaty 1960 Between the Government of India, the Government of Pakistan and the International Bank for Reconstruction and Development, adopted at Karachi on 19 September 1960 and entered into force on 12 January 1961 (with retroactive effect to 1 April 1960 pursuant to Art. XII), 419 *UNTS* 126.

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International Bank for Reconstruction and Development.[16] It provides for the allocation and regulation of the waters of the Indus system's rivers by the two countries. Following a request by Pakistan, the Court of Arbitration was asked to determine whether the Treaty permitted the construction by India of a Hydro-Electric Project (KHEP) on the Kishenganga River, a tributary of the Jhelum River flowing into Pakistan-administered Jammu and Kashmir. It was also asked to determine whether the Treaty would allow India to reduce the reservoir level of the KHEP and other future works below a certain level, known as 'dead storage level', in order to flush away sediment. In the initial partial award, the Court answered the first question in the affirmative, although found that India's preferred method for controlling sediment in reservoirs was precluded by the Treaty. In the final award, the Court addressed the second question and defined the minimum downstream flows that India was required to maintain.[17]

It is in this latter respect that the Court of Arbitration took international environmental law into account. It held that, whereas India had the right to divert the waters of the Kishenganga so as to operate the KHEP, Pakistan had the right to receive from India a minimum flow of water in the Kishenganga riverbed by virtue of the 1960 Indus Waters Treaty.[18] Not only was India under an obligation to avoid adverse effects on Pakistan's right to agricultural and hydroelectric uses of the waters, but 'India's duty to ensure that a minimum flow reaches Pakistan also stems from the Treaty's interpretation in light of customary international law'.[19] In this regard, the Court referred to prevention of environmental harm, as well as other principles of international environmental law.[20] However, as customary international law could only be taken into account insofar as conducive to the interpretation and application of the 1960 Indus Waters Treaty,[21] the Court held that the consideration of prevention of environmental harm could not override India's right to divert the

[16] These are Articles V and X of the Treaty, as well as Annexures F, G and H, which are relevant for the International Bank for Reconstruction and Development.

[17] For an overview of the case see John R. Crook, 'In Re Indus Waters Kishenganga Arbitration' (2014) *AJIL* 308; and Kishor Uprety, 'The Kishenganga Arbitration: Reviving the Indus Treaty and Managing Transboundary Hydropolitics' (2015) 14 *Chinese JIL* 497.

[18] *Indus Waters Kishenganga*, partial award, cit., at 215, para. 446.

[19] Ibid., para. 447.

[20] Ibid., at 216-217, paras. 448-452.

[21] See Annexure G to the 1960 Indus Waters Treaty, para. 29.

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waters of the Kishenganga, and thus the transboundary harm could simply be mitigated, but not completely prevented.[22] Therefore, the Court then determined the minimum flow that had to be released by India into the Kishenganga River.

Although the passage described has been regarded within legal scholarship as confirmation of the customary status of the purported obligation of prevention of environmental harm,[23] it is worth observing that, aside from treaty law, only customary international law could have been considered within the award. In accordance with the 1960 Indus Waters Treaty, the law applicable in the disputes between the Parties is that stipulated in the Treaty itself. It is merely 'whenever necessary for its interpretation or application, *but only to the extent necessary for that purpose*' that the applicable law may also be found in 'customary international law', as well as treaties 'establishing rules which are expressly recognized by the Parties'.[24] In view of Article 38 of the ICJ Statute, one would expect general principles (whether or not they extend, under that provision, to general principles of international law in addition to principles recognised *in foro domestico*)[25] to be included as well. That was not the case however.

Against this background, it was necessary to bring all 'principles' of international environmental law under the umbrella of customary international law, once they had been deemed to be relevant. Had the Court characterised some of them as general principles of international law rather than customary rules, then it would have been difficult, if not impossible, for the Court to take them into consideration. Compared with such a scenario, the overall inclusion of 'principles' of international environmental law in customary law must have appeared to be the best option. After all, as already pointed out, difficulties have constantly emerged in drawing a sharp distinction between customary international law and general principles of international law, along with the uncertainties surrounding the very existence of the latter as an autonomous category.[26]

Various ambiguities within the awards reinforce the impression

[22] *Indus Waters Kishenganga*, final award, cit., at 354-355, para. 112.

[23] See Leslie-Anne Duvic-Paoli, Jorge E. Viñuales, 'Principle 2: Prevention', in Jorge E. Viñuales (ed.), *The Rio Declaration on Environment and Development. A Commentary* (Oxford: Oxford University Press 2015), 107, at 128; and Jasmine Moussa, 'Implications of the Indus Water Kishenganga Arbitration for the International Law of Watercourses and the Environment' (2015) 64 *ICLQ* 697, at 713-715.

[24] See Annexure G to the 1960 Indus Waters Treaty, para. 29.

[25] See *supra*, Section 3.1.2.

[26] See *supra*, respectively Section 3.3.3 and Section 3.1.

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that, if general international environmental law were to be taken into account, the Court of Arbitration had no choice, under the terms of the 1960 Indus Waters Treaty, than to refer to customary international law. The Court adopted a broad and comprehensive approach to customary international law in order to encompass general principles under them. When referring to customary international law, by way of illustration, the Court employed such hybrid expressions as '*principles* of *customary* international law' and '*customary* international *principles*'.[27] It also had recourse to the fluid term 'environmental considerations',[28] which appear to be more akin to general principles than customary rules. Furthermore, the Court drew in particular on the award in the *Iron Rhine* arbitration,[29] where prevention of environmental harm was expressly defined and came to the fore as a general principle of international law, as will be seen later.[30]

5.2. *The Case Law of the International Court of Justice Revisited*

As pointed out above, authors have relied heavily, if not entirely, on the case law of the International Court of Justice in maintaining that prevention of environmental harm does exist as an obligation established by a customary rule in international law. In their opinion, the International Court of Justice has definitively ascertained the customary nature of the purported obligation to prevent environmental harm, leaving no doubt on this score.[31]

Admittedly, aside from references to prevention of transboundary harm in non-environmental cases,[32] on several occasions the International Court of Justice has referred to prevention of environmental harm in its case law. The first time was in the 1996 advisory opinion in the case concerning the *Legality of the Threat or Use of*

[27] *Indus Waters Kishenganga*, partial award, cit., at 216, para. 448, and at 217, para. 452.

[28] Ibid., final award, cit., at 353, para. 110, and at 354, para. 112.

[29] Ibid., partial award, cit., at 217, paras. 451-452; final award, cit., at 354-355, paras. 111-112. The prominent importance attached to the *Iron Rhine* award is suggested by the Court's reliance on the formulation of prevention of environmental harm as set out in that precedent: the pertinent passage was quoted at the point where the Court eventually interpreted the 1960 Indus Waters Treaty in the light of prevention of environmental harm.

[30] See *infra*, Section 5.3.1.

[31] See *supra*, Section 1.1.

[32] In particular, as far as the *Corfu Channel* case is concerned, see *supra*, Section 2.2.1.b.

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Nuclear Weapons.[33] As is known, the UN General Assembly had asked the Court to give an advisory opinion on the question as to whether the threat or use of nuclear weapons was permitted under any circumstances under international law.[34] Accordingly, in order as a preliminary matter to define the applicable law, the Court took account of the international law governing protection of the environment. It was in this context that the Court famously affirmed that

> the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. *The general obligation of States to ensure that activities within their jurisdiction or control respect the environment of other States or areas beyond national control is now part of the corpus of international law relating to the environment*.[35]

One year later, in 1997, that passage was quoted in the judgment in the case concerning the *Gabčíkovo-Nagymaros Project*.[36] The dispute essentially concerned the construction and operation of a system of locks on the Danube river based on a treaty between Hungary and Czechoslovakia dating back to the late 1970s.[37] By virtue of the Special Agreement,[38] Hungary and Slovakia – purporting to be the successor State of the former Czechoslovakia – requested the International Court of Justice to ascertain whether Hungary was entitled to suspend work on the project, and subsequently abandon it in 1989; whether Czechoslovakia was consequently entitled to proceed to the provisional solution involving the damming of the Danube, and to put it into operation from October 1992; and what the legal effects were of the notification concerning the termination of that Treaty given by Hungary in May 1992.[39]

[33] ICJ, *Legality of the Threat or Use of Nuclear Weapons*, advisory opinion of 8 July 1996, *I.C.J. Reports 1996*, 226.

[34] UNGA Res. 49/75 K of 15 December 1994.

[35] *Threat or Use of Nuclear Weapons*, advisory opinion, cit., at 242, para. 29 (emphasis added).

[36] ICJ, *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, judgment of 25 September 1997, *I.C.J. Reports 1997*, 7, at 41, para. 53.

[37] Treaty concerning the Construction and Operation of the Gabčíkovo-Nagymaros System of Locks, signed at Budapest on 16 September 1977 and entered into force on 30 June 1978, 1109 *UNTS* 211.

[38] Special Agreement, signed at Brussels on 7 April 1993 and entered into force on 28 June 1993, 1725 *UNTS* 225. It is also reproduced in the judgment in the case *Gabčíkovo-Nagymaros Project*, judgment, cit., at 10-13, para. 2.

[39] Art. 2 of the Special Agreement.

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However, it was only in the 2010 judgment in the case concerning *Pulp Mills on the River Uruguay*[40] that the International Court of Justice went on to define the 'principle of prevention' as a 'customary rule'. According to this 'rule', in the words of the Court, a State is 'obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State'.[41] The case originated from a dispute concerning the use of the river Uruguay. Argentina had alleged that, in authorising the construction of two pulp mills on the left bank of the river, Uruguay had breached certain obligations under the 1975 Statute of the River Uruguay, a bilateral agreement aimed at ensuring the optimum and rational use of the river through the creation of joint machinery between Argentina and Uruguay, including the Administrative Commission of the River Uruguay (CARU, from the Spanish acronym for 'Comisión Administradora del Río Uruguay').

Subsequently, in the 2015 judgment in the joined cases *Certain Activities Carried out by Nicaragua in the Border Area* and *Construction of a Road in Costa Rica along the San Juan River*,[42] the International Court of Justice relied on the *Pulp Mills* precedent: it quoted the relevant passage and, in doing so, referred to the customary nature of the obligation to prevent environmental harm.[43] In the *Certain Activities* case, Costa Rica alleged that Nicaragua had invaded and occupied its territory and that it had breached several international obligations by conducting such activities as the dredging of the San Juan River. In the *Construction of a Road* case, Nicaragua contended that, in carrying out road construction works in the border area, Costa Rica had been violating Nicaraguan sovereignty and causing serious environmental damage.

Be that as it may, it is argued here that the case law of the International Court of Justice relating to prevention of environmental harm is less unambiguous than it might prima facie appear to be.

[40] ICJ, *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, judgment of 20 April 2010, *I.C.J. Reports 2010*, 14.

[41] Ibid., at 55-56, para. 101.

[42] ICJ, *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua* v. *Costa Rica)*, judgment of 16 December 2015, *I.C.J. Reports 2015*, 665.

[43] Ibid., at 706, para. 104, and at 711-712, para. 118. Paras. 177 to 217 are also relevant: there, the Court assessed the facts when deciding on the alleged breach of the purported obligation not to cause significant transboundary harm to Nicaragua.

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On closer examination, a number of inconsistencies between the pertinent cases are apparent, which undermines their conclusiveness as regards the classification of prevention of environmental harm as an obligation established by a customary rule. In particular, prevention of environmental harm initially operated, *in effect*, as a general principle of international law: it served an inspiring function relevant to balancing acts. It was later defined as a customary rule in cases in which environmental issues were intertwined with sovereignty issues. Further uncertainty results from the absence of any investigation of State practice and *opinio juris* by the Court. These inconsistencies will be illustrated in the following sections with the aim of tentatively resolving them through a reassessment of the pertinent cases.[44]

5.2.1. *At the Outset: the Operation of Prevention of Environmental Harm as a General Principle Based on a Community Interest*

5.2.1.a. *The 1996 Advisory Opinion on the* Legality of the Threat or Use of Nuclear Weapons

As mentioned above, the International Court of Justice referred to prevention of environmental harm for the first time in the 1996 advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons*, in the well-known dictum already quoted. Whereas this reference is in itself of great significance in definitively signalling the incorporation of environmental concerns into the case law of the Court, what is notable for the purposes of this study is that, upon its first appearance, prevention of environmental harm was conceived of by the Court as a general principle that performs a guiding function and is based on a community interest.

[44] Such a reassessment should appear to be justified also from a broader perspective, as various authors have stressed the Court's reluctance to rely expressly on general principles of international law as something outside of customary international law. In particular, see Pierre D'Argent, 'Les principes généraux à la Cour internationale de justice', in Samantha Besson and Pascal Pichonnaz (eds.), *Les principes en droit européen* (Genève/Zurich: Schulthess 2011), 107, at 111-117, who observes that the Court 'n'a pas encore emprunté à ce jour la voie de l'affirmation de l'existence de «principes (généraux)» totalement détachés du phénomène coutumier' (ibid., at 112). This is because, in his opinion, 'le processus coutumier, ou la qualification coutumière, permet au juge, au moins formellement, de se protéger du reproche d'inventer le droit, alors qu'il est en principe seulement censé l'appliquer' (ibid., at 119). It may well be, therefore, that in spite of some references to prevention of environmental harm as a customary obligation, it has operated as a general principle of international law within the case law of the International Court of Justice.

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From this perspective, it must be observed that the Court refrained from applying prevention of environmental harm as an obligation established by a customary rule in order to assess whether recourse to nuclear weapons was legal or illegal. It is remarkable that, throughout the entire opinion, *only* prevention of environmental harm was not relied on for this purpose.

It is indeed the case that no rule was applied in order to establish *conclusively* whether recourse to nuclear weapons was legal or illegal, so much so that some authors have suggested that the outcome to the opinion equates to a *non liquet*.[45] As is known, the Court eventually found that neither customary nor conventional international law contained 'any comprehensive and universal prohibition of the threat or use of nuclear weapons as such',[46] and held that, whereas 'the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict', it could not 'conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake'.[47]

Nevertheless, *except for prevention of environmental harm under general international law*, the Court did not completely exclude the possibility that recourse to nuclear weapons might amount to a breach of the rules considered. This holds true for both the rules that the Court recalled at the outset in order to define the applicable law and those rules that the Court ultimately deemed to be 'the most

[45] On this issue, see Marcelo G. Kohen, 'L'avis consultatif de la CIJ sur la *Licéité de la menace ou de l'emploi d'armes nucléaires* et la fonction judiciaire' (1997) 2 *EJIL* 336, at 342-349; Daniel Bodansky, '*Non Liquet* and the Incompleteness of International Law', in Laurence Boisson de Chazournes and Philippe Sands (eds.), *International Law, the International Court of Justice and Nuclear Weapons* (Cambridge: Cambridge University Press 1999), 153; Mariano J. Aznar-Gómez, 'The 1996 Nuclear Weapons Advisory Opinion and *Non Liquet* in International Law' (1999) 48 *ICLQ* 3; Kati Kulovesi, 'Legality or Otherwise? Nuclear Weapons and the Strategy of *Non Liquet*' (1999) 10 *Finnish YBIL* 55; Stephen C. Neff, 'In Search of Clarity: *Non Liquet* and International Law', in Kaiyan Homi Kaikobad and Michael Bohlander (eds.), *International Law and Power: Perspectives on Legal Order and Justice. Essays in Honour of Colin Warbrick* (London/Boston: Martinus Nijhoff Publishers 2009), 63, at 75-81; Surabhi Ranganathan, 'The *Nuclear Weapons* Advisory Opinions', in Eirik Bjorge and Cameron Miles (eds.), *Landmark Cases in Public International Law* (Oxford/Portland: Hart 2017), 409, at 428-430.

[46] *Threat or Use of Nuclear Weapons*, advisory opinion, cit., at 266, para. 105(2)(B).

[47] Ibid., at 266, para. 105(2)(E).

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directly applicable law governing the question', viz. the rules relating to the threat or use of force and to armed conflicts.[48]

As regards the former, the Court first examined the right to life as guaranteed in the International Covenant on Civil and Political Rights. It found that 'whether a particular loss of life, through the use of a certain weapons in warfare, is to be considered an arbitrary deprivation of life contrary to Article 6 of the Covenant, can only be decided by reference to the law applicable in armed conflict'.[49] As mentioned above, according to the Court, the threat or use of nuclear weapons tends to be incompatible with the law of armed conflicts, with the consequence that the right to life might also be violated. The Court then considered the prohibition against genocide, as laid down in the Convention on the Prevention and Punishment of the Crime of Genocide. Whilst it was said not to entail, per se, the illegality of any recourse to nuclear weapons, the prohibition of genocide would be breached by their use should the conditions set forth in Article II of the Convention be met, namely an intent to destroy, in whole or in part, any national, ethnic, racial or religious group.[50]

As regards the latter, i.e., 'the most directly applicable' rules, the Court found in a similar vein that recourse to nuclear weapons would be unlawful if it were incompatible with the prohibition of the threat or use of force under Article 2(4) of the UN Charter and if it failed to satisfy the requirements laid down under Article 51.[51] In terms of the law applicable to armed conflicts, the Court stated that it did not have 'sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable in armed conflict in any circumstance'. Nonetheless, '[i]n view of the unique characteristics of nuclear weapons' the Court admitted that 'the use of such weapons in fact seems scarcely reconcilable with respect for such requirements',[52] namely the prohibition of methods and means of warfare that prevent any distinction being drawn between civilian and military targets, as well as those methods and means that result in unnecessary suffering to combatants.

That being so, it is striking that the Court refrained from any allusion to the possibility that, in certain circumstances at least, recourse to nuclear weapons might amount to a breach of prevention

[48] Ibid., at 243, para. 34.
[49] Ibid., at 239-240, paras. 24-25.
[50] Ibid., at 240, para. 26.
[51] Ibid., at 244-247, paras. 37-50.
[52] Ibid., at 262-263, para. 95.

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of environmental harm *qua* obligation established by a customary rule. Had the Court regarded prevention as a customary obligation, it would have deemed recourse to nuclear weapons to be 'scarcely reconcilable' with prevention of environmental harm too, just as it was found to be 'scarcely reconcilable' with the requirements of international humanitarian law. Indeed, it is hard to see how recourse to nuclear weapons could *not* be subsumable under the 'general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control'. The Court did not limit the scope of that precept to peacetime only,[53] and was well aware that 'the use of nuclear weapons could constitute a catastrophe for the environment'.[54]

Rather than apply prevention of environmental harm as a customary rule in order to evaluate the legality or illegality of the threat or use of nuclear weapons, it seems that the Court relied on prevention of environmental harm as a general principle providing guidance, specifically a value-oriented direction to be considered when balancing protection of the environment against a conflicting interest. The Court focussed on the 'environmental considerations' which States must take into account 'when assessing what is necessary and proportionate in the pursuit of legitimate military objectives'.[55] Hence, respect for the environment 'is *one of the elements* that go to assessing whether an action is in conformity with the principles of necessity and proportionality'.[56]

[53] Albeit with reference to treaties relating to the protection of the environment, the Court expressed 'the view that the issue is not whether [they] are or are not applicable during an armed conflict, but rather whether the obligations stemming from these treaties were intended to be obligations of total restraint during military conflict' (ibid., at 242, para. 30).

[54] Ibid., at 241, para. 29. The point has been stressed within legal scholarship: see José Juste-Ruiz, 'The International Court of Justice and International Environmental Law', in Nerina Boschiero et al. (eds.), *International Courts and the Development of International Law. Essays in Honour of Tullio Treves* (The Hague: Asser Press 2013), 383, at 387-389, who tellingly observes that 'in spite of the Court's emphatic comments concerning the growing threats to the environment, the potential catastrophic effects of nuclear weapons for present and future generations, and its "potential to destroy all civilizations and the entire ecosystem of the planet", its conclusions on the legal effects of these findings were ultimately quite minimalist' (at 389, footnotes omitted).

[55] *Threat or Use of Nuclear Weapons*, advisory opinion, cit., at 242, para. 30.

[56] Ibid. (emphasis added). The operation of a general principle of international law in this passage is also noted by Massimo Iovane, 'La participation de la société civile à l'élaboration et à l'application du droit international de l'environnement' (2008) 112 *Rev. gén. dr. int. pub.* 465, at 492-493; and Id., 'Metodo costituzionali-

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The role of prevention of environmental harm as a principle inspiring 'environmental considerations' in States contrasts with the role played by treaty *rules* concerning protection of the environment, including in particular the obligation to protect the natural environment against widespread, long-term and severe environmental damage and the prohibition of attacks against the natural environment by way of reprisal, as laid down respectively in Articles 35(3) and 55 of Additional Protocol I to the 1949 Geneva Conventions. The possibility that recourse to nuclear weapons might be incompatible with those rules, if all the necessary requirements were met, is implicit within the Court's observation that they are 'powerful *constraints* for all the States having subscribed to them'.[57] On this view they perform a more far-reaching function, *qua* rules rather than principles, and effectively ensure greater protection for the environment than 'environmental considerations' do.

The construction of prevention of environmental harm as a principle of international law is certainly not inconsistent with the wording of the advisory opinion. Although the term 'obligation' seems to be akin to 'rule', the attribute 'general' is broader than 'customary' and might well have been used to refer to 'general international law' as incorporating general principles in addition to customary rules. The deliberately generic nature of the expression 'part of the corpus of international law relating to the environment' allows this construction, and points to some degree of prudence within the Court's approach. In fact, the ambiguity of the passage concerning prevention of environmental harm has been acknowledged within legal scholarship,[58]

stico e ruolo dei giudici nella formulazione dei principi generali del diritto internazionale' (2008) *Ars Interpretandi* 103, at 124. However, he refers to the principle of the protection of the environment (respectively, 'le principe de la protection et de la sauvegarde de l'environnement' and 'un principio generale non espresso sulla "protezione e la salvaguardia dell'ambiente"'), rather than the principle of prevention of environmental harm, on the assumption that prevention amounts to a customary obligation instead (ibid., at 115-116). Similarly, see Eduardo Savarese, *Certezza del diritto e diritto internazionale. Coerenza e identità tra fonti e argomentazione* (Napoli: Edizioni Scientifiche Italiane 2018), at 291-292. Nonetheless, as has been pointed out in the text, had the Court regarded prevention of environmental harm as a customary obligation, then it would have directly applied it, without recourse to any 'environmental considerations'.

[57] *Threat or Use of Nuclear Weapons*, advisory opinion, cit., at 242, para. 31 (emphasis added).

[58] See David M. Ong, 'International Environmental Law's "Customary" Dilemma: Betwixt General Principles and Treaty Rules' (2006) 1 *Irish YIL* 3, at 16-18; and Leslie-Anne Duvic-Paoli, *The Prevention Principle in International Environmental*

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or is at any rate implied.[59] This explains why, by contrast, the 2010 judgment in the *Pulp Mills* case is said to have eventually dispelled the pre-existing ambiguity.[60]

The absence of any inquiry into State practice and *opinio juris* – in contrast with the two-element approach to the determination of customary international law – provides a further element corroborating the interpretation of the text as implying that prevention of environmental harm was conceived of as a general principle rather than a customary rule. In truth, as will be pointed out below, the Court never carried out such an inquiry, even when asserting the customary status of the 'principle of prevention'.[61] However, in the advisory opinion on the *Threat or Use of Nuclear Weapons*, this would seemingly have been especially necessary as some States that participated in the proceeding had 'questioned the binding legal quality of these precepts of environmental law', namely those contained in principle 21 of the Stockholm Declaration and principle 2 of the Rio Declaration.[62]

Law (Cambridge: Cambridge University Press 2018), at 140-141 ('the Court did not expressly recognize the customary status of the norm but rather referred to prevention as belonging to 'the corpus of international law relating to the environment"). See also Benedetto Conforti, Massimo Iovane, *Diritto internazionale* (12th ed., Napoli: Editoriale Scientifica 2021), at 246.

[59] The passage concerning prevention of environmental harm has been overlooked completely in some of the publications that provide an overview of the advisory opinion, which could hardly be explained had the Court clearly stated the customary status of prevention of environmental harm, considering that it would have been the first affirmation to that effect in the Court's case law. For instance, no specific reference to that passage is made by Umberto Leanza, Luigi Sico, 'Uso e minaccia di uso di armi nucleari in due recenti pareri della Corte Internazionale di Giustizia' (1997) 52 *Com. Int.* 653, at 662-663; or by Michael Bothe, 'Nuclear Weapons Advisory Opinions', in *MPEPIL online* (2011), para. 11, both of whom however consider the part of the opinion that deals with protection of the environment. On the other hand, some authors have 'simply' identified the Court's dictum as an acknowledgement of the customary status of prevention of environmental harm: see Natalino Ronzitti, 'La Corte internazionale di giustizia e la questione della liceità della minaccia o dell'uso delle armi nucleari' (1996) 79 *Riv. dir. int.* 861, at 868; and Djamchid Momtaz, 'Le recours à l'arme nucléaire et la protection de l'environnement: l'apport de la Cour internationale de justice', in Boisson de Chazournes and Sands (eds.), *International Law*, cit., 354, at 357-359.

[60] See also *supra*, Section 1.1.1, and *infra*, note 99.

[61] See *infra*, Section 5.2.2.a.

[62] *Threat or Use of Nuclear Weapons*, advisory opinion, cit., at 241, para. 28. In particular, the United States and France insisted on the non-binding nature of the propositions set out in principle 21 of the Stockholm Declaration and principle 2 of the Rio Declaration. Those instruments were referred to by the United States,

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Conversely, recognition of prevention of environmental harm as a general principle did not require any investigation of State practice and *opinio juris*. This might explain why the Court cited treaties concerning protection of the environment, the Rio Declaration, and a General Assembly resolution simply in order to confirm the relevance of environmental considerations during hostilities.[63] Moreover, that recognition was not entirely at odds with the position of those States that denied the binding status of prevention of environmental harm. After all, in relation to the application of the law of armed conflict, environmental considerations needed 'only' to be taken into account.

Finally, the reconstruction within the advisory opinion of prevention of environmental harm as a general principle makes it possible to overcome the difficulties raised by authors concerning the differences between the formulation of the principle as proclaimed by the Court and the wording of principle 21 of the Stockholm Declaration (or principle 2 of the Rio Declaration). Such differences are far from unequivocal. In certain respects, the text of the advisory opinion seems to be less restrictive. In the words of the Court, States should ensure respect for the environment in general, rather than simply prevention of environmental harm. Furthermore, the reference in the opinion to the environment of 'areas beyond national control' appears to hint at a broader notion of international areas than the expression 'areas beyond the limits of national jurisdiction'. Other differences however seem to suggest the opposite. According to the principle as asserted in the opinion, it is only the activities that fall within both the jurisdiction *and* control of States that come into consideration, whilst activities within the jurisdiction *or* control of States are relevant under principle 21 of the Stockholm Declaration.[64] It

respectively, as 'a political statement of aspirations' and 'a non-legally binding political statement of principles and goals' (Written Statement of the Government of the United State, 20 June 1995, at 38-42). In the same vein, according to France, 'ces textes n'ont évidemment pas valeur juridique obligatoire, et n'ont pas davantage acquis une portée coutumière' (Exposé écrit du Gouvernement de la République française, at 38-39; see also the verbatim record of the public sitting of 2 November 1995, at 22, para. 45).

[63] *Threat or Use of Nuclear Weapons*, advisory opinion, cit., at 242-243, paras. 30-32.

[64] Although the English text of the opinion is the authoritative one (ibid., at 267, para. 105), it is worth observing that, aside from the reference to respect for the environment, the other differences illustrated do not appear in the French version, which reads as follows: 'L'obligation générale qu'ont les Etats de veiller à ce que les activités exercées dans les limites de leur juridiction *ou* sous leur contrôle respectent l'environnement dans d'autres Etats ou dans des zone ne

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is self-evident that, whereas these differences have been deemed to be important with a view to determining the content of a customary rule,[65] they are of no or little consequence once prevention of environmental harm is conceived of as a guiding principle.

One final remark is in order, concerning not the classification of prevention of environmental harm but rather the interest underpinning it. The Court arguably regarded that interest as being collective and not bilateral in nature. This is apparent not only from the references to the importance of protection of the environment for humankind as a whole, including the recognition that 'the environment is not an abstraction but represents the living space, the quality of life and the very health of human being, including generations unborn'.[66]

Above all, the Court was persuaded that the affirmation of the principle of prevention of environmental harm was unprecedented within its case law, and this can only be understood in the light of the collective nature of the interest underlying that principle. The relevance of a community interest is the distinguishing feature of the principle of prevention of environmental harm when compared to the no-harm rule, which is based on the bilateral interests at stake in relation to territorial sovereignty.[67] Considering that the Court is typically eager to recall its precedents,[68] had it conceived of prevention of environmental harm as a development of the no-harm rule, then the dictum in the judgment in the *Corfu Channel* case concerning 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States' would plausibly have been recalled as authority for the affirmation of prevention. However, that dictum was not cited. As will be pointed out, such a reference was later introduced in the judgment in the *Pulp Mills* case, thus signalling an apparent change in the Court's conception of prevention of environmental harm.

relevant d'aucune *juridiction* nationale fait maintenant partie du corps de règles du droit international de l'environnement' (ibid., at 242, para. 29, both emphases added). This might perhaps further reduce the relevance of those differences in relation to the wording of principle 21 of the Stockholm Declaration (or principle 2 of the Rio Declaration).

[65] See Edith Brown Weiss, 'Opening the Door to the Environment and to Future Generations', in Boisson de Chazournes and Sands (eds.), *International Law*, cit., 338, at 339-340.

[66] *Threat or Use of Nuclear Weapons*, advisory opinion, cit., at 241, para. 29.

[67] See *supra*, Chapter 2.

[68] For an extensive analysis of the Court's tendency, see Mohamed Shahabuddeen, *Precedent in the World Court* (Cambridge: Cambridge University Press 1996), especially, at 23-31.

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5.2.1.b. *The 1997 Judgment in the* Gabčíkovo-Nagymaros *Case*

The judgment in the *Gabčíkovo-Nagymaros* case confirms that, at the outset, the Court arguably regarded prevention of environmental harm as a general principle mainly aimed at serving a guiding function. As mentioned above, the dispute did not originate from environmental damage, even though protection of the environment was in several respects relevant to the application of the 1977 Treaty on the Gabčíkovo-Nagymaros Barrage System, which lay at the heart of the case.[69]

When dealing with the allegation by Hungary that a state of 'ecological necessity' had prevented it from complying with the Treaty on the Gabčíkovo-Nagymaros System, the Court referred to prevention of environmental harm by quoting the relevant passage from the opinion on the *Threat or Use of Nuclear Weapons*. According to Hungary, had it not suspended or abandoned the works, the system of locks would have caused severe environmental damage, including serious impairment of water quality, eutrophication of surface water, and the eradication of fluvial flora and fauna.[70] Therefore, Hungary

[69] See Peter H.F. Bekker, 'Gabčíkovo-Nagymaros Project (Hungary/Slovakia)' (1998) 92 *AJIL* 273, at 278 ('Notwithstanding elaborate treatment of environmental issues in the Judgment, this was not an environment case'). The judgment has therefore been deemed to be specially relevant for the law of treaties: see, e.g., Daniel Reichert-Facilides, 'Down the Danube: The Vienna Convention on the Law of Treaties and the *Case concerning the Gabčíkovo-Nagymaros Project*' (1998) 47 *ICLQ* 837. Some authors have gone even further: Laurence Boisson de Chazournes, Makana Moïse Mbengue, 'Gabčíkovo-Nagymaros Project (Hungary/Slovakia) (1997)', in Bjorge and Miles (eds.), *Landmark Cases*, cit., 435, at 435, stress that 'while the Court had occasion to consider a broad spectrum of issues in the light of international environmental law, one cannot escape the conclusion that it could have done more, as the ICJ ultimately founded many of its holdings in this case on the basis of more 'traditional' grounds, such as the law of treaties and state responsibility'. In a similar vein, Stephen Stec, Gabriel E. Eckstein, 'Of Solemn Oaths and Obligations: The Environmental Impact of the ICJ's Decision in the *Case concerning the Gabčíkovo-Nagymaros Project*' (1997) 8 *YI Env. L* 41, observe that '[t]he judgment […] is likely more significant for the questions that it failed to answer and for the opportunities that it missed in advancing international environmental law' (at 43), and conclude in even more telling words that '[t]he Court's treatment of environmental issues in the case was perfunctory at best' (at 49). However, the opinion that the Court favoured form, viz., the law of treaties, over considerations of substance, namely environmental concerns, has attracted criticism: see Jan Klabbers, 'The Substance of Form: The *Case concerning the Gabčíkovo-Nagymaros Project*, Environmental Law, and the Law of Treaties' (1997) 8 *YI Env. L* 32.

[70] *Gabčíkovo-Nagymaros Project*, judgment, cit., at 35, para. 40.

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claimed that its failure to comply with the Treaty could not be classified as wrongful owing to a state of necessity.

Prevention of environmental harm performed a guiding function and operated as a principle in that it resulted in an environmentally or ecologically oriented understanding of the state of necessity as a circumstance precluding wrongfulness. The Court admitted that it had 'no difficulty in acknowledging that the concerns expressed by Hungary for its environment […] related to an "essential" interest of that State', within the meaning relevant to the notion of state of necessity.[71] Hence, the passage from the opinion on the *Threat or Use of Nuclear Weapons* concerning prevention of environmental harm was quoted to recall that the Court had recently taken the opportunity to stress the 'great significance' attached to respect for the environment.[72] In the end however, the Court found that, even if it had been established that there was a state of necessity, Hungary could not rely on that circumstance since 'it had helped, by act or omission, to bring it about'.[73]

The passage from the advisory opinion concerning prevention of environmental harm is not quoted at any other place in the *Gabčíkovo-Nagymaros* judgment. Nonetheless, the Court recalled it when emphasising the need for the Parties to take environmental concerns into account during the construction and operation of the system of locks. In this connection, the guiding value of prevention of environmental harm appears to be confirmed.

In particular, in relation to the contention by Hungary that new requirements under international environmental law had precluded compliance with the 1977 Treaty on the Gabčíkovo-Nagymaros Barrage System, the Court held that newly developed norms on the protection of the environment that were relevant to the implementation of that Treaty could be 'incorporated' by agreement pursuant to Articles 15, 19 and 20 of the Treaty, which dealt respectively with safeguarding Danube water quality, nature protection, and the protection of fishing interests. According to the Court, the implementation of those provisions required 'a mutual willingness to discuss in good faith actual and potential environmental risks'.[74]

In underscoring how important it was 'to do this' the Court recalled that 'the environment is not an abstraction but represents the

[71] Ibid., at 41, para. 53.
[72] Ibid.
[73] Ibid., at 46, para. 57.
[74] Ibid., at 67-68, para. 112.

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living space, the quality of life and the very health of human beings, including generations unborn', as it had stated in the opinion on the *Threat or Use of Nuclear Weapons* immediately before the proclamation of the principle of prevention of environmental harm. The guiding value of the quotation is especially apparent from the conclusion reached by the Court: the 'awareness of the vulnerability of the environment and the recognition that environmental risks have to be assessed on a continuous basis have become much stronger', with the result that such 'new concerns have *enhanced the relevance* of Articles 15, 19 and 20' of the Treaty on the Gabčíkovo-Nagymaros System.[75]

One last point attesting to the guiding function served by prevention of environmental harm may be found in the final part of the judgment concerning the legal consequences arising from it. According to the Special Agreement, the Court was in fact required to determine the consequences of the rights and obligations established in the judgment.[76] As regards the environmental impact and implications of the project on the system of locks, the Court stated that it was for the Parties themselves to find an agreement in the light not only of the objectives of the Treaty on the Gabčíkovo-Nagymaros System, but also of international environmental law and the principles of the law of international watercourses as well.[77]

In reaching this conclusion, the Court seemingly alluded to the guiding value of prevention of environmental harm and relied on it as a sort of principle governing the balancing of protection of the environment with economic development. After stressing that 'in the field of environmental protection, *vigilance and prevention* are required', the Court went on to assert that new environmental norms and standards are respectively 'to be taken into consideration' and 'given proper weight'.[78] It was in this regard that it observed

[75] Ibid., at 68, para. 112 (emphasis added).

[76] Art. 2(2) of the Special Agreement, cit.

[77] *Gabčíkovo-Nagymaros Project*, judgment, cit., at 77-78, para. 140.

[78] Ibid., at 78, para. 140 (emphasis added). Considering the wording used by the Court, it is difficult to agree with those authors who identify a confirmation of the customary status of the alleged obligation of prevention of environmental harm within the quoted reference to vigilance and prevention: see, among them, Duvic-Paoli, Viñuales, 'Principle 2. Prevention', cit., at 121; and Pierre-Marie Dupuy, Jorge E. Viñuales, *International Environmental Law* (2nd ed., Cambridge: Cambridge University Press 2018), at 68. Significantly, on the assumption that prevention of environmental harm amounts to a customary obligation, Leslie-Anne Duvic-Paoli, 'Vigilance and Prevention: The Contribution of the *Gabčíkovo-Nagymaros* Judgment', in Serena Forlati, Makane Moïse Mbengue and Brian McGarry (eds.), *The*

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that the 'need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development'.[79]

In the other points of the judgment relevant to protection of the environment, the Court's line of reasoning was anchored in the application of Articles 15, 19 and 20 of the Treaty on the Gabčíkovo-Nagymaros System, and hence the general international law on prevention of environmental harm did not come to the fore.[80] Those points mainly dealt with Hungary's notification of termination of the Treaty on the Gabčíkovo-Nagymaros System. Specifically, Hungary had alleged that supervening environmental concerns had rendered performance impossible. However, the Court found that Articles 15, 19 and 20 of the Treaty did indeed provide for the adaptation of the

Gabčíkovo-Nagymaros *Judgment and Its Contribution to the Development of International Law* (Leiden/Boston: Brill/Nijhoff 2020), 193, at 199-202, can hardly explain why, in the passage at issue, prevention 'merely' served a guiding function, which she eventually admits. Indeed, it has been observed that 'the Court certainly demonstrated that it understood the full significance and scope of the principle of prevention. Yet, it never named it' as 'the Court did not pronounce itself on the normative value of any of these principles [of international environmental law] in relation to treaty norms': see Paulo Canelas de Castro, 'The Judgment in the *Case concerning the Gabčíkovo-Nagymaros Project*: Positive Signs for the Evolution of International Water Law' (1997) 8 *YI Env. L* 21, at 27-28, who hence tellingly concludes that 'the Court did not invoke these principles, it evoked them'.

[79] *Gabčíkovo-Nagymaros Project*, judgment, cit., at 78, para. 140. Indeed, it is especially due to the reference to the concept of sustainable development that, from the standpoint of international environmental law, the *Gabčíkovo-Nagymaros* judgment has attracted attention within legal scholarship, although the Court refrained from addressing the issue of its legal classification: see Alan E. Boyle, 'The *Gabčíkovo-Nagymaros* Case: New Law in Old Bottles' (1997) 8 *YI Env. L* 13, at 17-19, especially at 18 ('It is the Court's reference to sustainable development, however, that is probably the most interesting aspect of the entire case'); Nico Schrijver, Vid Prislan, 'Gabčíkovo-Nagymaros Case (Hungary/Slovakia)', in *MPEPIL online* (2008), para. 24; Makane Moïse Mbengue, 'On Sustainable Development: A Conversation with Judge Weeramantry', in Forlati, Mbengue and McGarry (eds.), *The* Gabčíkovo-Nagymaros *Judgment*, cit., 166.

[80] As observed by Johan G. Lammers, 'The Gabčíkovo-Nagymaros Case Seen in Particular from the Perspective of the Law of International Watercourses and the Protection of the Environment' (1998) 11 *LJIL* 287, at 317-318, 'there was no question of an autonomous application (i.e. beyond the will of the parties to the 1977 Treaty) by the Court of new norms and standards of international environmental law in derogation of obligations assumed by the parties in the 1977 Treaty'. He therefore concludes that 'from the perspective of *general* international law of international watercourses or protection of the environment the present Judgment of the Court brought little news'.

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project on the system of locks to the newly emerged environmental concerns.[81] On the basis of those provisions, the Court likewise dismissed the argument that progress in environmental knowledge and the development of new norms to protect the environment amounted to a fundamental change of circumstances. Those 'changes' were not unforeseen as the said provisions were designed to allow the Parties to the Treaty to take them into account.[82] Finally, the Court found that there was not sufficient evidence of any violation of Articles 15, 19 and 20 and thus held that no material breach of the Treaty as a ground for its termination had occurred. The Court also stressed that, in suspending and abandoning the works, Hungary itself had contributed to the creation of a situation that was incompatible with 'fruitful negotiations' on the desirability or necessity of measures to protect the environment in accordance with the Articles mentioned.[83]

Nevertheless, it is important to note that, in seeking to establish that Czechoslovakia had committed an international wrongful act, Hungary had alleged a breach of general international law in addition to the violation of the Treaty on the Gabčíkovo-Nagymaros System,[84] specifically a breach of the purported customary obligation of States to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States, as enshrined in principle 21 of the Stockholm Declaration.[85] Whilst the Court understandably maintained that only a breach *of the Treaty* could be relevant as a ground for its termination,[86] it also refrained from expressly considering the alleged violation of customary international law when assessing, from a broader perspective, the lawfulness of Czechoslovakia's conduct as regards the recourse to the provisional solution of damming and diverting the Danube.[87] It is reasonable to argue that the Court simply deemed it unnecessary to assess the lawfulness of such conduct with reference to customary international law, having already found that it amounted to a breach of the Treaty

[81] *Gabčíkovo-Nagymaros Project*, judgment, cit., at 63-64, paras. 102-103.
[82] Ibid., at 64-65, para. 104.
[83] Ibid., at 65-66, para. 107.
[84] Ibid., at 52, para. 70.
[85] Memorial of the Republic of Hungary, vol. 1, 2 May 1994, paras. 7.45-7.56.
[86] In the words of the Court, '[a]s to that part of Hungary's argument which was based on other treaties and general rules of international law, the Court is of the view that it is only a material breach of the treaty itself, by a party to that treaty, which entitles the other party to rely on it as a ground for terminating the treaty': see *Gabčíkovo-Nagymaros Project*, judgment, cit., at 65, para. 106.
[87] Ibid., at 52-54, paras. 72-79.

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on the Gabčíkovo-Nagymaros System, although not a breach that justified the notification of termination by Hungary.[88]

On the other hand, it must also be observed that the failure to consider the purported customary rule on prevention of environmental harm appears to be consistent with its classification as a general principle serving a guiding function. It is this function that, as illustrated above, the Court ascribed to prevention of environmental harm throughout the judgment. In this respect, one must not lose sight of the fact that the Court did not decline from considering each and every customary rule invoked by Hungary.

Specifically, it is indeed the case that the Court found that the diversion of the Danube was incompatible with treaty provisions rather than with customary rules, namely with the provisions of the Treaty on the Gabčíkovo-Nagymaros System aimed at ensuring the coordinated, single and indivisible character of the construction of the barrage system. However, in reaching that conclusion, the Court stated, in a fundamental point of its line of reasoning, that 'the refusal by Hungary of joint operation […] cannot mean that Hungary forfeited its basic right to an equitable and reasonable sharing of the resources of an international watercourse'.[89] Within the proceedings, Hungary had contended that the diversion of the Danube was unlawful under general international law as a result, inter alia, of the violation of the principle of equitable use of shared natural resources.[90] Therefore, the fact that the Court did not examine the alleged breach of the invoked customary obligation to prevent environmental harm stands out.[91]

[88] As illustrated above, the Court found no sufficient evidence to conclude that Czechoslovakia had violated the obligations to consult and negotiate under Articles 15, 19 and 20 of the Treaty on the Gabčíkovo-Nagymaros System, although it did find that Czechoslovakia had breached the Treaty by diverting the waters of the Danube in October 1992. Therefore, 'the notification of termination by Hungary on 19 May 1992 was premature' as no violation of the Treaty by Czechoslovakia had yet taken place then, with the consequence that 'Hungary was not entitled to invoke any such breach of the Treaty as a ground for terminating it when it did' (ibid., at 66, para. 108).

[89] Ibid., at 54, para. 78.

[90] Memorial of the Republic of Hungary, cit., paras. 7.69-7.82.

[91] The difference in the Court's approach to prevention of environmental harm and to equitable and reasonable utilisation has not passed unnoticed within legal scholarship: see Stec, Eckstein, 'Of Solemn Oaths', cit., 45-46. According to Jochen Sohnle, 'Irruption du droit de l'environnement dans la jurisprudence de la C.I.J.: l'affaire Gabčíkovo-Nagymaros' (1998) 102 *Rev. gén. dr. int. pub.* 85, at 112-113, '[l]a Cour ne constate aucun dommage sur le fondement de cette interdiction [de

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Moreover, the focus on the use of shared natural resources brings to light another aspect of the Court's conception of prevention of environmental harm in the *Gabčíkovo-Nagymaros* judgment: the anchorage in a community interest. In determining whether or not the diversion of the Danube was lawful, the Court looked only at rights correlative to obligations of a typically bilateral nature, such as those stemming from the use of shared natural resources. The bilateral dimension peculiar to the reasonable and equitable use of shared natural resources arguably rendered the pertinent law specifically important to the assessment of the lawfulness of the conduct at stake.[92] Hence, it seems that the Court kept prevention of environmental harm separate from mutual respect for territorial sovereignty insofar as it was founded on a community interest.

In effect, when quoting the passage from the opinion on the *Threat or Use of Nuclear Weapons*, the Court held that great significance was attached to respect for the environment 'not only for States *but also for the whole of mankind*'.[93] In line with the advisory opinion, no link was made to the prior dictum on 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States', as proclaimed in the judgment in the *Corfu Channel* case.[94]

Therefore, the Court seems to have rejected the stance taken by Hungary, which had identified the ultimate foundation for prevention of environmental harm in territorial sovereignty. Hungary defined the obligation not to cause significant harm to another watercourse State, as set out in principle 21 of the Stockholm Declaration

causer un dommage à l'environnement d'un autre Etat] et la condamnation de la Slovaquie pour le détournement unilatéral du cours d'eau international se fait pour violation d'une autre règle, celle de l'usage équitable et raisonnable'.

[92] On the importance of the judgment for the principle of reasonable and equitable utilisation of international watercourses, see Charles B. Bourne, 'The *Case concerning the Gabčíkovo-Nagymaros Project*: An Important Milestone in International Water Law' (1997) 8 *YI Env. L* 6. Even before the *Gabčíkovo-Nagymaros* judgment was issued, the law of international watercourses was expected to be of major significance: see Aaron Schwabach, 'Diverting the Danube: The Gabčíkovo-Nagymaros Dispute and International Freshwater Law' (1996) 14 *Berkeley JIL* 290.

[93] *Gabčíkovo-Nagymaros Project*, judgment, cit., at 41, para. 53 (emphasis added). On the other hand, references such as that to mankind have been considered from the perspective of the conflict between anthropocentric and ecological approach to protection of the environment: see Canelas de Castro, 'The Judgment', cit., 23-24.

[94] See *supra*, Section 2.2.1.b.

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or principle 2 of the Rio Declaration, as 'one of the most essential customary rules of the law of territorial sovereignty'.[95]

On the contrary, the overall approach of the Court to prevention of environmental harm seems to be more akin to the position adopted by Slovakia. Having classified principle 21 of the Stockholm Declaration as a principle providing guidance ('directed at reminding States of the importance of respect for the environment of other States'), Slovakia concluded that '[i]ts application to particular circumstances remains to be defined in the specific case'.[96] Accordingly, '[m]uch more relevant than this *abstract statement of principle* is specific law of damage that has been developed in the context of international watercourses', and Slovakia itself thus referred to the principle of the equitable and reasonable utilisation of an international watercourse.[97] In sum, it considered the general international law on the protection of the environment to play an ancillary role in the settlement of the dispute.[98]

5.2.2. *The Subsequent Change of Approach and Its Contingency: The Assertion of the Customary Status of Prevention of Environmental Harm in Context*

5.2.2.a. *The 2010 Judgment in the* Pulp Mills *Case*

Whereas the 1996 advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons* and the 1997 judgment in the *Gabčíkovo-Nagymaros* case show that, initially, prevention of environmental harm came into consideration as a general principle based on a community interest, the 2010 judgment in the *Pulp Mills* case seems to point to a change in the approach of the International Court of Justice. As mentioned above, the Court plainly referred to the

[95] Counter-Memorial of the Republic of Hungary, vol. 1, 5 December 1994, paras. 6.34-6.35. In Hungary's view, the linkage between territorial sovereignty and prevention of environmental harm was also apparent from the oral proceedings: see the verbatim record of the public sitting of 3 March 1997, at 41-42, para. 22.

[96] Counter-Memorial Submitted by the Slovak Republic, vol. 1, 5 December 1994, para. 11.32.

[97] Ibid., paras. 11.33-11.35 (emphasis added).

[98] According to Slovakia, whereas 'many of the instruments cited by Hungary as evidence of rules of international environmental law are non-binding statements and declarations', i.e., soft law, 'the relevant rights and obligations of the Parties derive not from the general international law of the environment by from the 1977 Treaty' on the Gabčíkovo-Nagymaros System: see the Reply Submitted by the Slovak Republic, vol. 1, 20 June 1995, para. 3.14.

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'principle of prevention' as a 'customary rule'. Various authors have thus argued that this resolved any ambiguity in the Court's position, hence excluding any further debate on the status of prevention of environmental harm in international law.[99]

Due to its importance, the relevant passage is worth quoting at length, including the precedents cited. It reads as follows:

> The Court points out that the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory. It is 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States' (*Corfu Channel (United Kingdom* v. *Albania), Merits, Judgment, I.C.J. Reports 1949*, p. 22). A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State. This Court has established that this obligation 'is now part of the corpus of international law relating to the environment' (*Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, p. 242, para. 29).[100]

[99] In the opinion of Sandrine Maljean-Dubois, Vanessa Richard, 'Pulp Mills on the River Uruguay (Argentina v. Uruguay), 2006', in Paula Wojcikiewicz Almeida, Jean-Marc Sorel (eds.), *Latin America and the International Court of Justice. Contributions to International Law* (London/New York: Routledge 2017), 309, at 315, '[t]he Court here refers to the expression ("is now part of") employed in its 1996 Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons* and repeated in its 1997 *Gabčíkovo-Nagymaros* judgment […]. Its scope had however remained vague in 1996 and 1997, probably voluntarily. It is henceforth clearly established as a customary obligation'. In a similar vein, Duvic-Paoli, *The Prevention Principle*, cit., at 140-141, observes that, in the *Pulp Mills* judgment, 'the Court confirmed the customary nature of prevention and put an end to any uncertainty that might have been left regarding its status' (footnotes omitted). Irrespective of any previous ambiguity, an acknowledgement of the customary status of prevention of environmental harm has been found in the words of the Court: see Elisa Ruozzi, 'Il complesso bilanciamento tra interessi economici degli Stati e tutela dell'ambiente naturale: la sentenza della Corte internazionale di giustizia relativa alle cartiere sul fiume Uruguay' (2010) 25 *Riv. giur. amb.* 1025, at 1036-1037; Paula María Vernet, 'Pulp Mills on the River Uruguay (Argentina v Uruguay)', in *MPEPIL online* (2010), para. 75; Duvic-Paoli, Viñuales, 'Principle 2. Prevention', cit., at 121; Dupuy, Viñuales, *International Environmental Law*, cit., at 68.

[100] *Pulp Mills on the River Uruguay*, judgment, cit., at 55-56, para. 101. In the authoritative French text: 'La Cour observe que le principe de prévention, en tant que règle coutumière, trouve son origine dans la diligence requise («due diligence») de l'Etat sur son territoire. Il s'agit de «l'obligation pour tout Etat, de ne pas laisser utiliser son territoire aux fins d'actes contraires aux droits d'autres Etats» […]. En effet, l'Etat est tenu de mettre en œuvre tous les moyens à sa disposition pour éviter que les activités qui se déroulent sur son territoire, ou sur tout espace relevant de

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Despite the explicit definition of the 'principle of prevention' as a customary rule, it is argued here that, once seen in context, the passage quoted suggests that it is premised on the *specific* relevance of territorial sovereignty to the case and, in particular, to the part of the judgment in which the above extract is to be found. Thus, one ought to be cautious in simply considering the same definition to be true of prevention of environmental harm as based on a community interest.

The anchorage of the classification of the principle of prevention as a customary rule in mutual respect for territorial sovereignty results from the simple fact that the above excerpt is concerned with the sovereign rights of Argentina over the river Uruguay as a shared natural resource.[101] In particular, that classification may be found in the part of the judgment dealing with the obligation to inform CARU pursuant to Article 7 of the 1975 Statute of the River Uruguay. According to that provision, the Party planning to carry out 'works which are liable to affect navigation, the regime of the river or the quality of its waters' is under an obligation to notify CARU, which must then determine 'whether the plan might cause significant damage' not to the environment, but 'to the other party' in general.[102]

What lies at the heart of the provision is not protection of the environment per se: the relevant damage results from the impairment by one party of the other party' rights to utilise a shared natural resource. Whereas the risk of environmental harm may be deemed to be included in the risk of adverse effects on the quality of waters, which is mentioned alongside navigation and the regime of the river, it appears to have been considered insofar as it could impact upon the use of the river. The Court itself stressed that the obligation to inform CARU 'constitutes the first stage in the procedural mechanism as a whole which allows the two parties to achieve the object of the 1975 Statute, namely, "the optimum and rational utilization of

sa juridiction, ne causent un préjudice sensible à l'environnement d'un autre Etat. La Cour a établi que cette obligation «fait maintenant partie du corps de règles du droit international de l'environnement» […]'.

[101] This might explain why, in some studies focusing on the importance of the *Pulp Mills* judgment for international environmental law, the passage examined has not even been mentioned, as attention has been paid to those parts of the decision that relate to other issues relevant to international protection of the environment, including sustainable development and environmental impact assessment. See Xiaoqin Zhu, Jinlong He, 'International Court of Justice's Impact on International Environmental Law: Focusing on the Pulp Mills Case' (2012) 23 *YI Env. L* 106; and Juste-Ruiz, 'The International Court of Justice', cit., at 395-398.

[102] *Pulp Mills on the River Uruguay*, judgment, cit., at 50, para. 80.

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the River Uruguay"'.[103] Indeed, that first stage would not apply to 'activities which would appear to cause damage only to the State in whose territory they are carried out',[104] even if serious harm to the environment were at stake.

In light of the link of the obligation to inform with the rights of the riparian State in general, rather than with prevention of environmental harm, it is easy to understand why the Court cited the judgment in the *Corfu Channel* case as a precedent. In that judgment, the Court had specifically inferred an obligation *to provide information* from, inter alia, mutual respect for territorial sovereignty, viz. 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States'. As stressed above, the right concerned was the right of innocent passage through Albanian waters, and environmental damage did not come into consideration.[105]

On the other hand, the reference made in the above passage from the *Pulp Mills* judgment to the dictum contained in the advisory opinion on the *Legality of Threat or Use of Nuclear Weapons* is puzzling. In that opinion, as pointed out above, the Court had referred to the principle of prevention of environmental harm as based on a collective interest, i.e., protection of the environment per se. In addition to harm to the environment of other States, harm to the environment of areas beyond national control was also mentioned. Overall, protection of the environment was regarded as an interest of the whole mankind: it was in no way tied to mutual respect for territorial sovereignty.[106]

Therefore, the citation of the *Threat or Use of Nuclear Weapons* precedent appears to be somewhat 'artificial'. Of course, one might simply contend that the Court linked mutual respect for territorial sovereignty to prevention of environmental harm because it could not discern any fundamental distinction between them.[107] As illus-

[103] Ibid., at 54, para. 94.

[104] Ibid., at 56, para. 102.

[105] See *supra*, Section 2.2.1.b.

[106] See *supra*, Section 5.2.1.a.

[107] According to Nina Mileva, Marina Fortuna, 'Environmental Protection as an Object of and Tool for Evolutionary Interpretation', in Georges Abi-Saab et al. (eds.), *Evolutionary Interpretation and International Law* (Oxford/Portland: Hart 2019), 123, at 127, 'the Court traced the evolution of the principle of prevention from its origin in *Corfu Channel* as a due diligence requirement to its inclusion of environmental considerations in the *Nuclear Weapons* Advisory Opinion and the present case'. In a similar vein, see Karine Bannelier, 'Foundational Judgment or Constructive Myth? The Court's Decision as a Precursor to International En-

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trated above, prevention of environmental harm has mostly been regarded within legal scholarship as an environmentally-focused development of the no-harm rule.[108]

However, it seems that the Court itself was aware of the difference between the principle of prevention of environmental harm, as first affirmed in the advisory opinion, and the obligation at issue in the *Pulp Mills* case. Otherwise, it would be difficult to understand why the Court felt any need to rephrase the dictum from the opinion. According to the Court's reconstruction in the *Pulp Mills* judgment, it had previously found, in the advisory opinion, that international environmental law included the State's obligation 'to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State'. Nonetheless, that was *not* the 'obligation' that, in the advisory opinion, the Court had deemed to form part of the corpus of international law pertaining to the environment. In the opinion, it had referred to a different 'obligation', namely that 'of States to ensure that activities within their jurisdiction or control respect the environment of other States *or areas beyond national control*', thus including harm to the environment of international areas too.

The reformulation of the *Nuclear Weapons* dictum stands out against the verbatim reproduction of 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States' from the *Corfu Channel* judgment. This contrast further suggests that the passage in the *Pulp Mills* judgment has more in common with the dictum in the *Corfu Channel* judgment than with the passage in the opinion on the *Threat or Use of Nuclear Weapons*.

Arguably, the advisory opinion was cited in addition to the *Corfu Channel* judgment as a reference to a more recent precedent dealing with transboundary harm. After all, the Court asserted the customary status of the principle of prevention without carrying out any investigation into State practice and *opinio juris*, in stark contrast with the two-element approach that – at least purportedly – it has repeatedly followed.[109] In this regard, it is noteworthy that the International Law Commission tellingly mentioned the passage quoted from the *Pulp Mills* judgment as an instance of the Court's recourse to a 'measure

vironmental Law', in Karine Bannelier, Theodore Christakis and Sarah Heathcote (eds.), *The ICJ and the Development of International Law: The Lasting Impact of the* Corfu Channel *Case* (London/New York: Routledge 2012), 242, at 248-250.

[108] See *supra*, Section 2.2.1.

[109] See *supra*, Section 1.3.3.

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of deduction', which differed from the inductive nature of the two-element approach to determination of customary international law.[110]

It should be admitted, however, that the reference to the customary nature of the principle of prevention was made *obiter* and only in passing. The Court had from the outset stated that only the treaty rules stemming from the 1975 Statute of the River Uruguay constituted the applicable law in the *Pulp Mills* case,[111] with the role of general international law being relegated to interpretation.[112] In such a scenario, the Court might have deemed it unnecessary to dwell on the analysis of relevant practice and *opinio juris*.

If one considers the passage from the *Pulp Mills* judgment in broader context, one gains the impression confirmed that the Court itself was not entirely persuaded of the equivalence between the principle of prevention *qua* customary rule, as stated in that passage, and the principle of prevention of environmental harm as affirmed in the advisory opinion on the *Threat or Use of Nuclear Weapons*. In this regard, the part of the judgment relating to the obligation to prevent pollution and to preserve the aquatic environment laid down by Article 41 of the 1975 Statute of the River Uruguay is worth considering. Whereas that provision is included in a treaty generally aimed at ensuring the optimum and rational utilisation of a shared natural resource, it is specifically based on protection of the environment per se, as the absence of any reference to different interests, including sovereign rights to use the river Uruguay, clearly shows.[113]

[110] See the Draft Conclusions on Identification of Customary International Law, with Commentaries, in Report of the International Law Commission on the Work of Its Seventieth Session (2018), UN Doc. A/73/10, 122, at 126, para. 5, note 676.

[111] *Pulp Mills on the River Uruguay*, judgment, cit., at 40-46, paras. 48-63, especially at 41, para. 52 ('Only those claims advanced by Argentina which are based on the provisions of the 1975 Statute [of the River Uruguay] fall within the Court's jurisdiction *ratione materiae* under the compromissory clause').

[112] Ibid., at 46-47, paras. 64-66. Indeed, the Court mentioned the rules of customary international law on treaty interpretation, as codified in Art. 31 VCLT. In this respect, it also referred to the rules of general international law that must be taken into account as 'relevant rules of international law applicable in the relations between the parties', but made it clear that this would have 'no bearing on the scope of the jurisdiction conferred on the Court […] which remains confined to disputes concerning the interpretation or application of the Statute' (ibid., at 46-47, para. 66).

[113] According to Art. 41, 'the parties undertake: *(a)* to protect and preserve the aquatic environment and, in particular, to prevent its pollution, by prescribing appropriate rules and [adopting appropriate] measures in accordance with applicable international agreements and in keeping, where relevant, with the guidelines and recommendations of international technical bodies; *(b)* not to reduce in their respective legal systems: 1. the technical requirements in force for preventing water

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It is remarkable that, with respect to such an obligation, the Court refrained from making any reference whatsoever to the previous paragraph of that very same judgment where it had defined the principle of prevention as a customary rule.[114] Conversely, it chose to quote the dictum from the advisory opinion on the *Threat or Use of Nuclear Weapons*, before assessing whether Uruguay had violated the obligation to prevent pollution under Article 41 of the River Uruguay Statute.[115] The Court did not reformulate that dictum, as it had by contrast done in relation to the obligation to inform CARU.[116]

The absence of any references to the dictum from the *Corfu Channel* judgment is also revealing in that it further marks the dif-

pollution, and 2. the severity of the penalties established for violations; *(c)* to inform one another of any rules which they plan to prescribe with regard to water pollution in order to establish equivalent rules in their respective legal systems'.

[114] Indeed, this apparent inconsistency, which on closer examination may be overcome by drawing a distinction between prevention as based in mutual respect for territorial sovereignty and prevention of harm to the environment per se, has raised perplexities among commentators: see Dire Tladi, 'The Principles of Sustainable Development in the Case concerning *Pulp Mills on the River Uruguay*', in Marie-Claire Cordonier Segger and Christopher G. Weeramantry (eds.), *Sustainable Development Principles in the Decisions of International Courts and Tribunals 1992-2012* (London/New York: Routledge 2017), 242, at 250 ('the implications of this principle [namely, the principle of prevention], which the Court accepts to be a principle of customary international law, are not factored in at all into the interpretation of the substantive obligations under the 1975 Treaty').

[115] *Pulp Mills on the River Uruguay*, judgment, cit., at 78, para. 193.

[116] In the *Pulp Mills* case, the Court had already quoted the passage from the advisory opinion on the *Threat or Use of Nuclear Weapons* concerning prevention of environmental harm in the order on provisional measures: *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, *Provisional Measures*, order of 13 July 2006, *I.C.J. Reports 2006*, 113, at 132, para. 72. The Court restated it in recalling the terms in which it had taken the opportunity, in the past, to stress 'the great significance it attaches to respect for the environment' (ibid.). It did not elaborate any further on prevention of environmental harm under general international law. Indeed, the passage from the advisory opinion is quoted in connection with the rights claimed by Argentina, in its request for provisional measures, on the exclusive basis of the 1975 Statute of the River Uruguay (ibid., at 129, para. 63), i.e., in connection with treaty rights. In particular, the Court was required to assess the right correlative to the 'obligation not to cause environmental pollution or consequential economic and social harm, including losses to tourism', as allegedly stemming from the 1975 Statute (ibid., at 130, para. 65). The Court eventually held that Argentina had failed to demonstrate the existence of an imminent threat of irreparable damage to the environment as a result of the decision by Uruguay to authorise the construction of the mills or their construction itself (ibid., at 132, paras. 73-75).

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ference between the passage of the *Pulp Mills* judgment in which the principle of prevention is classified as a customary rule and the consideration of the principle of prevention of harm to the environment per se. Indeed, after quoting the dictum from the opinion on the *Threat or Use of Nuclear Weapons*, the Court also restated the passage from the *Gabčíkovo-Nagymaros* judgment in which prevention of environmental harm had been applied as a guiding principle requiring the Parties to look afresh at the impacts of the barrage system on the environment.[117]

In conclusion, the definition of the principle of prevention as a customary rule in the *Pulp Mills* judgment appears to have rested upon the relevance of mutual respect for territorial sovereignty. Accordingly, insofar as prevention of environmental harm is founded on protection of the environment per se, as a community interest, it may well be that it amounts to a general principle of international law performing a guiding function, rather than an obligation established by a customary rule. The *Pulp Mills* judgment certainly does not preclude such a reconstruction. On the contrary, despite some ambiguity, the Court itself seems to have prudently avoided treating prevention of environmental harm based on a community interest on the same footing as prevention based on mutual respect for territorial sovereignty.

5.2.2.b. *The 2015 Judgment in the* Certain Activities *and* Construction of a Road *Joined Cases*

The passage analysed above from the *Pulp Mills* judgment, in which the principle of prevention is classified as a customary rule, was subsequently referred to by the Court in the 2015 judgment in the joined cases concerning *Certain Activities Carried out by Nicaragua in the Border Area* and *Construction of a Road in Costa Rica along the San Juan River*. In contrast with the position of two authors,[118] it is submitted here that that reference cannot be regarded as confirmation of the customary status of the purported obligation to prevent environmental harm, at least insofar as prevention of harm is related to protection of the environment per se *qua* community interest. In the *Certain Activities* judgment, just as in the *Pulp Mills*

[117] *Pulp Mills on the River Uruguay*, judgment, cit., at 78-79, para. 194. The relevant part of the *Gabčíkovo-Nagymaros* judgment was examined *supra*, Section 5.2.1.b.

[118] See Dupuy, Viñuales, *International Environmental Law*, cit., at 68.

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case, prevention of environmental harm came to the fore in connection with sovereign rights, including the utilisation of a shared natural resource.

The Court relied on the *Pulp Mills* precedent when dealing with the 'Substantive Obligations concerning Transboundary Harm', namely the allegation by Costa Rica that Nicaragua had breached 'the obligation not to dredge, divert or alter the course of the San Juan River, if this causes damage to the Costa Rican territory (including the Colorado River), its environment, or to Costa Rican rights under the 1888 Cleveland Award'.[119] This Award was rendered in order to establish the validity and clarify the interpretation of the 1858 Treaty of Limits, which provides that the border between Nicaragua and Costa Rica runs along the Costa Rican right bank of the San Juan River, with Nicaragua having 'exclusive *dominium* and *imperium*' over the waters of the river and Costa Rica having the right of free navigation for commercial purposes.[120] As regards that allegation by Costa Rica, the paragraphs from the Cleveland Award that were relevant were those dealing with the conditions that allow Nicaragua to conduct improvement works of the San Juan River as well as the conditions that allow Costa Rica to prevent Nicaragua from diverting the waters of the San Juan River.[121]

According to Costa Rica, the rights and obligations of Nicaragua stemming from both the 1858 Treaty of Limits and the 1888 Cleveland Award had to be interpreted in light of the current principles on protection of the environment. It also asserted that neither the Treaty nor the Award could '"override the application of environmental obligations under general principles of law and under international treaties" requiring States not to cause significant transboundary harm'.[122]

It was in this context that the Court mentioned the *Pulp Mills* judgment, holding that, 'under customary international law, "[a] State is … obliged to use all the means at its disposal in order to avoid

[119] *Certain Activities* and *Construction of a Road*, judgment, cit., at 710, para. 114. The *Award in Regard to the Validity of the Treaty of Limits between Costa Rica and Nicaragua of 15 July 1858* (Clevaland Award), decision of 22 March 1888, is available at 28 *RIAA* 189.

[120] *Certain Activities* and *Construction of a Road*, judgment, cit., at 693, paras. 59-60.

[121] Ibid., at 711, para. 116. See respectively paras. 6 and 9 of the Cleveland Award, cit., at 210.

[122] *Certain Activities* and *Construction of a Road*, judgment, cit., at 711, para. 117.

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activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State"'.[123] Although the Court raised the question concerning the relationship between that obligation and the 1858 Treaty of Limits, as interpreted by the Cleveland Award, it remained an open question in the event, as the Court found that the available evidence did 'not show that Nicaragua [had] breached its obligations by engaging in the dredging activities in the Lower San Juan River'.[124]

The key point here is that, when assessing the evidence, the Court considered not only harm to the environment, but also more broadly *any harm to Costa Rica* resulting from the Nicaraguan dredging programme. It took account of the effects of the dredging programme on the flows of the Colorado River in Costa Rica as well as on navigation.[125] Accordingly, the Court concluded in general terms that 'the diversion of water due to the dredging of the Lower San Juan River [was] far from […] causing harm *to Costa Rica*',[126] rather than to its environment in particular. In the Court's opinion, there was no 'convincing evidence that sediments dredged from the river were deposited on [the Costa Rican] right bank'.[127] Indeed, the Court itself primarily referred to 'harm to Costa Rica's territory', rather than specifically mentioning the environment.[128]

The alleged harm caused by Nicaragua's dredging programme to Costa Rican wetlands was the only possible instance of harm to the environment per se at stake. Importantly, it seems that the obligations applicable to that harm resulted not from general international law, including the purported customary obligation to prevent environmental harm, but rather from treaties, namely the 1971 Ramsar Convention on Wetlands.[129] Indeed, treaties had been invoked in the

[123] Ibid., at 711-712, para. 118.

[124] Ibid., para. 120.

[125] Ibid., para. 119. Accordingly, the usage of the expression 'Alleged Violations of International Environmental Law' as the overall heading encompassing the substantive obligations relating to transboundary harm, in addition to procedural and other substantive obligations, was perhaps misleading, as it implies the relevance of international environmental law only (ibid., at 705). Conversely, it is self-evident that the harm to the morphology of the Colorado River, viz. its flows, and to navigation cannot be linked to protection of the environment.

[126] Ibid., at 712, para. 119 (emphasis added).

[127] Ibid.

[128] Ibid., at 705, para. 100, and at 712, para. 118.

[129] Convention on Wetlands of International Importance Especially as Waterfowl Habitat, adopted at Ramsar on 2 February 1971 and entered into force on 21 December 1975, 996 *UNTS* 245.

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first instance with regard to protection of the environment. At any rate, the Court also found no conclusive evidence of any alleged harm to wetlands.[130]

On account of the above, the reference to the passage of the *Pulp Mills* judgment dealing with the State's obligation to prevent harm to the environment of another State could hardly be related to protection of the environment per se. Instead, it is mutual respect for territorial sovereignty that appears to have actually come to prominence in connection with Nicaragua's dredging activities. Environmental harm was just one of the possible types of harm to another State's territory.

In this regard, the Court's use of the expression, mentioned above, 'Substantive Obligations concerning Transboundary Harm',[131] with 'Obligations' in the plural, should not be overlooked. The Court may perhaps have had in mind a variety of norms relevant to prevention of transboundary harm, ranging from conventional to customary norms, founded on bilateral but possibly collective interests as well. The Court simply did not have the opportunity to state and clarify any of them having found no evidence of transboundary harm at all.[132] Thus it is not inconsistent with the approach of the Court to anchor the reference to the *Pulp Mills* judgment in mutual respect for territorial sovereignty.

Another part of the *Certain Activities* judgment confirms that, when dealing with prevention of transboundary harm under general international law, the Court was not specifically considering protection of the environment per se. In assessing the allegation by Nicaragua that Costa Rica had breached substantive obligations of customary international law by building a road along the San Juan River, the Court examined the evidence relating to different types of transboundary harm, including the increase in the river's sediment concentrations,[133] the alleged harm to the river's morphology,

[130] *Certain Activities* and *Construction of a Road*, judgment, cit., at 709, para. 109, and at 712, para. 119.

[131] Ibid., at 710.

[132] In the words of Jacob Kats Cogan, 'Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua); Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)' (2016) 110 *AJIL* 320, at 323: 'With regard to Nicaragua's substantive obligations not to cause transboundary harm, the Court sidestepped having to elaborate on the applicable legal regime that governed this case'.

[133] *Certain Activities* and *Construction of a Road*, judgment, cit., at 729-731, paras. 188-196.

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to navigation and to Nicaraguan dredging programme,[134] as well as the alleged harm to the health of riparian communities and tourism,[135] alongside environmental harm *stricto sensu*, viz. harm to water quality and the aquatic ecosystem.[136] Indeed, 'in Nicaragua's view, Costa Rica breached the obligation under customary international law not to cause significant transboundary harm *to Nicaragua*',[137] i.e., not only to its environment, and the Court held that it would 'apply the relevant rules of international law' – in the plural – to the facts established by it.[138]

Be that as it may, also with respect to the construction of a road by Costa Rica along the San Juan River, the Court concluded that no significant transboundary harm had been proved. Hence, it did not have the opportunity to identify the relevant applicable law.[139] In the end, the Court dismissed 'Nicaragua's claim that Costa Rica breached its substantive obligations' – in the plural, again – 'under customary international law concerning the transboundary harm' – without any references to the environment.[140]

Since the Court refrained from clarifying the substantive obligations relevant to transboundary harm in the absence of any evidence concerning it, which is true of both of the two joined cases,[141] one

[134] Ibid., at 732-734, paras. 197-207.

[135] Ibid., at 736, paras. 214-216.

[136] Ibid., at 734-736, paras. 208-213.

[137] Ibid., at 726, para. 174 (emphasis added).

[138] Ibid., para. 176.

[139] As observed by Cogan, 'Certain Activities', cit., at 325, '[w]ithout elaborating on the content of a state's substantive obligations, the Court rejected Nicaragua's claim'.

[140] *Certain Activities* and *Construction of a Road*, judgment, cit., at 737, para. 217.

[141] Such an outcome might perhaps be due to the fact that, as observed by Yoshifumi Tanaka, '*Costa Rica v. Nicaragua* and *Nicaragua v. Costa Rica*: Some Reflections on the Obligation to Conduct an Environmental Impact Assessment' (2017) 26 *RECIEL* 91, at 96-97, it may prove difficult for the Court 'to ascertain scientific evidence submitted by the parties […] since the disputing parties often submit contrasting data on environmental harm': a suggestion is therefore made to 'entrust an expert to evaluate scientific evidence in accordance with Article 50 of the ICJ Statute', although 'it is rare for the Court to invoke its power under this provision'. On the general reluctance of international courts and tribunals to appoint a scientific expert, and for an analysis of the possible reasons behind it, see Chiara Ragni, *Scienza, diritto e giustizia internazionale* (Milano: Giuffré Francis Lefebvre 2020), at 189-201. For one significant exception in the *South China Sea Arbitration*, and on the use of scientific experts within the WTO dispute settlement mechanism and in the work of the UN Compensation Commission, see Katalin

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may observe some overlap between prevention of transboundary harm as based on mutual respect for territorial sovereignty and prevention of harm to the environment per se, as a community interest.

First, when citing the passage from the *Pulp Mills* judgment concerning the customary status of the principle of prevention, the Court also referred to the dictum from the advisory opinion on the *Threat or Use of Nuclear Weapons*, albeit only as an additional precedent.[142] Thus, once again, the Court failed to appreciate that, in the advisory opinion on the *Threat or Use of Nuclear Weapons*, prevention of environmental harm was founded on protection of the environment per se. By contrast, as illustrated above, in the *Pulp Mills* judgment prevention of environmental harm was anchored in mutual respect for territorial sovereignty.[143]

Secondly, in another point of the *Certain Activities* judgment in which the Court built on the *Pulp Mills* precedent, prevention of environmental harm appears to have operated as a general principle,

Sulyok, *Science and Judicial Reasoning. The Legitimacy of International Environmental Adjudication* (Cambridge: Cambridge University Press 2021), at 284-288.

[142] *Certain Activities* and *Construction of a Road*, judgment, cit., at 711-712, para. 118.

[143] In the *Construction of a Road* case, the Court had already shown a lack of sensitivity to such a distinction when ruling on the request by Nicaragua for the order of provisional measures. In the relevant order, the Court quoted the passage from the *Threat or Use of Nuclear Weapons* advisory opinion concerning prevention of environmental harm in connection with the claimed rights of territorial sovereignty and integrity invoked: see *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua* v. *Costa Rica)*, *Provisional Measures*, order of 12 December 2013, *I.C.J. Reports 2013*, 398, at 403, para. 19. Specifically, as Nicaragua had also invoked the right to be free from transboundary harm – in general, and not from transboundary harm *to the environment* in particular – the Court observed that 'the claimed right to be free from transboundary harm is the principal right underpinning Nicaragua's request and is derived from the right of a State to sovereignty and territorial integrity' (ibid.). That being so, the quotation of the dictum from the opinion on the *Threat or Use of Nuclear Weapons* appears to be unwarranted. This is even more so considering that Nicaragua had not invoked any substantive environmental rights: leaving aside the rights of territorial sovereignty and integrity and the right to be free from transboundary harm, the right to receive a transboundary environmental impact assessment from Costa Rica was claimed (ibid., para. 17). Be that as it may, once prevention of environmental harm has been linked to the rights of territorial sovereignty and integrity, it is little surprise that the Court held that a right correlative to the States' obligation 'to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control', as stated in the *Threat or Use of Nuclear Weapons* opinion, was 'plausible' (ibid., para. 19).

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and thus in a way consistent with the approach adopted by the Court in the advisory opinion on the *Threat or Use of Nuclear Weapons*. When examining whether Nicaragua had breached the procedural obligation to carry out an environmental impact assessment of its dredging works, the Court quoted the passage from the *Pulp Mills* judgment concerning the customary status of prevention of environmental harm, going on to state immediately afterwards that:

> *to fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm*, a State must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is a risk of significant transboundary harm, which would trigger the requirement to carry out an environmental impact assessment.[144]

In this extract, the Court seems to allude to the obligation to carry out an environmental impact assessment as a rule aimed at implementing prevention of harm to the environment, *and hence as a rule embodying prevention of environmental harm as a principle*.[145] Even though it is hard to draw a sharp distinction between the aims of a rule and its underlying principles, the reference to prevention of environmental harm as something 'to fulfil' makes it more akin to a principle rather than a rule.[146] That being so, the Court should

[144] *Certain Activities* and *Construction of a Road*, judgment, cit., at 706-707, para. 104 (emphasis added). In the authoritative French text: 'afin de s'acquitter de l'obligation qui lui incombe de faire preuve de la diligence requise en vue de prévenir les dommages environnementaux transfrontières importants, un Etat doit, avant d'entreprendre une activité pouvant avoir un impact préjudiciable sur l'environnement d'un autre Etat, vérifier s'il existe un risque de dommage transfrontière important, ce qui déclencherait l'obligation de réaliser une évaluation de l'impact sur l'environnement'.

[145] Altough this is certainly implied by the quoted passage, the issue of the relationship between prevention of environmental harm and the obligation to conduct an environmental impact assessment will be addressed in greater detail *infra*, Section 6.2.3.

[146] By contrast, Yann Kerbrat, Sandrine Maljean-Dubois, 'La contribution en demi-teinte de la CIJ au droit international de l'environnement dans les affaires Costa Rica-Nicaragua' (2018) 145 *Journ. dr. int.* 1133, at 1136-1139, use the image of Russian dolls to describe the relationship between due diligence, prevention of transboundary environmental harm (defined as 'le socle'), and other 'secondary' obligations (or 'corollaries'), namely the obligation to conduct an environmental impact assessment and the obligations to notify and consult, in the *Certain Activities* judgment. Evocative as it may be, this image seemingly fails to explain why certain obligations 'contain' others, when they are all regarded as customary rules on an

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perhaps have quoted the dictum from the advisory opinion on the *Threat or Use of Nuclear Weapons*, instead of the passage from the *Pulp Mills* judgment. It chose to mention the latter probably because, in accordance with the circumstances at hand, it referred to the obligation to carry out an environmental impact assessment solely with regard to the risk of harm to the environment of another State, and not to the environment of areas beyond the limits of national jurisdiction.

5.3. *The Operation of Prevention of Environmental Harm as a General Principle in Arbitral Proceedings*

5.3.1. *The 'Considerations of Environmental Protection' in the* Arbitration regarding the Iron Rhine Railway

Only five years before the *Pulp Mills* judgment and the – circumstantial – assertion by the International Court of Justice of the customary status of the principle of prevention, an Arbitral Tribunal set up under the auspices of the Permanent Court of Arbitration relied on prevention of environmental harm as a general principle of international law in the 2005 award in the *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* between Belgium and the Netherlands.[147] In ascribing an essentially guiding value to prevention of environmental harm, the Tribunal followed the approach adopted by the International Court of Justice in the advisory opinion on the *Threat or Use of Nuclear Weapons* and the judgment in the *Gabčíkovo-Nagymaros* case, which were cited as precedents.

The dispute at the heart of the *Iron Rhine* arbitration concerned the use, restoration, adaptation and modernisation of the historical route of the Iron Rhine on Dutch territory. The origins of the railway date back to the separation of Belgium from the Netherlands. Its construction, which was completed in 1879, was founded on the transit right conferred on Belgium by Article XII of the 1839 Treaty between Belgium and the Netherlands relative to the Separation of their Respective Territories. With regard to the reactivation of the railway, the Arbitral Tribunal was requested to answer three questions, viz. to what extent Dutch law and any decision-making power based on it was applicable; to what extent Belgium had the right to

equal footing. The issue is related to the problem of the content of prevention of environmental harm, which will be addressed specifically *infra*, Chapter 6.

[147] PCA, *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* between Belgium and the Netherlands, award of 24 May 2005, 27 *RIAA* 35.

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perform or commission work and to establish plans, specifications and procedures according to Belgian law and any decision-making power based on it; and to what extent the cost items and financial risks had to be borne by Belgium or by the Netherlands.

Whilst it is plainly apparent that environmental issues were not in the foreground of the case, they emerged all the same, and attention will be focused on them below. In particular, a problem arose concerning the adverse effects on the environment of the reactivation of the Iron Rhine, also on account of the planned increase in the intensity of its use. The Tribunal examined the Netherlands' national environmental legislation and concluded that the measures envisaged until that time were not as such as to amount 'to a denial of Belgium's transit right or render the exercise of the right unreasonably difficult'.[148] As regards the environmental legislation of the then European Community, the Tribunal considered it unnecessary to interpret the pertinent acts, including specifically the Habitat Directive. Thus, on the environmental front too, the Tribunal held that the dispute fell outside the scope of Article 292 of the Treaty establishing the European Community (now Article 344 TFEU), which precluded Member States from submitting any dispute concerning the interpretation or application of the Treaty to any method of settlement other than those provided for in the Treaty.[149]

The Tribunal also looked to international environmental law when explaining how it would interpret the aforementioned 1839 Treaty of Separation and the 1873 Treaty providing for the construction of the Iron Rhine. In accordance with the systemic approach to treaty interpretation under Article 31(3)(c) of the Vienna Convention on the Law of Treaties, under which account is to be taken of 'any relevant rules of international law applicable in the relations between the parties', the Tribunal held that 'international environmental law ha[d] relevance to the relations between the Parties', including general international law.[150]

[148] Ibid., at 111, para. 205.

[149] Ibid., at 90-91, para. 137. That holding has attracted some criticism within scholarly writings: see Nikolaos Lavranos, 'The *Mox Plant* and *Ijzeren Rijn* Disputes: Which Court Is the Supreme Arbiter?' (2006) 19 *LJIL* 223, at 227-231; and Colin Warbrick, 'The "Iron Rhine" ("Ijzeren Rijn") Arbitration (Belgium-Netherlands)', in *The Iron Rhine (*Ijzeren Rijn*) Arbitration (Belgium-Netherlands) Award of 2005. With an Introduction by Colin Warbrick* (The Hague: Asser Press 2007), 1, at 7-15.

[150] *Arbitration regarding the Iron Rhine*, award, cit., at 66, para. 58. However, doubts have been raised as to whether the Tribunal's interpretation of the 1839 Treaty of Separation really does fall within the scope of systemic integration under Art.

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The Tribunal then went on to raise a problem that is central for this study: the dichotomy between rules and principles, namely, between customary rules and general principles of international law. It noted the existence of 'considerable debate as to what, within the field of environmental law, constitutes "rules" or "principles"; what is "soft law"; and which environmental treaty law *or principles* have contributed to the development of customary international law',[151] thus implying a difference between general principles and customary international law. That is remarkable in that the International Court of Justice has by contrast thus far abstained from explicitly addressing that problem in its case law, at least as far as prevention of environmental harm is concerned. Whilst the Arbitral Tribunal refrained from 'entering further into those controversies',[152] the preliminary and plain reference to the underlying issue cannot be ignored when the ensuing line of reasoning of the Tribunal is considered.

It is possible to understand, in light of that premise, the overall prudence of the Arbitral Tribunal when dealing with international protection of the environment. It mostly referred to 'emerging principles' of international environmental law, 'whatever their current status'.[153] They were on the whole said to relate to 'conservation, management, notions of prevention and of sustainable development, and protection for future generations', and said to 'integrate environmental protection into the development process', as reflected by principle 4 of the 1992 Rio Declaration.[154]

Against that prudence, the lack of hesitation by the Tribunal when considering prevention of environmental harm is striking:

> Environmental law and the law on development stand not as alternatives but as mutually reinforcing, integral concepts, which require that where development may cause significant harm to the environment there is a duty to prevent, or at least mitigate, such harm […]. This duty, in the opinion of the Tribunal, has now become *a principle of general international law*.[155]

31(3)(c) VCLT, as it rather seems to be more akin to an evolutionary interpretation: see Warbrick, 'The "Iron Rhine"', cit., at 15-32.

[151] *Arbitration regarding the Iron Rhine*, award, cit., at 66, para. 58 (emphasis added).

[152] Ibid.

[153] Ibid., at 66-67, paras. 58-59.

[154] Ibid.

[155] Ibid., para. 59 (emphasis added).

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As it had in mind the problem of the difference between rules and principles, and between customary rules and general principles, the Tribunal must have pondered the nature of prevention of environmental harm,[156] and eventually defined it as an international law principle.[157]

[156] Within legal scholarship, the classification as 'a principle of general international law' has sometimes been linked to sustainable development rather than to prevention of environmental harm: see Philippe Weckel, 'Cour permanente d'arbitrage, sentence du 24 mai 2005, Chemin de fer du Rhin de fer (Belgique/Pays-Bas)' (2005) 109 *Rev. gén. dr. int. pub.* 715, at 720; Virginie Barral, 'La sentence du Rhin de fer, une nouvelle étape dans la prise en compte du droit de l'environnement par la justice internationale' (2006) 110 *Rev. gén. dr. int. pub.* 647, at 654-657; Christian Djeffal, 'The *Iron Rhine* Case. A Treaty's Journey from Peace to Sustainable Development' (2011) 71 *ZaöRV* 569, at 579-585. In actual fact, some entanglement between sustainable development and prevention of environmental harm is noticeable in the overall approach of the Tribunal (see also Duvic-Paoli, *The Prevention Principle*, cit., at 148). However, the wording of the passage quoted indicates that it is certainly the duty to prevent, or at least mitigate, significant harm to the environment that qualifies as a principle of general international law according to the Tribunal. This has been acknowledged even by those authors who ultimately argue in favour of the alternative construction (see Barral, 'La sentence du Rhin de fer', cit., at 655, '[s]'il est vrai que le Tribunal associe ici le terme de «devoir» à la notion de «prévention» et non «d'intégration», on peut toutefois estimer que c'est bien cette dernière qu'il vise'). Furthermore, if the classification as a principle of general international law were to be linked to sustainable development, it would be at odds with the Tribunal's previous definition of principle 4 of the Rio Declaration, which enshrines sustainable development (or, at any rate, the principle of integration), simply as an 'emerging principle' only a couple of lines above. Therefore, Djeffal, 'The *Iron Rhine* Case', cit., at 582, finds himself admitting that '[i]t is difficult to conceive how the tribunal can talk about sustainable development as an *emerging* principle and at the same time a duty that *has become* a principle of international law' (both emphases in original).

[157] Therefore, the opinion that by the expression 'principle of general international law' the Tribunal alluded to customary international law is unconvincing. It is seemingly based on the *assumption* that prevention of environmental harm amounts to a customary rule. In particular, according to Barral, 'La sentence du Rhin de fer', cit., at 655-657, who refers the classification as a principle of general international law to sustainable development, 'il y a tout lieu de penser que le Tribunal confère un statut coutumier au principe d'intégration […]. En effet, point n'est besoin aux arbitres d'affirmer que, de leur opinion, le devoir de prévention appartient aujourd'hui au droit international général: la Cour internationale de Justice l'avait déjà déclaré' (ibid., at 655). It is difficult to understand why '[s]i leur intention avait été de se référer au seul devoir de prévention, on peut alors supposer que les arbitres se seraient contentés de rappeler le *dictum* de la Cour à cet égard' (ibid., at 655-656), considering also the vagueness of the passage in the International Court of Justice's advisory opinion on the *Threat or Use of Nuclear Weapons* (illustrated *supra*, Section 5.2.1.a). Moreover, it is indeed the case that the expression 'principle of general international law' is broader than 'general principle of international law' (Barral, 'La sentence du Rhin de fer', cit., at 656). However, again, the emphasis

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Furthermore, the reference to 'the environment', without any qualification in terms of relevance for any State jurisdiction, is noteworthy. The expression seemingly alludes to the environment in itself. Accordingly, as submitted in this study, the object of prevention of environmental harm as a general principle of international law appears to lie in protection of the environment per se as a community interest. In fact, the circumstances of the case can only in part account for the reference to the environment in absolute terms.

In particular, the Tribunal held that, whilst international environmental law has mainly developed with regard to the transboundary effects of activities carried out in the territory of one State on the territory of another, it was faced 'with the effect of the exercise of a treaty-guaranteed right of one state in the territory of another state and a possible impact of such exercise on the territory of the latter state'.[158] It hence applied an analogy in order to consider the duty of prevention in the case at issue.[159]

Upon closer consideration however, analogy appears to be unpersuasive. The State carrying out the activity that was likely to cause environmental harm *was not* the one required to take environmental protection measures. Specifically, although adverse environmental effects were likely to be caused by the exercise of Belgium's right of transit through the territory of the Netherlands, it was the Netherlands that was adopting environmental measures, i.e., the State in whose territory the environmental harm was likely to occur. Belgium was simply obliged to 'fund the environmental element of the overall costs of the reactivation' of the Iron Rhine,

placed by the Tribunal on the distinction between customary rules and principles, on the terminological front too, means that the classification at hand cannot be considered as an allusion to customary international law. By that same token, it is difficult to adhere to the 'hybrid' construction advanced by Christian Dominicé, 'The Iron Rhine Arbitration and the Emergence of a Principle of General International Law', in Tafsir Malick Ndiaye and Rüdiger Wolfrum (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes.* Liber Amicorum *Judge Thomas A. Mensah* (Leiden/Boston: Martinus Nijhoff Publishers 2007), 1067, interesting as it may be. In his opinion, the duty to prevent or mitigate significant harm to the environment resulted from the concept of sustainable development and represented an adaptation of the principle of prevention of environmental harm: it was said to constitute a principle of general international law, understood as having a legal status similar to that of customary international law.

[158] *Arbitration regarding the Iron Rhine*, award, cit., at 116, paras. 222-223.

[159] Such an extension 'by analogy' of the scope of prevention of environmental harm has been praised within legal scholarship: see Weckel, 'Cour permanente d'arbitrage', cit., at 720-721; and Duvic-Paoli, *The Prevention Principle*, cit., at 148.

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insofar as it would be integral to the exercise of the right of transit by Belgium.[160]

In this context, the reference by the Tribunal to 'the environment' when defining prevention of significant environmental harm as a principle of international law could hardly have been fortuitous. It is in fact consistent with the conception of prevention of environmental harm as a principle based on a collective interest, namely protection of the environment per se. Such a conception may more convincingly explain the relevance of the principle to the *Iron Rhine* case than analogy. Indeed, while occurring within the territory of one State only, the harm to the environment at stake would affect biological diversity, which is a community interest.[161]

As well as being classified as a principle of general international law, prevention of environmental harm actually performed in the award the guiding function typical of general principles. It is true that, as mentioned above, the Tribunal introduced international environmental law through systemic interpretation, which is likewise relevant to customary international law too.[162] Nonetheless, in the end, prevention of environmental harm performed an inspiring function related to a balancing act, rather than a 'mere' interpretative function. The problem was not to determine the meaning of a term in Article XII of the 1839 Treaty of Separation, nor was the compatibility of Belgium's right of transit with international environmental law at stake. Instead of clarifying the meaning of one or more terms of the treaty, or of harmonising an incongruous treaty rule, prevention of environmental harm led the Tribunal to factor protection of the environment into the search for a balanced allocation of costs for reactivating the Iron Rhine.[163]

The Tribunal held that the principle of prevention of environmental harm 'applies not only in autonomous activities but also in activities undertaken in implementation of specific treaties between the Parties'.[164] In this regard, the Tribunal recalled the point from the

[160] *Arbitration regarding the Iron Rhine*, award, cit., at 117, para. 226.

[161] See *supra*, Section 2.3.4.

[162] See *supra*, Section 3.2.1.

[163] See also Djeffal, 'The *Iron Rhine* Case', cit., at 583, who, although classifying sustainable development rather than prevention of harm to the environment as a principle of general international law, observes with regard to the allocation of costs that '[w]hat the tribunal has actually done is introducing a meta-rule that promotes environmental concerns. As a principle it does not create direct obligations for the parties but serves as a guide to questions of interpretation'.

[164] *Arbitration regarding the Iron Rhine*, award, cit., at 67, para. 59.

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Gabčíkovo-Nagymaros judgment in which prevention of environmental harm specifically came to the fore as a guiding principle,[165] namely the point at which the International Court of Justice held that the Parties would take account of environmental norms and standards with a view to balancing economic development with protection of the environment.[166] The Tribunal accordingly concluded, building on prevention of environmental harm, that 'where a state exercises a right under international law within the territory of another state, *considerations of environmental protection* also apply'.[167] In the Tribunal's opinion, environmental protection measures were necessary for the intended use of the railway line as requested by Belgium, and they were 'to be fully integrated into the project and its costs'.[168] This is why, as alluded to, Belgium was under an obligation to contribute to funding the environmental element of the costs of reactivating the railway: these could not be borne by the Netherlands on its own.[169]

Indeed, it is worth noting that said 'considerations of environmental protection' bear a resemblance to the 'environmental considerations' evoked by the International Court of Justice in the advisory opinion on the *Threat or Use of Nuclear Weapons*, the dictum of which concerning prevention of environmental harm was recalled and quoted by the Arbitral Tribunal.[170] As illustrated above, in that opinion too, 'environmental considerations' represented a manifestation of the guiding function of prevention of environmental harm as a general principle of international law based on a community interest.[171]

5.3.2. *Prevention of Environmental Harm as a General Principle in the* South China Sea Arbitration

Although the 2016 *South China Sea Arbitration* is one of those cases in which general international law on protection of the environment only played a marginal role, the award being centred on treaty law, namely UNCLOS, it appears to allude to prevention of environmental harm as a general principle, rather than as an obliga-

[165] The point is made at para. 140 of the *Gabčíkovo-Nagymaros* judgment, analysed *supra*, Section 5.2.1.b.

[166] *Arbitration regarding the Iron Rhine*, award, cit., at 67, para. 59.

[167] Ibid., at 116, para. 223 (emphasis added).

[168] Ibid.

[169] Ibid., at 117, para. 226.

[170] Ibid., at 116, para. 222.

[171] See *supra*, Section 5.2.1.a.

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tion established by a customary rule. Whilst not being conclusive per se, it provides support for the submission that prevention of environmental harm, as based on a community interest, amounts to a general principle of international law.

The case originated out of a number of disputes between the Philippines and China relating to the South China Sea.[172] The former country initiated proceedings against the latter under Annex VII UNCLOS. The Arbitral Tribunal thereby established was requested to determine the legal basis for maritime rights and entitlements, the status of certain features, and the lawfulness of certain Chinese actions, and also to find that China had aggravated and extended the dispute between the Parties. As is known, China never participated in the proceedings, and refused to accept them.[173]

It was in relation to the lawfulness of certain Chinese activities in the South China Sea that environmental issues came to the fore. The Philippines alleged that China had failed to protect and preserve the marine environment by tolerating and actively supporting national fishermen in the harvesting of species endangered with extinction and in the use of fishing methods adversely affecting the marine ecosystem, and by causing severe harm to the marine environment through the construction of artificial islands.[174] In both respects, the Arbitral Tribunal eventually found that China had breached its obligations under UNCLOS.[175]

In reaching that conclusion, the Tribunal referred in passing to prevention of environmental harm under general international law when analysing the UNCLOS provisions relevant to the case. With regard to Article 192 UNCLOS, which lays down the obligation for States to protect and preserve the marine environment,[176] the Tribunal held that

[172] PCA, *In the Matter of the South China Sea Arbitration (The Philippines* v. *China)*, award of 12 July 2016, 33 *RIAA* 166.

[173] On the implications of China's non-participation, see Otto Spijkers, 'Non-Participation in Arbitral Proceedings under Annex VII United Nations Convention on the Law of the Sea: *Arctic Sunrise* and *South China Sea* Compared', in Angela del Vecchio and Roberto Virzo (eds.), *Interpretations of the United Nations Convention on the Law of the Sea by International Courts and Tribunals* (Cham: Springer 2019), 171. For a broader analysis of non-participation in international proceedings, see Alessandra Zanobetti Pagnetti, *La non comparizione davanti alla Corte internazionale di giustizia* (Milano: Giuffré 1996).

[174] *South China Sea Arbitration*, award, cit., at 185-186, para. 9.

[175] Ibid., at 542, paras. 992-993. The Tribunal's analysis is at 518-542, paras. 939-991.

[176] Art. 192 UNCLOS reads as follows: 'States have the obligation to protect and preserve the marine environment'.

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> [t]he corpus of international law relating to the environment which informs the content of the general obligation in Article 192, requires that States 'ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control'. Thus States have a positive duty '"to prevent, or at least mitigate" significant harm to the environment when pursuing large-scale construction activities'.[177]

This is the only reference made in the award to prevention of environmental harm under general international law. Immediately afterwards, in order to further define the content of the general obligation in Article 192, the Tribunal turned to UNCLOS provisions and the specific obligations set forth in treaties on the protection and preservation of the marine environment.[178]

As the above excerpt shows, prevention of environmental harm was not defined as an obligation established by a rule of customary international law. Indeed, the quotations contained in it refer to precedents in which prevention of environmental harm was not classified as a customary rule, viz. the *Threat or Use of Nuclear Weapons* advisory opinion and the *Iron Rhine* award, both of which are in fact cited in the pertinent footnotes.[179] Conversely, the decisions of the International Court of Justice in which prevention of environmental harm is referred to – albeit circumstantially – as a customary rule were omitted. Since the *South China Sea* award was delivered in 2016, it is remarkable that the Arbitral Tribunal cited the *Threat or Use of Nuclear Weapons* opinion dating back to 1996, rather than the more recent *Pulp Mills* judgment of 2010 and *Certain Activities* judgment of 2015. These judgments were not even cited in addition to the advisory opinion. In this context, it seems that the choice made by the Arbitral Tribunal not to define prevention of environmental harm as a customary rule was a well-considered one.

One might then note that the precedents on which the Arbitral Tribunal based its reasoning were not 'simply' those in which prevention of environmental harm was not classified as a customary rule: they were cases in which the environment per se, rather than the environment of other States, was at stake. The *Threat or Use of Nuclear Weapons* opinion concerned the environment in general,[180]

[177] *South China Sea Arbitration*, award, cit., at 519, para. 941 (footnotes omitted).
[178] Ibid., at 519, para. 942.
[179] Ibid., para. 941, notes 1094 and 1095.
[180] See *supra*, Section 5.2.1.a.

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and in the *Iron Rhine* case the environment within the territory of the State of origin of the harm was at issue.[181]

The two aspects are intertwined, as pointed out above. When coupled with mutual respect for territorial sovereignty, prevention of environmental harm has been defined as a rule of customary international law. By contrast, when detached from respect for territorial sovereignty, prevention of environmental harm has *not* been classified as a customary rule and, in effect, has operated as a general principle of international law. The *South China Sea Arbitration* award is no exception.

Although Chinese activities in the South China Sea were also alleged to be unlawful with respect to the Philippines' rights under UNCLOS, including fishing, oil exploration, navigation, and the construction of artificial islands and installations,[182] China's alleged failure to protect and preserve the marine environment was assessed separately.[183] Moreover, even though sovereignty issues were directly or indirectly involved in the case,[184] the Arbitral Tribunal stated from the outset that 'questions of sovereignty are irrelevant to the application of Part XII of the Convention' concerning the marine environment.[185] This is because 'the obligations in Part XII apply to all States with respect to the marine environment in all maritime areas, both inside the national jurisdiction of States and beyond it'.[186] Accordingly, the Tribunal applied general provisions of Part XII UNCLOS for which exercise of sovereign rights is immaterial, i.e., Article 192 laying down the general obligation to protect and preserve the marine environment and Article 194, paragraphs 1 and 5,[187] which pertain respectively to prevention, reduction and control

[181] See *supra*, Section 5.3.1.

[182] *South China Sea Arbitration*, award, cit., at 185-186, para. 9.

[183] A specific part of chapter VII of the award, concerning the lawfulness of Chinese activities in the South China Sea, deals with protection of the marine environment, i.e., section D.

[184] Nonetheless, according to the Arbitral Tribunal, the dispute did not generally concern sovereignty or maritime boundary delimitation, and therefore its jurisdiction was not precluded in this respect: *In the Matter of the South China Sea Arbitration (The Philippines* v. *China)*, award on jurisdiction and admissibility, 29 October 2015, 33 *RIAA* 6, at 62-65, paras. 151-157.

[185] *South China Sea Arbitration*, award of 12 July 2016, cit., at 519, para. 940.

[186] Ibid. See also para. 927 concerning jurisdiction.

[187] In addition to the 'substantive' obligations under those provisions, the Tribunal applied obligations of a 'procedural' nature with regard to the construction activities carried out by China. In particular, it found that a breach had been committed of the obligation to cooperate on a global or regional basis pursuant to Art.

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of marine pollution[188] and to the protection and preservation of rare or fragile ecosystems as well as habitats of depleted, threatened or endangered species.[189] In fact, marine biodiversity was basically at stake, which plainly qualifies as a community interest.[190]

In this context, prevention of environmental harm came into consideration and operated as a general principle of international law. As the extract above shows, it was defined as a duty underpinning the entire corpus of international environmental law and thus informing the content and scope of the rule set forth in Article 192 UNCLOS. That prevention of environmental harm stems from the corpus of international law relating to the environment implies its foundational value: it flows from that corpus because it underpins international environmental law, and has inspired its development through the formation of more specific rules. Consequently, prevention of environmental harm performs a guiding function in the interpretation and application of its embodying rules. The Arbitral Tribunal seemingly considered the obligation to protect and preserve the marine environment in Article 192 as being based on the general principle of prevention of environmental harm. Hence it relied on this principle in order to determine the content and scope of that obligation.

Although it was not expressly stated, the problem facing the Tribunal was whether the harvesting of species threatened with extinction, viz. sea turtles, fell within the scope of the obligation to protect and preserve the marine environment as a residual obligation to be applied in the absence of more detailed rules. The harvesting of endangered species could hardly be brought under Article 194, which mainly deals with pollution of the marine environment: the term 'pollution' refers under UNCLOS to the introduction by man

197 UNCLOS, and of the obligation to conduct an environmental impact assessment in accordance with Art. 206 UNCLOS. Aside from Part XII UNCLOS, the Tribunal likewise ascertained a breach of Art. 123 UNCLOS (included in Part IX), concerning cooperation of States bordering enclosed or semi-enclosed seas, such as the South China Sea.

[188] Pursuant to Art. 194(1) UNCLOS, 'States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection'.

[189] Under Art. 194(5) UNCLOS, '[t]he measures taken in accordance with this Part shall include those necessary to protect and preserve rare and fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life'.

[190] See *supra*, Section 2.3.4.

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of substances or energy into the marine environment which results or is likely to result in deleterious effects.[191] The only exception is Article 194(5), which concerns, as mentioned, rare or fragile ecosystems and the habitats of depleted, threatened or endangered species. However, it generically requires that the measures taken to protect and preserve the marine environment extend to those necessary to protect and preserve such ecosystems and habitats. Furthermore, provisions on the conservation and management of living resources in specific maritime zones or areas could not be applied, as the questions relating to sovereignty had been left out.

On the basis of the principle of prevention of environmental harm, the Arbitral Tribunal concluded that 'the obligation to "protect and preserve the marine environment" in Article 192 includes a due diligence obligation to prevent the harvesting of species that are recognised internationally to be at risk of extinction and requiring international protection'.[192] To this end, the Tribunal also considered the Convention on International Trade in Endangered Species (CITES),[193] as it is under Appendix I to that Convention that the sea turtles at issue were listed as species threatened with extinction.[194]

The Tribunal's reliance on the principle of prevention of environmental harm may therefore be regarded as a natural consequence of its guiding function.[195] Alternatively, the systemic integration method under Article 31(3)(c) VCLT might likewise explain the recourse to the principle of prevention,[196] although no reference was made

[191] The definition of 'pollution' is laid down, for the UNCLOS purposes, in Art. 1(1)(4) UNCLOS, reading as follows: '"pollution of the marine environment" means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities'.

[192] *South China Sea Arbitration*, award of 12 July 2016, cit., at 526, para. 956.

[193] Convention on International Trade in Endangered Species of Wild Fauna and Flora, adopted at Washington on 3 March 1973 and entered into force on 1 July 1975, 993 *UNTS* 243.

[194] *South China Sea Arbitration*, award of 12 July 2016, cit., at 526, para. 956. On the Tribunal's reliance on CITES, see also *infra*, Section 6.3.1.

[195] See *supra*, Section 3.2.1.

[196] This position is taken by Chie Kojima, 'South China Sea Arbitration and the Protection of the Marine Environment: Evolution of UNCLOS Part XII through Interpretation and the Duty to Cooperate' (2015) 21 *Asian YBIL* 166, at 171-172, who however seemingly takes the classification of prevention of environmental harm as a customary rule for granted.

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to it. In this respect, it should be borne in mind that the implicit adoption of the systemic approach is not infrequent in international case law.[197] Indeed, the Tribunal abstained from explicitly asserting systemic integration even when taking into consideration CITES, which however could hardly have been relevant otherwise. It was only in relation to the Convention on Biological Diversity,[198] as far as the notion of ecosystem under Article 194(5) UNCLOS was concerned,[199] that the Tribunal expressly mentioned Article 31(3) VCLT alongside Article 293(1) UNCLOS,[200] which allows Part XV courts or tribunals to apply, in addition to UNCLOS, 'other rules of international law not incompatible' with it.[201] At any rate, even assuming that the Tribunal took account of prevention of environmental harm by virtue of the systemic integration method, that would not be inconsistent with its reconstruction as a general principle, because general principles may also be deemed to fall within the scope of Article 31(3)(c) VCLT, as noted above.[202]

[197] See Roberto Virzo, 'The "General Rule of Interpretation" in the International Jurisprudence Relating to the United Nation Convention on the Law of the Sea', in Del Vecchio and Virzo (eds.), *Interpretations*, cit., 15, at 27-32.

[198] Convention on Biological Diversity, adopted at Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993, 1760 *UNTS* 79.

[199] *South China Sea Arbitration*, award of 12 July 2016, cit., at 521-522, para. 945.

[200] Ibid., award of 29 October 2015, cit., at 74, para. 176.

[201] Art. 293(1) UNCLOS exactly reads as follows: 'A court or tribunal having jurisdiction under this section shall apply this Convention and other rules of international law not incompatible with this Convention'.

[202] See *supra*, Section 3.2.1.

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Part III

The Reconstruction of Prevention as a Principle Put to the Test

Chapter 6

The 'Content' of Prevention of Environmental Harm: Trends in Customary Law

Summary: 6.1. Strengths of the Reconstruction of Prevention of Environmental Harm as a General Principle of International Law. - 6.1.1. Resistance to the Weaknesses Undermining the Construction of Prevention of Environmental Harm as a Customary Rule. - 6.1.2. New Perspectives on Debated Problems. – 6.2. Prevention through Procedural Obligations: Activities Likely to Cause Significant Environmental Harm. - 6.2.1. Procedural Obligations between Prevention and Cooperation: Notification, Information and Consultation. - 6.2.2. The Obligation to Conduct an Environmental Impact Assessment… - 6.2.3. …and Its Relationship with the Principle of Prevention of Environmental Harm. – 6.3. Prevention as Regulation of Hazardous Activities and Limitation of Environmental Harm. - 6.3.1. Creation of Treaty Regimes Providing for Specific Rules and Standards. - 6.3.2. Outside Detailed Treaty Regimes: Trends Relating to the Dumping of Wastes and Other Matter at Sea… - 6.3.3. …and, in Particular, the Dumping of Radioactive Wastes. - 6.3.4. Creation of Civil Liability Regimes… - 6.3.5. …and Its Consequences on Prevention of Environmental Harm: Trends Relating to Prompt and Adequate Compensation. – 6.4. Prevention as Prohibition: Environmental Harm Detached from the Economic Exploitation of Natural Resources. - 6.4.1. Prohibition on Destruction of the Environment as a Weapon… - 6.4.2. …and Other Trends concerning Prevention of Environmental Harm during Armed Conflict. - 6.4.3. Trends towards the Prohibition of Nuclear Weapon Tests with a Significant Environmental Impact.

6.1. *Strengths of the Reconstruction of Prevention of Environmental Harm as a General Principle of International Law*

The above analysis leads to the conclusion that prevention of environmental harm may be reconstructed as a general principle of international law rather than as an obligation established by a customary rule. In fact, it has fundamentally served a guiding function in informing numerous treaties or legally binding acts, of the European Union in particular, that lay down more specific rules.[1] As a result, prevention of environmental harm has been recognised within the interna-

[1] See *supra*, Chapter 4.

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tional legal system: it is apparent from those treaties and acts as their underlying principle. Moreover, far from confirming the customary status of the purported obligation of prevention, as is usually asserted in legal scholarship, international case law shows that prevention of environmental harm has mostly been relied on to evoke 'environmental considerations', in connection with balancing acts, or for interpretative purposes only, in a way that is more consistent with a principle than a rule.[2] The explicit reference to the 'principle of prevention' as a 'customary rule' by the International Court of Justice has only been found in those passages of its judgments in which mutual respect for territorial sovereignty was at stake. Nonetheless, as has been argued above, the anchoring of prevention of environmental harm in territorial sovereignty seems to be inappropriate: it disregards the structural difference between protection of the environment per se, as a community interest, and traditional interests of a bilateral nature.[3]

In this context, the difficulties in identifying general principles of international law, and in consequently distinguishing them from rules of customary international law, are of the utmost importance and cannot be overlooked. The inspiring and interpretative function peculiar to general principles may to some extent be performed by customary rules as well. Treaties or binding acts of international organisations may vest customary international law with detailed content, and customary rules are certainly relevant to the interpretation of treaties. Therefore, the classification of prevention of environmental harm as a general principle of international law might prima facie appear to be just as valid as its definition as a customary rule. Some might go even further and hence suggest that, from an environmentally-oriented perspective, it would be preferable to define prevention as a customary rule in order to ensure the existence of an obligation.

On closer scrutiny, however, the reconstruction of prevention of environmental harm as a general principle of international law does offer a powerful alternative to its construction as an obligation established by a rule of customary international law. The reason for this is twofold. First, the evidence undermining the classification of prevention as a customary rule does not equally undermine the conclusion that it amounts to a general principle. Secondly, the alternative submitted here opens new perspectives on problems that the construction as a customary rule has thus far failed to resolve.

[2] See *supra*, Chapter 5.
[3] See *supra*, Chapter 2.

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6.1.1. *Resistance to the Weaknesses Undermining the Construction of Prevention of Environmental Harm as a Customary Rule*

The reconstruction of prevention of environmental harm as a general principle of international law is not undermined by the well-known data, mentioned above, that shows an increasingly deteriorating environment, and even a risk of ecological collapse.[4] The same holds true for the cases analysed in which serious damage to the environment occurred and prevention of environmental harm was not applied as a customary obligation for assessing the lawfulness of the conduct at stake.[5] As already illustrated, evidence to this effect casts doubt on the customary status of the purported obligation of prevention of environmental harm on account of the weight of the actual practice of States in determining customary international law under the classical two-element approach.[6] As pointed out above, in response authors have de-emphasised the importance of that practice or placed emphasis on written instruments and international case law, although this approach does not appear to be entirely persuasive.[7]

First, continuing degradation of the environment is not at odds with prevention of environmental harm *qua* principle, because general principles of international law do not rest, or at least do not *directly* rest, on uniform and consistent practice as a constitutive element. As regards general principles of international law, practice does not have the same weight or nature as it has in relation to customary international law. On the contrary, the acknowledgement and restatement that harm to the environment ought to be prevented is *consonant* with the continuing degradation of the environment: the more it deteriorates, the more the need to protect it becomes compelling. After all, since environmental awareness started to spread during the 1960s and 1970s, States have acknowledged prevention of environmental harm as an aspiration and ideal direction for their conduct.

In general terms, inconsistent practice will throw the effectiveness of treaty rules or binding acts into question, or raise doubts about the existence of customary rules. However, it will not immediately affect the underlying general principle, which will still transpire from those rules. Taken to extremes, such a situation characterised by inconsistent or lacking practice might perhaps result in a case in which

[4] See *supra*, Section 1.2.1.
[5] See *supra*, Sections 1.2.2-1.2.9.
[6] See *supra*, Section 1.3.1.
[7] See *supra*, Sections 1.3.2-1.3.3.

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only treaty rules or acts of international organisations implement the relevant principle, without any concurring customary rules, although this seems to be a remote possibility.

Secondly, as regards the instances in which the purported customary obligation to prevent environmental harm has not been applied, it should be borne in mind that, in contrast to rules, principles do not *themselves* impose obligations on States; they need to be weighed up against conflicting principles, with the embodying rules arising out of this balancing act. As a general principle, prevention of environmental harm performs a guiding function. Therefore, it must be balanced against competing principles in order for *rules* to come into being and for States to be bound, ultimately, to adopt specific conduct or achieve a specific result.

6.1.2. *New Perspectives on Debated Problems*

The above leads into the other strength alluded to, that of the new perspectives on as yet unsolved or debated issues that are opened by the classification of prevention of environmental harm as a general principle of international law. As has been pointed out, when prevention of environmental harm is regarded as an obligation established by a customary rule, the issue of its content is usually deemed to be a matter for debate. Indeed, it is due inter alia to the relevant uncertainties that this study has questioned the existence of a customary obligation to prevent environmental harm, given the difficulties in even conceiving of a customary rule the content of which cannot be defined, not even to the extent that it is possible to do so in relation to unwritten law.[8]

The issue of the content of prevention of environmental harm must be understood, in the light of its reconstruction as a general principle of international law, in such a manner as to require the identification of the rules embodying it. The 'content' of the principle of prevention of environmental harm will consist in those rules. Hence, the task at hand is no longer to define the object and scope of a comprehensive customary rule, the ambit of which should cover circumstances ranging from pollution of international watercourses to global warming, or from nuclear atmospheric pollution or crude oil pollution at sea to the loss of biological diversity. In fact, a general principle is inherently vague and, by its nature, cannot be precise or specific: it sets out a value-oriented direction, such as prevention of

[8] See *supra*, the Introduction, Section II.

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environmental harm. It is the rules embodying the principle that give more specific tangible form to it.

The task of determining those rules changes depending on the source of law, or type of rule, being considered. As far as treaty rules and legally binding acts of international organisations are concerned, since they mostly set forth written rules, the problem of their 'determination' may be reduced to one of identifying *a link* with the principle of prevention of environmental harm. Conversely, a major complication arises for general international law, since the task becomes one of identifying the customary rules themselves that embody prevention of environmental harm as a general principle. In other words, their very existence – and not just their link with that principle – will need to be ascertained in the first instance.

This viewpoint on the content of prevention has notable implications for the debated issue of the threshold of environmental harm too. It provides a middle-ground solution between the search for the one and only threshold, applicable to all of the disparate circumstances falling under the alleged customary rule on prevention of environmental harm, and the definition of that threshold on a case-by-case basis. Whilst the harm threshold certainly varies depending upon the prevailing circumstances, there need not necessarily be one single meaning of 'significant environmental harm'. On the contrary, as far as customary international law is concerned, there will be as many meanings as the number of specific customary rules embodying the principle of prevention of environmental harm. Looking at specific customary rules, it should be easier to find a level of harm that is common to the relevant circumstances, as they will surely be more homogeneous than those pertaining to a comprehensive customary obligation to prevent environmental harm.

Against this backdrop, the classification of prevention of environmental harm as a general principle of international law likewise opens up a different perspective on the issue of the relationship between prevention of environmental harm and other so-called 'principles' of international environmental law, including precaution, 'polluter-pays', environmental impact assessment, notification and assistance in case of emergency, notification and consultation on activities with a transboundary impact, and sustainable development. Efforts within the legal scholarship have so far been focused on verifying whether those precepts, or some of them, qualify as customary rules, and their relationship with prevention of environmental harm has been considered on the assumption that it too is a customary rule. By contrast, as a general principle of international law, prevention of environmental harm is *itself embodied* within those 'principles' of

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international environmental law that amount to customary rules and seek to implement it.

This chapter is dedicated to an exploration of the perspectives mentioned above. Therefore, as regards the 'content' of prevention of environmental harm, the emergence or existence of customary rules embodying it will be investigated.[9] Moreover, when identifying such customary rules, some light will be tentatively shed also on the relationship between prevention of environmental harm and certain 'principles' of international environmental law.

A caveat is in order though. The intention is not to identify each and every customary rule embodying the principle of prevention of environmental harm, nor to establish its relationship with all the other 'principles' of international environmental law. Instead, the objective is to attempt to enucleate the main trends. To this end, it should be borne in mind that the rules embodying a principle tend to reflect the outcome of its balancing against conflicting principles. Whereas this is true also of the rules laid down in treaties and legally binding acts of international organisations, the balancing 'operations' carried out under customary international law are of particular importance in that they are not specific to a certain treaty or conventional sub-system, universal or quasi-universal as it may be, but rather pertain to the international legal system in general.

The thesis proposed here is that the trends in customary international law reflect *sustainable development as the fundamental outcome* of the balancing of prevention of environmental harm against territorial sovereignty of States and, more broadly, their rights to economically exploit natural resources – including States' rights in international areas.[10] Hence, prevention of environmental harm is implemented to the extent that it does not completely negate that right. In particular, at least three trends point in that direction. The first is the trend towards procedural obligations with regard to activities that are likely to cause significant environmental harm. Secondly,

[9] The issue of the embodiment of the principle of prevention of environmental harm within treaty rules and legally binding acts of international organisations has already been addressed in this study: see *supra*, Chapter 4.

[10] As submitted *supra* (Section 2.3), prevention of environmental harm cannot be regarded as a corollary of sovereignty by reason of its peculiar rationale, i.e., protection of the environment per se *qua* community interest. Instead, it amounts to a limitation on sovereignty. Their conflict is intrinsic: unprecedented industrial development during the 1950s precipitated the degradation of the environment, which continues to deteriorate due to increased exploitation of natural resources. On this conflict, see also *infra*, Chapter 7.

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there is the trend towards the mere regulation of activities that cause significant harm to the environment. Thirdly, and *a contrario*, there is also the trend towards the absolute prohibition of activities that cause harm to the environment but are *not* connected with the economic exploitation of natural resources, despite the relevance of other conflicting interests. Each of these trends will be analysed in the following sections. After doing so, some general observations on sustainable development will be made in the next Chapter.

6.2. *Prevention through Procedural Obligations: Activities Likely to Cause Significant Environmental Harm*

6.2.1. *Procedural Obligations between Prevention and Cooperation: Notification, Information and Consultation*

Within international environmental law, the expression 'procedural obligations' usually refers to rules that impose obligations on States that do not have a direct bearing on any activity causing harm or likely to cause harm to the environment. They rather provide for a course of action, a set of requirements that must be satisfied before any hazardous activity is carried out. Obligations that are commonly deemed to be of a procedural nature include the obligation to conduct an environmental impact assessment (EIA) and the obligations to notify and consult with potentially affected States. Sometimes the term 'procedural obligations' is employed to embrace actions that must be taken in the event that damage to the environment has occurred, such as notification of emergencies to other States and cooperation with the affected States.[11] Such obligations too are not immediately relevant to activity that poses a risk to the environment, as the damage has already occurred.

As mentioned above, existing or emerging procedural obligations in customary international law, as a result of the balancing act between prevention of environmental harm and territorial sovereignty of States or their rights to exploit natural resources, tend to reflect sustainable development: the likelihood that any given activity may cause significant harm to the environment does not per se preclude that activity from being carried out. Instead, it triggers a series of procedural requirements, which are aimed at allowing the State to

[11] For an overview, see Phoebe Okowa, 'Principle 18: Notification and Assistance in Case of Emergency', in Jorge E. Viñuales (ed.), *The Rio Declaration on Environment and Development. A Commentary* (Oxford: Oxford University Press 2015), 471.

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consider the environmental impact of an activity, through EIA, as well as the interests and positions of the other States concerned, through notification, information and consultation. As will be seen below, whereas this is somewhat necessary in order to implement the principle of prevention of environmental harm, the rights of States to exploit natural resources may in substance remain unaffected by the entire process.

The following sections will focus on the obligation to carry out an environmental impact assessment, which is specifically founded on prevention of environmental harm. Other procedural obligations, albeit relevant to protection of the environment, appear to be properly classified under a different, autonomous principle, namely the principle of cooperation. As is self-evident, cooperation is a broader principle than prevention of environmental harm, as it is not necessarily tied to protection of the environment.[12]

From this perspective, it is worth noting that, even in relation to environmental harm, notification and consultation as traditional obligations of cooperation appear to be traceable to mutual respect for territorial sovereignty. They have essentially developed out of relationships between neighbouring States and in 'transboundary' contexts, in the narrowest sense of the word. A telling example of such a connection is provided by the preparatory works for the Rio Declaration. The original proposal for the provision that would eventually become principle 19, enshrining notification and consultation, was amended in such a manner as to exclude harm to the environment beyond the limits of national jurisdiction,[13] with only environmental harm in transboundary contexts being relevant.[14] Therefore, principle

[12] For an overview of cooperation in relation to international protection of human rights, international economic law, and international dispute settlement see Jost Delbrück, 'The International Obligation to Cooperate – An Empty Shell or a Hard Law Principle of International Law? – A Critical Look at a Much Debated Paradigm of Modern International Law', in Holger P. Hestermeyer et al. (eds.), *Coexistence, Cooperation and Solidarity.* Liber Amicorum *Rüdiger Wolfrum* vol. 1 (Leiden/Boston: Martinus Nijhoff Publishers 2012), 3.

[13] The proposal read as follows: 'States shall provide prior and timely notification and relevant information to other concerned States on activities that may have a significant *international or transboundary* effect and shall consult with those States at an early stage and in good faith' (emphasis added). See Laurence Boisson de Chazournes, Komlan Sangbana, 'Principle 19: Notification and Consultation on Activities with Transboundary Impact', in Viñuales (ed.), *The Rio Declaration*, cit., 493, at 494-495.

[14] According to principle 19, 'States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a

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19 differs in scope from principle 2 on prevention of environmental harm, a difference which could hardly be explained were notification and consultation to be conceived of as being grounded in protection of the environment per se, as a community interest.

Of course, cooperation is of the utmost importance for the protection of global commons, and the affirmation of the international law of cooperation is indeed intertwined with the emergence of collective interests.[15] However, as far as protection of the environment of international areas is concerned, procedural obligations such as notification and consultation necessarily seem to depend on the establishment of a treaty-based cooperation framework. By way of illustration, it would be rather complex for a State, in the absence of any cooperation regime or any competent international organisation, to notify, and even more so to consult with, the potentially affected States when the activity is likely to cause harm to the marine environment on the high seas or to contribute significantly to climate change. In such an eventuality, all States would in principle be affected, and any *ex ante* identification of specially affected States might be hindered by difficulties in determining the causal link between the activity and the harm.[16]

In sum, the relevance of notification and consultation for customary international law seems to be limited to transboundary contexts in the narrowest sense. Accordingly, such procedural requirements do not appear to be based on prevention, whereas this is not the case for environmental impact assessment.

6.2.2. *The Obligation to Conduct an Environmental Impact Assessment…*

On the basis of State practice and *opinio juris*, the obligation to conduct an EIA for any activities that are likely to cause significant environmental harm may probably be viewed as an emerging rule of customary international law. EIA refers to the procedure whereby the potential adverse effects of a project on the environment are ascertained, so that they may be taken into account when deciding whether to authorise the project.[17] Its first appearance in domestic

significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith'.

[15] See *supra*, Section 2.3.2.

[16] In the case of climate change, for example, damage may occur at considerable distance from the State of origin, and many years after the activity took place.

[17] The following analysis will be focussed on 'classical' EIA, and strategic environ-

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law is commonly found in the 1969 National Environmental Policy Act of the United States.[18] Since then, EIA legislation has spread horizontally throughout the world, and it seems that the domestic legal orders of the majority of States currently provide for EIA.[19] In addition to this form of practice and *opinio juris*, provisions on EIA have proliferated in treaties and legally binding acts of international organisations, as well as in soft law instruments.

The most pertinent treaty is perhaps the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention),[20] which is exactly dedicated to EIA. European Union Directive 2011/92,[21] as amended in 2014,[22] is another instance of an act specifically dealing with EIA. Moreover, a variety of treaties with broader content incorporate provisions on EIA. Many deal with transboundary environmental harm liable to occur in specific geographic areas, such as the South Pacific region,[23] or the Southeast

mental assessment will not be considered. Whereas the former type relates to specific projects involving certain activities, the latter is more broadly concerned with plans and programmes. The status of strategic environmental assessment in international law still appears to be incipient. Leaving aside EU law, and specifically Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2011 on the assessment of the effects of certain plans and programmes on the environment, L 197 *OJEC* 30, there seems to be only one treaty that provides for strategic environmental assessment, i.e., the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, adopted at Kiev on 21 May 2003 and entered into force on 11 July 2010, 2685 *UNTS* 140.

[18] For an overview, see Daniel R. Mandelker, 'The National Environmental Policy Act: A Review of Its Experience and Problems' (2010) 32 *Washington Univ. JLP* 293.

[19] See Neil Craik, 'Environmental Impact Assessment', in Ludwig Krämer and Emanuela Orlando (eds.), *Principles of Environmental Law. Elgar Encyclopedia of Environmental Law* vol. VI (Cheltenham/Northampton: Edward Elgar 2018), 195, at 195-199.

[20] Convention on Environmental Impact Assessment in a Transboundary Context, adopted at Espoo on 25 February 1991 and entered into force on 10 September 1997, 1989 *UNTS* 309.

[21] Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects in the environment, L 26 *OJEU* 1. It repealed the homonymous Council Directive 85/337/EEC of 27 June 1985, L 175 *OJEC* 40, as amended.

[22] Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects in the environment, L 124 *OJEU* 1.

[23] Art. 16 of the Convention for the Protection of Natural Resources and Environment of the South Pacific Region, adopted at Noumea on 24 November 1986 and entered into force on 22 August 1990, available at *www.sprep.org*.

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Pacific region.[24] The Espoo Convention itself has been adopted under the auspices of the United Nations Economic Commission for Europe (UNECE), and its scope is *ratione loci* limited to the relative region.

This does not however mean that EIA has been relegated to transboundary environmental harm in its narrowest sense. On the contrary, EIA obligations are laid down in treaties relating to environmental media in general, international areas, and common concerns. By way of illustration, Article 206 of the UN Convention on the Law of the Sea draws no distinction between marine areas in stipulating the obligation to assess the potential adverse effects of planned activities on the marine environment.[25] Another example is Article 8 of the Antarctic Environmental Protocol,[26] which provides that certain activities are subject to the EIA procedures set out in Annex I to the Treaty.[27] Furthermore, Article 14 of the Convention on Biological Diversity requires EIA as well.[28]

[24] Art. 8 of the Agreement on the Protection of the Marine Environment and the Coastal Area of the Southeast Pacific, adopted at Lima on 12 November 1981 and entered into force on 19 May 1986, 1648 *UNTS* 3.

[25] United Nations Convention on the Law of the Sea (UNCLOS), adopted at Montego Bay on 10 December 1982 and entered into force on 16 November 1994, 1833 *UNTS* 3. The provision reads as follows: 'When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205'. See also Eike Blitza, 'Article 206', in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea. A Commentary* (München: C.H. Beck/Hart/Nomos 2017), 1369, at 1375-1376, who stresses that '[the] effect-based nature [of Art. 206] distinguishes it from EIA obligations which require a transboundary context and brings it in line with the comprehensive environmental management system of the UNCLOS' (ibid., at 1375, footnotes omitted).

[26] Protocol on Environmental Protection to the Antarctic Treaty, adopted at Madrid on 4 October 1991 and entered into force on 14 January 1998, 2941 *UNTS*.

[27] Annex I on Environmental Impact Assessment to the Protocol on Environmental Protection to the Antarctic Treaty. For an overview of the Protocol, including the EIA Annex, see Christopher C. Joyner, 'Protection of the Antarctic Environment against Marine Pollution under the 1991 Protocol', in Davor Vidas (ed.), *Protecting the Polar Marine Environment. Law and Policy for Pollution Prevention* (Cambridge: Cambridge University Press 2000), 104, especially at 112-114. On EIA under the Antarctic regime, see Laura Pineschi, *La protezione dell'ambiente in Antartide* (Padova: CEDAM 1993), at 265-292.

[28] Convention on Biological Diversity, adopted at Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993, 1760 *UNTS* 79. Pursuant to Art. 14,

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The importance of EIA for protection of the environment per se is confirmed by soft law instruments. For instance, in the World Charter for Nature, the assessment of potentially harmful effects of planned activities is recommended with regard to the environment, *rectius* 'nature', without any further qualification.[29] Similarly, in the 1992 Rio Declaration, principle 17 enshrining EIA refers to 'impact on the environment' *tout court*,[30] and thus differs from principle 19 concerning other procedural requirements, namely notification and consultations, which are limited to 'transboundary environmental effect', as has been illustrated.[31] Regrettably, the International Law Commission has only dealt with EIA in relation to the harm occurring in a place under the jurisdiction or control of a State other than the State of origin. Nonetheless, this is due to the general scope of its work on prevention of transboundary harm from hazardous activities.[32]

Bearing in mind that the national legal orders of the majority of States require EIA, the above overview seems to provide some grounds for concluding that there may be an emerging customary obligation to conduct an EIA. This view has in fact been affirmed in scholarly writings,[33] and is also supported in international case law.

the Parties to the Convention are under an obligation to '[i]ntroduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity […]'.

[29] UNGA Res. 37/7 of 28 October 1982. Pursuant to Art. 16 of the Charter, '[a]ll planning shall include, among its essential elements, the formulation of strategies for the conservation of nature, the establishment of inventories of ecosystems *and assessment of the effects on nature of the proposed policies and activities*' (emphasis added).

[30] Principle 17 reads as follows: 'Environmental impact assessment, as a national instrument, shall be undertaken for activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority'.

[31] See *supra*, Section 6.2.1.

[32] Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries (hereinafter, Draft Articles on Prevention of Transboundary Harm), in Report of the International Law Commission on the Work of Its Fifty-Third Session (2001), UN Doc. A/56/10, 148. On their scope, see draft Articles 1 and 2, and the relevant commentaries, ibid., at 149-153.

[33] See Malgosia A. Fitzmaurice, 'International Protection of the Environment' (2001) 293 *Rec. cours* 9, at 280-285 (who argues that a 'strong case' can be made that EIA has 'entered the body of customary international environmental law', ibid., at 284); Astrid Epiney, 'Environmental Impact Assessment', in *MPEPIL online* (2009), para. 47; Laura Pineschi, 'The Duty of Environmental Impact Assessment in the First ITLOS Chamber's Advisory Opinion: Towards the Supremacy of the General Rule to Protect and Preserve the Marine Environment as a Common Value?', in

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In particular, in the judgment in the *Pulp Mills* case, the International Court of Justice referred to 'a practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment'.[34] In the judgment in the *Certain Activities* and *Construction of a Road* joint cases, the Court relied on that precedent in confirming the existence of the obligation to carry out an EIA.[35] Although the Court generically referred to it, on both the occasions, as an obligation under 'general international law',[36] some judges had hinted at the existence of a *customary* obligation to carry out an EIA back in 1995, in the context of the *Nuclear Tests* case.[37] In the end, the Seabed Dispute Chamber expressly held that

Nerina Boschiero et al. (eds.), *International Courts and the Development of International Law. Essays in Honour of Tullio Treves* (The Hague: Asser Press 2013), 425, at 425-428. The question as to whether a customary obligation to carry out an EIA exists was answered in the negative especially before it was affirmed within international case law, for example by Phoebe Okowa, 'Procedural Obligations in International Environmental Agreements' (1996) 50 *BYIL* 275, at 317-330; and Neil Craik, *The International Law of Environmental Impact Assessment. Process, Substance and Integration* (Cambridge: Cambridge University Press 2008), at 120-126. It is remarkable how some of the authors who initially rejected the customary nature of the EIA obligation have subsequently changed their mind: see, e.g., Neil Craik, 'Principle 17: Environmental Impact Assessment', in Viñuales (ed.), *The Rio Declaration*, cit., 451, at 462-463.

[34] ICJ, *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, judgment of 20 April 2010, *I.C.J. Reports 2010*, 14, at 83, para. 204. In the authoritative French text: 'une pratique acceptée si largement par les Etats ces dernières années que l'on peut désormais considérer qu'il existe, en droit international général, une obligation de procéder à une évaluation de l'impact sur l'environnement'.

[35] ICJ, *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua* v. *Costa Rica)*, judgment of 16 December 2015, *I.C.J. Reports 2015*, 665, at 706, para. 104.

[36] The point was addressed by Judge ad hoc Dugard, in the separate opinion appended to the judgment in the *Certain Activities* and *Construction of a Road* joined cases. He observed that, as far as the case at hand was concerned, he understood 'the term "general international law" to denote a rule of customary international law requiring an environmental impact assessment to be carried out where there is a risk of transboundary harm' (Separate Opinion of Judge ad hoc Dugard, para. 16). Indeed, he stressed that '[t]here can be little doubt that there is an obligation under customary international law to conduct an environmental impact assessment' (ibid., para. 17).

[37] See the Dissenting Opinion of Judge Palmer, at 412, para. 91 ('customary international law may have developed a norm of requiring environmental impact assessment where activities may have a significant effect on the environment'), appended to ICJ, *Request for an Examination of the Situation in Accordance with Paragraph 63*

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the requirement to conduct an EIA amounts to 'a general obligation under customary international law'.[38]

As regards the content of this – emerging – customary rule, it appears to impose on States a positive obligation to carry out an EIA, or to ensure that an EIA be carried out, when any activities are likely to cause significant harm to the environment. Thus the risk of environmental harm triggers the obligation. Arguably, an EIA must be conducted before the planned project starts. If not, the EIA would be pointless, as it is aimed specifically at allowing decision-makers to take into account the environmental effects of the project.

These and other basic features of the obligation to carry out an EIA are also detectable in the case law of the International Court of Justice. In the *Pulp Mills* judgment, the Court stated that 'an environmental impact assessment must be conducted prior to the implementation of a project' and that it requires continuous monitoring of the effects of the project on the environment after the operations have commenced.[39] It added that States must have regard 'to the nature and magnitude of the proposed development and its likely adverse impact on the environment as well as to the need to exercise due diligence in conducting such an assessment'.[40]

That being said, it would perhaps be too much to expect customary international law to establish precise criteria defining the content of the EIA. In the *Pulp Mills* judgment, the Court held that general international law did not 'specify the scope and content of an environmental impact assessment'.[41] It thus reached the conclu-

of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand *v.* France) *Case*, order of 22 September 1995, *I.C.J. Reports 1995*, 288. In more general terms, Judge Weeramantry observed that '[EIA] is gathering strength and international acceptance, and has reached the level of general recognition at which this Court should take notice of it' (Dissenting Opinion of Judge Weeramantry, at 344).

[38] SDC, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, advisory opinion of 1 February 2011, *ITLOS Reports 2011*, 10, at 50, para. 145. This conclusion was fundamentally based on the *Pulp Mills* judgment (ibid., at 51, para. 147). Since that precedent was concerned with watercourse pollution, whereas the Chamber was dealing with activities beyond the limits of national jurisdiction, namely in the Area, it observed that '[t]he Court's reasoning in a transboundary context may also apply to activities with an impact on the environment in an area beyond the limits of national jurisdiction; and the Court's references to "shared resources" may also apply to resources that are the common heritage of mankind' (ibid., para. 148).

[39] *Pulp Mills on the River Uruguay*, judgment, cit., at 83-84, para. 205.

[40] Ibid., at 83, para. 205.

[41] Ibid. The Seabed Dispute Chamber recalled the Court's view that the scope

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sion, in the absence of other applicable rules of international law, that 'it is for each State to determine in its domestic legislation or in the authorization process for the project, the specific content of the environmental impact assessment required in each case'.[42] In the judgment in the *Certain Activities* and *Construction of a Road* joined cases, the Court concluded that a case-by-case approach is necessary in order to determine the content of an EIA.[43]

Apart from the content, several aspects of the obligation to conduct an EIA still remain highly debatable. Some of them relate to issues that are not directly relevant to prevention of environmental harm, and thus are of little consequence in this study. For instance, the question as to whether potentially affected States must be notified and consulted during the EIA process, and not only in the event that a risk of significant environmental harm is ultimately confirmed, seems to pertain more to cooperation than to prevention.[44]

and content of EIA is not specified in customary international law, but did not dwell on the point because the indications in Art. 206 UNCLOS and in the acts of the International Seabed Authority came into consideration as regards activities in the Area (see *Responsibilities and Obligations*, advisory opinion, cit., at 51, para. 149).

[42] *Pulp Mills on the River Uruguay*, judgment, cit., at 83, para. 205. Similarly, in the view of the International Law Commission, '[t]he specifics of what ought to be the content of assessment is left to the domestic laws of the State conducting such assessment', with the result that Art. 7 of the Draft Articles on Prevention of Transboundary Harm, which is also concerned with EIA, 'does not specify what the content of the risk assessment should be' (Draft Articles on Prevention of Transboundary Harm, cit., at 158-159).

[43] *Certain Activities* and *Construction of a Road*, judgment, cit., at 707, para. 104.

[44] In this regard, as the obligation to conduct an EIA appears to extend to ecological common concerns and the protection of the environment in international areas, the difficulties arising are those that have been mentioned with regard to notification and consultation in cases involving environmental harm in areas beyond the limits of national jurisdiction (see *supra*, Section 6.2.1). Therefore, the existence of a cooperation framework becomes important also to EIA for the purposes of consultation and notification. Indeed, in the *South China Sea Arbitration*, in which the marine environment was at stake regardless of questions of sovereignty (see *supra*, Section 5.3.2), the Arbitral Tribunal emphasised the role of the Conference of the Parties to UNCLOS, and international organisations in general, in assessing compliance with the obligation to communicate EIA reports under Articles 205 and 206 UNCLOS (see *supra*, note 25). It held that 'the obligation to communicate is, by the terms of Article 205, to "competent international organisations, which should make them available to all States"': see PCA, *In the Matter of the South China Sea Arbitration (The Philippines* v. *China)*, award of 12 July 2016, at 541-542, para. 991. Hence, it reached the conclusion that '[a]lthough China's representatives ha[d] assured the States parties to the Convention that its "construction activities followed a high standard of environmental protection", it ha[d] delivered no assessment in writing

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Similarly, public participation of potentially affected populations or individuals, within or outside the State of origin, is based not on prevention of environmental harm directly, but on human rights and democracy.[45]

By contrast, the relationship between the customary obligation to conduct an EIA and prevention of environmental harm is of the utmost importance in this study. Although the link between the two appears to be beyond doubt and seems to result from the instrumentality itself of the EIA,[46] it is far from clear how they interact. This is one of the most controversial aspects of EIA.

6.2.3. *…and Its Relationship with the Principle of Prevention of Environmental Harm*

It is commonly believed that the obligation to conduct an EIA and prevention of environmental harm both amount to customary obligations on an equal footing, while being established by two separate rules. As has been illustrated above, in fact, many authors deem prevention of environmental harm to be the object of a customary obligation,[47] and certain judgments of the International Court of Justice are said to confirm it.[48]

On the other hand, due to the instrumentality of EIA, it is a widely held view that the EIA obligation qualifies as a requirement of the purported customary obligation to prevent environmental harm.[49] As

to that forum or any other international body' (ibid.). Under UNCLOS however, States seem to be free to choose between publishing EIA reports and notifying them to a competent international organisation: see Eike Blitza, 'Article 205', in Proelss (ed.), *United Nations Convention on the Law of the Sea*, cit., 1364, at 1367-1368.

[45] On both of these aspects, see extensively Craik, *The International Law*, cit., at 141-150.

[46] In this regard, it is significant that Philippe Sands et al., *Principles of International Environmental Law* (4th ed., Cambridge: Cambridge University Press 2018), at 657-681, included environmental impact assessment among the 'techniques for implementing international principles and rules'.

[47] See *supra*, Section 1.1.1.

[48] However, see *supra*, Section 5.2.

[49] In the words of Pierre-Marie Dupuy, Jorge E. Viñuales, *International Environmental Law* (2nd ed., Cambridge: Cambridge University Press 2018), at 69, '[i]n its present understanding, the prevention principle entails: (i) a general duty not only to refrain from causing significant damage to the environment but also to pro-actively take measures to prevent such damage as well as to ensure that such measures are effectively implemented; (ii) with a first procedural extension in the form of a duty of cooperation, particularly through notification and consultation, as well as (iii) a second procedural extension in the form of a requirement to conduct

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the International Court of Justice put it in the judgment in the *Certain Activities* and *Construction of a Road* joined cases,

> a State's obligation to exercise due diligence in preventing significant transboundary harm requires that State to ascertain whether there is a risk of significant transboundary harm prior to undertaking an activity having the potential adversely to affect the environment of another State. If that is the case, the State concerned must conduct an environmental impact assessment.[50]

According to the Court, in sum, the due diligence obligation of prevention implies that States must carry out an EIA when the activity at stake poses a risk of significant harm.[51]

It is nonetheless submitted here that this construction turns out to be irreconcilable with the other features usually attributed to EIA and prevention of environmental harm, namely the autonomy of the EIA obligation and the due diligence nature of prevention of environmental harm *qua* obligation established by a customary rule. On this account, the EIA obligation could hardly be conceived of as being required by the alleged customary obligation to prevent environmental harm.

In general, the idea that a customary obligation may arise as a requirement under another customary obligation would not appear to be untenable, although instances of such cases do not exactly abound, as far as the author is aware. After all, a customary rule might in theory be more specific than another customary rule dealing with the same subject matter.

However, once the customary obligation to carry out an EIA is considered to be implicit within the purported customary obligation to prevent environmental harm, then a breach of the former must inevitably entail a breach of the latter as well. In the *Pulp Mills* judgment, the International Court of Justice referred to such an outcome:

an environmental impact assessment where the proposed activity is likely to have significant adverse impact'.

[50] *Certain Activities* and *Construction of a Road*, judgment, cit., at 720, para. 153.

[51] Hence there seems to be an intermediate step between prevention and EIA: the preliminary assessment of risk. This has attracted criticism, because too broad a margin of appreciation is said to be left to States when ascertaining the conditions that trigger the application of the EIA obligation: see Yoshifumi Tanaka, '*Costa Rica v. Nicaragua* and *Nicaragua v. Costa Rica*: Some Reflections on the Obligation to Conduct an Environmental Impact Assessment' (2017) 26 *RECIEL* 91, at 94-95.

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> due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works liable to affect the regime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works.[52]

This means that the independence of the two rules from each other must be limited. It should be restricted to cases in which the obligation to carry out an EIA is complied with: conducting an EIA should be necessary *but not sufficient* to ensure compliance with the purported obligation to prevent environmental harm. As a broader rule, prevention should encompass further requirements too, and could be breached even if the obligation to conduct an EIA were complied with.

Admittedly, in the *Pulp Mills* judgment, there was no need for the Court to address the EIA obligation and the purported obligation to prevent environmental harm as mutually independent customary rules. There are two reasons for this. First, the issue of the relationship between them under customary international law did not come into consideration at all. Although the Court referred to customary international law with regard to the 'principle of prevention',[53] it applied a treaty rule regarding prevention of environmental harm in the specific case, and it is that treaty rule, viz. Article 41 of the River Uruguay Statute, that the Court interpreted in the light of the customary obligation to carry out an EIA.[54] Secondly, the Court did not, on that occasion, draw a sharp distinction between prevention of environmental harm and the EIA obligation in the sense that the former was substantive in nature and the latter was procedural. Instead, the Court considered the EIA obligation when examining compliance with substantive obligations, namely the aforementioned treaty obligation stipulating prevention of environmental harm.

By contrast, in the judgment in the *Certain Activities* and *Construction of a Road* joined cases, the International Court of Justice could not avoid addressing the issue of the relationship between the obligation to conduct an EIA and the purported customary obligation to prevent environmental harm. In fact, the former had been included under procedural obligations and the latter under substantive obligations. Moreover, in that same judgment, the Court had also defined the obligation to conduct an EIA as a requirement of the 'due diligence' obligation of prevention.[55]

[52] *Pulp Mills on the River Uruguay*, judgment, cit., at 83, para. 204.
[53] See *supra*, Section 5.2.2.a.
[54] *Pulp Mills on the River Uruguay*, judgment, cit., at 82-83, para. 204.
[55] See the quotation *supra*, Section 5.2.2.b.

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However, in order to ensure that the obligation to carry out an EIA remains fully independent from the alleged obligation to prevent environmental harm under customary international law, alongside the conception of the former as being required by the latter, one must conclude that the obligation of prevention is *not* one of due diligence. This is exactly what appears to have happened in the judgment in the *Certain Activities* and *Construction of a Road* joined cases. The Court seemingly ended up treating the rule on prevention of environmental harm as though it were an obligation of result: it made the finding concerning its breach dependent upon the occurrence of damage to the environment. It was thus possible for the Court to avoid making any finding that the 'due diligence' obligation of prevention of environmental harm had been breached, even though it had already held that Costa Rica had breached the obligation to conduct an EIA.

In particular, in examining the alleged breaches by Costa Rica of its substantive obligations, including 'the obligation under customary international law not to cause significant transboundary harm to Nicaragua',[56] the Court focused on the question as to whether Nicaragua had proved that the construction of the road by Costa Rica caused such harm.[57] Having answered in the negative[58] with regard to environmental harm too,[59] the Court dismissed the allegation that Costa Rica had violated its substantive obligations under customary law.[60] The Court took no account of its previous finding that 'Costa Rica ha[d] not complied with its obligation under general international law to carry out an environmental impact assessment concerning the construction of the road',[61] as one would have expected it to do assuming the due diligence nature of the purported obligation of prevention and the definition of the EIA as a requirement under it.

[56] *Certain Activities* and *Construction of a Road*, judgment, cit., at 726, para. 174.

[57] Ibid., para. 176.

[58] Ibid., at 726-737, paras. 177-217.

[59] Ibid., especially at 729-731, paras. 187-196, and at 734-736, paras. 208-213. On the unfortunate overlap, in the Court's reasoning, between mutual respect for the environment and prevention of harm to the environment per se, see *supra*, Section 5.2.2.a.

[60] *Certain Activities* and *Construction of a Road*, judgment, cit., at 737, para. 217. Admittedly, one gets the impression that, given the failure to conduct any EIA, the Court could not even ascertain the lawfulness of Costa Rica's conduct as far as substantive obligations on protection of the environment were concerned, because it was in accordance with the EIA that Costa Rica should have exercised its due diligence.

[61] Ibid., at 723, para. 162.

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In sum, in the *Certain Activities* and *Construction of a Road* joined cases, the Court's approach surely allowed the distinction between the EIA obligation and prevention of environmental harm to be maintained. Nonetheless, it was clearly at odds with the Court's repeated characterisation of prevention as a due diligence obligation requiring, inter alia, an EIA. As such, it could be breached even in the event that no environmental damage has been caused, where the State has taken inadequate preventive measures, or none at all. The opposite is also the case, namely that the purported obligation of prevention cannot be breached where all due diligence has been applied, but environmental damage has occurred all the same.

The incoherence in the Court's reasoning has not passed unnoticed within scholarly writings.[62] Indeed, the Court seemingly split over the relationship between the EIA obligation and prevention of environmental harm. In their separate opinions, some judges affirmed that the two rules were not self-standing, and classified the obligation to carry out an EIA under the due diligence obligation of prevention.[63]

It is argued here that the reconstruction of prevention of environmental harm as a general principle of international law, with the obligation to conduct an EIA amounting to a customary rule embodying it, enables their independence to be maintained, without however detracting from their connection. On the one hand, a breach of the obligation to carry out an EIA cannot imply a violation of the principle of prevention of environmental harm. By its nature, a general

[62] See especially Yann Kerbrat, Sandrine Maljean-Dubois, 'La contribution en demi-teinte de la CIJ au droit international de l'environnement dans les affaires Costa Rica-Nicaragua' (2018) 145 *Journ. dr. int.* 1133, at 1147-1148.

[63] To be specific, Judge Owada felt the need to attach a separate opinion to express the view that 'conducting an environmental impact assessment is one important constituent element of the process that emanates from the international obligation of States to act in due diligence to avoid or mitigate significant transboundary harm, rather than a separate and independent obligation standing on its own under general international law' (Separate Opinion of Judge Owada, para. 18). Hence, prevention of transboundary harm is the only relevant rule, with the EIA being only one of the possible requirements coming into consideration under it, depending on the particular circumstances (ibid., para. 21). In the same vein, Judge Donoghue expressed some doubt as to whether 'State practice and *opinio juris* would support the existence of such a specific rule [i.e., the obligation to undertake an EIA], in addition to the underlying obligation of due diligence' (Separate Opinion of Judge Donoghue, para. 13). By contrast, Judge ad hoc Dugard insisted on the independent status of the obligation to conduct an EIA (Separate Opinion of Judge ad hoc Dugard, paras. 6-11, especially para. 9).

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principle is not directly affected by a breach of the rules that it has informed, as it has its own autonomy. It does not apply directly to specific cases, as its function consists in inspiring rules and mainly extends to their interpretation.[64] On the other hand, EIA is anyway instrumental in nature, since the customary obligation to conduct an EIA is certainly linked to prevention of environmental harm, which is the principle of international law informing it.

Therefore, the requirement to conduct an EIA may well be conceived of as a customary obligation that is instrumental in pursuing prevention of environmental harm, once this has been classified as a general principle of international law. In effect, at one point of the judgment in the *Certain Activities* and *Construction of a Road* joined cases, a point already commented on, the Court seemingly referred to the obligation to carry out an EIA as a rule embodying the principle of prevention of environmental harm.[65]

Furthermore, the reconstruction proposed here provides a response to the well-known argument that, as far as protection of the transboundary environment is concerned, the EIA should be viewed as being based on the principle of non-discrimination, rather than the principle of prevention.[66] Under the principle of non-discrimination, States should have the same regard to the environment of other States as they have for their own.[67] This is the reason why, according to that argument, domestic EIA legislation in a number of States has expanded to include a consideration of the effects of the planned activity on the transboundary environment.[68] In international law too, so the

[64] See *supra*, Section 3.2.1.

[65] See *supra*, Section 5.2.2.b.

[66] See the seminal article by John H. Knox, 'The Myth and Reality of Transboundary Environmental Impact Assessment' (2002) 96 *AJIL* 291.

[67] The principle was set out within the Organisation for Economic Co-operation and Development (OECD), in the Annex to the Recommendation of the Council for the Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, adopted on 15 May 1977, OECD/LEGAL/0152. Pursuant to para. 3(a), 'each country should ensure that its regime of environmental protection does not discriminate between pollution originating from it which affects or is likely to affect the area under its national jurisdiction and pollution originating from it which affects or is likely to affect an exposed country'. For an overview on the relevance of non-discrimination to EIA, see Craik, *The International Law*, cit., at 55-59.

[68] See Knox, 'The Myth and Reality', cit., at 296-301, especially at 300 ('As applied to domestic EIA laws, the nondiscrimination principle would require states to assess the extraterritorial effects of actions within their jurisdiction just as they assess their domestic effects […]. Transboundary EIA provisions that require states to

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argument continues, EIA is based on the principle of non-discrimination rather than prevention: by virtue of EIA obligations, States are not prevented from authorising a planned project in the event that the EIA reveals that it will cause significant harm to the environment.[69]

It must be conceded that, insofar as the obligation to carry out an EIA is regarded as being instrumental in implementing prevention of environmental harm *qua* customary rule, then one must inevitably conclude that, if the EIA indicates that the planned activity will cause significant harm to the environment, the purported obligation of prevention will apply and the project cannot be authorised, unless it is duly modified or mitigation measures are adopted.[70] Accordingly, the fact that planned projects that will cause significant harm to the environment may be authorised nonetheless, under various domestic laws and international rules as well, can only raise perplexities.

The situation changes once the obligation to carry out an EIA is viewed as a customary rule embodying prevention of environmental harm *qua* general principle of international law. Under such a scenario, prevention of environmental harm will not apply in order to assess the lawfulness of the conduct at stake, if the EIA shows that the planned project will cause significant environmental harm. As a general principle it has already performed its function by inspiring the formation of the EIA obligation. Such a link is not weakened by the lack of a 'no-authorisation requirement' where the EIA reveals that a certain activity will cause significant environmental harm.

consider extraterritorial effects in the same way that they consider domestic effects of projects within their jurisdiction would comply with this principle').

[69] Knox, 'The Myth and Reality', cit., at 301-308, focuses on two treaties, specifically the Espoo Convention and the 1997 draft North American Agreement on Transboundary Environmental Impact Assessment, in order to demonstrate that they 'do not prohibit significant transboundary environmental harm and do not require EIA for all projects that might cause it, as would Principle 21. Instead, the agreements require only that states take into account the extraterritorial effects of limited types of projects already subject to domestic EIA […]. In effect, the agreements require the parties to bring their existing domestic EIA systems into compliance with the principle of nondiscrimination' (ibid., at 301).

[70] As argued by Craik, 'Principle 17', cit., at 466-467, 'where significant transboundary harm is clearly not likely, then the no-harm principle is not engaged, and the source State may proceed with the proposed activity. In cases where significant transboundary harm is present, the no-harm principle requires States take measures to prevent the predicted harm'. Of course, the outcome of an EIA may not be straightforward, and there may well be disagreement between the State of origin and the potentially affected States, once they have been duly notified, regarding the likelihood of environmental harm on the basis of EIA. In such an eventuality, consultation should come into consideration.

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For sure, prevention of environmental harm will serve, as a general principle, an inspiring function also in the interpretation of the customary obligation to conduct an EIA. This might explain, by way of illustration, why the EIA must be carried out before the activity at stake is authorised. Moreover, it is reasonable to argue that the obligation to carry out an EIA requires the outcome to be effectively taken into account.[71] This may possibly imply a need to state reasons for the authorisation of the project despite the anticipated environmental impact.

However, it is difficult to go further than this. Where an EIA indicates significant environmental harm, the issue as to whether or not the authorisation of the planned project may give rise to a breach of a *substantive* obligation on prevention will depend on the specific substantive obligation, if any, that will apply. In other words, once it has been established that a project will cause significant environmental harm, it will be necessary to identify the substantive obligation applicable in the prevailing circumstances. There may be just one relevant rule, or more than one, and they may either be customary or treaty obligations, or both. For instance, the planned project might have an adverse effect on the atmosphere or on biological diversity, in which case it will be necessary to consider the relevant obligations, in treaty and customary law. It cannot therefore be taken for granted that authorisation of the planned project will be incompatible with the relevant substantive obligations. It is possible that no such substantive obligations exist, or that none is applicable in the particular case. For example, the threshold established by the rule at issue may not have been met, even though the harm to the environment is significant.

Like the obligation to conduct an EIA, the substantive obligations applicable in a specific case may be founded on prevention of environmental harm as a general principle of international law. If this is the case, prevention will operate as an overarching principle linking procedural and substantive obligations.

6.3. *Prevention as Regulation of Hazardous Activities and Limitation of Environmental Harm*

Once it has been established, on the basis of an EIA, that an activity has significant adverse effects on the environment, or is hazardous on account of significant environmental harm that might accidentally occur, the question arises as to what *substantive obligations* under cus-

[71] See Epiney, 'Environmental Impact Assessment', cit., para. 61; and Craik, 'Principle 17', cit., at 461-462.

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tomary international law apply. These require, in contrast to procedural obligations, conduct that has a direct bearing on the activity concerned.

Here the search for specific customary rules inspired by the principle of prevention of environmental harm becomes highly complex, since their formation is systematically hindered by two trends in international environmental law. First, States tend to create detailed treaty regimes relating to classes of activities or types of harm, and it seems that they deem an activity or harm to be unregulated when standards have not been specified. Secondly, as regards hazardous activities in particular, the change in focus where State responsibility is increasingly replaced by the civil liability of the operator represents an obstacle to the emergence of substantive obligations, because States are mainly required to ensure that operators can be held liable and any damage can be promptly and adequately compensated.[72]

Although both of the trends mentioned are well-known, their influence on the formation of customary rules appears to have remained under-explored. This is probably due to the widespread disregard for the issue of the existence of more specific customary rules on prevention, as a result of the common assumption that there is a general obligation to prevent environmental harm under customary international law. That influence will be examined immediately below, subjet to the caveat that none of those trends completely prevents substantive obligations from coming into existence under customary law, although they do make it more difficult.

6.3.1. *Creation of Treaty Regimes Providing for Specific Rules and Standards*

The tendency of States to regard themselves as not being bound by rules in the absence of standards is especially apparent from the practice in relation to treaties. By treaties, in fact, activities are specifically regulated and limits to environmental harm are defined. It is thus worth starting from such practice with a view to considering the potential implications for customary international law.

The proliferation of treaties is another well-known phenomenon

[72] On the influence of these trends on the content of environmental obligations under general international law, and the ensuing difficulties in determining it, see Paolo Picone, 'Obblighi reciproci ed obblighi *erga omnes* degli Stati nel campo della protezione internazionale dell'ambiente marino dall'inquinamento', in Vincenzo Starace (ed.), *Diritto internazionale e protezione dell'ambiente marino* (Milano: Giuffré 1983), 15, at 96-103, also in Paolo Picone, *Comunità internazionale e obblighi 'erga omnes'. Studi critici di diritto internazionale* (3rd ed., Napoli: Jovene 2013), 1, at 86-93.

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within international environmental law. Seemingly, hundreds of multilateral environmental agreements (so called MEAs) have been concluded since the 1960s, following the Stockholm Conference in particular, and many bilateral treaties relating to environmental matters have been concluded between neighbouring States, although some of them are based on mutual respect for territorial sovereignty rather than protection of the environment, or a combination of the two.

It is also widely known that, when international action is taken on any given environmental issue, States often conclude a 'framework convention' first, which aims to set out objectives and general obligations, and to create a cooperation mechanism, which is commonly based on the conference of parties, as well as scientific or technical committees. Subsequently, operating within the treaty framework, the parties adopt protocols stipulating more specific obligations and setting forth detailed standards. The most illustrative example is perhaps the Convention on Long-Range Transboundary Air Pollution,[73] as eight protocols to it have been adopted: apart from the first one, which deals with monitoring and evaluation, each of the others is basically concerned with a specific substance or specific substances.[74] Other examples are provided by the Convention for the Protection of the Ozone Layer,[75] with its Protocol on Substances that Deplete the Ozone Layer,[76] and the UN Framework Convention on Climate Change (UNFCCC),[77] with the Kyoto Protocol thereto[78] and the Paris Agreement,[79] though this latter could be equated to a 'protocol' to the UNFCCC in some respects only.[80]

[73] Convention on Long-range Transboundary Air Pollution, adopted at Geneva on 13 November 1979 and entered into force on 16 March 1983, 1302 *UNTS* 217.

[74] See *supra*, Section 4.2.1.c.

[75] Convention for the Protection of the Ozone Layer, adopted at Vienna on 22 March 1985 and entered into force on 22 September 1988, 1513 *UNTS* 293.

[76] Protocol on Substances That Deplete the Ozone Layer, adopted at Montreal on 16 September 1987 and entered into force on 1 January 1989, 1522 *UNTS* 3.

[77] United Nations Framework Convention on Climate Change, adopted at New York on 9 May 1992 and entered into force on 21 March 1994, 1771 *UNTS* 107.

[78] Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted on 11 December 1997 and entered into force on 16 February 2005, 2303 *UNTS* 162.

[79] Paris Agreement, adopted on 12 December 2015 and entered into force on 4 November 2016, Decision 1/CP.21 of the Conference of the Parties to the UNFCCC, in Report of the Conference of the Parties on Its Twenty-First Session, held in Paris from 30 November to 13 December 2015, Part Two, UN Doc. FCCC/CP/2015/10/Add.1.

[80] On the relationship between the Paris Agreement and the UNFCCC, including the reasons why the name 'Paris Agreement' was chosen instead of 'Paris

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From a broader point of view, even when States have not resorted to the 'framework convention-protocol' architecture, one may observe that parameters and standards are directly incorporated into treaties, in particular in their annexes, or that general treaty obligations refer to standards to be established 'outside' the treaty, through other treaties or acts, without any cooperation framework being set up. For instance, a total of more than 35,000 species of fauna and flora are listed on the Appendices to the Convention on International Trade in Endangered Species (CITES).[81] They are divided into three groups depending upon whether the species are already endangered by international trade, could become endangered should their international trade remain unrestricted, or are domestically regulated but cooperation between the Parties to CITES is necessary in respect of international trade. As for the 'outside' standards, one may recall the UNCLOS provisions whereby the obligation of States to adopt laws and regulations to prevent, reduce and control marine pollution rests on parameters that need to be set by international rules and standards, as well as recommended practices and procedures.[82] According to the same UNCLOS provisions, States parties undertake to establish those rules and standards through competent international organizations or diplomatic conference.[83]

Occasionally, an international organisation is created that is charged with the competence to define standards relevant to the general obligations laid down in the constituent treaty. Under UNCLOS itself, by way of illustration, the obligation of States to adopt laws and regulations to prevent, reduce and control pollution from activities in the Area focuses on the international rules, regulations and procedures established by the International Sea-Bed Authority.[84]

Protocol' or 'Paris Implementation Agreement', which had also been proposed, see Daniel Bodansky, 'The Paris Climate Change Agreement: A New Hope?' (2016) 110 *AJIL* 288, at 295-297.

[81] Convention on International Trade in Endangered Species of Wild Fauna and Flora, adopted at Washington on 3 March 1973 and entered into force on 1 July 1975, 993 *UNTS* 243.

[82] See Articles 207(1) on pollution from land-based sources; 208(3) on pollution from sea-bed activities subject to national jurisdiction; 210(6) on pollution by dumping; 211(2) on pollution from vessels; and 212(1) on pollution from or through the atmosphere.

[83] See Articles 207(4) on pollution from land-based sources; 208(5) on pollution from sea-bed activities subject to national jurisdiction; 210(4) on pollution by dumping; 211(1) on pollution from vessels; and 212(3) on pollution from or through the atmosphere.

[84] Art. 209 UNCLOS.

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There are also hybrid cases where detailed rules and standards are set forth in the treaty, or its annexes, and the conference of the Parties or an ad hoc body is charged with the task of periodically reviewing and updating them, without any international organisation being actually created. For example, the International Convention for the Regulation of Whaling (ICRW) includes a Schedule stipulating specific obligations and standards:[85] under the Convention, the International Whaling Commission has the power to adopt regulations in order to amend the provisions of the Schedule.[86]

It should be added, finally, that on some occasions detailed obligations and standards are laid down directly in the treaty, with the 'general' provisions referring to and incorporating them, or without any general obligations being set out at all. In that event, contracting Parties have seemingly been reluctant to even insert a general obligation in the treaty: although not conclusive, such evidence speaks against the conclusion that they considered those detailed obligations and standards as the specification of a customary rule.

By way of illustration, Article II CITES, entitled 'Fundamental Principles', directly provides for the division of species into the three Appendices cited above. The only 'general' obligation laid down is based on the Appendices:[87] it stipulates that '[t]he Parties shall not allow trade in specimens of species included in Appendices I, II and III except in accordance with the provisions of the present Convention'.[88] As another example, the States party to the Convention for the Protection of the Ozone Layer are under an obligation to take appropriate measures 'to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer' not in general, but 'in accordance with the provisions of this Convention and of those protocols in force to which they are party'.[89] The protocols concerned are those that the Parties undertake to adopt by

[85] International Convention for the Regulation of Whaling, adopted at Washington on 2 December 1946 and entered into force on 10 November 1948, 161 *UNTS* 72.

[86] Art. V(1) ICRW.

[87] The only provision of general scope is found in the preamble, para. 1, although it could hardly be regarded as an obligation considering its wording and inclusion in the preamble. It states as follows: '*[R]ecognizing* that wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth which must be protected for this and the generations to come […]'.

[88] Art. II(4) CITES.

[89] Art. 2(1) of the Vienna Convention for the Protection of the Ozone Layer.

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cooperating 'in the formulation of agreed measures, procedures and standards for the implementation of this Convention'.[90]

In sum, treaties within international environmental law have structural features that show the willingness of States to define the scope of obligations through detailed rules and standards. This is somewhat necessary, considering the highly technical nature of environmental issues. On the other hand, the need to search for precise standards results from the nature of activities that cause environmental harm: as they are not only per se lawful, but are also deemed to be economically and socially necessary, they cannot simply be prohibited.[91] On the contrary, they need to be regulated, or harm to the environment needs to be limited. To this end, detailed rules or standards are likewise necessary.

The stipulation of detailed obligations and the definition of standards do not per se constitute an obstacle to the formation of customary rules. Contrariwise, as recalled on several occasions in this study, treaty rules may surely specify the content of a more general customary rule. Indeed, regardless of whether detailed obligations and standards are included in protocols, annexes and acts, or 'outside' treaties, the basic treaty usually sets forth also general provisions. For instance, the aforementioned Convention on Long-Range Transboundary Air Pollution stipulates that the Parties 'shall endeavour to limit and, as far as possible, gradually reduce and prevent air pollution including long-range transboundary air pollution'.[92] It is plain to see that general provisions as such are ideal candidates for identifying corresponding customary rules. In other words, it might be alleged that detailed obligations and standards specify the general provisions laid down in treaties, which in turn reflect or crystallise existing or emerging customary rules, or have evolved into new rules of customary international law.

Nevertheless, international practice indicates that States tend to regard themselves as being bound *only* by the detailed obligations and standards as set forth in environmental treaties, including annexes and protocols, or that are apparent from their context, while they seem to consider the general provisions laid down in the relevant treaties to be not only ineffective or scarcely effective, but also incapable, on their own, of imposing obligations. This suggests that States might not be convinced of the existence of customary rules

[90] Art. 2(2)(c) of the Vienna Convention for the Protection of the Ozone Layer.
[91] On the related problem of *sine delicto* liability of States, see *supra*, Section 1.1.3.
[92] Art. 2 of the Convention on Long-Range Transboundary Air Pollution.

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corresponding to those general provisions, which obviously hinders the determination of the *opinio juris* element.

In this regard, the general provision contained in UNFCCC is noteworthy, since States have seemingly attached little legal weight, if any, to it. According to Article 4(2)(a), each developed country Party 'shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs'. On account of the universal participation in the UNFCCC as well as the general tone of the wording, one might prima facie be led to believe that that provision reflects a customary rule. This rule would thus have been codified in the UNFCCC and clarified through the more precise obligations and standards set forth in the relevant treaty regime.

However, it seems that States consider Article 4(2)(a) to be too broad to impose legal obligations. Admittedly, the qualifications included in the provision, namely a return to pre-1990 levels of greenhouse gas emissions by the end of that decade, are couched in descriptive rather than prescriptive terms.[93] Some States, including the United States in particular, have accordingly denied that any legal commitment is established by it.[94] Moreover, the Parties to the UNFCCC as a whole appear to have acknowledged the weakness of Article 4(2)(a) because in 1995, shortly after it was adopted, they urged the definition of more rigorous obligations,[95] which would sub-

[93] Pursuant to Art. 4(2)(a), the policies and measures adopted by the developed country Parties 'will demonstrate that developed countries are taking the lead in modifying long-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol would contribute to such modification'.

[94] See especially Daniel Bodansky, 'The United Nations Framework Convention on Climate Change: A Commentary' (1993) 18 *Yale JIL* 451, at 516-517. See also Patricia Birnie, Alan Boyle, Catherine Redgwell, *International Law and the Environment* (3rd ed., Oxford: Oxford University Press 2009), at 360; Jennifer Kilinski, 'International Climate Change Liability: A Myth or Reality?' (2009) 18 *J Transn. LP* 377, at 389; Jean-Maurice Arbour, Sophie Lavallée, Hélène Trudeau, *Droit international de l'environnement* (Cowansville: Editions Yvon Blais 2012), at 311-320; Sands et al., *Principles*, cit., at 304.

[95] This is the so-called 'Berlin Mandate' under decision 1/CP.1 of the Conference of the Parties to the UNFCCC, in Report of the Conference of the Parties on Its First Session, held at Berlin from 28 March to 7 April 1995, Addendum Part Two, UN Doc. FCCC/CP/1995/7/Add.1. The preamble states that the Conference agreed to 'begin a process to enable it to take appropriate action for the period be-

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sequently be stipulated in the Kyoto Protocol. Concerns about the delays in the entry into force of the Kyoto Protocol, which occurred more than seven years after it was adopted, confirm the impression that States felt as though there was a lack of international action on climate change, despite the operation of UNFCCC, including Article 4(2)(a). The same holds true with regard to concerns over the failure by the United States to ratify the Protocol, as the United States seemingly considered itself not to be bound by any obligations as a result, although it was a party to the UNFCCC.[96] The need for a new treaty – ultimately the Paris Agreement – following the uncertainties surrounding the extension of the scope of the Kyoto Protocol to a second commitment period,[97] the first one having expired in 2012, provides further evidence that States tend to consider the UNFCCC to lack any substantive obligations.[98] More recently in 2017, when the United States declared that it would withdraw from

yond 2000, including the strengthening of the commitments of the Parties included in Annex I to the Convention […] in Article 4, paragraph 2(a) and (b), through the adoption of a Protocol or another legal instrument'. The need to strengthen the commitments under Art. 4(2) is repeated in the decision, under section II, para. 2.

[96] One of the reasons for the failure of the Kyoto Protocol is commonly found in the decision by the United States not to participate.

[97] The Doha Amendment provided for a second commitment period from 2013 to 2020. It was adopted by decision 1/CMP.8 of the Conference of the Parties to the UNFCCC serving as the meeting of the Parties to the Kyoto Protocol, in Report of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol on Its Eighth Session, held in Doha from 26 November to 8 December 2012, Part Two, UN Doc. FCCC/KP/CMP/2012/13/Add.1. The Doha Amendment paradoxically entered into force on 31 December 2020, at the end of the relevant commitment period, after it had eventually been accepted by the number of Parties required under Articles 20(4) and 21(7) of the Kyoto Protocol.

[98] In the *Urgenda Foundation* v. *State of the Netherlands* case, No. 19/00135, judgment of 20 December 2019, the Supreme Court of the Netherlands also considered Art. 4 UNFCCC when affirming that States are individually responsible for taking the necessary measures to mitigate climate change (ibid., para. 5.7.3). However, the basis for the obligation of the Netherlands to reduce greenhouse gas emissions by the end of 2020 by at least 25% compared to 1990 was identified as being the European Convention on Human Rights, and specifically Articles 2 and 8 concerning respectively the right to life and the right to respect for private and family life. Moreover, for the purposes of the analysis carried out here, it is worth stressing that the Dutch Supreme Court relied on detailed standards, and in particular on the minimum target of a 25% reduction as established by the Intergovernmental Panel on Climate Change and subsequently endorsed by States (ibid., paras. 7.2.1-7.2.11). Indeed, the Supreme Court seemingly alluded to the very general content of the obligation under Art. 4 UNFCCC (ibid., para. 6.2).

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the Paris Agreement,[99] several States expressed regret about that decision,[100] but without acknowledging any subsidiary role for Article 4(2)(a) UNFCCC. In fact, given its aim of dismantling a series of national policies aimed at mitigating climate change, the United States regarded only its participation in the Paris Agreement as being an issue, and hence decided to withdraw from it,[101] as if participation in the UNFCCC did not stand in the way of the planned change in environmental policies.[102]

In international case law too, general treaty provisions have seldom been applied in isolation from more specific obligations and standards. By way of illustration, it is worthy of note that, in the *South China Sea Arbitration*, the Arbitral Tribunal relied on the division of species under CITES in order to assess the lawfulness of the Chinese conduct with reference to Article 192 UNCLOS, which is specifically entitled 'general obligation' and stipulates in broad terms that States are under an 'obligation to protect and preserve the marine environment'.[103] It seems that, in order to reach the conclusion that activities involving the harvesting of vulnerable, threatened and endangered species amounted to a breach of that general obligation, the Tribunal needed to read it 'against the background of other applicable international law', and to give it 'particular shape in the context of fragile ecosystems' on the basis of Article 194(5).[104] Since this provision establishes in general terms that the measures taken on protection of the marine environment under Part XII UNCLOS

[99] The statement by the President of the United States is available at *www.archives.gov/presidential-libraries/archived-websites*. The United States had ratified the Paris Agreement through acceptance on 3 September 2016.

[100] See Mario Gervasi, 'On the United States' Decision to Withdraw from and Cease Implementation of the Paris Agreement on Climate Change' (2019) 18 *Chinese JIL* 777, at 784-786.

[101] Ibid., at 799-801.

[102] Following the presidential statement, the United States withdrawal from the Paris Agreement was in fact communicated on 4 November 2019, i.e., after three years from its entry into force, and it took effect on 4 November 2020 in accordance with Art. 28(1) and (2) of the Agreement. However, on 20 January 2021, the United States deposited again its instrument of acceptance of the Paris Agreement.

[103] Consideration of Art. 192 UNCLOS was somewhat necessary, since the application of more specific provisions relating to the different marine areas would have implied the preliminary examination of sovereignty issues or the delimitation of maritime boundaries, which fell outside the scope of the dispute according to the Tribunal (see *supra*, Section 5.3.2).

[104] *South China Sea Arbitration*, award, cit., at 527, para. 959, and, in a similar vein, at 528-529, para. 964.

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'shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life', it is especially the 'other applicable international law' that qualifies the obligation in Article 192. This was comprised of CITES: the Arbitral Tribunal essentially found that China had breached its obligations under Articles 192 and 194(5) UNCLOS as it had failed to prevent the harvesting of species listed as endangered or likely to be endangered with extinction under CITES appendices.[105]

The impression that the recourse to specific standards was needed is not contradicted by the application of Article 192 in another passage of the award in the *South China Sea Arbitration*, as other provisions were also applied, namely Article 194(1) dealing with pollution of the marine environment and Article 194(5), mentioned above.[106] In particular, the Tribunal was called upon to assess the lawfulness of China's island-building activities on reefs,[107] and found that all of the UNCLOS provisions mentioned had been breached.[108] In addition, it can also be plausibly argued that it was easier for the Tribunal to apply broader provisions in relation to China's construction activities, as these had disastrous effects on the environment and were aimed at land reclamation in a disputed area, rather than constituting the exercise of China's own rights of economic exploitation. As will be stressed shortly, the need for careful regulation of hazardous activities and limitation of harm tends to fade when economic exploitation of natural resources is not directly at stake.

6.3.2. *Outside Detailed Treaty Regimes: Trends Relating to the Dumping of Wastes and Other Matter at Sea…*

The trend towards the creation of treaty regimes that lay down specific rules and standards appears to represent an obstacle to the formation of customary rules, as it may indicate a reluctance on the part of States to regard themselves as being bound by general obligations. As alluded to however, this does not mean that this trend entails an absolute preclusion on the emergence of customary law as regards substantive obligations on the prevention of environmental harm.

[105] Ibid., at 526-527, paras. 956-957.
[106] Ibid., at 539, para. 983.
[107] Ibid., at 533-539, paras. 976-982.
[108] Ibid., at 539, para. 983.

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First, the complex relationship between customary international law and treaties should be borne in mind. Treaties may be indicative of the inexistence of customary rules, if they are adopted to fill a gap in customary international law or, as in the above case, if they reflect an overall attitude that is inconsistent with the very features of customary law. On the other hand, treaties amount to instances of State practice and *opinio juris*, and thus may serve as evidence of customary rules.[109] Secondly, the need to define specific rules and standards might change over time: it may arise during a merely initial phase, when States are not prone to accept broad obligations with far-reaching implications, although such obligations might gradually come into being, in treaty or customary law, operating regardless of more specific parameters. As pointed out above, the creation of detailed treaty regimes reflects the willingness of States to regulate, or limit the environmental harm deriving from, activities that are considered to be economically or socially significant. However, the perception of the economic importance of an activity, as well as its disvalue, may change over the years.

In this regard, international prevention of marine pollution by dumping is worthy of note. The relevant practice shows a tendency towards the progressive abandonment of originally established parameters, and as a result an increasing consensus around general obligations, which may be or may eventually evolve into customary rules. In particular, it appears that a customary prohibition on dumping of wastes at sea has been gradually emerging.

Starting with the definition of 'dumping', it essentially refers, pursuant to Article 1 UNCLOS, to 'any deliberate disposal of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea'.[110] The deliberate character implies that the disposal of wastes that is just incidental to or derives from the normal operation of vessels, aircraft or platforms is excluded (unless such 'normal operation' consists specifically in the disposal of wastes or other matter, or unless their treatment on board operationally entails the disposal at sea), as is the 'placement of matter for a purpose other than the mere disposal thereof', such as scientific purposes.[111] The UNCLOS definition rests on that of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other

[109] See *supra*, Section 3.3.3.

[110] Art. 1(5)(a)(i) UNCLOS. The definition also covers 'any deliberate disposal of vessels, aircraft, platforms or other man-made structures at sea', under (ii).

[111] Art. 1(5)(b) UNCLOS.

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Matter (London Convention),[112] and dumping has a similar meaning under other treaties too.[113]

International treaties addressing marine pollution by dumping initially sought to *regulate* such dumping as an activity. In order to achieve this, specific rules and standards were necessary. Hence, under the London Convention, certain substances and materials are listed in two separate annexes, as States undertake to prohibit the dumping of those contained in Annex I (so called 'black list') and to subject the dumping of those contained in Annex II to a 'special permit' (so called 'grey list'), with the dumping of residual wastes or other matter being permitted upon condition that a 'general permit' is issued to that effect.[114] The criteria governing the issue of either permit are specified in Annex III,[115] including the features and composition of the matter, the characteristics of the dumping site and the method of deposit.

The 'black/grey list' approach has been followed in regional treaties too. For instance, the Convention for the Prevention of Marine Pollution by Dumping (Oslo Convention),[116] which is no longer in force as will be seen immediately below, prohibited the dumping of the substances listed in Annex I whilst permitting

[112] Art. III of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, adopted at Washington, Moscow, London, and Mexico City on 29 December 1972 and entered into force on 30 August 1975, 1046 *UNTS* 120.

[113] As regards some of the treaties that will be considered below, see Art. 3(3) and (4) of the 1976 Barcelona Dumping Protocol; Art. 2(b) of the Noumea Convention; Art. II(3) of the Bucharest Convention; as well as, with slight modifications, Art. 1(f) and (g) of the OSPAR Convention. One of the most controversial aspects of this definition of 'dumping' is whether or not disposal on the seabed and into the subsoil falls within its meaning. The answer seems to be that such actions do not, as illustrated with regard to radioactive waste by Hubertus Welsh, 'The London Dumping Convention and Sub-seabed Disposal of Radioactive Waste' (1985) 28 *German YIL* 322. Indeed, when States have intended treaty provisions concerning dumping to refer to disposal on the seabed and into the subsoil too, it has been clearly stated. As will be seen, in laying down a prohibition on the dumping of radioactive waste, the Noumea Convention extends it to disposal on the seabed and into the subsoil, irrespective of the meaning of dumping. In a similar vein, more recent treaties have departed from the UNCLOS definition of 'dumping' to include disposal on the seabed and in the marine subsoil: among the treaties that will be mentioned below, see Art. 1(4.1.3) of the London Protocol; and Art. 3(3)(c) of the 1995 Barcelona Dumping Protocol.

[114] Art. IV(1) of the London Convention.

[115] Art. IV(2) of the London Convention.

[116] Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, adopted at Oslo on 15 February 1972 and entered into force on 7 April 1974, 932 *UNTS* 3. It concerns the North-East Atlantic.

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the dumping of wastes containing substances and materials listed in Annex II, subject to a 'specific permit',[117] whereas the dumping of other substances or materials required a general 'approval'.[118] In other treaties the same expressions relating to the 'black/grey list' approach as those used in the London Convention are employed, viz. in the Dumping Protocol to the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Dumping Protocol),[119] the Dumping Protocol to the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea Convention),[120] and the Dumping Protocol to the Convention on the Protection of the Black Sea against Pollution (Bucharest Convention).[121] They all list the substances and materials the dumping of which is prohibited,[122] as well as those that may be dumped with a 'special permit',[123] with the dumping of all other wastes and matter being subject to a 'general permit'.[124] Like the London Convention, all of the treaties mentioned specify the factors applicable to the issue of the permit in an annex.[125]

[117] Articles 5 and 6 of the Oslo Convention.

[118] Art. 7 of the Oslo Convention.

[119] Convention for the Protection of the Mediterranean Sea against Pollution (with Annex and Protocols for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft and Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency), adopted at Barcelona on 16 February 1976 and entered into force on 12 February 1978, 1102 *UNTS* 27.

[120] Convention for the Protection of the Natural Resources and Environment of the South Pacific Region and Related Protocols, adopted at Noumea on 24 November 1986 and entered into force on 22 August 1990, (1987) 26 *ILM* 38. The official name of the Dumping Protocol is the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping.

[121] Convention on the Protection of the Black Sea against Pollution (with Annex and Protocols), adopted at Bucharest on 21 April 1992 and entered into 15 January 1994, 1764 *UNTS* 3. The official name of the Dumping Protocol is Protocol on the Protection of the Black Sea Marine Environment against Pollution by Dumping.

[122] Art. 4 of the Barcelona Dumping Protocol; Art. 4 of the Dumping Protocol to the Noumea Convention; Art. 2 of the Dumping Protocol to the Bucharest Convention.

[123] Art. 5 of the Barcelona Dumping Protocol; Art. 5 of the Dumping Protocol to the Noumea Convention; Art. 3 of the Dumping Protocol to the Bucharest Convention.

[124] Art. 6 of the Barcelona Dumping Protocol; Art. 6 of the Dumping Protocol to the Noumea Convention; Art. 4 of the Dumping Protocol to the Bucharest Convention.

[125] Annex III to the Oslo Convention (referred to by Articles 6 and 7); Annex

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It seems that the approach based on regulation of dumping is being progressively replaced by another based on the *prohibition* of dumping at sea in general. Differently from the former, the latter approach does not depend on a specific enumeration of the substances the dumping of which is prohibited or requires a permit, since the dumping of all wastes and other matter is forbidden. Instead, it is the *exceptions* to the general prohibition that must be stated in what is called a 'reverse list'.[126]

On a global level, this shift in approach was seemingly inaugurated by the 1996 Protocol to the London Convention (London Protocol),[127] which – despite its name – supersedes the London Convention 'as between Contracting Parties to this Protocol which are also Parties to the Convention',[128] and is thus meant to replace the Convention. There are presently eighty-seven Parties to the Convention and fifty-three to the Protocol:[129] forty of the Parties to the former are parties to the latter as well. The London Protocol essentially stipulates that the Parties 'shall prohibit the dumping of any wastes or other matter with the exception of those listed in Annex 1':[130] the issue of a permit is necessary only for the dumping of the wastes and matter specified in that Annex, and the criteria and conditions for the permit come into consideration in this regard only.[131]

The 'reverse list' approach has been adopted by regional treaties too in order to replace the 'black/grey list' approach. The Convention for the Protection of the Marine Environment of the North-East

III to the Barcelona Dumping Protocol (referred to by Art. 7); Annex III to the Dumping Protocol to the Noumea Convention (referred to by Art. 7); Annex III to the Dumping Protocol to the Bucharest Convention (referred to by Art. 5).

[126] For an overview, see Yoshifumi Tanaka, *The International Law of the Sea* (3rd ed., Cambridge: Cambridge University Press 2019), at 374-377. The said evolution has also been described from the perspective of the precautionary approach: see David L. VanderZwaag, 'The International Control of Ocean Dumping: Navigating from Permissive to Precautionary Shores', in Rosemary G. Rayfuse (ed.), *Research Handbook on International Marine Environmental Law* (Cheltenham: Edward Elgar 2015), 132, at 134-137.

[127] Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes or Other Matter, 1972, adopted at London on 7 November 1996 and entered into force on 24 March 2006.

[128] Art. 23 of the London Protocol.

[129] See IMO, Comprehensive Information of the Status of Multilateral Conventions and Instruments in Respect of Which the International Maritime Organization or Its Secretary-General Performs Depositary or Other Functions (7 January 2021), at 542-560, available at *www.imo.org*.

[130] Art. 4(1.1) of the London Protocol.

[131] Art. 4(1.2) of the London Protocol.

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Atlantic (OSPAR Convention) replaced the Oslo Convention,[132] which terminated on 25 March 1998. Under the OSPAR Convention, '[t]he dumping of all wastes or other matter is prohibited, except for those wastes or other matter listed'.[133] The Barcelona Dumping Protocol has been likewise amended and, although the new Protocol has not yet entered into force, it must be noted that pursuant to Article 4, as amended, '[t]he dumping of wastes or other matter, with the exception of those listed […] is prohibited'.[134] Finally, it is remarkable that the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention) has adopted the 'reverse list' approach since it was concluded:[135] dumping of wastes or other matter is prohibited, except for dredged material, the dumping of which is subject to a special permit.[136]

The UNCLOS regime does not clearly endorse the 'black/grey list' or the 'reverse list' approach: it does not itself contain any distinction between substances in respect of dumping at sea. This may easily be explained considering the broad scope of the Convention, which comprehensively deals with the law of the sea. Under Article 210(3) UNCLOS, however, national legislation 'shall ensure that dumping is not carried out without the permission of the competent authorities'. Moreover, as mentioned above, the obligation to adopt laws, regulations and measures to prevent, reduce and control marine pollution by dumping is qualified as they cannot be 'less effective […] than the global rules and standards'.[137] It seems probable that those rules and standards extend to the London Convention and Protocol,[138] and thus that the evolution of the content of the pertinent obligation reflects the trend from the 'black/grey list' approach to the 'reverse list' approach.

In sum, the above overview of the international action on dumping at sea shows that the need for specific rules and standards may weaken

[132] Convention for the Protection of the Marine Environment of the North-East Atlantic, adopted at Paris on 22 September 1992 and entered into force on 25 March 1998, 2354 *UNTS* 67.

[133] Art. 3(1) of Annex II to the OSPAR Convention.

[134] Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea, adopted at Barcelona on 10 June 1995, available at *www.unenvironment.org*.

[135] Adopted at Helsinki on 22 March 1974 and entered into force on 3 May 1980, 1507 *UNTS* 166.

[136] Art. 11(1) and (2) of the Helsinki Convention.

[137] Art. 210(1) and (4) UNCLOS. See also *supra*, Section 6.3.1.

[138] See Frank Wacht, 'Article 210', in Proelss (ed.), *United Nations Convention on the Law of the Sea*, cit., 1407, at 1418.

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over time, and consensus around a general obligation may grow as a result, which may eventually evolve into a customary rule. In this connection, there seems to be a trend towards the emergence of a customary prohibition on the dumping of wastes or other matter at sea, with treaties setting out exceptions. Further instances of State practice and *opinio juris* appear to be consistent with such a trend. Indeed, despite the difficulties in assessing the amount and nature of wastes and other matter that are dumped at sea, the available data shows that dumping is essentially limited to those substances and materials that fall under the exceptions set forth in treaties.[139] The dumping of other substances and materials seems to be considered illegal by States.[140]

6.3.3. *…and, in Particular, the Dumping of Radioactive Wastes*

Pending the crystallisation of a customary prohibition on dumping at sea in general, one may currently observe, against the background illustrated, that certain customary rules concerning the dumping of particular hazardous wastes or other matter have already come into being, which confirms that, whilst being an obstacle to the formation of general rules, the creation of specific treaty regimes is not an insurmountable one. In particular, the dumping of high-level radioactive wastes seems to be the object of a quite well established prohibition under customary international law. After all, it is the concerns about the dumping of radioactive wastes that have progressively led to broader international action to protect marine environment from pollution by dumping.[141]

Highly radioactive wastes result from nuclear power generation, specifically spent fuel from reactors as well as liquid and solid residues from reprocessing.[142] Although States started dumping such wastes at sea in 1946, according to the IAEA no further disposal of high-level radioactive wastes has occurred since 1993.[143] Thus, State

[139] See Alan Simcock, Juying Wang, 'Solid Waste Disposal', in *First Global Integrated Marine Assessment. World Ocean Assessment* (United Nations 2016), at 6-9, available at *www.un.org*. Said substances and materials essentially consist in dredged materials, sewage sludge, and fish waste.

[140] Ibid., at 11-12.

[141] As is noted by José A. De Yturriaga, 'Regional Conventions on the Protection of the Marine Environment' (1979) 162 *Rec. cours* 319, at 362, '[u]ntil the 1970s international law had paid little attention to the problems of marine pollution by dumping operations of all kinds. Indeed, until that time, the question had only been examined in connection with the disposal of radioactive wastes'.

[142] See Sands et al., *Principles*, cit., at 613.

[143] IAEA, *Inventory of Radioactive Waste Disposals at Sea* (Wien: IAEA 1999), at 5-20, especially at 12.

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practice seems to be consistent with the existence of a customary prohibition on dumping highly radioactive wastes at sea: States have refrained from such conduct for almost thirty years.[144] Moreover, the prohibition on the dumping of radioactive waste has long been imposed by a number of treaties.

It is striking that the Convention on the High Seas,[145] which was adopted in the late 1950s, when protection of the environment was still at an embryonic stage, already contained an obligation to take measures to prevent marine pollution from the dumping of radioactive wastes, as well as an obligation to cooperate to that end.[146] The dumping of highly radioactive wastes was subsequently prohibited by the London Convention through the inclusion in its black list,[147] whereas the dumping of radioactive wastes in general is outlawed under the black list of the Barcelona Dumping Protocol and the Dumping Protocol to the Bucharest Convention.[148] The Noumea Convention is especially significant as it expresses the serious concern about the dumping of radioactive waste: it is prohibited under a special provision directly appearing in the Convention itself,[149] separately from the 'black/grey list' approach informing the overall rules on dumping in the relevant Protocol. It also clarifies that, 'whether or not disposal into the seabed and subsoil of wastes or other matter is "dumping"',[150] the prohibition applies equally to 'the disposal into the seabed and subsoil of the Convention Area of radioactive wastes or other radioactive matter'.[151] In addition to treaties dealing with dumping at sea and the protection of the marine environment, treaties establishing denuclearised zones also include a prohibition on dumping of radioactive wastes, such as the South Pacific Nuclear Free Zone Treaty and the Treaty on the Southeast Asia Nuclear Weapon-Free Zone.[152]

[144] See Simcock, Wang, 'Solid Waste Disposal', cit., at 9.

[145] Convention on the High Seas, adopted at Geneva on 24 February 1958 and entered into force on 30 September 1962, 450 *UNTS* 11.

[146] Art. 25 of the Convention on the High Seas.

[147] Annex I, para. 6.

[148] See respectively Annex I, section A, para. 7, and Annex I, para. 8.

[149] Art. 10(1) of the 1986 Noumea Convention.

[150] Ibid.

[151] Ibid.

[152] See respectively Art. 7 and Art. 3(3). Information about those treaties is provided *infra*, Section 6.4.3, note 299. The 1996 African Nuclear Weapon Free Zone Treaty (on the relevant details, see likewise ibid.) also contains a provision, i.e., Art. 7, entitled 'Prohibition of Dumping of Radioactive Wastes': it refers, albeit in quite ambiguous terms, to the 1991 Bamako Convention, according to

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The fact that, lately, international action on the prevention of marine pollution resulting from the dumping of radioactive wastes has focused on *non*-heavily radioactive wastes suggests, *a contrario*, that the issue of high-level radioactive wastes has now become uncontroversial, thus providing additional evidence for the existence of a customary prohibition on the dumping of such wastes. In this regard, it should be borne in mind that low-level radioactive wastes are usually produced by medical establishments or laboratories, biological materials, industrial or building materials, and uranium mining tailings.[153] In several treaties that adopt the 'black/grey list' approach, such wastes have been inserted into the list of materials for which dumping is permitted subject to a special permit, and attempts to include them among the prohibited substances have encountered difficulties, even where they were ultimately successful.

For instance, when the London Convention was adopted, radioactive wastes or other matter different from high-level radioactive wastes were among the substances and materials the dumping of which required a special permit.[154] Shortly afterwards, many Parties proposed amendments to include such radioactive wastes too in the black list, but several others objected.[155] In 1983, the consultative meeting of the Parties to the Convention adopted a resolution to call 'for the suspension of all dumping at sea of radio-active materials',[156] followed in 1985 by another resolution on the 'suspension of all dumping at sea of radioactive wastes and other radioactive matter to permit time for the further consideration of issues which would provide a broader basis for an informed judgment on proposals for the amendment of the Annexes

which, under Art. 4(2)(a), the 'Parties in conformity with related international conventions and instruments shall […] prohibit the dumping at sea of hazardous wastes', including radioactive wastes (Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, adopted at Bamako on 30 January 1991 and entered into force on 22 April 1998, 2101 *UNTS* 177). See also Art. 2(2) as for the qualification of radioactive wastes as hazardous wastes for the purposes of the Convention itself.

[153] See Sands et al., *Principles*, cit., at 613.

[154] Annex II, section D.

[155] For an overview of the positions of the various States, see Britta Meinke-Brandmaier, 'Multi-Regime Regulation – How the South Pacific Region Influences Global Marine Environmental Policy Making: A Study of Radioactive Waste Dumping' (2005) 19 *Ocean YB* 162, at 166-175.

[156] Resolution LDC.14(7), adopted by the seventh consultative meeting of the Parties to the London Convention.

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of the Convention'.[157] Both resolutions were non-binding. It was only in 1993 that an amendment was adopted,[158] to the effect that all radioactive wastes or other radioactive matter would be included in the black list, except for wastes or other materials, such as sewage sludge and dredged materials, containing *de minimis* level of radioactivity as defined by the IAEA.[159] Nonetheless, the amendment did not enter into force in respect of Russia,[160] which had notified its intention not to accept it.[161]

All of this is remarkable when compared with the inclusion *ab origine* of high-level radioactive wastes among the substances and materials the dumping of which is prohibited.[162] To provide another example from a treaty based on the 'reverse list' approach, under the OSPAR Convention the prohibition on the dumping of low-level and medium-level radioactive wastes appears in the provision setting forth exceptions to the general prohibition on the dumping of wastes.[163] This is because some Parties, including in particular France and the United Kingdom, wanted to retain the option of resuming the dumping of those substances after a period of time, and a clause was thus inserted to that effect.[164] Be that as it may, this possibility was subsequently excluded by virtue of a binding decision unanimously adopted by the OSPAR Commission,[165] which is comprised of representatives of all of the Parties.[166]

[157] Resolution LDC.21(9), Annex IV, para. 1, adopted by the ninth consultative meeting of the Parties to the London Convention.

[158] For further details, see again Meinke-Brandmaier, 'Multi-Regime Regulation', cit., at 178-186.

[159] Resolution LC.51(16), adopted by the sixteenth consultative meeting of the Parties to the London Convention on 12 November 1993.

[160] On the history of the dumping of radioactive wastes at sea by Russia, see Kristin Moody-O'Grady, 'Nuclear Waste Dumping in the Oceans: Has the Cold War Taught Us Anything?' (1995) 35 *Nat. Res. J* 695, at 696-700.

[161] Pursuant to Art. XV of the London Convention, '[a]mendments to the Annexes approved by a two-thirds majority of those present at a meeting […] shall enter into force for each Contracting Party immediately on notification of its acceptance to the [International Maritime] Organisation and 100 days after approval by the meeting for all other Parties except for those which before the end of the 100 days make a declaration that they are not able to accept the amendment at that time'.

[162] Annex I, para. 6, to the London Convention.

[163] Art. 3(3)(a) of Annex II to the OSPAR Convention.

[164] Art. 3(3)(b) of Annex II to the OSPAR Convention.

[165] OSPAR Decision 98/2 on Dumping of Radioactive Waste, adopted at Sintra on 23 July 1998 and entered into force on 9 February 1999.

[166] Art. 10(1) of the OSPAR Convention. Pursuant to Art. 13, the OSPAR Commission may adopt binding decisions in addition to recommendations.

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6.3.4. *Creation of Civil Liability Regimes…*

It will be recalled that State responsibility has not been invoked in a number of cases involving transboundary harm to the environment, while inter-individual proceedings have taken place as a result, or damages have been claimed from the operator. As pointed out above, such cases fail to support the construction of prevention of environmental harm as an obligation established by a customary rule, as otherwise a breach of this rule would have been invoked. However, it was not, which weakens the evidence of State practice as a constitutive element of customary law.[167]

It should now be added that, over and above specific cases involving environmental harm, States have created treaty regimes to govern the civil liability of the economic operator, as the person exercising control over the hazardous activity. These were developed at the outset in relation to nuclear damage – resulting from peaceful uses of nuclear energy – and oil pollution at sea. As regards nuclear damage, the Paris Convention on Third Party Liability[168] and the Vienna Convention on Civil Liability[169] were concluded in the early 1960s, the former under the auspices of the OECD and the latter under the auspices of the IAEA. Both of them have since been supplemented or amended.[170] As regards oil pollution, the main treaty, the Convention on Civil Liability for Oil Pollution Damage (CLC), dates back to 1969,[171] and has been repeatedly amended since,

[167] See *supra*, Sections 1.2 and 1.3.

[168] Convention on Third Party Liability in the Field of Nuclear Energy, adopted at Paris on 29 July 1960 and entered into force on 1 April 1968, 956 *UNTS* 251.

[169] Convention on Civil Liability for Nuclear Damage, adopted at Vienna on 21 May 1963 and entered into force on 12 November 1977, 1063 *UNTS* 265.

[170] As for the Paris Convention on Third Party Liability, see the Convention Supplementary to the Convention on Third Party Liability in the Field of Nuclear Energy, adopted at Brussels on 31 January 1963 and entered into force on 4 December 1964, 1041 *UNTS* 358; the Protocol to Amend the Convention on Third Party Liability in the Field of Nuclear Energy, adopted at Paris on 16 November 1982 and entered into force on 7 October 1988, 1519 *UNTS* 329; the Protocol to Amend the Convention of 31 January 1963, Supplementary to the Convention on Third Party Liability in the Field of Nuclear Energy, adopted at Paris on 16 November 1982 and entered into force on 1 August 1991, 1650 *UNTS* 446. As regards the Vienna Convention on Civil Liability, see the Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage, adopted at Vienna on 12 September 1997 and entered into force on 4 October 2003, 2241 *UNTS* 270.

[171] International Convention on Civil Liability for Oil Pollution Damage, adopted at Brussels on 29 November 1969 and entered into force on 19 June 1985, 973 *UNTS* 3.

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most recently in 1992.[172] Significantly, the International Fund for Oil Pollution Damage (IOPC Fund) was set up in 1971,[173] and the treaty establishing it was later amended too.[174]

Treaties on the operator's civil liability have been stipulated outside of these traditional fields as well. Although not all of them have entered into force yet, they are indicative of an expansion of civil liability in international environmental law, which stands in contrast to the paucity of practice in relation to State responsibility for harm to the environment. Today, treaties on civil liability concern the exploration and exploitation of seabed mineral resources,[175] transboundary effects of industrial accidents,[176] transboundary movements and disposal of waste,[177] and the transport of dangerous goods or hazardous substances.[178] Moreover, the scope of some treaties providing for civil liability is particularly broad as it is not limited to one

[172] Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage, adopted at London on 27 November 1992 and entered into force on 30 May 1996, 1956 *UNTS* 255.

[173] International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, adopted at Brussels on 18 December 1971 and entered into force on 16 October 1978, 1110 *UNTS* 57.

[174] See the Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, adopted at London on 19 November 1976 and entered into force on 22 November 1994, 1862 *UNTS* 509; and the Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, adopted at London on 27 November 1992 and entered into force on 30 May 1996, 1953 *UNTS* 330.

[175] Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration and Exploitation of Seabed Mineral Resources, adopted at London on 1 May 1977 and not yet in force, available at *www.gov.uk*.

[176] Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents, adopted at Kiev on 21 May 2003 and not yet in force, available at *www.unece.org*.

[177] Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and Their Disposal, adopted at Basel on 10 December 1999 and not yet in force, available at *www.basel.int*.

[178] Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD), adopted at Geneva on 10 October 1989 and not yet in force, available at *www.unece.org*; International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, adopted at London on 3 May 1996 and not yet in force, and its Protocol of 2010, available at *www.hnsconvention.org*.

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specific activity. These include the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment;[179] Annex VI on Liability Arising From Environmental Emergencies to the Antarctic Environmental Protocol,[180] mentioned above; and the Nagoya-Kuala Lumpur Liability Protocol.[181]

The trend towards stressing civil liability is noteworthy because, as alluded to, it represents an obstacle to the identification of substantive customary rules inspired by prevention of environmental harm *qua* general principle of international law, in the same way as it tends to contradict the existence of a comprehensive customary rule on prevention. Likewise, when civil liability is invoked in specific cases involving environmental harm, without any consideration for State responsibility, an opportunity is missed for States to assert the existence of specific customary rules, or to contribute to their emergence or crystallisation, in the event that no treaty obligation is relevant.

Although civil liability does not exclude the possibility of invoking State responsibility,[182] as a matter of fact the former ends

[179] Adopted at Lugano on 21 June 1993 and not yet in force, available at *www.coe.int*.

[180] Indeed, under Art. 16 of the Protocol on Environmental Protection to the Antarctic Treaty, 'the Parties undertake to elaborate rules and procedures relating to liability for damage arising from activities taking place in the Antarctic Treaty area and covered by this Protocol'. Accordingly, Annex VI was later adopted by Measure 1 (2005) of the XXVIII Antarctic Treaty Consultative Meeting – VIII meeting of the Committee for Environmental Protection, held in Stockholm in 2005. For an overview of the Annex, see Michael Johnson, 'Liability for Environmental Damage in Antarctica: The Adoption of Annex VI to the Antarctic Environment Protocol' (2006) 19 *Georgetown I Env. LR* 33; and Rüdiger Wolfrum, 'Liability for Environmental Damage in Antarctica: Supplement to the Rules on State Responsibility or a Lost Opportunity?', in Isabelle Buffard et al. (eds.), *International Law between Universalism and Fragmentation. Festschrift in Honour of Gerhard Hafner* (Leiden/Boston: Martinus Nijhoff Publishers 2008), 817.

[181] Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, adopted at Nagoya on 15 October 2010 and entered into force on 5 March 2018, available at *www.bch.cbd.int*.

[182] According to Massimo Iovane, *La riparazione nella teoria e nella prassi dell'illecito internazionale* (Milano: Giuffré 1990), at 293-296, State responsibility could be invoked for any breach of substantive or procedural obligations laid down in civil liability treaties, on condition that the State concerned has also failed to comply with the obligation to ensure compensation to individuals under the relevant civil liability regime. See however, as far as nuclear damage is concerned, Gaetano Arangio-Ruiz, 'Some International Legal Problems of the Civil Uses of Nuclear Energy' (1962) 107 *Rec. cours* 497, at 625-630, especially at 625-627, who highlights the difficulties arising from the interaction between the civil liability regime and State responsibility under general international law.

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up applying in place of the latter.[183] That is especially the case when States themselves are entitled to claim damages under a treaty regime that, like those mentioned above, is intended specifically to impose civil liability on the operator. Although a detailed examination of those treaties would fall beyond the scope of this study,[184] their key features should be borne in mind:[185] they include the strict liability of the operator, with the result that there is no need to establish fault; the requirement for the operator to take out insurance; and the establishment of further sources of compensation, usually funds held by the relevant industry sectors or, more rarely, payment by the State of origin. Thus, aside from the grounds for exemption expressly laid down by the treaty, the ability to obtain damages should be certain thanks to the insurance, in the event of the operator's insolvency, or otherwise supplementary compensation. Conversely, the ability of a State to invoke the international responsibility of another State for a breach of a customary rule is far from an attractive alternative, considering the inherent difficulties in identifying customary law and the fact that, in the field of protection of the environment, judicial means of dispute settlement are seldom available.

In this regard, the IOPC Fund practice is significant, as it shows that States have in effect claimed compensation for damage caused by pollution under the pertinent civil liability regime, even where there was uncertainty surrounding the definition of environmental harm. The Patmos case, in particular, concerned an oil spill from the homonymous Greek-registered tanker off the Italian coast in 1985.[186] Although it was doubtful at that time whether, in accordance with CLC, the notion of 'pollution damage' extended to 'pure' environmental damage in addition to property damage and the loss of profit resulting from environmental impairment, Italy claimed compensation for damage to the environment from the ship-owner, the insurer, and the IOPC Fund. It seems that the possibility that, as the flag State, Greece might be held internationally responsible under customary law was not explored. Nonetheless, a codification conven-

[183] See Picone, 'Obblighi reciproci ed obblighi *erga omnes*', cit., at 99-101. See also David M. Ong, 'International Environmental Law's "Customary" Dilemma: Betwixt General Principles and Treaty Rules' (2006) 1 *Irish YIL* 3, at 21-22.

[184] For a detailed analysis, see Sands et al., *Principles*, cit., at 771-802.

[185] See Dupuy, Viñuales, *International Environmental Law*, cit., at 319-322.

[186] See Maria Clara Maffei, 'The Compensation for Ecological Damage in the "Patmos" Case', in Francesco Francioni and Tullio Scovazzi (eds.), *International Responsibility for Environmental Harm* (London/Dordrecht/Boston: Graham & Trotman 1991), 381, at 383-387.

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tion dealing with protection of the marine environment, UNCLOS, had recently been adopted although had not yet entered into force.

6.3.5. *…and Its Consequences on Prevention of Environmental Harm: Trends Relating to Prompt and Adequate Compensation*

Despite the hurdles illustrated above to the identification of substantive rules of customary law, the reconstruction proposed in this study of prevention of environmental harm as a general principle of international law makes it possible to consider the trend of States to focusing on the operator's civil liability also as a factor influencing the content of *other* customary rules. These other rules will not be substantive in nature and, perhaps, will be more akin to procedural obligations, as they will impose a course of action that is not directly related to the hazardous activity, such as the obligation to ensure that the damage be promptly and adequately compensated, the obligation to subject the operator to strict or absolute liability, or the obligation to create an insurance mechanism or fund. Nevertheless, they can be classified under the principle of prevention all the same.

In other words, whilst the increasing recourse to civil liability seems to conflict with the common classification of prevention of environmental harm as an obligation established by a customary rule, it is consistent with its reconstruction as a general principle. This is because, whilst being a distraction from substantive obligations, it indicates a tendency to make rules that are still inspired by that principle. The creation of treaty regimes providing for civil liability is just one further way through which States implement, indirectly as the case may be, the principle of prevention of environmental harm. Moreover, it may well be the case that some of the obligations laid down reflect emerging customary rules, considering that the practice analysed suggests an overall preference of States for operator's civil liability alongside their reluctance to invoke State responsibility.

In this context, with a view to understanding how the increasing weight of civil liability regimes may influence the evolution of customary rules under the principle of prevention of environmental harm, it is necessary to examine the connection between civil liability and the principle of prevention. The relevance of civil liability lies not simply in the self-evident deterrent effect that it may have for economic operators, or in its scope, which usually extends to the costs of measures to prevent or mitigate environmental damage, in addition to the costs of measures to reinstate or restore the environment. Its importance to prevention of environmental harm is deeper and dates back to the 1972 Stockholm Declaration.

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Principle 22 of the Declaration invites States to 'co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage'. It was conceived of as being closely related to prevention of environmental harm, as enshrined in principle 21: it represents a sort of continuation of that principle and, throughout the Declaration, is the only provision that borrows language from principle 21, as it deals with pollution and damage 'caused by activities within the jurisdiction or control of […] States to areas beyond their jurisdiction'. Indeed, the UN General Assembly considered principles 21 and 22 together, when defining them as the principles laying down 'basic rules'.[187]

Admittedly, at the time of the Stockholm Conference, principle 22 was arguably viewed as being centred on State responsibility, rather than civil liability. As the preparatory works show, some previous versions of principle 22 explicitly cited State responsibility: as such it would constitute the flip side to prevention of environmental harm.[188] In the event of damage to the environment, States should be held responsible and be obliged to compensate it. Accordingly, the General Assembly cited principles 21 and 22 as the basic provisions in respect of 'the international responsibility of States' in the field of protection of the environment.[189]

On the other hand, out of concerns that principle 22 might support the development of *sine delicto* liability of States, the final formulation does not mention State responsibility.[190] Instead, it is sufficiently broad to include civil liability, because such generic terms as 'liability' and 'victims' might refer respectively to the operator's liability and to individuals suffering from environmental damage. This is not only possible, but is also corroborated by the reformulation of principle 22 in the 1992 Rio de Janeiro Declaration.

Principle 22 is not simply restated in that Declaration, as principle 13 also implies that civil liability is prominent. It reads as follows:

> States shall develop *national law regarding liability and compensation* for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for

[187] UNGA Res. 2996 (XXVII) of 15 December 1972.

[188] See Louis B. Sohn, 'The Stockholm Declaration on the Human Environment' (1973) 14 *Harvard ILJ* 423, at 493-496.

[189] UNGA Res. 2996 (XXVII), cit.

[190] See Sohn, 'The Stockholm Declaration', cit., at 494-495.

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adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.[191]

As the first sentence is concerned with the development of national law, it reasonably addresses compensation of environmental damage as a matter of civil liability. Furthermore, the second sentence, on the development of international law, may be viewed as alluding not only to State responsibility or liability but also to civil liability, on account of the generic language employed and of the State practice of creating international treaty regimes that provide for operator's liability.

The International Law Commission has also confirmed the relevance of prevention of environmental harm for civil liability within its work on international liability for injurious consequences arising out of acts not prohibited by international law.[192] In spite of the distinction drawn between prevention of environmental harm, dealt with in the 2001 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities,[193] and the issue of liability and compensation, addressed in the 2006 Draft Principles on the Allocation of Loss in the Case of Transboundary Harm,[194] with the latter assuming that States have complied with the prevention obligations purportedly codified in the former,[195] prevention of environmental harm ultimately plays a role in the Draft Principles on Allocation of Loss as well. Protection of the environment is one of the two purposes of the Draft Principles, along with the objective of ensuring prompt and adequate compensation for victims.[196] They are intertwined since, when commenting on the purpose of compensation, the International Law Commission built on prevention of environmental harm under principle 21 of the Stockholm Declaration, taken together with principle 22 of that Declaration and principle 13 of the Rio Declaration.[197] Indeed, prevention of

[191] Emphasis added.

[192] See *supra*, Section 1.1.3.

[193] Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries, in Report of the International Law Commission on the Work of Its Fifty-Third Session (2001), UN Doc. A/56/10, 148.

[194] Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with Commentaries, in Report of the International Law Commission on the Work of Its Fifty-Eighth Session (2006), UN Doc. A/61/10, 59.

[195] Ibid., at 63, para. 8. See also *supra*, Section 1.1.3.

[196] Principle 3 of the Draft Principles on the Allocation of Loss, cit.

[197] Draft Principles on the Allocation of Loss, cit., at 72-73, paras. 3-5.

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environmental harm appears to be the principle underpinning compensation. In the view of the International Law Commission, '[t]he importance of ensuring prompt and adequate compensation to victims of transboundary damage has its underlying premise […] in principle 21 of the Stockholm Declaration'.[198] Similarly, when commenting on the purpose underlying environmental protection and preservation, the International Law Commission considered it important 'to emphasize that damage to environment *per se* could constitute damage subject to prompt and adequate compensation'.[199]

Finally, the identification of the interest specific to prevention of environmental harm in protection of the environment per se, as a community interest, which has been endorsed in this study, should not be seen as a factor that breaks the link with civil liability. It should be admitted, in effect, that treaties concerning civil liability usually apply in the event of transboundary damage to areas under national jurisdiction. This is the case, by way of illustration, for the Vienna Convention and the Paris Convention on nuclear damage, as well as for the CLC regime in respect of oil pollution. Remarkably, even the Nagoya-Kuala Lumpur Liability Protocol, which deals with the protection of biodiversity, i.e., a collective interest, does not include damage to global commons within its scope. Nonetheless, there are instances of civil liability regimes under international law that are relevant to the environment in areas beyond the limits of national jurisdiction, namely the Antarctica and the Area. As regards the former, Annex VI to the Antarctic Environmental Protocol has already been recalled, which deals with the operator's liability in the event of environmental emergencies in the Antarctica.[200] As regards the latter, Article 22 of Annex III to UNCLOS provides for the responsibility or liability of contractors for environmental damage arising out of activities in the Area.[201] Moreover, according to the ITLOS Seabed Chamber, the obligation to ensure that prompt and adequate compensation is available for environmental damage, under

[198] Ibid., at 72, para. 3.

[199] Ibid., at 73, para. 6.

[200] See *supra*, Section 6.3.4.

[201] This provision states, in its first sentence, that '[t]he contractor shall have responsibility or liability for any damage arising out of wrongful acts in the conduct of its operations, account being taken of contributory acts or omissions by the Authority'. For an overview of the deep seabed liability regime, see Kristoffer Svendsen, 'Liability and Compensation for Activities in the Area', in Catherine Banet (ed.), *The Law of the Seabed. Access, Uses, and Protection of Seabed Resources* (Leiden/Boston: Brill/Nijhoff 2020), 593, at 595-608.

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Article 235(2) UNCLOS,[202] also applies in relation to activities in the Area.[203]

The link between civil liability and prevention of environmental harm having been illustrated, it is now necessary to consider the influence of the increasing weight of civil liability regimes on the content of existing or emerging rules of customary law, as inspired by prevention of environmental harm. In particular, it seems that the tendency of States to create civil liability regimes gives substance to the polluter-pays 'principle', which hence tends to crystallise as a customary rule.

As is known, the polluter-pays principle is commonly deemed to be encapsulated by principle 16 of the Rio Declaration, which reads as follows:

> National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Although the provision has no counterpart in the 1972 Stockholm Declaration, explicit references to the polluter-pays principle date back to the early 1970s, at the dawn of international protection of the environment. It was already mentioned in a 1972 Council recommendation of the Organisation for Economic Cooperation and Development,[204] and endorsed in the First Programme of Action on the environment of the then European Community, adopted in 1973.[205]

However, the exact meaning of the polluter-pays principle remains difficult to grasp, since the internalisation of environmental costs may be implemented in different ways, and environmental costs may be those associated with preventive measures, or may also extend to the costs of measures to restore and reinstate the environment impaired. Be that as it may, the instrumentality of civil liability regimes for the polluter-pays principle appears to have been commonly acknowledged within the legal scholarship,[206] and has been stressed by

[202] The provision will be quoted below in the text.

[203] *Responsibilities and Obligations*, advisory opinion, cit., at 49, paras. 139-140.

[204] OECD, Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies, adopted on 26 May 1972, OECD/LEGAL/0102.

[205] See *supra*, Section 4.3.2.

[206] See Alan Boyle, 'Polluter Pays', in *MPEPIL online* (2009), paras. 8-12; and Priscilla Schwartz, 'The Polluter-Pays Principle', in Malgosia Fitzmaurice, David

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the International Law Commission as well.[207] In effect, it is plain to see that a treaty regime imposing liability for environmental damage on the operator implies that the polluter does in fact pay.

Among the various manifestations of the polluter-pays principle, the rule that appears to be more prominent under customary international law, as inspired by the principle of prevention of environmental harm, is that establishing the obligation to ensure that prompt and adequate compensation is available for environmental damage.[208] Thus, at least as far as hazardous activities are concerned, compensation must cover harm to the environment per se, or pure environmental damage. In other words, compensation could not be limited to personal injury, property damage, or mere economic loss, even when this results from environmental impairment, and irrespective of its relevance in the event of environmental incidents.

Such an obligation has been codified in the Draft Principles on Allocation of Loss.[209] Although they are primarily aimed at contributing to the progressive development of international law rather than to its codification *stricto sensu*,[210] and the International Law Commission has refrained from reaching any conclusion concerning the status of the polluter-pays principle under general international law,[211] its work suggests that various forms of State practice and *opinio juris*, including national legislation and case law as well as

M. Ong and Panos Merkouris (eds.), *Research Handbook on International Environmental Law* (Cheltenham/Northampton: Edward Elgar 2010), 243, at 251-254.

[207] See *supra*, Section 1.1.3.

[208] On the consolidation of this obligation in customary law, see Massimo Iovane, 'Soggetti privati, società civile e tutela internazionale dell'ambiente', in Angela Del Vecchio and Arno Dal Ri Júnior (eds.), *Il diritto internazionale dell'ambiente dopo il vertice di Johannesburg* (Napoli: Editoriale Scientifica 2005), 133, at 163-167. By contrast, according to Fulvio Maria Palombino, 'Il significato del principio "chi inquina paga" nel diritto internazionale' (2003) 18 *Riv. giur. amb.* 871, at 879-896, it amounts to a general principle of law recognised by civilised nations.

[209] Principle 4, para. 1. As regards the connection with the polluter-pays principle, the International Law Commission stressed that 'the principle of ensuring "prompt and adequate" compensation by the operator should be perceived from the perspective of achieving "cost internalization", which originally constituted the core of the "polluter pays" principle' (Draft Principles on the Allocation of Loss, cit., at 74, para. 11).

[210] See *supra*, Section 1.1.3.

[211] This stands out considering the importance of the polluter-pays principle within the Draft Principles on Allocation of Loss, which has been acknowledged by the International Law Commission itself: see *supra*, Section 1.1.3. For some critical remarks on the prudent approach of the International Law Commission, see Fulvio Maria Palombino, 'I principi elaborati dalla Commissione del diritto internazionale

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international treaties, are consistent with the emergence of a customary obligation to ensure that environmental damage is promptly and adequately compensated. In its commentary, the International Law Commission has observed that 'numerous treaties, some important decisions and the extensive national law and practice which have evolved have given considerable weight to claims for compensation in respect of transboundary pollution', so much so that '[s]ome commentators regard this as a customary obligation'.[212] It seems therefore that, whereas the above analysis has focused on the creation of treaty regimes concerning civil liability for environmental harm, regimes of this type are widespread within national legal orders.[213]

Furthermore, the relevance of the obligation at issue for protection of the environment per se, mentioned above with reference to civil liability in general, seems also to be confirmed in the work of the International Law Commission. It has stressed that 'the earlier reluctance to accept liability for damage to the environment *per se*, without linking such damage to damage to persons or property is gradually disappearing',[214] with the result that, '[i]n the case of damage to natural resources or the environment, there is a right of compensation or reimbursement for costs incurred by way of reasonable preventive, restoration or reinstatement measures'.[215] In effect, the obligation to ensure that prompt and adequate compensation for environmental damage is available has been incorporated not only into treaties establishing civil liability regimes,[216] but is also laid down in treaties with a broader scope or dealing with protection of the environment in general. By way of illustration, under Article 235(2) UNCLOS, 'States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction'.

sulla responsabilità per danni transfrontalieri derivanti dall'esercizio di attività pericolose' (2005) 20 *Riv. giur. amb.* 655, at 665-667.

[212] Draft Principles on the Allocation of Loss, cit., at 77, para. 6.

[213] Despite the common tendency to impose liability on the operator, it is plainly apparent that, under civil liability regimes established outside treaties, States retain discretion over the type of liability, maximum thresholds, and the establishment of supplementary layers of compensation, including insurance, funds, and the State of origin itself. Qualifications as such are quite common, since to place an excessive burden on the operator might discourage activities that, whilst being hazardous, are considered to be economically and socially necessary.

[214] Draft Principles on the Allocation of Loss, cit., at 73, para. 8 (footnotes omitted).

[215] Ibid.

[216] See *supra*, section 6.3.4.

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6.4. *Prevention as Prohibition: Environmental Harm Detached from the Economic Exploitation of Natural Resources*

From the viewpoint of the clash between prevention of environmental harm and territorial sovereignty or States' rights to economically exploit natural resources, it is now worth considering scenarios under which environmental harm is *not* caused by the economic exploitation of natural resources. This is the case, in particular, for environmental harm resulting from the conduct of armed conflict or the testing of nuclear weapons. In circumstances such as these, regardless of whether or not the harm to the environment takes place in the territory of the State carrying out the activity (for instance, in the event of internal armed conflict), that harm could hardly be linked simply to the economic exploitation of natural resources. One would then expect the interest in protection of the environment to reach its fullest extent. Since the economic interest in the exploitation of natural resources is less relevant, prevention of environmental harm should prevail 'without limitation'.

Such an expectation is, admittedly, far too optimistic. Whilst the economic exploitation of natural resources does constitute the primary counterbalance to prevention of environmental harm, one must not lose sight of the other conflicting interests that might still come into consideration. They may be of great significance, and may indeed involve national security considerations or the very survival of the State.

Nevertheless, prevention of environmental harm in fact becomes more stringent in line with the decline in the relevance of the economic exploitation of natural resources. There are trends within customary international law towards a prohibition of at least some activities that cause harm to the environment during armed conflict as well as a prohibition of certain types of nuclear weapons tests. These trends will be examined in much more detail below in order to assess the emerging customary rules. It must however be noted from the outset that the *negative* and *absolute* nature of the prohibitions at stake stands out when compared with the characteristics, illustrated above, of the trends concerning environmental harm as a result of the economic exploitation of natural resources.

6.4.1. *Prohibition on Destruction of the Environment as a Weapon…*

The emergence, and indeed the very existence, of international customary rules on protection of the environment during armed conflict has been widely acknowledged in recent authoritative codi-

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fication works. In fact, over these past years, increasing efforts have been made to codify general international law on the protection of the environment during armed conflict.

In 2005, a comprehensive study dedicated to the codification of international humanitarian law was published under the auspices of the International Committee of the Red Cross (ICRC),[217] with a chapter comprised of three 'rules' being focused on protection of the natural environment.[218] More recently, in 2013, the International Law Commission (ILC) included the topic 'Protection of the Environment in Relation to Armed Conflict' in its programme of work.[219] Six years later, in 2019, it provisionally adopted on first reading the text of the relevant draft principles and commentaries on them.[220] As things currently stand, the text includes twenty-eight principles divided into four main parts, in addition to part one establishing the purpose and scope of the set of draft principles. In accordance with a 'temporal' approach, these four parts deal with protection of the environment prior to armed conflict, during armed conflict, in situations of occupation, and after armed conflict.

The attention of the International Committee of the Red Cross was attracted by the issue not only in the context of the broader study mentioned above. In 1994, it had previously drawn up some guidelines specifically concerning protection of the environment during armed conflict.[221] Although they do not strictly speaking amount to a work of codification, their objective being the promotion of interest in and concern for the environment and, ultimately, inclusion within military manuals and instructions on the law of armed conflict,[222] the Guidelines

[217] Jean-Marie Henckaerts, Louise Doswald-Beck, *Customary International Humanitarian Law* vol. I: *Rules* (Cambridge: Cambridge University Press 2005).

[218] Ibid., at 143-158.

[219] See the Report of the International Law Commission on the Work of Its Sixty-Fifth Session (2013), UN Doc. A/68/10, at 72-73.

[220] Text of the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, adopted by the Commission on first reading, in Report of the International Law Commission on the Work of Its Seventy-First Session (2019), UN Doc. A/74/10, 211.

[221] ICRC Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict, annex to 'United Nations Decade for International Law', Report of the Secretary-General, UN Doc. A/49/323, 19 August 1994 (henceforth, 1994 Guidelines on the Protection of the Environment). They are also published in (1996) 311 *IR Red Cross* 232, with an introduction by Hans-Peter Gasser, 'Follow-up to the International Conference for the Protection of War Victims (1993)', ibid., 230.

[222] 1994 Guidelines on the Protection of the Environment, cit., paras. 1 and 3.

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are intended to reflect State practice and existing international obligations, and therefore to constitute 'the expression of international customary law or treaty law'.[223] Indeed, the UN General Assembly invited States to disseminate these Guidelines and 'to give due consideration to the possibility of incorporating them'.[224] Importantly, in September 2020 the International Committee of the Red Cross released an updated version of the Guidelines along with a commentary.[225]

Building on those studies and documents, as well as the considerable body of State practice and *opinio juris* brought together within them, it seems reasonable to assert that, under customary international law, there is a prohibition on destruction of the environment as a weapon.[226] It is a negative obligation, i.e., an obligation *not to use* destruction of the environment as a weapon. Furthermore, it would appear to be absolute in nature because it cannot be justified by virtue of military necessity.[227] These features are consistent with the deliberate nature of the conduct at stake, namely the specific purpose of destroying the environment, as well as the qualified seriousness of environmental damage.[228]

As regards the definition of the content of the prohibition at hand, a question arises as to whether 'destruction of the environment as a weapon' coincides with the use of environmental modification techniques. As is known, the use of these techniques is not permitted under the 1976 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention).[229] In particular, under Article I, States parties undertake

[223] Ibid., para. 3.

[224] UNGA Res. 49/50 of 9 December 1994, para. 11.

[225] ICRC, Guidelines on the Protection of the Natural Environment in Armed Conflict: Rules and Recommendations Relating to the Protection of the Natural Environment under International Humanitarian Law, with Commentaries (September 2020), available at *www.icrc.org* (hereinafter, 2020 Guidelines on the Protection of the Natural Environment).

[226] See Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., Rule 45 (second sentence: 'Destruction of the natural environment may not be used as a weapon'), at 151 and 155-156 ('There is extensive State practice prohibiting the deliberate destruction of the natural environment as a form of weapon'); 2020 Guidelines on the Protection of the Natural Environment, cit., Rule 3.A, at 40, para. 76 ('This rule has been established as a norm of customary international law applicable in international, and arguably also in non-international, armed conflicts').

[227] See Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., at 157-158.

[228] 2020 Guidelines on the Protection of the Natural Environment, cit., at 40-42.

[229] Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, adopted by the UN General Assembly, Res. 31/72, 10 December 1976, and entered into force on 5 October 1978, 1108 *UNTS* 151.

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'not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party'. The term 'environmental modification techniques' is defined in Article II, whereby it 'refers to any technique for changing – through the deliberate manipulation of natural processes – the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space'. If there were complete overlap between the customary prohibition on recourse to destruction of the environment as a weapon and the treaty prohibition on the use of environmental modification techniques under the ENMOD Convention, this would be tantamount to asserting that the latter has evolved into a customary rule. This would be of consequence, considering that there are at present only seventy-eight Parties to the ENMOD Convention, i.e., less than half of UN Member States.[230]

Although there appears to be some overlap between the two rules, and the difference between them may appear be difficult to grasp in actual fact, the customary prohibition on destruction of the environment as a weapon seems to be a self-standing rule: it does not correspond to the prohibition on the use of environmental modification techniques laid down in the ENMOD Convention. The threshold triggering the application of the customary rule is higher in terms of both the magnitude of the environmental damage and the deliberate nature of the destruction of the environment.[231] As mentioned above, under the ENMOD Convention, the effects of the environmental modification techniques need 'only' be 'widespread, long-lasting *or* severe', where they are used 'as the means of destruction, damage or injury *to any other State Party*'.[232] It is exclusively in the event that a higher threshold is reached that the deployment of environmental modification techniques will fall within the scope of the customary prohibition on destruction of the environment as a weapon. If not, that conduct will be unlawful under the ENMOD Convention as far as the Parties to it are concerned.[233]

[230] However, with regard to the limited number of States parties to the ENMOD Convention, Rüdiger Wolfrum, 'The Protection of the Environment in Armed Conflict' (2015) 45 *Israel YBHR* 67, at 74, notes that 'in scrutinizing this figure one has to note that it includes the ratification of most of the permanent members of the Security Council and that the ENMOD-Convention particularly addresses technologically advanced States'.

[231] 2020 Guidelines on the Protection of the Natural Environment, cit., at 42, para. 83.

[232] Art. 1 of the ENMOD Convention (both emphases added).

[233] The 2020 Guidelines on the Protection of the Natural Environment, cit.,

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This distinction is substantially apparent from the studies and works mentioned above on protection of the environment during armed conflict. It is true that the 2005 Study carried out under the auspices of the International Committee of the Red Cross relies heavily on the ENMOD Convention and States' military manuals incorporating it in order to substantiate the existence of the customary prohibition on destruction of the environment as a weapon.[234] However, the difference between the ENMOD Convention and that customary prohibition has been seemingly maintained.[235] In the more recent 2020 Guidelines on the Protection of the Natural Environment, the prohibition on destruction of the environment as a weapon and the rule set forth in the ENMOD Convention are significantly laid down in two separate – albeit connected – provisions.[236] Interestingly, the set of draft principles adopted on first reading by the International Law Commission does not codify the customary prohibition on destruction of the environment as a weapon, but does set out a rule equivalent to the prohibition under the ENMOD Convention only.[237] Nevertheless, the former is cited as a distinct and only partly overlapping rule within the commentary on the latter.[238] In truth, it is rather odd that, in a work that is specifically

at 42, explain that 'the use of environmental modification techniques may not in fact destroy the natural environment (for example, the use of cloud-seeding), although it may cause destruction, damage or injury to civilians or civilian objects that would nevertheless violated the ENMOD Convention' (ibid., para. 83). Conversely, 'triggering a tsunami or earthquake for the purpose of destroying the natural environment, and thereby causing this destruction, is prohibited' under customary international law (ibid., para. 82).

[234] Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., at 155. See in particular the practice relating to Rule 45 (Causing Serious Damage to the Natural Environment), Section B (Environmental Modification Techniques), available at *www.ihl-databases.icrc.org*.

[235] 'Therefore, *irrespective of whether the provisions of the ENMOD Convention are themselves customary*, there is sufficiently widespread, representative and uniform practice to conclude that the destruction of the natural environment may not be used as a weapon' (Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., at 156, emphasis added).

[236] They are, respectively, Rule 3.A and Rule 3.B as parts of overarching Rule 3, entitled 'Prohibition of Using the Destruction of the Natural Environment as a Weapon'.

[237] Pursuant to principle 19 of the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., '[i]n accordance with their international obligations, States shall not engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State'.

[238] ILC, Draft Principles on Protection of the Environment in Relation to Armed

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dedicated to protection of the environment during armed conflict, the International Law Commission merely alluded in passing to the existence within customary international law of that prohibition on destruction of the environment as a weapon, without investigating it any further. The impression is that it simply relied on the study of the International Committee of the Red Cross.[239] This in turn suggests that the existence of that rule should not appear to be too controversial to the International Law Commission.

6.4.2. *…and Other Trends concerning Prevention of Environmental Harm during Armed Conflict*

In addition to the prohibition on destruction of the environment as a weapon, there also seems to be a trend within customary international law towards a prohibition on the use of methods and means of warfare that are intended or expected to cause widespread, long-term and severe damage to environment.[240] Such a customary rule would correspond, in essence, to the treaty rule set forth in Article 35(3) of the 1977 First Additional Protocol to the Geneva Conventions (Additional Protocol I),[241] which is restated, from a different angle, in

Conflicts, cit., at 264, para. 2: 'The mention of international obligations in the draft principle refers to the treaty obligations of States parties to the Convention and, *to the extent that the prohibition overlaps with a customary obligation that, according to the ICRC study on customary international humanitarian law, prohibits the use of the environment as a weapon*, the obligations under customary international law' (emphasis added).

[239] Ibid.

[240] See Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., Rule 45, first sentence, at 151: 'The use of methods or means of warfare that are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment is prohibited'. It has been restated in Rule 2 of the 2020 Guidelines on the Protection of the Natural Environment, cit. See also principle 13, para. 2, of the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., which in more general terms provides that '[c] are shall be taken to protect the natural environment against widespread, long-term and severe damage'. Albeit 'inspired by article 55 of Additional Protocol I' (ibid., at 252, para. 9), this draft principle seems to be more akin to a general duty to take care of the environment, which will be discussed below in the text.

[241] Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), adopted at Geneva on 8 June 1977 and entered into force on 7 December 1978, 1125 *UNTS* 3. Art. 35(3) reads as follows: 'It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment'.

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the second sentence of Article 55(1) of the Protocol.[242] In this regard, it should be borne in mind that, whilst not being universal, Protocol I to the Geneva Conventions has been ratified by an overwhelming majority of States.[243]

This rule does not concern cases in which the destruction of the environment is itself used 'as a weapon', viz. as a tactic or method of warfare. It is more broadly concerned with *all* means and methods of warfare that cause widespread, long-term and severe damage to the environment.

On the other hand, in the same manner as the prohibition on destruction of the environment as a weapon, this rule appears to be absolute in nature too, and does not permit justification on the grounds of military necessity.[244] Another similarity lies in the high threshold that triggers the application of the rule, which is related to its absolute nature. Damage to the environment needs to be widespread, long-term and severe: although the meaning of each of these terms is uncertain,[245] along with the way in which they differ from the similar wording of the ENMOD Convention,[246] the three con-

[242] Pursuant to Art. 55(1), 'Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population'. The major difference from Art. 35(3) lies in the additional reference to the ensuing prejudice to 'the health or survival of the population'. Although it denotes an anthropocentric conception of protection of the environment during armed conflict, it is consistent with the location of Art. 55, which features in the part of Protocol I dealing with civilian population, alongside *other* civilian objects, namely cultural objects and places of worship (Art. 53), objects indispensable to the survival of civilian population (Art. 54), and works and installations containing dangerous forces (Art. 56). By contrast, Art. 35(3) lays down, from a broader perspective, one of the 'basic rules' relating to methods and means of warfare.

[243] There are currently 174 States parties to Addition Protocol I.

[244] See the 2020 Guidelines on the Protection of the Natural Environment, cit., at 30, para. 49. On the absolute nature of the corresponding rule laid down in Articles 35(3) and 55(1) of Addition Protocol I, see Yoram Dinstein, 'Protection of the Environment in International Armed Conflict' (2001) 5 *MPYUNL* 523, at 536; and Wolfrum, 'The Protection of the Environment', cit., at 79. See also the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., at 256, para. 9.

[245] Clarification of the relevant notion is called for in particular by Jean-Marie Henckaerts, Dana Constantin, 'Protection of the Natural Environment', in Andrew Clapham and Paola Gaeta (eds.), *Oxford Handbook of International Law in Armed Conflict* (Oxford: Oxford University Press 2014), 469, at 486, considering also the high level of the threshold implied (ibid., at 479-480).

[246] On this difference see, among others, Dinstein, 'Protection of the Environ-

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ditions are surely cumulative.[247] Moreover, in order for the temporal condition to be met, damage to the environment should seemingly continue for decades.[248] No specific intention to cause serious harm to the environment is necessary. However, some degree of knowledge regarding the adverse effects on the environment is nonetheless required: such effects need to be intended or their occurrence should be foreseeable.

The existence of the prohibition on recourse to methods or means of warfare that are intended or may be expected to cause widespread, long-term and severe damage to the environment is made doubtful by the practice and *opinio juris* of some of the nuclear-weapon States. In effect, on account of the known environmental impact of the use of nuclear weapons, such a prohibition should apply to recourse to those weapons as well.

In particular, in ratifying the Additional Protocol I to the Geneva Conventions, France and the United Kingdom made a reservation to the effect that Articles 35(3) and 55(1) only apply to conventional weapons.[249] The United States has never acceded to the Protocol, and has not even signed it. However, it has taken the opportunity to assert that these Articles do not reflect customary rules and do not apply to nuclear weapons.[250] Admittedly, in the 1996 advisory

ment', cit., at 539-543; and Anthony P.V. Rogers, *Law on the Battlefield* (2nd ed., Manchester: Manchester University Press 2004), at 169-171.

[247] For an extensive analysis, see the 2020 Guidelines on the Protection of the Natural Environment, cit., at 30-38, paras. 50-72.

[248] Such an understanding is apparent from the *travaux préparatoires* for Additional Protocol I: see the Official Records of the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts, Geneva (1974-1977), vol. XV, at 268, para. 27.

[249] France acceded to the Protocol on 11 April 2001 and, at the same time, made reservations and declarations including the following statement: 'le Gouvernement de la République Française continue de considérer que les dispositions du Protocole concernent exclusivement les armes classiques, *et qu'elles ne sauraient ni réglementer ni interdire le recours à l'arme nucléaire*, ni porter préjudice aux autres règles du droit international applicables a d'autres activités, nécessaires a l'exercice par la France de son droit naturel de légitime défense' (emphasis added). Similarly, in ratifying the Protocol on 28 January 1998, the United Kingdom made reservations and affirmed that '[i]t continues to be the understanding of the United Kingdom that the rules introduced by the Protocol apply exclusively to conventional weapons without prejudice to any other rules of international law applicable to other types of weapons. *In particular, the rules so introduced do not have any effect on and do not regulate or prohibit the use of nuclear weapons*' (emphasis added). The text of those statements is available at *www.ihl-databases.icrc.org*.

[250] In the proceedings before the International Court of Justice concerning the

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opinion on the *Threat or Use of Nuclear Weapons*, the International Court of Justice only held that the two provisions impose 'powerful constraints' on the States parties to Protocol I,[251] and that it could not ultimately exclude the possibility that recourse to nuclear weapons may be lawful in extreme circumstances of self-defence, despite its incompatibility with the international law applicable in armed conflict.[252]

Although it has been considered from various angles within legal scholarship, particular weight has been attached to the position of nuclear-weapon States in any case, because they qualify as 'specially affected' States as regards such weapons. For instance, the 'persistent-objector' doctrine has been deemed to be relevant, which means that the prohibition at issue would not apply to the United States at all, and would not apply to France and the United Kingdom as far as the use of nuclear weapons is concerned.[253] Alternatively, it may be inferred that the prohibition effectively applies to conventional weapons only, or at any rate that the use of nuclear weapons is simply an exception to the rule. All things considered, it appears reasonable to conclude that there has hitherto been only a trend towards the prohibition of methods or means of warfare that are intended or may be expected to cause widespread, long-term and severe damage to the environment.

Leaving aside the prohibitions on destruction of the environment as a weapon and on the use of methods and means of warfare that

case *Legality of the Threat or Use of Nuclear Weapons*, the United States affirmed that the rule set forth in 'Articles 35(3) and 55 of Additional Protocol I to the 1949 Geneva Conventions […] is one of the new rules established by the Protocol that […] do not apply to nuclear weapons' (Written Statement of the Government of the United States of America, 10 June 1994, at 30-31). Subsequently, in ratifying the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (with Protocols I, II and III), adopted at Geneva on 10 October 1980 and entered into force on 2 December 1983, 1342 *UNTS* 137, the United States made a reservation whereby it 'considers that the fourth paragraph of the preamble to the Convention, which refers to the substance of provisions of article 35(3) and article 55(1) of Addition Protocol I to the Geneva Conventions for the Protection of War Victims of August 12, 1949, applies only to States which have accepted those provisions' (21 January 2009).

[251] ICJ, *Legality of the Threat or Use of Nuclear Weapons*, advisory opinion of 8 July 1996, *I.C.J. Reports 1996*, 226, at 242, para. 31.

[252] Ibid., at 266, para. 105(2)(E).

[253] See Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., at 151-155; and the 2020 Guidelines on the Protection of the Natural Environment, cit., at 48, para. 29.

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cause serious damage to the environment, there seem to be no other trends towards the emergence of customary international law that is *directly* concerned with protection of the environment during armed conflict.[254] Focusing on those prohibitions, one must therefore now ask whether they may be based on prevention of environmental harm as a general principle of international law. In other words, it should be possible to observe a precise relationship between prevention of environmental harm as a principle and the prohibitions illustrated above as rules, with the former having inspired and, as a result, being derivable from the latter.

In this regard, aside from the simplistic observation that the entire corpus of international environmental law can be traced back to prevention as a general rationale, it is significant that provisions reformulating prevention of environmental harm have been included within the studies and works mentioned above on protection of the environment during armed conflict. Essentially, prevention of environmental harm has been transposed into the provision whereby due regard is to be given to respect for and protection of the environment during armed conflict.[255]

[254] Leaving aside the duty to have due regard to protection of the environment during armed conflict, which will be considered below in the text, another form of specific protection for the environment is usually deemed to be provided by the prohibition on reprisals against the environment, as set forth in Art. 55(2) of the Additional Protocol I, whereby '[a]ttacks against the natural environment by way of reprisals are prohibited'. Identical provisions have been included in ILC's Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., principle 16; and in the 2020 Guidelines on the Protection of the Natural Environment, cit., Rule 4.A.i. However, doubts have been expressed within both the ILC and the ICRC concerning the existence of a corresponding rule of customary international law: see respectively the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., at 257-260, especially paras. 4-5; and the 2020 Guidelines on the Protection of the Natural Environment, cit., at 44, para. 89. Accordingly, the ILC considered draft principle 16 as an exercise of progressive development of international law (Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., at 259-260, especially para. 10), whilst the ICRC limited the application of the equivalent Rule 4.A.i to the Parties to Additional Protocol I only, subject to any declarations and reservations submitted by them (2020 Guidelines on the Protection of the Natural Environment, cit., at 44, para. 89).

[255] See Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., Rule 44, first sentence, at 147: 'Methods and means of warfare must be employed with due regard to the protection and preservation of the natural environment'. The provision has been restated in Rule 1 of the 2020 Guidelines on the Protection of the Natural Environment, cit., entitled 'Due regard for the natural environment in military operations'. In both of them, a connection is established with principle 21

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Regrettably, on the – unquestioned – assumption that prevention of environmental harm is a customary rule,[256] its relationship with other provisions has largely remained in the background, including the prohibitions on destruction of the environment as a weapon and on the use of methods and means of warfare that are intended or expected to cause widespread, long-term and severe damage to the environment.

Nevertheless, it is the inspiring function of prevention of environmental harm that is ultimately apparent, and this is a function specific to principles rather than rules. In particular, the duty to take care of the environment during armed conflict, mentioned above, provides the very foundation for the subsequent, more specific rules set out in the studies and works prepared by the International Committee of the Red Cross.[257] Within scholarship, the duty to have due regard

of the Stockholm Declaration and principle 2 of the Rio Declaration, as well as the passage concerning prevention of environmental harm in the ICJ advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons* (see Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., Rule 44, first sentence, at 147-149, especially footnotes 34 and 36; and the 2020 Guidelines on the Protection of the Natural Environment, cit., at 27, para. 42, note 94). This is because '[t]he general obligation of due regard for the natural environment reflects the international community's recognition of the need to provide protection to the natural environment as such' (2020 Guidelines on the Protection of the Natural Environment, cit., at 27, para. 42). In the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., principle 13 concerning general protection of the environment during armed conflict, including the duty to protect and respect the environment as well as to take care of it, has not been expressly linked to prevention of environmental harm. Principle 21 of the Stockholm Declaration is not mentioned in the relevant commentary. Be that as it may, a connection is apparent in that draft principle 13 is based on the passage of the ICJ opinion on the *Threat or Use of Nuclear Weapons* concerning 'environmental considerations', which in turn results from the operation of the principle of prevention of environmental harm (see *supra*, Section 5.2.1.a). The omission of any explicit reference to prevention of environmental harm with regard to draft principle 13 is perhaps due to the fact that another provision is clearly informed and shaped by principle 21 of the Stockholm Declaration, namely draft principle 22, pursuant to which '[a]n Occupying Power shall exercise due diligence to ensure that activities in the occupied territory do not cause significant harm to the environment of areas beyond the occupied territory' (see the pertinent commentary: Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., at 279-280).

[256] See, in particular, Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., at 148-149.

[257] The foundational value of the duty to take care of the environment and, specifically, of prevention of environmental harm, is apparent from the importance attached to the relevant provision: it precedes the rules specifically aimed at protecting the environment during armed conflict. That duty is accordingly enshrined in Rule

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to the environment during armed conflict has been tellingly equated to a guiding principle, and has been associated with prevention of environmental harm.[258]

Indeed, the classification of prevention of environmental harm as a general principle explains its relationship not only with rules that are directly aimed at protecting the environment during armed conflict, but also with the 'classical' rules of international humanitarian law. It is by virtue of the inspiring function of prevention of environmental harm as a principle that their scope may be expanded so as to include also protection of the environment.[259] This is true of the rules on distinction, proportionality, military necessity, and precautions in relation to attacks. Their relevance for protection of the environment rests on the substantive equiparation of the environment with a civilian object,[260] which in turn can be traced back

44 of the ICRC's 2005 Study, with Rule 45 stipulating prohibitions on the use of methods or means of warfare intended or expected to cause widespread, long-term and severe damage to the environment and on destruction of the environment as a weapon (Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit.). Even more remarkably, the 'due regard' rule is contained in the opening provision to the overall 2020 Guidelines on the Protection of the Natural Environment and, in particular, in the section concerning specific protection of the environment.

[258] See Stavros-Evdokimos Pantazopoulos, 'Protection of the Environment during Armed Conflicts: An Appraisal of the ILC's Work' (2016) 34 *QIL, Zoom-in* 7, at 13-14: 'The obligation of taking care to protect the natural environment during armed conflict seems closer to the international environmental law principles of due diligence and prevention […]. In short, the obligation of taking care to protect the natural environment comprises an overarching guiding principle'. This position is endorsed by Anne Dienelt, Britta Sjöstedt, 'Is the ILC's Work Enhancing Protection for the Environment in Relation to Warfare? A Reply to Stavros-Evdokimos Pantazopoulos and Karen Hulme' (2016) 34 *QIL, Zoom-in* 43, at 49.

[259] In truth, protection of the environment in armed conflict has only gained momentum in relatively recent times, if one considers how well-established certain rules of *jus in bello* are. Although environmental damage has been caused during armed conflict since time immemorial, and is probably as old as war itself, protection of the environment during armed conflict only came properly into consideration as an issue following the rise of an environmental awareness during the 1960s. It is thus hardly surprising that, in the aftermath of the Second World War, no provision *directly* relevant to the environment may be found in the 1949 Geneva Conventions. It was therefore in the 1970s that treaty law expressly concerning protection of the environment in armed conflict started to be stipulated, with the adoption of the ENMOD Convention and the inclusion of Articles 35(3) and 55 into Additional Protocol I.

[260] See Henckaerts, Doswald-Beck, *Customary International Humanitarian Law*, cit., Rule 43, at 143-146, and as far as precautions in attacks are concerned Rule 44, at 149-150; the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, cit., principle 14 and the commentaries thereto at 254-256;

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to prevention of environmental harm as an inspiring principle. The environment is thus indirectly or generally granted protection under the international law of armed conflict. Whilst being less specific, such a form of protection ought not to be underestimated, considering the high threshold of environmental damage that is necessary in order for rules directly pertaining to protection of the environment during armed conflict to apply.[261]

In sum, the reconstruction of prevention of environmental harm as a general principle of international law offers, once again, a more comprehensive and powerful vision as regards both direct and indirect protection of the environment during armed conflict. Within legal scholarship, doubts have been cast on the applicability during armed conflict of prevention of environmental harm *qua* customary rule enshrined in principle 21 of the Stockholm Declaration.[262] It has thus been reformulated as the general duty mentioned above to take care of the environment in order to adapt to the peculiar circumstances arising during wartime. Such doubts, however, fade away once prevention of environmental harm has been classified as a general principle. No adaptation is needed because the particular requirements of military operations are factored in and weighed up in the formation of specific rules based on prevention of environmental harm *qua* principle. This is confirmed by the high threshold triggering the application of the prohibitions on destruction of the environment as a weapon and on the recourse to methods or means of warfare that are intended or expected to cause serious damage to the environment.[263] The qualification of that threshold counterbalances the absolute nature of those prohibitions. The consideration given to the interests specific to armed conflict is even more apparent when prevention of environmental harm only performs an interpretative function with respect to existing rules of international humanitarian law.

the 2020 Guidelines on the Protection of the Natural Environment, cit., Part II, especially sections 1 to 3, and the commentaries thereto.

[261] See Dieter Fleck, 'The Protection of the Environment in Armed Conflict: Legal Obligations in the Absence of Specific Rules' (2013) 82 *Nordic JIL* 7, especially at 8.

[262] See Marina Castellaneta, 'La responsabilità internazionale degli Stati per danni all'ambiente causati nel corso di conflitti armati' (1998) 81 *Riv. dir. int.* 632, at 647-649.

[263] In general terms, according to Wolfrum, 'The Protection of the Environment', cit., at 68, 'all norms of international humanitarian law providing for the protection of the environment against the impact of armed hostilities reflect a balance between military necessity and the obligation to protect the environment […] [W]here express prohibitions outlaw a certain activity or a certain impact, neither military necessity nor any other rationale may override that prohibition'.

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6.4.3. *Trends towards the Prohibition of Nuclear Weapon Tests with a Significant Environmental Impact*

As mentioned above, nuclear weapon testing is another field in which environmental harm does not result from the economic exploitation of natural resources. In fact, such activity is related to the same national security interests that are asserted in order to justify the development and proliferation of nuclear weapons.

In this regard, protection of the environment does not constitute the only, or indeed the main, reason against nuclear weapon testing. Disarmament is certainly the primary aim to be pursued through limitations on nuclear weapon tests. Humanitarian concerns raised by recourse to nuclear weapons are also relevant, since testing is obviously important for the usage of nuclear weapons. Moreover, mutual respect for territorial sovereignty as distinct from protection of the environment per se might also come into consideration, in the event that nuclear emissions cause harm to the territory of another State.[264]

Nevertheless, with regard to limitations on nuclear weapons, prevention of environmental harm has been attached greater weight than it has been with regard to other particular weapons that have an impact on the environment, i.e., chemical or biological weapons. This is perhaps due to the fact that the 'nuclear era' began in relatively recent times, towards the end of World War II:[265] it would not take long for the environmental movement to emerge with the spread of an environmental awareness.[266] Conversely, the use of chemical and biological weapons dates further back in time, and efforts to limit it were already being made at the start of the twentieth century,[267]

[264] See *supra*, Section 2.4.2.

[265] The United States carried out the first nuclear weapon test in July 1945, and two atomic bombs were dropped on Hiroshima and Nagasaki, in Japan, in August of the same year. Although some nuclear weapon tests took place between 1946 and 1949, it was during the 1950s that their number started to increase dramatically: between 1955 and 1989, against the backdrop of the Cold War, an average of fifty nuclear weapon tests were conducted each year, with the number peaking between the late 1950s and the early 1960s. For further details see the official website of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO): *www.ctbto.org*.

[266] See *supra*, Section 3.3.1.

[267] Early prohibitions on the use of chemical weapons may be found in the Declaration concerning Asphyxiating Gases, adopted at the Hague on 29 July 1899 and entered into force on 4 September 1900, available at *www.ihl-databases.icrc.org*, and in the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, adopted at Geneva on

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when protection of the environment per se was not yet an issue. Accordingly, as far as restrictions on nuclear weapons are concerned, and in particular their testing, one could hardly argue in terms of merely indirect protection for the environment.[268]

On the other hand, in order to assess the weight of prevention of environmental harm, a distinction needs to be drawn between recourse to nuclear weapons and their testing. In the advisory opinion on the *Threat or Use of Nuclear Weapons*, the International Court of Justice inferred only 'environmental considerations' from prevention of environmental harm: as pointed out above, the Court held that the very survival of the State could be at stake in extreme circumstances calling for self-defence, and as a result the lawfulness of recourse to

17 June 1925 and entered into force on 9 May 1926, 94 *UNTS* 65, which is relevant to biological weapons too. The prohibitions on the usage of respectively biological and chemical weapons have been restated more recently in the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, adopted at London, Moscow and Washington on 10 April 1972 and entered into force on 26 March 1975, 1015 *UNTS* 163; and in the Convention on the Prohibition of the Development, Production, Stockpiling and Use Chemical Weapons and on their Destruction, adopted at Geneva on 3 September 1992 and entered into force on 29 April 1997, 1974 *UNTS* 45. According to the ICRC study, both prohibitions now amount to customary rules, and thus appear in Rules 20 and 21 of the 2020 Guidelines on the Protection of the Natural Environment, cit.

[268] Generally speaking, the importance of prohibitions or limitations on the use of certain weapons for protection of the environment has been widely acknowledged. For example, an entire part in the ICRC's 2020 Guidelines on the Protection of the Natural Environment deals with rules concerning specific weapons, including poison or poisoned weapons, herbicides, incendiary weapons, landmines, and explosive remnants of war, in addition to biological and chemical weapons. Indeed, according to the ICRC study, the prohibition on the use of biological and chemical weapons provides not only indirect but also direct protection of the environment too, insofar as it also deals with animals and vegetation (see the 2020 Guidelines on the Protection of the Natural Environment, cit., at 87, para. 226, and at 89, para. 234). However, the Guidelines do not contain any rules concerning nuclear weapon tests, as these would fall outside the scope of *jus in bello*. On the other hand, it is interesting to note that, in its commentary to the famous Art. 19 of the Draft Articles on State Responsibility adopted on first reading, the International Law Commission mentioned the 'sphere of nuclear tests' as well as 'the chemical and bacteriological sphere' when commenting on 'a serious breach of an international obligation of essential importance for the safeguarding and preservation of the human environment, such as those prohibiting massive pollution of the atmosphere or of the seas' *qua* international crime (Draft Article on State Responsibility with Commentaries thereto Adopted by the International Law Commission on First Reading, at 119, para. 32; see also *supra*, Section 2.3.3).

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nuclear weapons could not be excluded outright.[269] This is not the case, however, as far as nuclear weapons testing is concerned, which is not *in itself* instrumental in immediately safeguarding such an essential interest as the survival of the State. Therefore, whereas one might reasonably have doubts regarding the existence of a customary prohibition on the threat or use of nuclear weapons under all circumstances, a prohibition on certain nuclear tests has eventually emerged or is in the course of emerging under customary international law, specifically nuclear weapon test explosions that cause radioactive fallout. A trend in that direction is clearly noticeable.[270]

Before analysing this trend, two caveats are in order. First, it is important to stress that not all kinds of nuclear weapon test have the same impact on the environment. Whereas atmospheric and underwater explosions seriously affect the environment due to the ensuing radioactive leakage, radiation from underground tests is of minor consequence, *provided that* the explosion is contained and little radiation is thereby discharged.[271] For that reason, whereas nuclear weapon test explosions have essentially taken place either in the atmosphere or underground, with underground tests accounting for the overwhelming majority,[272] the following analysis will focus on atmospheric tests. Secondly, nuclear-weapon States may be regarded as 'specially affected' States in relation to the testing of those weapons, and particular weight will therefore be attached to their practice and *opinio juris*.[273] These States are specifically China, France, Russia, the

[269] See *supra*, Section 5.2.1.a.

[270] See also Gabriella Venturini, 'Test-Bans and the Comprehensive Test Ban Treaty Organization', in Jonathan L. Black-Branch and Dieter Fleck (eds.), *Nuclear Non-Proliferation in International Law* vol. I (The Hague: Asser Press 2014), 133, at 142-143 and 151-152.

[271] For an overview of the types of nuclear weapons see the official website of the Preparatory Commission for CTBTO: *www.ctbto.org*. It must be stressed, therefore, that underground tests *may* cause radioactive contamination. This explains why, as will be seen, New Zealand instituted proceedings against France with regard to underground tests on the basis of environmental concerns. In that case, the contamination of the marine environment caused by such tests was said to result from the particular structure of the atolls where the explosions had occurred. However, New Zealand also relied on the precautionary approach and the duty to carry out an EIA, because the adverse effects on the environment of the underground tests at stake were disputed.

[272] According to the Arms Control Association, out of 2056 nuclear weapon tests conducted since 1945 (the total does not include the bombs dropped on Hiroshima and Nagasaki), 1528 have been underground tests, whereas 528 detonations have taken place in the atmosphere (*www.armscontrol.org*), and only a few have been underwater explosions.

[273] In commenting on the requirement for the general scope of practice as a con-

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United Kingdom and the United States, who are the nuclear-weapon States under the Non-proliferation Treaty,[274] as well as India, Israel, North Korea and Pakistan.[275] However, it would appear that Israel has never tested nuclear weapons, and so special attention will be dedicated to the other nuclear-weapon States.[276]

That said, an initial manifestation of the trend under examination may be found in the Partial Nuclear-Test-Ban Treaty, which was adopted and entered into force in 1963.[277] It stipulates an obligation of each State party 'to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control in the atmosphere; beyond its limits, including outer space; or under water, including territorial waters or high seas'.[278] The same obligation applies to any other environment, if the nuclear explosion 'causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted'.[279] In other words, underground nuclear explosions fall outside the scope of the prohibition, unless they have transboundary effects.

Considering that, in the early 1960s, an environmental awareness had only just started to spread, it is remarkable that, in the preamble of the Partial Nuclear-Test-Ban Treaty, the desire 'to put an end to

stituent element of customary international law, the International Law Commission observed that 'in assessing generality, an indispensable factor to be taken into account is the extent to which those States that are particularly involved in the relevant activity or are most likely to be concerned with the alleged rule ("specially affected States") have participated in the practice': Draft Conclusions on Identification of Customary International Law, with Commentaries, in Report of the International Law Commission on the Work of Its Seventieth Session (2018), UN Doc. A/73/10, 122, at 136, para. 4.

[274] Treaty on the Non-Proliferation of Nuclear Weapons, adopted at London, Moscow and Washington on 1 July 1968 and entered into force on 5 March 1970, 729 *UNTS* 161.

[275] On the status of the nuclear arsenals and capabilities of the States mentioned, see extensively Shannon N. Kile, Hans M. Kristensen, 'World Nuclear Forces', in *SIPRI Yearbook 2020. Armaments, Disarmament and International Security* (Oxford: Oxford University Press 2020), 325.

[276] See Vitaly Fedchenko 'Nuclear Explosions, 1945-2017', in *SIPRI Yearbook 2018. Armaments, Disarmament and International Security* (Oxford: Oxford University Press 2018), 295, at 302.

[277] Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, adopted at Moscow on 5 August 1963 and entered into force on 10 October 1963, 480 *UNTS* 43.

[278] Art. I(1)(a) of the Partial Nuclear-Test-Ban Treaty.

[279] Art. I(1)(b) of the Partial Nuclear-Test-Ban Treaty.

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the contamination of man's environment by radioactive substances' is one of the principal aims set out in the preamble, along with 'the discontinuance of all test explosions of nuclear weapons', and the 'achievement of an agreement on general and complete disarmament'. This confirms the special weight of protection of the environment as regards nuclear weapon test explosions.

However, it must be conceded that the Partial Nuclear-Test-Ban Treaty has not yet attracted universal participation. Currently slightly more than a half of UN Member States are parties to it.[280] It is also worth observing that, whilst Russia, the United Kingdom and the United States ratified the Treaty as the original contracting Parties, and India and Pakistan have since ratified it as well, the other three nuclear-weapon States have not accepted it, namely China, France and North Korea. Indeed, atmospheric tests were still carried out by third States after the Treaty had entered into force. The *Nuclear Tests* case before the International Court of Justice originated specifically out of the atmospheric nuclear tests conducted by France between the 1960s and early 1970s in the South Pacific.[281]

In this respect, it is also noteworthy that in 1973, shortly after the adoption of the Stockholm Declaration, New Zealand drew extensively on protection of the environment when complaining about French nuclear weapon tests. In asserting their illegality, New Zealand did not resort to prevention of environmental harm as an obligation established by a customary rule. Instead it affirmed, on the basis of environmental considerations, the existence of a *specific* prohibition under customary international law on nuclear weapon tests that give rise to radioactive fallout.

In this study, it has already been stressed that, in contrast to Australia, New Zealand invoked the rights of all members of the international community to be preserved from unjustified artificial radioactive contamination of the environment.[282] It must now be added that, alongside those rights, it adduced the rights of all members of the international community to require 'that no nuclear tests that give rise to radioactive fallout be conducted'.[283] According to New Zealand,

[280] There are currently 125 States parties, according to the United Nations Office for Disarmament Affairs (*www.disarmament.un.org*).

[281] See *supra*, Section 2.4.1.a.

[282] Memorial on Jurisdiction and Admissibility Submitted by the Government of New Zealand, 29 October 1973, para. 190. On the different position of Australia linking prevention of environmental harm to mutual respect for territorial sovereignty, see *supra*, Section 2.4.1.a.

[283] Memorial of New Zealand, cit., para. 190.

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'opposition to atmospheric nuclear tests […] has crystallized to the point of the formation of a rule of customary international law prohibiting' such nuclear tests.[284] That opposition was said to derive from an awareness not only of 'the dangers which [atmospheric nuclear tests] present to the life, health and security of peoples and nations everywhere', but also 'of their irreversible contribution to the pollution of the human environment'.[285] Therefore, the Stockholm Declaration was referred to as a piece of '[e]vidence of the necessary *opinio juris*'.[286]

As is known, the International Court of Justice did not take the opportunity to establish whether such a customary rule existed, having found that the case no longer had any object as a result of the declarations by France that it would cease atmospheric nuclear tests.[287] Moreover, the Court also did not have such an opportunity in 1995 when New Zealand once again instituted proceedings against France with regard to the underground nuclear weapons tests carried out in certain atolls of the South Pacific regions.[288] In fact, according to the judgment issued in 1974, if its basis 'were to be affected, the Applicant could request an examination of the situation'.[289] The Court dismissed the request filed by New Zealand because it was concerned with *underground* explosions, whereas the judgment on which the request was based dealt with *atmospheric* tests.[290] In other words, the request was rejected since no atmospheric tests had resumed. Still, it is interesting to note that, whereas in 1974 some judges answered in the negative the question as to the existence of a customary rule prohibiting nuclear weapon tests,[291] in 1995 one judge alluded to the existence of such a rule with regard to tests that give rise to radioactive fallout.[292]

[284] Ibid., para. 189.

[285] Ibid.

[286] Ibid.

[287] ICJ, *Nuclear Tests (New Zealand* v. *France)*, judgment of 20 December 1974, *I.C.J. Reports 1974*, 457, at 478, para. 65. See also ICJ, *Nuclear Tests (Australia* v. *France)*, judgment of 20 December 1974, *I.C.J. Reports 1974*, 253, at 272, para. 62.

[288] Application Instituting Proceedings, 21 August 1995. The Atolls are Mururoa and Fangataufa.

[289] *Nuclear Tests (New Zealand* v. *France)*, judgment, cit., at 477, para. 63.

[290] *Request for an Examination*, order, cit., at 304-306, paras 55-66.

[291] See the Separate Opinion of Judge Petrén appended to the judgment in the *Nuclear Tests* case *(Australia* v. *France)*, at 302-306 and, in more general terms, the Separate Opinion of Judge Gros, at 287-289, paras. 18-21.

[292] In the view of Judge Koroma, 'it can be argued that nuclear testing as such is not only prohibited, but would be considered illegal if it would cause radioactive fallout' (Dissenting Opinion of Judge Koroma, at 379).

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Indeed, practice shows that even States that are not parties to the Partial Nuclear-Test-Ban Treaty have eventually refrained from conducting atmospheric nuclear weapon tests.[293] As far as France is concerned, it halted these tests in 1974 when the International Court of Justice rendered its judgment in the *Nuclear Tests* case. China carried out its last atmospheric nuclear weapon test in 1980. As for North Korea, there is no public information concerning any atmospheric tests.[294]

As is known, it is inherently difficult to assess the value of abstention with a view to determining customary international law. It is the *opinio juris* element that should shed some light on the reasons behind any negative conduct and help to understand whether this does indeed reflect a belief that it is required by law.[295] Nonetheless,

[293] It is worth observing that States have also subsequently refrained from underground nuclear weapon test explosions: these were last carried out in the 1990s, specifically in 1990 by Russia, in 1991 by the United Kingdom, in 1992 by the United States, in 1996 by China and France, and in 1998 by India and Pakistan. Since then, only North Korea carried out such tests between 2006 and 2017, although these attracted strong condemnation as a result, from the Security Council in particular: see UN Security Council Resolutions 1718 (2006) of 14 October 2006; 1874 (2009) of 12 June 2009; 2094 (2013) of 7 March 2013; 2270 (2016) of 2 March 2016; 2321 (2016) of 30 November 2016; 2375 (2017) of 11 September 2017. On the relevant sanctions, see Charalambos D. Stamelos 'Les essais nucléaires par la Corée du Nord et le droit international' (2007) 60 *Rev. hellénique dr. int.* 371, at 376-383; and Leonardo Borlini, 'The North Korea's Gauntlet, International Law and the New Sanctions Imposed by the Security Council' (2016) 26 *Italian YIL* 319. However, reactions were mainly based on security considerations, since the environmental impact of those explosions, as underground tests, seems to have been negligible. In this respect, Japan's reaction to the nuclear test conducted by North Korea in 2006 is illustrative. The Chief Cabinet Secretary of Japan stated that 'the Government of Japan humbly asks for dispassionate behavior concerning the recent nuclear test by the DPRK because, according to past experience, the quantity of radioactivity emitted by underground nuclear tests into atmosphere is estimated to be extremely small. As a result, if the recent nuclear test has in fact been carried out, the effect of radioactivity on the territory of Japan, human bodies as well as flora and fauna therein is understood to remain within a negligible range', as reproduced by Koichi Morikawa, Ryo Yamamoto, 'Japan's Responses to the Missile Launches and the Nuclear Test by the Democratic People's Republic of Korea' (2007) 50 *Japanese YIL* 141, at 160.

[294] On these data, see Fedchenko 'Nuclear Explosions, 1945-2017', cit., at 300-301.

[295] Considering that the International Law Association has deemed practice to constitute a sufficient element within the formation of customary international law (see *supra*, Section 1.3.3), it is remarkable that it has identified cases involving ambiguous omissions as being indicative of one of the exceptions in which the *opinio juris* element plays a role: see Section 17(iv)(a) of the London Statement of Principles

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it is not easy to determine the psychological element that has driven States to refrain from atmospheric nuclear tests or to shift towards underground tests.[296] By way of illustration, it would appear that, when declaring that the atmospheric tests to be conducted in 1974 would be the last ones of that type, France did not dwell on the reasons for the transition to underground tests, apart from the technological developments that made it feasible.[297] In truth, the more recent abandonment of underground tests can also be traced back to advances in technology that enable nuclear weapons explosions to be replaced by computer simulations and subcritical tests using non-nuclear materials only, and thus not involving nuclear explosions.[298] Again, it would be almost impossible to establish whether those de-

Applicable to the Formation of General Customary International Law and Accompanying Commentary attached to the Final Report of the Committee, as Amended at the London Conference, held on 15-29 July 2000, adopted by Res. 16/2000 and available at *www.ila-hq.org*.

[296] The point is especially stressed by Phoebe Okowa, *State Responsibility for Transboundary Air Pollution in International Law* (Oxford: Oxford University Press 2000), at 107 ('Although it is true that most states have refrained from carrying out atmospheric nuclear tests, it cannot be said with certainty that this has been the result of a conscious belief that customary law required restraint from such conduct'). Hence she concludes, albeit writing twenty years ago, that customary international law is simply experiencing a trend towards the prohibition of atmospheric nuclear tests under customary international law (ibid., at 99-110).

[297] In the *Nuclear Tests* case *(New Zealand* v. *France)*, for example, one may read in a note of 10 June 1974 from the French Ambassador to the New Zealand Minister of foreign affairs that 'la France, au point où en est parvenue l'exécution de son programme de défense en moyens nucléaires, sera en mesure de passer au stade des tirs souterrains aussitôt que la série d'expériences prévues pour cet été sera achevée' (Documents Submitted to the Court after the Filing of the Memorial, at 298). In the *Nuclear Tests* case *(Australia* v. *France)*, a note to that effect was sent to the Australian Minister of foreign affairs on 11 June 1974 (Documents Submitted to the Court after the Filing of the Memorial, at 550). See, in general, *Nuclear Tests (New Zealand* v. *France)*, judgment, cit., at 471, paras. 40-43; and *Nuclear Tests (Australia* v. *France)*, judgment, cit., at 266, paras. 37-39. Accordingly, in his separate opinion to the judgment in the *Nuclear Tests* case *(Australia* v. *France)*, Judge Forster noted, '[a]s for the transition from atmospheric to underground tests', that he saw 'it simply as a technical step forward which was due to occur; that, and no more', having first 'noted nothing in the French statements which could be interpreted as an admission of any breach of positive international law' (Separate Opinion of Judge Forster, at 275). This position was shared by Judge Ignacio-Pinto (Separate Opinion of Judge Ignacio-Pinto, at 311). However, it should be borne in mind that France insisted that the atmospheric nuclear tests at issue did not have any adverse effects on the environment (see *supra*, Section 2.4.1.a).

[298] See Daniel Oberhaus, 'Nuclear Tests Have Changed, but They Never Really Stopped' (16 July 2020) *www.wired.com*.

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velopments were intended to pursue aims other than technological advancement for its own sake, such as protection of the environment.

Despite these difficulties, one cannot ignore the fact that, over and above the abstention of nuclear-weapon States *qua* specially affected States, overall practice indicates increasing concern worldwide for nuclear weapon test explosions that cause significant harm to the environment. Leaving aside the Partial Nuclear-Test-Ban Treaty, nuclear-weapon-free zones have subsequently been established in various regions.[299] Nuclear testing is prohibited in those zones,[300] and protection of the environment appears to be one of the aims pursued through their creation.[301] Furthermore, the UN General Assembly has not only promoted the negotiation and adoption of a treaty stipulating a prohibition on all nuclear weapon tests,[302] but has itself

[299] They have mainly been created by treaties, namely the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco), adopted at Mexico City on 14 February 1967 and entered into force on 22 April 1968, 634 *UNTS* 281; the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga), adopted at Rarotonga on 6 August 1985 and entered into force on 11 December 1986, 1445 *UNTS* 177; the Treaty on the Southeast Asia Nuclear Weapon-Free Zone (Treaty of Bangkok), adopted at Bangkok on 15 December 1995 and entered into force on 27 March 1997, 1981 *UNTS* 129; African Nuclear Weapon Free Zone Treaty (Treaty of Pelindaba), adopted at Cairo on 11 April 1996 and entered into force on 15 July 2009, available at the official website of the African Union: *www.au.int*; the Treaty on a Nuclear-Weapon-Free Zone in Central Asia (CANWFZ), adopted at Semipalatinsk on 8 September 2006 and entered into force on 21 March 2009, 2970 *UNTS* 91. In addition, Mongolia declared its nuclear-weapon-free status in 1998, which was welcomed and supported by the UN General Assembly, Res. 53/77 D of 4 December 1998.

[300] See Art. 1(1)(a) and (2) of the Treaty of Tlatelolco; Art. 6 of the Treaty of Rarotonga; Art. 3(1)(c) and (2)(c) of the Treaty of Bangkok; Art. 5 of the Treaty of Pelindaba; Art. 5 CANWFZ.

[301] For example, the Parties to the Treaty of Bangkok proclaimed their determination 'to protect the region from environmental pollution and the hazards posed by radioactive wastes and other radioactive material' (preamble, para. 10). Clauses to that effect have been included in the Treaty of Rarotonga (preamble, para. 10) and the Treaty of Pelindaba (preamble, para. 12) as well. Indirect references to protection of the environment may also be found in the Treaty of Tlatelolco, which is the most ancient of the treaties establishing nuclear-weapon-free zones and the only one to be adopted prior to the Stockholm Declaration: the Parties express their conviction that 'nuclear weapons […] constitute, through the persistence of the radioactivity they release, an attack on the integrity of the human species and ultimately may even render the whole earth uninhabitable' (preamble, para. 7).

[302] For example, see UNGA Resolutions 32/78 of 12 December 1977 and 35/145 of 12 December 1980. The treaty in question was the 1996 Comprehensive Nuclear-Test-Ban Treaty.

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also condemned such explosions on several occasions,[303] including on account of their adverse effects on the environment.[304]

Within this context, one should not overestimate the fact that the Comprehensive Nuclear-Test-Ban Treaty has not yet entered into force.[305] This is because, although it lays down a general prohibition on nuclear weapon test explosions,[306] including underground tests, the Treaty is mainly centred on the creation of an international organisation vested with extraordinarily intrusive powers: the Comprehensive Nuclear-Test-Ban Treaty Organization. It is sufficient to note that each State party is allowed to request an on-site inspection in the territory or at a place under the jurisdiction or control of any other State party, including within international areas.[307] It is accordingly plausible to assume that States' reluctance to accept the Treaty is due to the monitoring system, rather than the substantive prohibition set forth within it, at least as regards atmospheric nuclear tests.

In light of the above, it is reasonable to conclude that a prohibition on nuclear weapon test explosions has emerged or is in the

[303] In particular, 'all nuclear weapon tests, in whatever environment they may be conducted' were condemned: see UNGA Resolutions 3257 (XXIX) of 9 December 1974, para. 1; 3466 (XXX) of 11 December 1975, para. 1; 31/66 of 10 December 1976, para. 1. At the outset, in fact, the General Assembly condemned 'with the utmost vigour' all nuclear weapon tests: see Resolutions 2934 (XXVII) of 19 November 1972, section C, para. 1, and 3078 (XXVIII) of 6 December 1973, section A, para. 1. On one occasion, nuclear weapon tests were condemned 'solemnly and most emphatically': see UNGA Res. 2828 (XXVI) of 16 December 1971, section A, para. 1.

[304] In Res. 3078 (XXVIII), cit., section B, preamble, para. 7, the General Assembly proclaimed itself to be 'deeply concerned that, notwithstanding the opposition of the vast majority of States […], nuclear weapon tests continue to take place in the atmosphere, *despite the danger of radio-active contamination*' (emphasis added). In Resolutions 2828 (XXVI), cit., section A, preamble, para. 1; 2934 (XXVII), cit., section C, preamble, para. 1; and 3078 (XXVIII), cit., section A, preamble, para. 2, it expressed its deep or utmost 'apprehension concerning the harmful consequences of nuclear weapon tests for the acceleration of the arms race *and for the health of present and future generations of mankind*' (emphasis added). Accordingly, the General Assembly considered the 'cessation of nuclear-weapon testing' to be 'in the supreme interest of mankind', not only because it would be 'a major step towards controlling the development and proliferation of nuclear weapons', but also in order 'to relieve the deep apprehension concerning the harmful consequences of radio-active contamination for the health of present and future generations': see Resolutions 3257 (XXIX), cit., preamble, para. 6; 3466 (XXX), cit., preamble, para. 6; 31/66, cit., preamble, para. 1.

[305] Comprehensive Nuclear-Test-Ban Treaty, adopted on 10 September 1996 by UNGA Res. 50/245.

[306] Art. I of the 1996 Comprehensive Nuclear-Test-Ban Treaty.

[307] Art. IV(34) of the 1996 Comprehensive Nuclear-Test-Ban Treaty.

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course of emerging under customary international law as far as tests that cause radioactive fallout – thus causing significant harm to the environment – are concerned. It is difficult to imagine that, should atmospheric tests be resumed more than forty years after they were halted, they would not face any opposition from the international community on the basis of environmental concerns.

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Chapter 7

Protection of the Environment and Continued Economic Growth in the Age of Technology

Summary: 7.1. The Decline of Prevention of Environmental Harm and the Rise of Sustainable Development. - 7.1.1. The Integration of Protection of the Environment and Economic Development as a Key Component of Sustainable Development. - 7.1.2. The Paradigm Shift from Prevention of Environmental Harm to Sustainable Development. – 7.2. Continued Economic Growth and the Paradox of Protection of the Environment: The Promise of Technology. – 7.3. Beyond the Technological Illusion: 'Un-sustainable' Development and the De-growth Solution. – 7.4. The Potential of the Principle of Prevention of Environmental Harm in a De-growth Scenario.

7.1. *The Decline of Prevention of Environmental Harm and the Rise of Sustainable Development*

7.1.1. *The Integration of Protection of the Environment and Economic Development as a Key Component of Sustainable Development*

In the previous Chapter, the main trends resulting from the operation of the principle of prevention of environmental harm in general international law were tentatively examined. As was noted, since these trends may be observed in customary law, they are indicative of the evolution of the principle of prevention in the international legal system in general. Accordingly, it is now worth zooming out from those trends in order to consider them from a broader perspective.

It will then become clear that prevention of environmental harm tends to be unable to go so far as to impair the *economic* exploitation of natural resources, even if the activity at stake causes significant harm to the environment. By virtue of the principle of prevention of environmental harm, environmental concerns are taken into account when exploiting natural resources. Nonetheless, this seldom renders unlawful any activity that causes harm to the environment, unless it is unrelated to economic and industrial development. As far as economic exploitation of natural resources is concerned, activity that is harmful to the environment will only become unlawful if it falls short of the relevant standard, or if a certain threshold is met,

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or if particular substances are used. In itself, however, that activity will usually not be unlawful. Moreover, procedural obligations will not *directly* interfere with it.

This situation confirms that the reconstruction of prevention of environmental harm as a general principle of international law fits in better with reality than its construction as an obligation established by a customary rule. Whilst the content of prevention *as a rule* needs to be sufficiently well defined, as it may be under customary international law, to apply to specific cases, prevention of environmental harm *as a principle*, viz. a value-oriented direction, may well refer to a vast array of activities. Leaving aside any issue concerning the status of the relevant State practice,[1] the content of the alleged customary rule on prevention could hardly be couched in such terms as to encompass negative obligations, for instance in relation to the dumping of highly radioactive waste and other substances at sea, as well as positive obligations, such as the obligation to conduct an EIA. Even though the conception of prevention of environmental harm as a due diligence obligation allows for a great degree of flexibility, it seems difficult to refer to due diligence in situations involving the wanton destruction of the environment during armed conflict, or nuclear weapon tests that cause radioactive fallout. Furthermore, notwithstanding the reliance on due diligence, the purported customary obligation to prevent environmental harm proves to be at odds with the definition of detailed standards or thresholds with regard to certain activities. In fact, in the absence of such qualifications, States appear to be reluctant to consent to be bound by broad rules that might have far-reaching implications.

In addition, the inherent lawfulness of activities entailing economic exploitation of natural resources is consistent with the discourse on State liability for harm resulting from lawful acts.[2] Again, the primary rules laid down in the pertinent treaties do not prevent the activity concerned from being carried out.

All in all, it seems that the concept of sustainable development reflects these trends derived from the operation of the principle of prevention of environmental harm in general international law. As the expression 'sustainable development' suggests, the primary focus of the notion is on 'development', whilst environmental 'sustainability' simply qualifies it. Environmental considerations tend to be somewhat *integrated* into economic development, but ultimately the

[1] See *supra*, Chapter 1.
[2] See *supra*, Section 1.1.3.

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principle of prevention of environmental harm is generally unable to hinder it.

The integration of protection of the environment and economic development is one of the hallmarks of sustainable development. It is stressed in particular in principle 4 of the Rio de Janeiro Declaration, where the first solemn reference to the concept is commonly found. According to principle 4, '[i]n order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it'.[3] This provision makes it clear that, under sustainable development, economic development qualifies as the driving force. Therefore protection of the environment cannot be pursued separately from development, whereas the opposite does not appear to be equally true.

Following the 1992 Rio de Janeiro Conference, integration as a key feature of sustainable development has extended to include the social dimension of development as well. At the 2002 Johannesburg UN World Summit on Sustainable Development, the famous image of a three-pillar concept of sustainable development encompassing economic development, social development and protection of the environment was enshrined in the final Political Declaration.[4] It was restated more recently in the outcome document adopted in 2012 by the Rio de Janeiro UN Conference on Sustainable Development (Rio+20), 'The Future We Want'.[5]

One is thus under the impression that the centrality of the economic dimension of sustainable development has progressively been abandoned, with the emphasis shifting to the interdependence of and interconnection between the three 'pillars'. Apparently, both the Johannesburg Summit and Rio+20 promoted such a vision. In reality however, the importance of protection of the environment, including prevention of environmental harm, has faded.[6]

Before proceeding to illustrate this phenomenon, it is necessary

[3] Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, Res. 1, Annex 1, UN Doc. A/CONF.151/26/Rev.1 (Vol.1).

[4] See the Johannesburg Declaration on Sustainable Development, in Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002, Res. 1, UN Doc. A/CONF.199/20.

[5] See 'The Future We Want', Annex to Resolution 1, in Report of the United Nations Conference on Sustainable Development, Rio de Janeiro, Brazil, 20-22 June 2012, UN Doc. A/CONF.216/16.

[6] See *infra*, Section 7.1.2.

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to clarify why, although sustainable development is a fuzzy and 'multi-faceted concept',[7] the emphasis has here been placed on the integration of protection of the environment with economic development. This is not simply because integration is an essential component of the concept of sustainable development, as is apparent from the consolidation of the three-pillar image to describe it. More to the point, the integration feature is specifically important for the purposes of this study, since it is most directly relevant to protection of the environment. Conversely, other components of sustainable development seem to be based on the logic of economic exploitation and mutual respect for territorial sovereignty. As a result, integration of protection of the environment and economic development represents perhaps the most innovative feature of sustainable development, as it could certainly not predate the spread of environmental awareness in the 1960s.

In particular, 'intergenerational equity' as a component of sustainable development appears to be connected with conservation rather than protection of the environment.[8] It implies that natural resources should be preserved for the benefit of future generations. An emphasis on intergenerational equity was apparent within what is commonly regarded as being at the very origin of sustainable development: the report 'Our Common Future', adopted by the World Commission on Environment and Development in 1987.[9] According to the Report, sustainability is a distinctive feature of 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.[10] That is specified in principle 3 of the Rio de Janeiro Declaration, which states that '[t]he right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations'.[11]

[7] See Nico Schrijver, 'The Evolution of Sustainable Development in International Law: Inception, Meaning and Status' (2007) 329 *Rec. cours* 217, at 366-374. For an overview of the different definitions of the content of sustainable development, see Massimiliano Montini, *Investimenti internazionali, protezione dell'ambiente e sviluppo sostenibile* (Milano: Giuffré 2015), at 36-41.

[8] In the words of Pierre-Marie Dupuy, Jorge E. Viñuales, *International Environmental Law* (2nd ed., Cambridge: Cambridge University Press 2018), at 88, 'this principle [of inter-generational equity] can be considered as a manifestation of the old idea of nature conservation and the more recent concept of sustainable development'.

[9] Report of the World Commission on Environment and Development, 'Our Common Future', Annex to the note by the Secretary-General to the General Assembly, UN Doc. A/42/427 of 4 August 1987.

[10] Ibid., para. 27, at 24.

[11] For an overview, see Claire Molinari, 'Principle 3: From a Right to Development to Intergenerational Equity', in Jorge E. Viñuales (ed.), *The Rio Declaration*

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It is true that the conservation of natural resources may have a bearing on prevention of environmental harm, and the concept of 'future generations' has come under the influence of human rights,[12] including the right to a healthy environment. In itself, however, conservation of natural resources focuses on their future *exploitation*. It cannot be properly linked to protection of the environment per se. Indeed, conservation for future exploitation predates the spread of environmental awareness. For instance, when the United States claimed, in the 1893 *Pacific Fur Seal* arbitration, that it had a right to preserve seals against their destruction, even if this took place outside its own jurisdiction,[13] it was hardly moved by environmental concerns. Nonetheless, a manifestation of sustainable development has been found in this position of the United States dating back to the nineteenth century.[14]

Similarly, protection of the environment could hardly be seen as being properly included within 'intra-generational equity', which is frequently considered as another component of sustainable development.[15] Also conceptualised in terms of the equitable use of natural resources, it implies that, when exploiting such resources, States should take into account the needs of other States.[16] It comes into

on Environment and Development. A Commentary (Oxford: Oxford University Press 2015), 139.

[12] See the seminal book by Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (Tokyo: UN University Press 1989), who refers to 'intergenerational' or 'planetary' rights and obligations. For a concise overview see Id., 'Our Rights and Obligations to Future Generations for the Environment' (1990) 84 *AJIL* 198, especially at 201-204.

[13] *Award between the United States and the United Kingdom relating to the Rights of Jurisdiction of United States in the Bering's Sea and the Preservation of Fur Seals*, decision of 15 August 1893, 28 *RIAA* 263. See in particular the fifth point submitted to the Tribunal of Arbitration pursuant to Art. VI of the Treaty between the United States and the United Kingdom, adopted on 29 February 1892 and entered into force on 7 May 1892. It concerned the question as to whether the United States had 'any right, and if so, what right of protection or property in the fur-seals frequenting the islands of the United States in Behring Sea when such seals are found outside the ordinary three-mile limit'.

[14] See Philippe Sands et al., *Principles of International Environmental Law* (4th ed., Cambridge: Cambridge University Press 2018), at 218 ('the idea of "sustainability" has been a feature in international legal relations since at least 1893, when the United States asserted a right to ensure the legitimate and proper use of seals and to protect them, for the benefit of humankind, from wanton destruction').

[15] See Patricia Birnie, Alan Boyle, Catherine Redgwell, *International Law and the Environment* (3rd ed., Oxford: Oxford University Press 2009), at 116-123, especially at 122-123; and Sands et al., *Principles*, cit., at 218-219.

[16] See Sands et al., *Principles*, cit., at 219 and 225-227.

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consideration especially with regard to shared natural resources, and thus appears to be entrenched in the mutual respect for territorial sovereignty, although may also be indirectly relevant for the prevention of environmental harm. Beyond shared natural resources and their use, another manifestation of intra-generational equity is said to lie in the so called 'principle' of common but differentiated responsibilities.[17] According to that precept, since States have contributed to differing degrees to environmental degradation over history, 'developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command'.[18] As a result, the economic needs of developing States should be taken into account, as their environmental burdens are scaled down accordingly.

7.1.2. *The Paradigm Shift from Prevention of Environmental Harm to Sustainable Development*

As the concept of sustainable development, and the feature of integration in particular, is appropriate to describe the trends emerging from the operation of prevention of environmental harm in general international law, there is a question of what the relationship is between sustainable development and prevention of environmental harm. Since the concept of sustainable development tends to reflect the outcome of the balancing act between prevention of environmental harm and exploitation of natural resources (as economic development is ultimately never hindered), one might reasonably question whether sustainable development, as opposed to prevention, is the general principle of international law that really performs a guiding function in international law.

This question raises the broader issue of the status of sustainable development in international law. However, addressing this issue would surely fall well beyond the limits of this study.[19] The intention here is, more modestly, to illustrate that international practice increasingly indicates not only some overlap between prevention of environmental harm and sustainable development, but also a shift in

[17] See Alessandro Fodella, 'I principi generali', in Alessandro Fodella and Laura Pineschi (eds.), *La protezione dell'ambiente nel diritto internazionale* (Torino: Giappichelli 2009), 95, at 124-126.

[18] Principle 7 of the 1992 Rio Declaration on Environment and Development.

[19] For an overview of the diverse opinions within legal scholarship, see Montini, *Investimenti internazionali*, cit., at 41-55.

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importance from the former to the latter. In this respect, the observation that the trends emerging from the operation of the principle of prevention of environmental harm in customary international law essentially reflect sustainable development appears to be symptomatic of the erosion of the principle of prevention, which might ultimately lead to its replacement by sustainable development.

For this purpose, it will be sufficient to recall, as far as the status of sustainable development in international law is concerned, that it has maintained a hybrid or open-ended characterisation in both international case law and scholarship. That is not inconsistent with the gradual substitution just alluded to: since sustainable development does not amount to a rule, it might be or evolve into a general principle, and in fact its open-ended character is peculiar to general principles.

The International Court of Justice has employed the term 'concept' to refer to sustainable development. It has mostly been used in this study too, because it is appropriate to describe, by definition, a general idea, such as the one resulting from the balancing act between prevention of environmental harm and exploitation of natural resources. As the International Court of Justice put it in its judgment in the *Gabčíkovo-Nagymaros* case, the 'need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development'.[20] In legal writings too, sustainable development has been defined as a concept expressing a balance.[21]

Significantly, sustainable development has sometimes been referred to as a 'principle' or an 'objective' in international case law and practice.[22] This confirms the tangible possibility that the principle of

[20] ICJ, *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, judgment of 25 September 1997, *I.C.J. Reports 1997*, 7, at 78, para. 140. The Court quoted that excerpt in *Pulp Mills*, judgment, cit., para. 76. It also restated that 'the balance between economic development and environmental protection […] is the essence of sustainable development'.

[21] See, e.g., Dupuy, Viñuales, *International Environmental Law*, cit., at 90-94.

[22] In the judgment in the *Pulp Mills* case, although the Court cited the passage in the *Gabčíkovo-Nagymaros* judgment in which sustainable development is referred to as a 'concept' (see *supra*, Section 5.2.1.b), it went on to use the word 'objective' to mention sustainable development: see *Pulp Mills*, judgment, cit., para. 177. In the *Pulp Mills* case, the Court had previously mentioned sustainable development also in the order on the request for provisional measures, but refrained from classifying it: see *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, *Provisional Measures*, order of 13 July 2006, *I.C.J. Reports 2006*, 113, at 133, para. 80 ('the present case highlights the importance of the need to ensure environmental protection of shared

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prevention of environmental harm may progressively be replaced by a principle of sustainable development. Even though the word 'principle' features inherent ambiguities, the expression 'objective' makes sustainable development more similar to a guiding principle than a rule.[23] Indeed, it seems that international courts and tribunals have been careful not to classify sustainable development as a customary rule.[24] Such a classification has only seldom been affirmed within the legal scholarship.[25] On the contrary, some authors have significantly referred to sustainable development as a legal principle, and even attached a guiding function to it.[26]

Returning to the point at issue, the overlap between the principle of prevention of environmental harm and sustainable development is especially apparent in international case law. It is in connection with prevention of environmental harm that sustainable development has

natural resources while allowing for sustainable development'). On the other hand, sustainable development has been referred to as a principle in arbitral proceedings. In the award in the *Iron Rhine* case, the Arbitral Tribunal included sustainable development among the 'emerging principles' of international environmental law: see PCA, *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway* between Belgium and the Netherlands, award of 24 May 2005, 27 *RIAA* 35, at 66-67, paras. 58-59. In the partial award in the *Indus Water Kishenganga* arbitration, the Court of Arbitration referred to sustainable development as a principle: see PCA, *In the Matter of the Indus Waters Kishenganga Arbitration*, partial award of 18 February 2018, 31 *RIAA* 55, at 216-217, paras. 449-450. Indeed, it implied that the International Court of Justice had classified sustainable development as a principle, which, as illustrated, was not however the case. In the case law of the International Court of Justice, it is only in the separate opinions of some Judges that sustainable development has been defined as a principle rather than a concept: see the Separate Opinion of Vice-President Weeramantry, appended to *Gabčíkovo-Nagymaros*, judgment, cit., 88, at 88; and Separate Opinion of Judge Cançado Trindade, appended to *Pulp Mills*, judgment, cit., 135, especially paras. 132-147.

[23] See *supra*, Section 3.1.4.

[24] The only exception seems to lie in the Separate Opinion of Judge Weeramantry, mentioned above, who regarded sustainable development as being part of customary international law, although it was defined as a principle: 'there are plentiful indications […] to give the principle of sustainable development the nature of customary law' (Separate Opinion of Vice-President Weeramantry, cit., at 104).

[25] See Sands et al., *Principles*, cit., at 219: 'There can be little doubt that the concept of "sustainable development" has entered the corpus of international customary law'.

[26] See Duncan French, 'Sustainable Development', in Malgosia Fitzmaurice, David M. Ong and Panos Merkouris (eds.), *Research Handbook on International Environmental Law* (Cheltenham/Northampton: Edward Elgar 2010), 51, at 55-56; and Ulrich Beyerlin, 'Sustainable Development', in *MPEPIL online* (2013), paras. 15-19, especially para. 17.

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mostly come into consideration, although without any sharp distinction between the two. While not being particularly copious, the pertinent case law is revealing as it shows how prevention of environmental harm and sustainable development have become closely intertwined in concrete circumstances.

The most telling instance of this overlap is perhaps found in the award in the *Iron Rhine* arbitration. This is not simply because 'the notions of prevention and sustainable development' were included together, as a hendiadys, among the 'emerging principles' of international environmental law, in addition to conservation, management, and protection for future generations.[27] The definition of the 'duty to prevent, or at least mitigate' significant harm to the environment as 'a principle of general international law', commented on above,[28] is also set out in the middle of a passage which is entirely centred on sustainable development.

Before arriving at that definition, the Arbitral Tribunal dwelled on the integration of environmental protection and economic development which, as noted above, is a key feature of sustainable development.[29] It also cited principle 4 of the Rio Declaration, i.e., the provision dealing specifically with sustainable development.[30] Instead, the Tribunal did not recall principle 2 on prevention of environmental harm. It introduced the proposition that 'where development may cause significant harm to the environment there is a duty to prevent, or at least mitigate, such harm' starting from the observation that '[e]nvironmental law and the law on development stand not as alternatives but as mutually reinforcing, integral concepts'.[31] Having defined prevention as a general principle, the Tribunal immediately went on to refer again to sustainable development, quoting the relevant passage from the *Gabčíkovo-Nagymaros* judgment, reproduced above.[32]

The partial award rendered in the *Indus Waters Kishenganga* arbitration provides another example of the intertwinement between prevention of environmental harm and sustainable development. After having quoted the *Trail Smelter* dictum and mentioned principle 21

[27] *Arbitration regarding the Iron Rhine*, award, cit., at 66, para. 58.

[28] See *supra*, Section 5.3.1.

[29] *Arbitration regarding the Iron Rhine*, award, cit., at 66, para. 59: 'both international and EC law require the integration of appropriate environmental measures in the design and implementation of economic development activities'.

[30] See *supra*, Section 7.1.1.

[31] *Arbitration regarding the Iron Rhine*, award, cit., at 66, para. 59.

[32] Ibid., at 67, para. 59. See *supra*, text corresponding to note 20.

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of the Stockholm Declaration as a 'broader restatement' of it,[33] the Court of Arbitration first cited the requirement that environmental protection be taken into consideration 'when planning and developing projects that may cause injury to a bordering State'; it then recalled the existence of treaties, declarations and international case law 'address[ing] the need to manage natural resources in a sustainable manner'; finally, it expressly referred to sustainable development, quoting the relevant passage from the *Gabčíkovo-Nagymaros* judgment.[34]

In effect, there must have been no essential difference, in the view of the Court of Arbitration, between prevention of environmental harm and sustainable development. On the one hand, it affirmed that, in the *Pulp Mills* judgment, it is sustainable development that had 'translate[d] into "a requirement under general international law to undertake impact assessment"';[35] on the other hand, it went on to cite the passage from the *Pulp Mills* judgment dealing with the connection of 'due diligence, and the duty of vigilance and prevention which it implies', with the obligation to conduct an EIA.[36] However, as illustrated above, the obligation to conduct an EIA is, according to the International Court of Justice, a requirement under prevention of environmental harm, rather than sustainable development.[37]

Finally, there has already been occasion to note in this study that the above quotation from the *Gabčíkovo-Nagymaros* judgment regarding sustainable development appears in a passage of the decision that is also relevant to prevention of environmental harm.[38] In dealing with the impact and implications of the system of locks on and for the environment, the International Court of Justice did not limit itself to recalling the obligations under the pertinent treaty.[39] From a broader perspective, it stressed the importance of 'vigilance and prevention' in the protection of the environment.[40] It observed that, although interferences with the environment had occurred 'at an unconsidered and unabated pace' throughout history, 'new norms and standards have been developed' which had to be taken into consideration and given proper weight.[41] On the

[33] *Indus Waters Kishenganga*, partial award, cit., at 216, para. 448.
[34] Ibid., para. 449.
[35] Ibid., at 216-217, para. 450.
[36] Ibid., at 217, para. 450.
[37] See *supra*, Section 6.2.3.
[38] See *supra*, Section 5.2.1.b.
[39] *Gabčíkovo-Nagymaros*, judgment, cit., para. 140.
[40] Ibid.
[41] Ibid.

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basis of that premise, the Court expressly mentioned the concept of sustainable development.[42]

As alluded to, the blurring of the distinction between prevention of environmental harm and sustainable development, as may be observed within international case law, has paralleled the erosion of the principle of prevention as a consequence of the increasing importance of the concept of sustainable development.[43] Remarkably, the sequence of UN environmental conferences shows how protection of the environment and prevention of environmental harm have been diluted by the concept of sustainable development.[44] That is significant because these conferences have greatly contributed to the evolution of international protection of the environment, even though their final reports – including declarations and plans – are not per se legally binding. Throughout the history of UN environmental conferences, one may note the decline of the principle of prevention of environmental harm on a twofold level.

On a general level, those conferences have been increasingly centred on sustainable development rather than protection of the environment. Over time, the word 'environment' has tellingly disappeared from their very names. Whereas the object of the 1972 Stockholm Conference was the 'human environment', and the 'environment' was still included in the name of the 1992 Rio Conference together with 'development', the 2002 Johannesburg World Summit and Rio+20 both referred only to 'sustainable development'. That change is not only formal in nature, as the relevant reports show. Whilst protection of the environment should be one of the three pillars of sustainable development on the same footing as social development and economic development, it is frequently referred to simply as an instrument for achieving them. After all, since social development is commonly measured in terms of economic devel-

[42] Ibid.

[43] For example, it is noteworthy that prevention of environmental harm constitutes a mere instrument for the achievement of the objective of sustainable development in the ILA New Delhi Declaration of Principles of International Law Relating to Sustainable Development, adopted by the International Law Association at its 70th Conference held in New Delhi from 2 to 6 April 2002, available at *www.ila-hq.org*, and also as UN Doc. A/CONF.199/8 of 9 August 2002. In particular, the principle of prevention of environmental harm is restated, as essentially formulated in Principle 2 of the Rio Declaration, in para. 1.1, under the duty of States to ensure sustainable use of natural resources.

[44] See also Ivan Ingravallo, 'La dimensione ambientale dello sviluppo sostenibile: osservazioni critiche', in Daniela Caterino and Ivan Ingravallo (eds.), *L'impresa sostenibile. Alla prova del dialogo dei saperi* (Lecce: EuriConv 2020).

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opment, i.e., by gross domestic production (GDP), the economic dimension ultimately prevails over both the social and the environmental aspects.

For instance, according to the Political Declaration adopted at Johannesburg, the 'overarching objectives of and essential requirements for sustainable development' lie in 'poverty eradication, changing consumption and production patterns and *protecting and managing the natural resource base for economic and social development*'.[45] Not only does protection refer to natural resources rather than the environment, but it also appears to be limited to those natural resources that are essential to economic and social development. This approach was endorsed in the Rio+20 Conference.[46] Moreover, none of the chapters of the 2002 Plan of Implementation adopted at Johannesburg is expressly dedicated to protection of the environment.

One gains the same impression from 'The Future We Want', or certain parts of it at least, although some thematic areas and issues are directly relevant to environmental protection.[47] All in all, protection of the environment appears to be merely instrumental in achieving economic and social development. By way of illustration, as regards the oceans and seas, the importance of conservation and sustainable use of marine resources is stressed in terms of 'their contributions to poverty eradication, sustained economic growth, food security and creation of sustainable livelihoods and decent work', while 'protecting biodiversity and the marine environment' seems to come into consideration as a sort of side effect.[48] In a similar vein, as for desertification, land degradation and drought, it is the 'economic and social significance of good land management' that is recognised, which encompasses, on the whole, 'economic growth, biodiversity, sustainable agriculture and

[45] See the Johannesburg Declaration on Sustainable Development, cit., para. 11 (emphasis added).

[46] See 'The Future We Want', cit., at 1, para. 4.

[47] The sections immediately relevant appear to be those relating to oceans and seas; climate change; forests; biodiversity; desertification, land degradation and drought; chemical and waste. The dilution of protection of the environment stands out against the heterogeneity of themes and issues, which concern poverty eradication; food security and nutrition and sustainable agriculture; water and sanitation; energy; sustainable tourism; sustainable transport; sustainable cities and human settlements; health and population; promoting full and productive employment, decent work for all and social protection; small island developing States; least developing countries; landlocked developing countries; Africa; regional efforts; disaster risk reduction; mountains; sustainable consumption and production; mining; education; gender equality and women's empowerment.

[48] See 'The Future We Want', cit., at 30, para. 158.

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food security, eradicating poverty, women's empowerment, addressing climate change and improving water availability'.[49]

Considering these points regarding protection of the environment in general, it is easy to see why, on a more specific level, the weight of prevention of environmental harm has diminished. For instance, in the section of 'The Future We Want' mentioned above that deals with the oceans and seas, it is observed that 'the health of oceans and marine biodiversity are negatively affected by marine pollution, including marine debris, especially plastic, persistent organic pollutants, heavy metals and nitrogen-based compounds, from a number of marine and land-based sources'.[50] However, a commitment is simply made 'to take action to reduce *the incidence and impacts* of such pollution on marine ecosystems',[51] rather than to prevent or reduce marine pollution directly. As far as climate change is concerned, it is *adaptation* that 'represents an immediate and urgent global priority', considering the continuing rise in global greenhouse gas emissions.[52] Mitigation through their reduction seems to be mentioned only in passing, in relation to the need for 'the widest possible cooperation by all countries and their participation in an effective and appropriate international response'.[53]

7.2. *Continued Economic Growth and the Paradox of Protection of the Environment: The Promise of Technology*

The proposed reconstruction of prevention of environmental harm as a general principle of international law appears not only to offer a different perspective for considering afresh issues that have remained controversial according to the construction of prevention as an obligation established by a customary rule. It also seems to be suited to adaptation to possible future scenarios in the evolution

[49] Ibid., at 41, para. 205.
[50] Ibid., at 31-32, para. 163.
[51] Ibid. (emphasis added).
[52] Ibid., at 37, para. 190.
[53] Ibid., at 37-38, para. 191. Indeed, the growing importance of adaptation in the international action on climate change is also apparent from the 2015 Paris Agreement when compared to the 1992 Framework Convention on Climate Change and 1997 Kyoto Protocol, despite the essentially hortatory character of the relevant provisions: see Mario Gervasi, 'Rilievi critici sull'Accordo di Parigi: le sue potenzialità e il suo ruolo nell'evoluzione dell'azione internazionale di contrasto al cambiamento climatico' (2016) 71 *Com. Int.* 21, at 31-35; and Massimiliano Montini, 'Riflessioni critiche sull'Accordo di Parigi sui cambiamenti climatici' (2017) 100 *Riv. dir. int.* 719, at 740-742.

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of international protection of the environment. Before embarking on any reflections on this issue, it is necessary to arrive at a deeper understanding of the current focus of trends in customary law, as illustrated above.

In particular, the fact that the outcome to the operation of the principle of prevention of environmental harm tends to reflect the concept of sustainable development, the confusion between that principle and that concept, and the erosion of prevention of environmental harm as a result of its incorporation into sustainable development, are not fortuitous phenomena. On the contrary, they are symptomatic of the intrinsic paradox within protection of the environment in the global economic system as it currently stands. It is against the backdrop of capitalism that the interaction between the principle of prevention of environmental harm and the exploitation of natural resources takes place. Since the end of the cold war, capitalism has been the dominant economic system around the world, and the word 'globalisation' refers primarily to the spread of capitalism worldwide.[54]

Before considering this paradox, it must be clarified that, in the same way as protection of the environment per se is the interest underlying the principle of prevention of environmental harm, the real interest underlying the economic exploitation of natural resources is *economic growth*. Indeed, as will be seen immediately below, capitalism by definition rests on *continued* economic growth. In this regard, the term 'economic growth' should perhaps be preferred over 'economic development', although the latter is more consistent with the language of sustainable development, which is why it has been used until now in this study.

On closer consideration, the use of the term 'economic development' rather than 'economic growth' to identify one of the three dimensions of sustainable development even risks being deceptive. It might appear to be focused mainly on the compelling economic needs of developing countries only, as if developed countries had already accomplished their developmental goals. Admittedly, the dawn of international protection of the environment came with the new economic order, when developing countries firmly claimed their right to development. In this context, some of them came to perceive environmental constraints as something that was being imposed by industrialised States in order to impede their development, and ap-

[54] See Luciano Gallino, *Dizionario di Sociologia* (2nd ed., Torino: UTET 2004), at 323-331.

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parently this is why protection of the environment was incorporated into development. Nonetheless, one must not lose sight of the plain fact that, in reality, economic development, viz. economic growth, is also pursued by developed States, and not only by developing countries.

Since economic growth is the interest underpinning the economic exploitation of natural resources, protection of the environment cannot preclude economic growth within the interaction between the principle of prevention of environmental harm and States' rights to exploit natural resources. In other words, the trends in customary law emerging from the operation of the principle of prevention of environmental harm show that that principle is ultimately incapable of hindering economic growth. This outcome is perfectly in keeping with the driving logic of capitalism.

In effect, capitalism is distinguished by the fact that it seeks to achieve *indefinite increases in profits*. In order to achieve this, a 'commensurate' economic growth is required, which involves an indefinite rise in production and consumption. This means that the economic growth required is compound or exponential, because year after year economic growth is measured against an ever increasing level of economic output. Therefore, economic growth is structurally unstoppable under capitalism.[55]

It is here that the environmental issue comes to prominence. Economic expansion basically depends on the increasing exploitation of natural resources, which is essential to *production*. Moreover, the environmental implications of *consumption* must also be borne in mind, in that production obviously requires that existing goods be constantly consumed. That has adverse effects on the environment in terms of pollution, including waste and emissions. Accordingly, it is self-evident that continuous economic growth must inevitably entail enormous environmental costs.

One might think, by way of illustration, about the correlation between economic growth and resource use, which obviously has environmental implications in terms of pollution and the loss of biological diversity, to say the least. Data show that global GDP, as the standard measure for economic expansion, grew from 1970 to

[55] See, in greater detail, Jason Hickel, *Less is More. How Degrowth Will Save the World* (London: William Heinemann 2020), at 83-98. See also Serge Latouche, *Farewell to Growth* (Cambridge/Malden: Polity Press 2009), at 16-22, especially at 21-22, who tellingly refers to a 'toxic addiction to growth' in today's society; and, for some critical remarks on economic growth as a deeply entrenched 'myth', Umberto Galimberti, *I miti del nostro tempo* (6th ed., Milano: Feltrinelli 2016), at 279-297.

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2017, except during the economic crisis of 2008-2009. Over the same fifty-year period, resource use grew from less than 30 billion tonnes to more than 90 billion tonnes of raw materials extracted per year, including specifically biomass, non-metallic minerals, fossil fuels and metal ores. Indeed, it appears that resource use has even *outstripped* economic growth, since the rise in raw material consumption or material footprint, as the measure for resource use, outpaced GDP growth from 2002 to 2015.[56]

In this context, the paradox of protection of the environment within capitalism becomes apparent. As the principle of prevention of environmental harm turns out to be incapable of constraining economic growth – *and it could not be otherwise under capitalism* – the inescapable conclusion seems to be that economic growth will eventually lead to irreversible ecological collapse, and perhaps even the very destruction of the Earth.

The paradox is that, as an eminent philosopher has explained, protection of the environment is necessary for the survival of capitalism, but at the same time entails its extinction.[57] On the one hand, capitalism needs the environment to be protected because there will be no natural resources or Earth at all, and no longer any capitalism as a result, if the environment collapses entirely. Hence protection of the environment is instrumental for the survival of capitalism. On the other hand however, in order to protect the environment, capitalism will have to reduce economic growth, and ultimately the indefinite rise in profits which is its specific purpose. In other words, it will have to renounce *its own essence*, and thereby put an end to itself. In both cases, capitalism cannot save itself.

The erosion of the principle of prevention of environmental harm and its dilution by the concept of sustainable development reflect this tension. Although prevention of harm to the environment is necessary, protection of the environment as an aim is limited by economic growth as an aim, whereas the latter cannot be constrained by the former. Under sustainable development, protection of the environment should be integrated into economic development. However, such integration is doomed to failure owing to the inherent conflict between economic growth and protection of the environment. This

[56] These data have been elaborated by the Vienna University of Economics and Business and are available at *www.materialflows.net*.

[57] See Emanuele Severino, *Il declino del capitalismo* (Milano: Rizzoli 1993), at 65-97. See also, more recently, Id., *Capitalismo senza futuro* (Milano: RCS 2012), at 126-127; and Id., *Il tramonto della politica. Considerazioni sul futuro del mondo* (Milano: Rizzoli 2017), at 31-33 *et passim*.

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conflict results not only from the fact that economic growth entails environmental degradation, but also from the deeper consideration that, in addition to economic growth, protection of the environment too has become essential for capitalism.

Technology is invoked in order to resolve this paradox. The promise of technology is that it can break the link between economic growth and environmental impacts or resource use.[58] This is known as the 'decoupling' process. This means that economic growth might still continue without any significant adverse effects on the environment. Technology should thus ensure the survival of capitalism, since both economic growth and protection of the environment could be equally ensured. In this respect, it is not only capitalism that relies on technology. Whilst it is a potentially conflicting interest, protection of the environment also relies on it because, through technology, it may be reconciled with the capitalist system.[59]

It is therefore easy to understand why technology is said to play a crucial role in sustainable development. It is technology that is expected to make development 'sustainable', or economic growth 'green',[60] as development or growth cannot be scaled back under capitalism. Accordingly, great significance was attached to technology at the international conferences mentioned above that deal with sustainable development.[61] Although it is apparent in particular

[58] For a critical overview see Hickel, *Less is More*, cit., at 124-162.

[59] One might even go on to conclude that, once technology has become the means *necessary* for pursuing both capitalism and protection of the environment *qua* ends, technological advancement turns out to be an end in and of itself. In other words, it is technology that, in actual fact, makes use of capitalism and protection of the environment *qua* means in order that its own advancement may be pursued, which hence amounts to the ultimate end. On the transformation of technology from a means into an end, see again Emanuele Severino, *Téchne. Le radici della violenza* (Milano: RCS 2002), at 223-226; Id., *Capitalismo*, cit., at 59-71; Id., *Il tramonto*, cit., at 76-82, 217-227, *et passim*.

[60] There seems to be substantial overlap between the concepts of 'sustainable development', 'green economy' and 'green growth'. According to Montini, *Investimenti internazionali*, cit., at 176-194, the green economy implies the concept of green growth, and is an instrument for the achievement of sustainable development. On the relevance of the green economy for sustainable development see also Pia Acconci, 'La "green economy" e la realizzazione dei diritti dell'uomo alla base dello sviluppo sostenibile' (2012) 6 *Dir. um. dir. int.* 587.

[61] Indeed, already the 1987 Report 'Our Common Future', cit., at 24, para. 27, states immediately after the definition of sustainable development that 'technology and social organization can be both managed and improved to make way for a new era of economic growth'. This is because the limitations implied by the concept of sustainable development are imposed not only 'by the ability of the biosphere to

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from the Plan of Implementation of the 2002 Johannesburg Summit, which focuses on how to achieve sustainable development, it may also be observed in the more recent 'The Future We Want', adopted at the Rio+20 Conference. In this document, the importance of strengthened 'technological capacities for sustainable development' is recognised in general terms,[62] with a section dedicated specifically to 'Technology' as one of the means for achieving sustainable development.[63]

The energy sector is indicative of this trend. In both the documents cited, the unquestioned assumption seems to be that energy production and consumption must continue to increase: technology should allow it to be decoupled from atmospheric pollution and, in particular, from carbon emissions that contribute to climate change. This would be possible not only thanks to renewable sources of energy. Technology should make 'green' non-renewable sources as well. On that score, 'greater reliance on advanced energy technologies, *including cleaner fossil fuel technologies*', is one of the ways of meeting developmental needs by 'using an appropriate energy mix'.[64] Only a combination of energy resources could make it possible to 'meet the *growing need* for energy services in the longer term to achieve sustainable development'.[65]

absorb the effects of human activities', but also 'by *the present state* of technology and social organization' (ibid., emphasis added). Accordingly, these limitations 'are not absolute limits' (ibid.).

[62] See 'The Future We Want', cit., at 53, para. 272.

[63] Ibid., at 52-53, paras. 269-276.

[64] See 'The Future We Want', cit., at 25, para. 127 (emphasis added). 'Advanced and cleaner fossil fuel technologies' are repeatedly considered in relation to 'energy for sustainable development' also in the Plan of Implementation of the World Summit on Sustainable Development, para. 20, in Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002, Res. 2, UN Doc. A/CONF.199/20.

[65] See the Plan of Implementation of the World Summit on Sustainable Development, cit., para. 20(d), emphasis added. This combination of energy resources is coupled with 'more efficient use of energy' and 'the sustainable use of traditional energy resources': again, it would be difficult to achieve either of them other than through technology. The words of the *ex officio* Vice-President of the Summit on the partnership plenary meetings on water and sanitation, energy, health, agriculture and biodiversity are likewise significant: 'In addition to meeting the needs of the poor, energy services are crucial for economic growth and an entry point to sustainable development in general' (Report of the World Summit on Sustainable Development, cit., at 99, para. 41). Accordingly, the 'major thrusts' requiring action include 'the need to develop clean and improved fossil fuel technologies', along with 'the need for an increased emphasis on renewable energy' (ibid.).

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Indeed, the role of technology is not limited to the energy sector. By way of illustration, in order to prevent water pollution, technologies should be introduced 'for affordable sanitation and industrial and domestic wastewater treatment'.[66] The transfer of technologies and capacity-building comes to the fore with regard to desertification and land degradation too.[67] In the same vein, the enhancement of technological capabilities, the development and transfer of technological solutions, and the development and dissemination of innovative technologies are among the actions recommended to address climate change.[68]

7.3. *Beyond the Technological Illusion: 'Un-sustainable' Development and the De-growth Solution*

Comforting as the narrative of technology might be, perplexities have been expressed about the ability of technology to ensure perpetuated economic growth and protection of the environment at the same time. In other words, it seems that one cannot take it for granted that technology will succeed in decoupling economic growth from environmental harm, or in doing so at the rate or to the extent necessary to avoid ecological collapse.[69] There are two primary reasons for such perplexities, and climate change provides some telling examples of both of them.[70]

First, 'green technologies' might themselves cause significant environmental harm once they have been increasingly resorted to and are essentially relied on. As a result of continued economic growth, they might achieve fewer gains over the long term than they seem to make over the short term.

Consider for instance renewable sources of energy. As noted above, these play a crucial role in the action on climate change because this type of energy is clean in terms of carbon emissions. However, producing energy from renewable resources *does have an environmen-*

[66] Plan of Implementation of the World Summit on Sustainable Development, cit., para. 25(d).

[67] Ibid., cit., at 31, para. 41(a).

[68] Ibid., cit., at 28, para. 38(d)(e)(f).

[69] See, e.g., Thomas O. Wiedmann et al., 'The Material Footprint of Nations' (2015) 112 *PNAS* 6271; and James D. Ward et al., 'Is Decoupling GDP Growth from Environmental Impact Possible?' (2016) 11(10) *PLoS ONE* 1.

[70] See Montini, *Investimenti stranieri*, cit., at 217-225, who uses the expression 'intra-environmental conflicts' to refer to technological solutions adopted to mitigate climate change, but that have adverse impacts on the environment and ecosystems.

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tal impact, because it implies the extraction of materials, including metals and rare minerals, which are necessary for the infrastructures required, such as solar panels, wind turbines, and batteries for power storage. Mineral extraction actually means mining, which is one of the most common causes of deforestation and loss of biodiversity. Thus, although it is not currently alarming, the environmental impact of renewable sources of energy could become extremely significant, if recourse to them were exponentially incremented to avoid, as an alternative, considerable reductions in energy production and consumption.[71] Hence, whereas the transition to clean energy is essential to mitigate climate change, it might itself turn out to be environmentally unsustainable against a backdrop of continued economic growth.

Secondly, it is uncertain whether and to what extent new technologies that are still speculative, or have yet to be implemented at scale, may really make any efficiency gains. Moreover, even if the answer is in the affirmative, it may take some time before they are finalised and fully operational, not to mention the issue of their global dissemination, throughout developing countries in particular. In the meantime, the environment will continue to deteriorate.

In this regard, the technology known as bio-energy with carbon capture and storage (BECCS) is especially illustrative. This process involves the use of biomass feed-stocks (e.g., plantations) as carbon emissions sinks, the transformation of biomass (e.g., harvested trees) into energy through combustion or conversion, the capture of carbon emissions produced during combustion or conversion, and their storage in dedicated sites underground or underwater.

The idea that BECCS may offer a key solution to climate change in the future has rapidly spread. Suffice it to say that, in the 2018 Report of the UN Intergovernmental Panel on Climate Change (IPCC), most mitigation scenarios factor in BECCS.[72] In effect, it is easy to see, in light of the 'growth imperative', why BECCS has been widely trusted: the non-reduction of carbon emissions in the present is the basic assumption of BECCS. The observation that carbon emissions have not been falling sufficiently to prevent global warming has been the starting point: the promise is that *current* emissions will be absorbed by biomass feed-stocks *in the future*.[73]

Doubts have been expressed, nonetheless, over whether BECCS

[71] See Hickel, *Less is More*, cit., at 139-142.

[72] IPCC, Fifth Assessment Report 'Climate Change 2014: Mitigation of Climate Change', available at *www.ipcc.ch*.

[73] For an overview, see Christopher Consoli, *Bioenergy and Carbon Capture and Storage* (Global CCS Institute 2019), available at *www.globalccsinstitute.com*.

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may really be safely relied on at a global scale.[74] It would take a long time to create biomass plantations and to build infrastructures and facilities, given that carbon emissions would have to be stored underwater or underground. To this end, as is self-evident, know-how and finances are necessary, which may be lacking in developing countries. Moreover, the land area required for bio-energy (the size of India, it has been estimated)[75] would have environmental implications in terms of deforestation, loss of biodiversity, and chemical pollution due to fertilisation.

This last remark reveals another contentious aspect of new technologies, aside from the uncertainties surrounding their feasibility: they may have unintended or unexpected adverse effects on the environment, perhaps even unimagined.[76] Therefore, according to the precautionary approach, one might ask whether such new technologies should be implemented.[77] For instance, concerns have been expressed about the environmental impacts of solar radiation management (SRM). It is a form of geo-engineering that is still under examination and has not yet been developed. It aims to artificially cool down the Earth, or parts of it, through a kind of reflective shield: basically, a certain amount of incoming solar energy is reflected back to the space, before it is trapped in the atmosphere by greenhouse

[74] See Clair Gough, Paul Upham, 'Biomass Energy with Carbon Capture and Storage (BECCS or Bio-CCS)' (2011) 1 *Greenhouse Gases Science and Technology* 324; Mathilde Fajardy, Nial Mac Dowell, 'Can BECCS Deliver Sustainable and Resource Efficient Negative Emissions?' (2017) 10 *Energy and Environmental Science* 1389; Clair Gough et al., 'Challenges to the Use of BECCS as a Keystone Technology in Pursuit of 1.5°C' (2018) 1 *Global Sustainability* 1; Jason Hickel, Giorgos Kallis, 'Is Green Growth Possible?' (2020) 25 *New Political Economy* 1, at 477-478.

[75] See Glen Peters, 'Does the Carbon Budget Mean the End of Fossil Fuels?' (2017), available at *www.cicero.oslo.no*.

[76] The words of Günther Anders, *Burning Conscience* (New York: Monthly Review Press 1962), at 12, should be borne in mind: 'in the course of the technical age the classical relation between imagination and action has reversed itself. While our ancestors had considered it a truism that imagination exceeds and surpasses reality, to-day the capacity of our imagination (and that of our feeling and responsibility) cannot compete with that of our *praxis*. As a matter of fact, our imagination is unable to grasp the effect of that which we are producing.'

[77] Principle 15 of the Rio Declaration, which enshrines the precautionary approach, reads as follows: 'In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation'.

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gases.[78] However, the artificial cooling of the Earth might in turn have repercussions for the climate, including extreme weather events, or cause harm to ecosystems.[79]

The perplexities illustrated, in the light of the importance of technology in sustainable development, are significant and cannot be overlooked. They imply that, insofar as development is construed as continued economic growth, it cannot be anything but *un*-sustainable. In spite of the actual or merely expected gains of technology, decoupling economic growth from environmental harm appears to be unattainable at a rate and to the extent necessary to avoid ecological collapse.[80] Therefore, economic scholars have advanced the idea that *de-growth* may offer the only solution to environmental degradation, and economic systems based on de-growth rather than growth are currently being examined,[81] which essentially means non-capitalist systems.

It is not the intention of this book to enquire into whether or not an economic system founded on de-growth provides a real alternative at present. It is worth stressing, however, that the social dimension of such a system has not been disregarded in the studies that support de-growth, with redistribution of income and wealth being a key solution to poverty.[82] From a broader perspective, the correlation between economic growth and the well-being of populations has been questioned, and other indicators have been proposed as alternatives to GDP in order to measure the welfare of populations.[83]

[78] Solar radiation reflection might possibly be achieved differently, with the two main SRM technologies being stratospheric sulphur injection and marine cloud brightening. For an overview, see Simon Nicholson, 'Solar Radiation Management' (2020), available at *www.wilsoncenter.org*.

[79] See, e.g., Lauren Hartzell-Nichols, 'Precaution and Solar Radiation Management' (2012) 15 *Ethics, Policy and Environment* 158.

[80] See Jason Hickel, 'The Contradiction of the Sustainable Development Goals: Growth versus Ecology on a Finite Planet' (2019) 27 *Sustainable Development* 873.

[81] See Giorgos Kallis, 'In Defence of Degrowth' (2011) 70 *Ecological Economics* 873; and Giorgos Kallis, Christian Kerschner, Joan Martinez-Alier, 'The Economics of Degrowth' (2012) 84 *Ecological Economics* 172. On de-growth as a political project, see especially Latouche, *Farewell to Growth*, cit., at 31-66 and, in particular, 67-96. As specifically regards de-growth and climate change, see Joan Martinez Alier, 'Socially Sustainable Economic De-growth' (2009) 40 *Development and Change* 1099.

[82] See Jason Hickel, *The Divide. A Brief Guide to Global Inequality and Its Solutions* (London: Windmill Books 2018), at 253-278.

[83] See Ida Kubiszewski et al., 'Beyond GDP: Measuring and Achieving Global Genuine Progress' (2013) 93 *Ecological Economics* 57.

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Nevertheless, from the perspective of international law, one might ask, *de jure condendo*, what the role of prevention of environmental harm might be within a de-growth scenario. In fact, the discourse concerning the limits to growth, which are mostly referred to as 'planetary boundaries' today, has recently attracted attention in civil society and scholarship.[84] In other words, it seems that one can no longer exclude altogether the possibility that sustainable development might fail, with the result that it becomes unavoidable to ask whether and how prevention of environmental harm might contribute to protection of the environment according to a de-growth paradigm.[85]

7.4. *The Potential of the Principle of Prevention of Environmental Harm in a De-growth Scenario*

The perception that protection of the environment entails limits to economic growth already existed at the dawn of environmentalism. In the early 1970s, a report was published under the auspices of the Club of Rome, which was tellingly entitled *The Limits to Growth*.[86] It was based on the findings of a research conducted by the Massachusetts Institute of Technology. In the report, the need to impose limits on contemporary rates of production and consumption was urgently proposed. However, under capitalism, the possibility that economic growth could be limited was ruled out in the subsequent evolution of international environmental law.

Indeed, the analysis carried out in this study has illustrated the decline in importance of the principle of prevention of environmental

[84] On the concept of 'planetary boundaries' see *supra*, Section 1.2.1. In truth, this concept is more specific than that of 'limits to growth', in that the former 'focuses on the biophysical processes of the Earth System that determine the self-regulating capacity of the planet': see Johan Rockström et al., 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity' (2009) 14 *Ecology and Society* 32. Within legal scholarship, on the role of law in relation to planetary boundaries, see for an overview Louis J. Kotzé, Duncan French, 'Staying within the Planet's "Safe Operating Space"? Law and the Planetary Boundaries', in Duncan French and Louis J. Kotzé (eds.), *Research Handbook on Law, Governance and Planetary Boundaries* (Cheltenham/Northampton: Edward Elgar 2021), 1, at 7-9.

[85] On the other hand, the importance of sustainable development remains correspondingly crucial for those authors who are sceptical about de-growth: see Giulio Peroni, *Stabilità economica e sostenibilità nel diritto internazionale* (Milano: Giuffré Francis Lefebvre 2020), at 321-322.

[86] Donella H. Meadows et al., *The Limits to Growth. A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: 1972 Universe Books).

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harm, which has become overshadowed by the concept of sustainable development. Trends within customary law emerging from the operation of the principle of prevention may be subsumed under the latter concept. Activities implying significant harm to the environment are prohibited, or tend to be prohibited, insofar as they are not strictly related to economic growth. Procedural obligations enable environmental concerns to be taken into consideration, but do not ultimately impinge on the activities that are likely to cause environmental harm. The principle of prevention proves to be incapable of effectively cutting into the economic exploitation of natural resources.

Nonetheless, this does not mean that the principle of prevention of environmental harm is now irremediably embedded within sustainable development to such an extent that it is pointless outside that concept. Contrariwise, the reconstruction proposed in this study regards prevention of environmental harm as having features that have the potential to address the challenge of de-growth.

In particular, the very classification of prevention of environmental harm as a general principle of international law, rather than as an obligation under a customary rule, is notable, because it makes it possible to investigate the content and scope of specific rules informed by that principle, not only in treaty law but in customary international law too. Considering how entrenched economic growth is in contemporary society, one could hardly expect general international law to evolve *en bloc* towards de-growth, if any. At the outset at least, only a few trends might potentially deviate from the concept of sustainable development as it now stands. In that event, insofar as they are inspired by the principle of prevention of environmental harm, these trends could be subsumed under it, alongside existing rules or current tendencies that are consistent with sustainable development. Again, in contrast with the construction of prevention of environmental harm as a catch-all customary obligation, the perspective that considers it as a general principle allows a better understanding of the complex reality of protection of the environment.

This study has attempted to show that prevention of environmental harm may qualify as a general principle of international law, to be understood as a value-oriented direction that may be derived from existing or emerging international rules, through which it has been recognised in international law. Prevention of environmental harm has inspired the formation of those rules, and therefore provides guidance for their interpretation. In fact, a large number of treaty rules have been informed by prevention of environmental harm, and its inspiring function is plainly apparent from the relevant treaties. Within EU law too, prevention of environmental harm has served a function compara-

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ble with that of general principles of international law, despite its progressive incorporation into the EU legal order. International case law also appears to confirm the operation of prevention of environmental harm as a general principle. In effect, the few references to prevention as a customary obligation are limited to those cases in which it has come into consideration alongside mutual respect for territorial sovereignty, without any distinction being drawn between them.

This leads to the other feature of prevention of environmental harm on which this study has tried to shed light, and which may be important for de-growth: the self-standing relevance of prevention of environmental harm as a principle founded on a community interest, viz., protection of the environment per se. The capacity of protection of the environment to impose limits on economic growth rests on its conception as an interest in and of itself, which may even prevail over conflicting economic interests. After all, as pointed out above, the idea that limits to growth were necessary was advanced when environmental awareness started to spread.

The research carried out has placed an emphasis on the importance of keeping prevention of environmental harm distinct from non-environmental rules relevant for prevention of transboundary harm in general. It has been attempted to demonstrate that protection of the environment per se is the interest that is specific to prevention of environmental harm from the outset, as is already apparent from the Stockholm Declaration. As a community interest, protection of the environment per se is structurally different from the bilateral interests underpinning the main non-environmental obligations related to transboundary harm, including the no-harm rule. This has a bearing on the common construction of prevention of environmental harm as an obligation under a customary rule, since it cannot be viewed as being based on such an essential feature of international law as territorial sovereignty. Moreover, that construction seems to depend on the adoption of methods for identifying customary international law that de-emphasise the importance of actual State practice, which methods are far from indisputable.

In conclusion, the research conducted in this book should have raised some doubts concerning the classification of prevention of environmental harm as an obligation established by a customary rule originating from mutual respect for territorial sovereignty. Rethinking prevention of environmental harm as a general principle of international law aimed at protection of the environment per se, as a community interest, appears to provide a powerful viewpoint not only for addressing still controversial issues, but also for observing the potential role that it may play in the future.

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