



**INTERUNIVERSITY PHD COURSE
“SUSTAINABLE LAND MANAGEMENT”
Cycle XXXVI**

PhD Student:	Marco Centanni.....
Year of the PhD Course:	First
Academic year:	2020_2021

Title of the Research Project	Modeling hydrology and water quality in temporary streams
Tutor:	Prof. Francesco Gentile

Summary of the Research Project

The PhD project will focus on the basin-scale analysis of the behavior of nutrients and pesticides in temporary rivers. This project is placed in the context of the regulatory framework of Directive 2000/60/EC to improve the state of water and ensure its sustainable use, a prerogative also linked to the Green Deal which has among its objectives reduction of pollution and the restoration of biodiversity. The planned study will take place through hydrological modeling with the use of models, for example SWAT (Soil & Water Assessment Tool). This activity will be placed within the European project "PRIMA - INWAT", of which it is a participant the DISAAT, which aims to broaden the knowledge of the hydrological regime of the courses of temporary waters of the Mediterranean, because it is expected that due to climate change these water flows could become predominant. During the doctoral period there will be experimental monitoring and sampling activities in the Canal basin D'Aiedda, in the province of Taranto (Puglia). We will then evaluate the alteration of the state of the surface water caused by point sources (e.g. purifiers) and widespread (e.g. agriculture), identifying the "hot spots" at the catchment area scale. Furthermore, the effects will be evaluated resulting from the application of alternative agricultural practices on water quality.



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