INTERUNIVERSITY PHD COURSE

"SUSTAINABLE LAND MANAGEMENT"

XXXVI course

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Research Project Title	**SEDIMENT MANAGEMENT IN RIVER BASINS**
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Research Project: summary

The watercourses damming and the consequent definition of artificial reservoirs stop the solid transport, that is the sediment, characterized by variable granulometry, settles at bottom of the reservoirs, especially during floods, accumulating and reducing the useful volume.
Therefore, in order to accomplish the aim of qualitative and quantitative water protection, that is closely related to its uses, and the aim of hydrogeological risk reduction, it is essential the development of Sediment Management Plans to organize interventions on the river network, to avoid significant deposits and restore the continuity of the solid transport of the watercourse, to preserve biodiversity and to protect ecosystems.
The purpose of the research project is to indicate guidelines to develop an effective sediment management programme, identifying interventions to restore longitudinal, lateral and vertical hydromorphological continuity, to reconnect river beds with floodplains and to help the renaturation and the morphological requalification, thus combining policies on forest management, agriculture, water quality, hydraulic risk prevention and land use planning, so that Sediment Management Plans can become effective programming means also in decision-making processes.

References

Balacco, G., Castorani, A., Di Santo, A., 2004. *The role of turbidity currents in the siltation process of an artificial reservoir*. Ninth International Symposium on River Sedimentation (9th ISRS), Yichang (China), 2, 987-996
Balacco, G., 2013. *The interrill erosion for a sandy loam soil*. International Journal of Sediment Research, 28, 329-337
Gaido, G., Silvestro, C., 2014. *I programmi di gestione dei sedimenti: strumenti di studio, pianificazione e integrazione*. XXXIV Convegno nazionale di Idraulica e Costruzioni Idrauliche. Bari: ed. Zaccaria