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FLOW VEGETATION INTERACTIONS AND EFFECTS ON RIVER'S EVOLUTION PROCESSES

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Vegetation and derived materials can be used for erosion control and slope protection to reduce risk events. The presence of vegetation in rivers exerts an important ecological function and is very important to maintain suitable habitat. Especially in recent years, author has focused her attention on the role of vegetation in channel's morphodynamics. Alteration of hydrological conditions in fluvial systems inevitably leads to changes in river morphology, riparian or riverbed vegetation and ecosystems. Riparian vegetation distribution could also change in time and in space depending on the combination of factors affecting the settling and growth of vegetated elements. Literature shows that climate is one of controlling factor of the distribution of plant species. Rapid climate change leads to remarkable changes in the distribution and behavior of plants, contributing to modify the ecosystem equilibrium and habitats. The present lecture focuses on flow vegetation interactions and on their effects on river's evolution processes.

BIOGRAPHY

Donatella Termini received her PhD in Hydraulics and Fluvial Hydraulics in 1996. She was nominated Scientist of Hydraulic and Hydraulic Applications in June 1997. She was Research Fellow at the Queen's University, Canada in 1997. She was Post-Doctoral Researcher at DIIAA of Palermo's University, Italy from 1998 to 2000. She worked as an Assistant Professor from May 2001 to December 2004. She was an Associate Professor in Hydraulic Engineering - Palermo's University, Italy since January 2005 and qualified as Full Professor since 2013. She was the Leader/Collaborator of national or EU research projects and Guest Editor of International Journals. She got "Karl Emil Hilgard Hydraulic Prize" in 2007. Her present research efforts include the investigation in fluvial hydraulics and eco-hydraulics (flow resistance, effect of vegetation, sediment transport and effects of bed roughness), prediction of river morphological evolution both through experimental investigations and by the development of numerical simulation codes. She has published more than 160 papers in proceedings of national and international congresses and in international scientific journals.

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