



## **Monitoring and evaluation of soil bioengineering interventions for watershed management, disaster mitigation and environmental restoration in Latin America**

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In recent decades the institutions responsible for land management and civil protection have showed a great interest in relation to the use of more environmentally friendly techniques to mitigate the risk of landslides and floods. Soil bioengineering has responded to this need and several research groups are carrying out experimentations using the techniques of this discipline in the countries in the developing world. The Deistaf from University of Florence has concentrated its activities in this area over the past decade promoting the use of the techniques of Soil bioengineering in Latin America through the implementation of training and experimentation programmes. Numerous works have been completed both in riverbanks and on slopes in Nicaragua, Guatemala, Ecuador and Colombia. It was decided to make a census of interventions in Latin America from different institutions that may be related to Soil bioengineering in order to obtain an overview of the state of the art in the specific context taking into account also environmental and socio-economic issues. Taking advantage of its network of contacts, DEISTAF has collected dozens of sheets that describe interventions. These sheets describe, among other fields focused on the environment in which the work has been carried out, the materials and techniques used, and the impact of the intervention. In the sheets we present also the monitoring that has been realized for some of these works in the months of October and November 2012; we include the identification of the current condition and functionality of the intervention and, in the case of the presence of some damages, the formulation of instructions to fix them as well as the economic quantification of the repairs to be carried out.