Soil and water conservation in the Sahel: the case of the Laaba basin (Burkina Faso)

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Soil and water management constitutes one of the main challenge in Sahelian watersheds. Moreover, the growing population pressure on the finite water resources, as well as changes in consumption and production patterns, are resulting in a rapidly increasing demand for water and land for agricultural purposes.

This study concerned the evaluation of the effectiveness and sustainability of soil and water conservation (SWC) measures for water erosion reduction and sediment transport management at small catchment scale. The topic was investigated through the data collected during the activities of the cooperation project coded UE-9 ACP ROC 28-3. This EU-funded project was started in May 2008 as a consequence of the floods occurred between July and September 2007 in the Northern Region of Burkina Faso. The goal of the project was to improve food security in three Districts of the Country (Yatenga, Loroum et Passoré), in which the main activities concerned the maintenance of small dams and SWC works. The Project was led by the NGO CISV (Turin, Italy) in partnership with the National Federation of Naam Groups (FNGN, Burkina Faso), which is one of the biggest rural community in the Sahel.

Considering the case study of Laaba watershed (Yatenga District), the monitoring data of the silting up of the reservoir and SWC works were presented, providing the general information on erosion and sedimentation processes at catchment scale. A cost-effectiveness analysis was then performed in order to evaluate the economical sustainability of the SWC measures, employed to limit the reservoir silting up. Further developments and shortcomings of the research will concern the comparison of several case studies, allowing a comprehensive diagnostic on sediment transport processes and loss of capacity in water storage within the Sahelian countries.

***Key words**: Sahel, Burkina Faso, small catchments, sediment transport, soil and water conservation*