



Participatory assessment of soil erosion severity and performance of mitigation measured using stakeholders' workshops in Koga catchment, Ethiopia

Walle Lakew (1,2), Jantiene Baartman (1), and Coen Ritsema (1)

(1) Wageningen University, Soil Physics and Land Management Group, Wageningen, The Netherlands, (2) Bahir Dar University, College of Agriculture and Environmental Science, Bahir Dar, Ethiopia

There has been little effort to systematically document the experiences and perceptions of farmers on soil erosion and soil and water conservation (SWC) even though a wealth of SWC knowledge and information exists, and there is a great demand to access it. Sustainable Land Management (SLM) has largely evolved through local traditional practices than being adopted on basis of scientific evidence. This research aimed to document the experiences of farmers on soil erosion and conservation, and to increase awareness and participation of the local community in SWC. Participatory stakeholders' workshops were undertaken at local level focused on experiences and perceptions of farmers. The workshops included group discussion and field monitoring of sheet erosion indicators, profiles of rills and gullies and impacts of SWC strategies. Systematic descriptions of the status of soil erosion, soil fertility and yield were used to assess the performances of SWC strategies. Results show that farmers were aware of the harmful effects of ongoing soil erosion and impacts of mitigation strategies on their farms. Sheet erosion was found to be the most damaging form of erosion while rill damage was critical on cereal cultivated farms on steep slopes. Farmers perceived that the desired impacts of SWC practices were attained in general: runoff and soil loss rates decreased, while soil fertility and production increased. The performance of SWC measures were found to be highly affected by the design quality and management strategies on the farm. Comparatively graded stone-faced soil bunds revealed maximum desired impacts and were liked by farmers whereas all level bunds caused water logging and traditional ditches begun incising and affected production of cereals. Bund maintenance practices were low and also distracted the stability of bunds. This calls for further improvement of design of SWC technologies and their maintenance. Further research should integrate the local knowledge for assessment of soil erosion and SWC strategies.