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Watershed Evaluation and Farmers' Preference – An Experience from Watershed Projects in Karnataka (India)

Bhupendra Singh Naik*, Sekhargouda Lingannagouda Patil, Anurag Raizada, Hrittick Biswas, Suresh Kumar, Mundre Ningappa Ramesha, Wontakal Muralidhar, Keshava Kumar Reddy and P. Mohan Kumar

ICAR- Indian Institute of Soil and Water Conservation (IISWC), Research Centre, Hospet Road, Ballari-583104, Karnataka, India

*Corresponding author

ABSTRACT

Twelve watershed projects located in six distressed districts of Karnataka (India) were evaluated. Various soil and water conservation (SWC) measures were implemented in the watersheds by concerned project implementing agencies (PIAs). Many lacunas and technical errors were observed in respect of executed SWC measures in the field while carrying out the evaluation work. Field observations on SWC measures related to site suitability, catchment, adequacy of design, quality, stability, siltation, vegetation, etc. are presented in this paper. In addition, the overall impact of SWC measures on watershed hydrology, productivity, erosion control and economics are also discussed along with farmers' preference for SWC measures. The expenditure towards watershed treatments varied from Rs 2429 to Rs 7616 per hectare. Field bunding was the major activity in 9 watersheds involving expenditure of 40-83% of total amount spent. Economic analysis revealed that maintenance of the SWC structures in the watersheds for 15 years can result higher BC ratios and IRR. As far as farmers' preference is concerned, field bunding was most preferred among SWC measures followed by check dam, farm pond and trenching. Among different ameliorating effects of SWC activities, highest weight was given to crop yield by farmers. It indicates that farmers give more priority to economic return as compared to other tangible benefits while adopting SWC measures. Waste weir was least preferred and it might be due to less rainfall and rare instance of water impoundment in the field up to highest flood level. As a result of implementation of SWC engineering measures across watersheds, a total of 2, 63,706 man days of direct employment was generated which curbed the migration to a large extent.

Keywords

Conservation measures, Fixed point scoring and rating method, Land degradation, Natural resource management, Soil erosion

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