

Impact of Integrated Watershed Management Programme Based on Four Waters Concept: A Case Study of Sali Village, Rajasthan State of India

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Abstract : Integrated watershed management programme based on 'Four Water Concept' was implemented in Sali village, in Jaipur District, Rajasthan State of India . The latitude 26.7234486 North and longitude 75.023876 East are the geocoordinate of the Sali. 'Four Waters Concept' is evolved by integrating the 'Four Waters', viz. rain water, soil moisture, ground water and surface water This methodology involves various water harvesting techniques to prevent the runoff of water by treatment of catchment, proper utilization of available water harvesting structures, renovation of the non-functional water harvesting structures and creation of new water harvesting structures. The case study included questionnaire survey from farmers and continuous study of village for two years. The total project area is 6153 Hac, and the project cost is Rs. 92.25 million. The sanctioned area of Sali Micro watershed is 2228 Hac with an outlay of Rs. 10.52 million. Watershed treatment activities such as water absorption trench, continuous contour trench, field bunding, check dams, were undertaken on agricultural lands for soil and water conservation. These measures have contributed in preventing runoff and increased the perennial availability of water in wells. According to the survey, water level in open wells in the area has risen by approximately 5 metres after the introduction of water harvesting structures. The continuous availability of water in wells has increased the area under irrigation and helped in crop diversification. Watershed management activities have brought the changes in cropping patterns and crop productivity. It helped in transforming 567 Hac culturable waste land into culturable arable land in the village. The farmers of village have created an additional income from the increased crop production. The programme also assured the availability of water during peak summers for the day to day activities of villagers. The outcomes indicate that there is positive impact of watershed management practices on the water resource potential as well the crop production of the area. This suggests that persistent efforts in this direction may lead to sustainability of the watershed.

Keywords : four water concept, groundwater potential, irrigation potential, watershed management

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