

Theme	Water Stewardship
Title	Watershed Development: Transforming Agricultural Sector and Livelihood of Marginalized Farmers
State (s)	Madhya Pradesh (MP)
District (s)	Agar
Evaluation Agency	Ingrain Technologies Pvt. Ltd.
Period of Study	Feb – April 2018

### Executive Summary

#### Objective(s):

To assess the watershed development programmatic interventions on various indicators like soil and moisture regime, groundwater recharge, soil health and agricultural productivity, seasonal migration, and building strong community driven institutions.

#### Key Findings:

1. As result of watershed development activities, operational period of wells in project locations increased from 6 months to 8.5 months, compared to no change in control villages (6 months).
2. Interventions like contour trenches, stop dams, earthen dams, percolation tanks and LBCDs were instrumental in water conservation and ground water recharge in project locations.
3. Soil organic carbon content in the project villages was estimated to be 1.2% as against 0.8% in control villages.
4. Project intervention increased the net and gross area under cultivation by 30% and 124% respectively in project villages, as against 2.3% and 0.4% respectively in control villages.
5. As a result of increased water availability in project villages, net area under irrigation improved by 29% over pre intervention scenario and increased by over 11% against control villages.
6. Average yield of all major crops improved on account of enhanced water availability. Productivity/yield of wheat increased by 25% and soyabean by 23% as compared to control villages.
7. Cropping intensity post intervention increased to 184% as compared to 102% in control villages.
8. The watershed development activities created employment to the tune of 1,27,597 person-days, leading to a decline in seasonal migration of farmers and farm labourers.
9. FGDs reveal that women are an integral part of the Watershed Development Committees (WDC) and they actively participate in and contribute to the watershed development activities.
10. The idea of taking government revenue wasteland or village wasteland on lease and developing forest on such land is ecologically beneficial. This concept is worth emulating in other development programmes based on feasibility.

### Areas for Improvement

1. It is recommended that bunds should be protected from damage through plantation of dry fruit trees like dates to provide supplementary income. Growing grass species is recommended on the other side of the bund (where stone pitching is not done) for the WHS with earthen bunds. It is recommended that above full tank level (FTL), grass should be maintained and until FTL, stone pitching should be maintained on the bunds. The maintenance of stone pitching is an important aspect of WHS management.
2. Value chain approach in agricultural development: In addition to improving productivity in agriculture and allied sectors, strengthening of value chain for various agricultural commodities will help in realizing higher economic returns to farmers. In Agar's Malwa programme area, a dedicated development work can be initiated for berries of Karonda, small ruminants (goats), fodder and milk value chain development. Organizing activities based on market linkages and value chain development approach will create economic vibrancy in the villages.
3. Using technology for monitoring of watershed development programme: The space based remote sensing technology (Geographic Information System- GIS, etc.) can be used for watershed management and monitoring activities. The geospatial technology can help in baseline survey, planning for watershed development activities, monitoring and evaluation, taking up mid-course corrections and assessing long-term effectiveness of the programme.

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*In case you would like to know more on the study please write to us at: [itcmsk@itc.in](mailto:itcmsk@itc.in)*