

Impact Assessment of Rewa Sagar

- With the initiation of National Water Policy – 1987, a new concept of participatory irrigation management came into vogue which emphasized over the point that management of water resources for diverse uses should encourage a participatory approach by involving not only the government agencies but also users and other stakeholders in an effective and decisive manner in various aspects of planning, design, development and management of water resources scheme. This initiative is called Agriculture Water Management [A.W.M] which, in brief, aims at involving different communities or stakeholders in any scheme of disaggregated water management from the very initiation to their completion, till the benefits flow to the cultivators. Rewa Sagar Project is one of the initiatives of Agriculture Water Management.
- The project started with district administration initially approaching relatively bigger farmers with more than 10 hect. of agriculture land and encouraging them to allocate 1/10th to 1/15th part of their land for construction of a tank which could store run – off water during rainy season for providing assured level of irrigation. The stored water was supposed to be useful for distress irrigation during the occasional long gaps of monsoon. The farmers who had adopted the concept were recognized as “**Bhagirath Krishak.**” For scaling – up the programme the district administration identified a few Bhagirath Krishak as trainers to convince fellow farmers about benefits of the approach.
- The study entitled “**Assessment of Rewa Sagar**“ basically aims at evaluating the efforts in promoting Impact water harvesting and reducing the dependence of farmers on ground water for irrigation. It needs hardly any reiteration that surface water harvesting is superior to ground water harvesting particularly from the view point of ecological conservation. The study aimed at to verify these assertions and quantify the various benefits and costs including the loss of production on that portion of land which has been converted into rain water storage structure.
- Regarding **sampling frame** two development blocks, 12 villages [6 high success, 4 moderate and 2 poor success] and 120 households have been identified, of which 96 were adopter households and 24 non adopter households. The selected blocks were Tonk Khurd and Khategaon.

Major Findings – Adopters

- Regarding sample villages of Khategaon tahsil, total area irrigated before the implementation of the Rewa Sagar Project was 801 hect which enhanced to 1556 hectare after implementation of the project registering a percentage increase of around 49. Similarly for the sample villages of Tonk Khurd tahsil the total area irrigated during pre – project period was 656 hect. which increased to 1356 hect during post project period registering a percentage increase of 52.
- Prior to implementation of the project, tube well was the main source of irrigation while after the implementation, tanks [Khet Talab] became the main source of irrigation.
- Regarding availability of electricity for irrigation about 91 percent households from the sample villages of Khategaon tahsil affirmed the availability while in case of sample villages of Tonk Khurd tahsil about 98 percent households were positive about availability of electricity for irrigation.
- The sufficient availability of institutional finance to the sample households of both the tahsils is indicative of the fact that in the project area due to adoption of agriculture water management practices, farming has become an affluent occupation with self sustaining capacity.
- About 98 percent sample households from Khategaon tahsil informed the presence of one Khet Talab in their farm while only 2 percent sample households said that they have two such structures. Similarly about 89.0 percent households from sample villages of Tonk Khurd tahsil agreed for one Khet Talab while around 11 percent sample households have said that they have 2 to 3 number of such structures. In general Khet Talabs have been constructed on waste land which is a good indicator. The overall scenario of water availability in the sample villages of project area was quite encouraging.
- Regarding provision of subsidy around 80 percent sample households from Khategaon tahsil said that they did receive subsidy while in the sample villages of Tonk Khurd tahsil around 82 percent households were positive about getting subsidy amount.

- Regarding maintenance of structures, all the sample households from both the tahsils said that from time to time deepening of Talabs were required for storing more rain water.
- Regarding mode of application of water, sample households from both the tahsils showed their preference for use of diesel pumps and only in marginal cases electricity operated pumps were preferred.
- Regarding durability of structures, most of the sample households in both the tahsils were of the view that structures stay for life time.
- Major Findings – Non Adopters
- Average of 73.66 percent sample households from both the tahsils said that the available water is insufficient for irrigating the crops.
- About willingness to construct water harvesting structures on the lines of Rewa Sagar, five sample households from Khategaon tahsil [31.25 percent to total households] expressed their opinion in favour of construction while 11 households [68.75 percent] gave a negative reply. Similarly cent – percent households from Tonk Khurd tahsil had a negative view about construction of Khet Talab. The usual reasons ascribed were smallness of land holdings, paucity of resources, difficulty of getting institutional finance etc. Besides, a few of the households also said that they were not sure of the economics of the structures. A few of the sample households from both the tahsils were not sure of the long term implementations of such investment nor were they aware of the technical feasibility of such structures.
- During the course of survey it was observed that cultivation in the sample area had no environmental impact. No migratory birds came to the area. The traditional birds like peacock, duck and fowls etc. were also not visible whereas in the post project period such types of birds were seen in plenty. Even migratory birds came from distant places.

(This study is a part of series of studies being conducted by IWMI with CARD “An Assessment of Decentralized Rainwater Harvesting Systems in Madhya Pradesh, India”).