



A Systematic Review Of Integrated Watershed Development Programme At Jhalawar Rajasthan

Anita Bhawariya

(Research Scholar -University of Rajasthan)

- Abstract :** Watershed management is an ever-evolving practice involving the management of land, water, biota, and other resources in a defined area for ecological, social, and economic purposes. In this paper, we explore the following objectives To strengthen the village level governance of biomass and water resources by village communities, including involvement of Panchayats in addressing natural resource management. To assist communities in effectively integrating agriculture and natural resources management and in regulating the demand for biomass and water through rules, regulations and mechanisms evolved by community institutions at village and inter village levels. Strengthen the inter-linkages between different production systems and productivity enhancement through appropriate intervention thus improving the cash flows in the village economy. To assist individual farmers through appropriate soil and water conservation measures to improve water availability for agriculture, livestock improvement and thereby, improving agricultural productivity. To increase the availability of biomass through re-vegetation of the common lands and increased availability of surface and ground water through soil and moisture conservation and retention measures.

How has watershed management evolved. This address the numerous benefits from integration across disciplines and jurisdictional boundaries, as well as the incorporation of technological advancements, such as remote sensing, GIS, big data, and multi-level social-ecological systems analysis, into watershed management strategies.

Keywords : integrated water shed ,programmes, Development

Introduction:-WATERSHED management basically involves harmonising the use of soil and water resources between upstream and downstream areas within a watershed toward the objectives of natural resource conservation, increased agricultural productivity and a better standard of living for its inhabitants. Identifying and addressing the significant externalities associated with watershed is critical for these objectives to be achieved in a sustainable manner.

Landscape and climate changes as well as economic developments in watersheds stimulate corresponding cascade of dynamic adjustments in both water quantity and water quality at locations further downstream. Sophisticated hydrologic simulation models and GIS have become the standard means for assessing the impact on the water resources system in India.

Project area: Geography and Terrain

Jhalawar lies in the south-eastern region of Rajasthan, at the edge of Malwa Plateau. The region, known for richness in forests, has exotic flora and fauna and a heaven for numerous species of birds which can be spotted on the roads as one drives along the lush-green fields. Total area of the district is 6928 km². Around 21% of this area is forest area. Total length of tarred roads is around 1400 Km., out of which 94 kms. come in National Highway range, and 202 kms are in st tate highway range. The District has 6 Sub-divisions, 7 Tehsils, 4 Sub-Tehsils, and 6 Blocks. Total revenue villages in the district are 1618.

IWMP-XII –Bakani Project is located in Bakani block of Jhalawar district. The project area is between the latitudes 24^o12' N to 24^o17' N & 76^o25' E to 76^o27' E longitudes. It is at a distance of 20 km from its Block headquarters and 60 Km from the district headquarters. There are 27 No. of villages in the project area.

Rational of the project

Government of Rajasthan, ITC-Rural Development Trust and Indian Institute for Rural Development (IIRD) has signed an agreement to support an innovative public-private civil society partnership project for watershed development in Bakani Panchayat Simiti of Jhalawar district. This partnership, acknowledging the potential of watershed development in dry land areas, aims to strengthen the ecological and institutional foundation to strengthen the rural livelihoods.

In this initiative, it has been proposed to develop 5838n ha through budgetary support from Government of Rajasthan and ITC-Rural Development Trust. This budgetary allocation would on the socio-technical requirements of the area.

The project will guide an intervention, which is anchored on people's engagement at various levels, and is based on the specific characteristics of the socio-economic-ecological settings, to foster a healthy relationship between livelihoods and natural surroundings and offer a stable economic opportunity

Project goal:-To improve livelihoods of the community through implementation of watershed development project and enhance agriculture production in the region.

Objective

- To create useful water conservation assets.
- To strengthen the village level governance of biomass and water resources by village communities, including involvement of Panchayats in addressing natural resource management.
- To assist communities in effectively integrating agriculture and natural resources management and in regulating the demand for biomass and water through rules, regulations and mechanisms evolved by community institutions at village and inter village levels.
- Strengthen the inter-linkages between different production systems and productivity enhancement through appropriate intervention thus improving the cash flows in the village economy.
- To assist individual farmers through appropriate soil and water conservation measures to improve water availability for agriculture, livestock improvement and thereby, improving agricultural productivity.
- To increase the availability of biomass through re-vegetation of the common lands and increased availability of surface and ground water through soil and moisture conservation and retention measures.

Outcomes

The project MOU was signed in 2013 during the fourth year of the project. The achievements are as follows

- 6 farm pond, 2 boundary wall and 4 farmers benefited by land leveling, 4-5 cattle shed farmers benefitted in this year
- Nine FFS benefited 216 farmers directly benefited in this year
- 35 farmers benefited by sprinklers sets,
- 45 farmers benefited by vermicompost bed;
- 65 Marginal farmers benefited by Nutrition Garden Kit,
- One SHG federation benefitted by the revolving fund by ITC under Innovative Income Generation Activity for Goat farming;
- One percolation tank completed under SMC activity by ITC fund;
- 1499 person days employment is generated.
- 950 hectare land is protected from erosion.
- 67hectare command area generated
- 8291Cum water to be harvested;
- Savlon Hand wash day was celebrated on October 15th, 2016.
- World Women's Day was celebrated on March 8th, 2016;
- 30 Bio gas plant were constructed for the domestic benefit of farmers
- 18357Cum Earthen Farm Bund EFB constructed.
- 475 benefited farming families spread in thirteen villages.
- Developing second year pasture land in the 24 hectare common land area.
- Horticulture plantation on 29ha land area,27 farmers motivated for orange orchard cultivation.
- Organization of 10 animal health camps & benefiting 117 farming families.



Kitchen Garden:-The importance of a kitchen garden is great and manifold. A kitchen garden ensures an inexpensive, regular and handy supply of fresh vegetables which are basic to nutrition. The green vegetables contain vitamins and minerals which protect us against diseases. Lack of vegetables, particularly the green leafy vegetables, leads to malnutrition which causes diseases like anemia and night-blindness. Dark green leafy vegetables such as Palak and brown vegetables like carrots prevent blinding malnutrition.



Land levelling is a measure used in surface irrigation, such as basin and furrow irrigation. It consists of preparing the irrigation plot in a way that no high and/or low spots disturb the uniform distribution of irrigation water on the field, and ensuring the optimal slope for water movement across a field when irrigated.

Farm pond:-The importance of farm ponds is underestimated by many people including those who own farm ponds. For years farm ponds have been used for livestock watering and irrigation, but farm ponds are much more than that. Farm ponds can help support wildlife habitat, reduce erosion, improve watershed health, increase property values, and provide a place for recreational activities like fishing. Farm ponds are habitats for many wildlife species whose environments are being destroyed. The type of plants and animals that thrive in and around ponds are some of the smallest, but most important in our ecosystem. They are the start of the food chain and when these animals' habitats start to disappear so do they.



Vermicompost:-

Composting, generally defined as the biological aerobic transformation of an organic by-product into a different organic product that can be added to the soil without detrimental effects on crop growth. In the process of composting, organic wastes are recycled into stabilized products that can be applied to the soil as an odorless and relatively dry source of organic matter, which would respond more efficiently and safely than the fresh material to soil organic fertility requirements. The conventional and most traditional method of composting consists of an accelerated bio oxidation of the organic matter as it passes through thermopile stage (45° to 65°C) where microorganisms liberate heat, carbon dioxide and water. However, in recent years, researchers have become progressively interested in using another related biological process for stabilizing organic wastes.

Conclusion

The major objective of the IWMP programme is to improve the ground water level and the ground water level is improved by constructing the water harvesting structure like Mini Percolation tank, kitchen gardening, Vermi composting land leveling and Check dams. Soil erosion is controlled and soil moisture conservation is improved by constructing of gully control works and thus improved the productivity of land and reduced the cost of cultivation and quality of produces also improved. By improving the ground water level and reducing the soil erosion control will boost the economic condition of the poor farmer through improvement of agriculture production to words integrated approach in IWMP programme.

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