

Building Adaptive Capacities of Small Inland Fishermen Community for Climate Resilience and Livelihood Security, Madhya Pradesh, India



Madhya Pradesh has total river length of 17,088 km and water spread area of 3.98 mha with 98% area already brought under the fisheries. Pressing need has been felt to bring the fishery sector into climate resilient sustainable production systems. The project is implemented in the agro-climatic zones of Dhar, Jhabua, and Alirajpur district lying in the south-western part of the Madhya Pradesh. The project envisions to develop climate resilient model of fishery through showcasing climate compatible pond designs, institutional arrangements between farmers and traditional fishermen, and use of insurance schemes. The project interventions like de-siltation of water reservoirs, repair/provision of inlet and outlet, wire mesh and seepage treatment, oxygenation, fish feed management, and insurance products would be adopted on a wider scale. The project would benefit existing, modified, and new fishery ponds both on the private lands and on common property lands leading into socio-economic empowerment of about 960 households.

PROJECT RATIONALE

Increasing seasonal and annual variability in precipitation and resulting flood or drought extremes become significant drivers of change in the inland fisheries. The vulnerability analysis of the Madhya Pradesh in SAPCC rates Dhar, Jhabua, and Alirajpur district as highly vulnerable to the impacts of climate change. It has been adversely affecting the inland fisheries and its production through decrease in fish spawning, seed availability, growth rate, survival, and overall fish catch. From 1990 to 2002, the number of wet days has reduced from 42 to 29 days in Dhar and from 40 to 27 days in Jhabua. It has been adversely affecting migration of fishes and causing change in their geographical location affecting their overall yield in the project areas. The given project entails to augment the production processes of inland fisheries in the project areas through appropriate choice of fish species, feeding, harvesting, and restocking that is under greater degree of human control.

PROJECT FACTS

Adaptation Fund Support	INR 107 million (USD 1.79 million)
No. of Participants/ Beneficiaries	Direct Beneficiaries: 2,004 Indirect Beneficiaries: 3,34
Project Duration	June 2015- May 2018

Project Approach

For improving the climate responsive inland fisheries, rural ponds (less than 10 ha) are chosen and technical modification in the pond design is done in relation to varying temperature, precipitation, and extreme weather events. A catchment treatment plan for each of the proposed 60 fishery ponds will be prepared through extensive community consultative processes. The project will lead to augmentation of production of table size fishes without intervening in capture of wild fishery practices. Existing weather based fisherman insurance scheme would be developed and repackaged to optimize the benefits to the individual fishermen. Existing fishermen cooperatives are strengthened and their capacity would be enhanced to better address the challenges. Plantation and soil conservation works would be done along the catchment areas of ponds to regulate micro climate, check run-off, provide shading effect, and foster capacity of the fishery activities. The four different species of endemic and locally adaptable fish, namely catla, rohu, mrigal and common carp is promoted. Besides seed hatcheries, nurseries would be established with provisions of maintenance of water quality and nutritional management in the ponds.

Impact of the Project

Inland fisheries activities would be developed in 899 rural ponds of Dhar and 629 rural ponds of Jhabua and Alirajpur districts respectively. This accounts for 8,403 and 1,734 ha of water spread area in the project districts.

Benefits to the beneficiaries

- Climate proofing of 60 ponds @ 20 ponds per district and having an area of less than 10 ha located either on Gram Panchayat land or private land of small and marginal farmers would be carried out.
- Construction of one seed hatchery, 2 nurseries (0.1 ha), and 1 seed rearing unit (0.1 ha) would be done in each of the district for making fish stock available and facilitate practice of poly culture.
- Leasing of ponds of less than 10 ha area to the small and marginal farmers are determined by the Gram Sabha and Gram Panchayat working at the local level.
- Fish farmers would be promoted to become members of the fisher folk cooperatives for development of fund to undertake climate compatible fishery activities.



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