Pilot Project on Climate Proofing of Watersheds in Tamil Nadu and Rajasthan

NABARD

Climate Proofing for Development is a methodological tool to incorporate the concerns surrounding climate variability and change into development planning. It enables planners and decision makers to identify risks posed by current and future climatic changes, so as to plan and prioritise adaptation options for building resilience. NABARD in collaboration with GiZ applied the climate proofing tools in two watersheds each in Tamil Nadu (Appiyampatti & Poosaripatty) and Rajasthan (Anjani and Rawatpura).

PROJECT RATIONALE

Climate change has been causing shifting of rainfall patterns and extreme weather events in the rained areas of Tamil Nadu and Rajasthan. Both the states falls under dry and moist semi-arid region, have persistent problem of land degradation, dependency on rainfall, overutilization of ground water, and complex cropping systems operating under fragile ecological conditions. Likelihood probability of drought is expected to be 3-5 years in majority of the watersheds, posing high threat to the health of soil and crop, fodder availability, and livelihood of the people. As per the climate projection model for the watersheds in Rajasthan, temperature deviations is expected to be between 0.26 to 0.94 °C across different watersheds by 2030. CLIMASYSTEM, a model used for generating sea level rise has predicted sea level rise of 1.1 to 1.25 m by 2100 along the coast of Tamil Nadu.

PROJECT FACTS

Adaptation Fund Support	USD 1.34 Million (INR 88.69 Million)
No. of Participants/ Beneficiaries	Direct Beneficiaries: 26,052 Indirect Beneficiaries: 30,699
Project Duration	June 2015 to January 2019

Project Approach

Through the application of the climate proofing tool, the impact of climate change on soil, agriculture, forests, pastureland, livestock, and communities within the four watersheds were studied. Following this analysis, treatment measures for implementation were identified which can increase resilience of the watershed and build adaptive capacities of the communities. Where found necessary, typical watershed development measures were customized according to the climate change analysis and incorporated in the final implementation plan. Watersheds thus become resilient to current and future climatic changes.

Climate Proofing Methodology

The climate proofing of watersheds approach under in this project is participatory in nature and involves a combination of top-down and bottom-up approaches. The process can be broadly classified as follows:

1. **Data collection:** This involves collection of baseline and future climate information and socio-economic data of the watershed and local communities from primary and secondary sources.

2. **Climate Analysis:** Based on the climate data, actual or potential bio-physical and socio-economic impacts of climate change on the chosen unit of measurement (in this case the natural system of the watersheds and communities living within the watershed), has been analyzed.

3. **Identification and prioritization of adaptation options:** Based on baseline climate conditions and projected climate scenarios, prioritized treatment measures and adaptation options were recommended for implementation.

4. **Integration:** With the involvement of community members from the watershed, NGOs, NABARD officers and concerned state departments, the recommended options were reviewed and prioritized. Selected options were then integrated into the planning documents and implemented. Climate considerations thus become part of the entire development process. The integration of the adaptation options was done employing the climate proofing table which helps in arriving at the recommended adaptation options by taking into consideration the exposure unit, climatic stress, non-climatic stresses, sensitivities and the existing adaptive capacities.

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