Innovative Water Resources Development for Livelihood Improvement of Smallholder Farmers

WHS with on-dyke horticulture and aquaculture

Vegetable cultivation utilizing stored water of WHS

Poultry farming unit as a component of IFS

Developed by

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RELEVANCE

- Agricultural productivity in rainfed regions of eastern India is very low due to a lack of water resources and technical knowledge.
- The study was conducted to assess the impact of creating water resources and developing water harvesting-based integrated farming system models on improving the livelihood of smallholder rainfed farmers in eastern India.

DESCRIPTION

- Water harvesting structures were constructed in farmers' fields on a participatory basis, with farmers contributing a part of the expenditure.
- Water harvested in WHSs was used for multiple purposes, *viz.*, agriculture, fish culture, on-dyke horticulture, vegetable cultivation, poultry, dairy and mushroom cultivation.

BENEFITS

- The net income from this integrated farming systems (IFS) model under best management practices was ₹ 251,000 ha^{-1}.
- Poultry farming in the uplands and intensive cultivation around the WHS (pond) embankments was effective in increasing the net return from the IFS models.
- On a scale of 5 to 25, the farmers' overall living standard can increase from 13.5 to 17.1.