

NICRA

National Innovations on Climate Resilient Agriculture (NICRA) is a network project of the Indian Council of Agricultural Research (ICAR) launched in February, 2011. The project aims to enhance resilience of Indian agriculture to climate change and climate vulnerability through strategic research and technology demonstration. The research on adaptation and mitigation covers crops, livestock, fisheries and natural resource management.

The technology demonstration component of the NICRA project deals with demonstrating proven technologies for adaptation of crop and livestock production systems to climate variability.

This component is implemented in selected vulnerable districts of the country through location specific interventions by Krishi Vigyan Kendras in a participatory mode. The project is implemented in 100 districts (see map) involving over one lakh farm families across the country.

The interventions in the village panchayats are finalized following a participatory approach through the Village Climate Risk Management Committee (VCRMC), after the PRA to assess the climate related problems in the village and baseline survey. The program was launched formally in all the villages by involving the state line department functionaries and leaders of the panchayats to ensure local ownership of the project from the beginning and convergence of related schemes currently in operation in the panchayat. In each village, the interventions are made in the following four modules:

Module I: Natural resources: This module consists of interventions related to in-situ moisture conservation, water harvesting, supplemental irrigation, improved drainage in flood prone areas, conservation tillage where appropriate, artificial ground water recharge and water saving irrigation methods.

Module II: Crop Production: This module consists of introducing drought/temperature/flood tolerant varieties, advancement of planting dates of rabi crops in areas with terminal heat

stress, water saving paddy cultivation methods (SRI, aerobic, direct seeding), frost management in horticulture through trash burning, community nurseries for delayed monsoon, custom hiring centres for timely planting, location specific intercropping systems with high sustainable yield index.

Module III: Livestock and Fisheries: Use of community lands for fodder production during droughts/floods, improved fodder/feed storage methods, preventive vaccination, improved shelters for reducing heat stress in livestock , management of fish ponds/tanks during water scarcity and excess water, etc.

Module IV: Institutional Interventions: This module consist of institutional interventions either by strengthening the existing ones or initiating new ones relating to seed bank, fodder bank, commodity groups, custom hiring centre, collective marketing, introduction of weather index based insurance and climate literacy through a village level weather station.

Nandurbar district of Maharashtra is one of the drought prone districts of the state. Dr. Hedgewar Seva Samiti, Krishi Vigyan Kendra, Nandurbar has been implementing NICRA project since 2011 in the Dhadgaon taluka of Nandurbar district. Initially the NICRA project site was selected in village –Umarani, Tal. Dhadgaon in Nandurbar district. Umarani village, Tq. Dhadgaon which is located at a distance of 104 km from district headquarter – Nandurbar. The NICRA village is situated in the Satpuda ranges. Then the NICRA project was implemented in the villages – Shivanipada, Bhujgaon, Suryapur and Katri in Dhadgaon taluka. It receives an annual normal rainfall of 813.2 mm. The frequency of intensive rainfall (> 60mm/day) is 2.5 as decadal average in that area. The existing soil types of the area are red and black. The soils are having a shallow depth, prone to moderate to severe soil erosion. Major cropping systems in the area are maize, sorghum, black gram, pigeon pea and soybean. Most of the tribal farmers have 7-8 mango trees in their fields. Preparation of mango slices from raw mangoes (Amchur) is the main activity in the summer season which is a very important monetary source for upcoming summer season. The major climatic vulnerability in these selected villages is heat stress and drought.