

Climate Adaptation and Resilience in Agriculture (CARA) Project

Project Period: October 2024 - September 2029

Project Allocation: Rs. 10 crores from AF-EC own funds

Coverage: 12 selected model villages

Overview

AF-EC has initiated the Climate Adaptation and Resilience in Agriculture (CARA) Project to build climate resilience and promote appropriate adaptation measures in agriculture. The project works in selected villages and develops them as model villages for climate adaptation and resilience in agriculture.

CARA promotes sustainable agriculture and livelihoods through natural resource management, improved cropping practices, innovative technologies and active community participation. The project also seeks convergence with government schemes, banks, NABARD and other organisations to mobilise additional resources.

Project Objective

To build climate adaptation and resilience in agriculture, stabilise farm livelihoods, and transform agriculture and other rural livelihoods so that they become productive, remunerative and sustainable.

Six Core Components

- Build awareness, sensitise and capacitate rural communities to take up appropriate adaptation measures through a participatory approach.
- Promote climate-resilient cropping systems such as short-duration varieties, mixed cropping, contingency cropping, relay cropping and fodder crops.
- Promote water conservation and demand management systems through restoration of water bodies, soil and moisture conservation, crop water budgeting, micro-irrigation and protective irrigation.
- Promote climate-resilient soil nutrient management systems such as composting, farm manure application, mulching and crop rotation.
- Promote off-farm and allied livelihoods including livestock rearing, dairying, poultry, carbon revenues, crop insurance and access to MSP.
- Enhance access to downscaled weather forecasts and weather-based crop advisories.

Year 1 Preparatory Progress

- A Technical Advisory Committee was formed with scientists and climate experts to provide regular guidance.
- Nine project staff were recruited and trained.
- Twelve villages were selected based on criteria finalised in the first Technical Advisory Committee meeting.
- e-PRA exercises were conducted in 12 villages for village resource mapping and participatory planning with support from WASSAN.

- Household data was collected using KoboCollect, covering demographic details, income, land, livestock, crops, assets and CBO membership.
- Village-level action plans were developed based on e-PRA data.

Household and Resource Profile

The consolidated household survey covered 11 villages and 2,912 families. The caste composition included 2,078 BC families, 305 OC families, 501 SC families and 28 ST families.

The project area includes 15,667 acres of land, including 8,357 acres rainfed, 5,728 acres irrigated and 1,549 acres of commons.

The survey recorded 2,350 acres under horticulture, 210,731 trees and 571 farmers associated with tree-based systems.

Livestock resources include 1,519 cows, 842 buffaloes, 86 bullocks and 15,068 small ruminants.

Year 1 Impact Details

- Community institutions were created in all project villages, with eight CBOs in each village.
- Five RO water plants and nine water troughs were constructed in 12 villages, improving drinking water access for people and livestock.
- Mixed fruit tree plantations were promoted with 58 farmers, covering 149 acres with 19,225 saplings from 15 varieties.
- Agrobiodiversity was promoted with 500 farmers across 634 acres through mixed cropping using 10 types of seeds.
- Seed banks were established in five villages and 2,400 kg of seed was distributed to improve access to local and timely quality seed.
- Contingency and relay cropping was promoted by supplying 164.21 quintals of horse gram seed to 372 farmers, covering 2,025 acres.
- Sixty-seven natural farming model plots were established, including ATM, 60x60, NHS and IFS models.
- Crop water budgeting exercises were conducted in three villages with support from FES, Madanapalli team.
- Four check dams are nearing completion in two villages to strengthen water conservation.
- Greenery development was promoted through dibbling of 216 kg custard apple seeds and 21,800 palmyra seeds along farm boundaries and trenches.
- Twelve farm waste shredder machines were purchased and sent to 10 villages to promote crop residue management.
- Tank silt excavation was completed in Mucharlapalli, benefiting 30 farmers through 1,775 trips of silt covering 61.50 acres.
- Cover crops were promoted in about 1,500 acres to improve soil fertility and moisture retention.
- A District Level Convergence Committee chaired by the District Collector and 12 village-level convergence committees were formed.
- Two hundred and fifty-six kitchen gardens were established in 10 villages.
- Fifty-three women were supported with financial assistance to start new income-generating activities.
- Manual rain gauges were installed in eight villages, with installation planned in two more villages.
- WhatsApp groups were formed to disseminate real-time weather updates and crop advisories to farmers.

Expected Long-Term Change

CARA is expected to demonstrate a scalable model of climate-resilient agriculture in drought-prone rural areas. By combining community planning, climate-resilient crops, water conservation, soil health, diversified livelihoods and weather-based advisories, the project aims to reduce climate risk, stabilise farm incomes and improve the sustainability of rural livelihoods.

Key 1st Year Numbers

Indicator	Achievement
Villages covered for e-PRA	12
Households surveyed	2,912 families
Total land mapped	15,667 acres
Rainfed land	8,357 acres
Irrigated land	5,728 acres
Commons	1,549 acres
Fruit saplings planted	19,225
Area under fruit tree plantation	149 acres
Area under mixed cropping	634 acres
Seed distributed through seed banks	2,400 kg
Horse gram seed supplied	164.21 quintals
Farmers under contingency/relay crops	372
Area under contingency/relay crops	2,025 acres
Natural farming model plots	67
Kitchen gardens established	256
Women supported for income activities	53