

COTTON



CROP IN DISTRESS

Cotton, one of the major commercial crops cultivated in India, accounts for one-fourth of the total global production. This crop is associated with sustaining the livelihoods of an estimated six million cotton farmers and 40 to 50 million people engaged in related activities.

The green revolution created higher demands for farm power, water and fertilisers. Intensive cropping impacted the soil health. High levels of chemical inputs caused tremendous pollution and affected the production of crops and human health.

Conventional cotton production is directly proportionate to the highly inefficient usage of water that affects the farmers and the hydrological environment. The excess use of groundwater leading to depletion creates a real threat to large numbers of smallholder farmers.

Maharashtra is a water stressed state and is mainly rainfed. Cotton is known to be a thirsty crop and is held responsible for the depletion of groundwater levels. Cotton production has been on a decline in the recent years due to shortage of water.

Land degradation

Excess use of inorganic fertilizers, pesticides and improper irrigation practices has led to land degradation. Due to the lack of awareness and various pest attacks, farmers apply a combination of pesticides to improve the soil health without testing the soil. The excess use of inorganic fertilisers and pesticides also affects climate change.

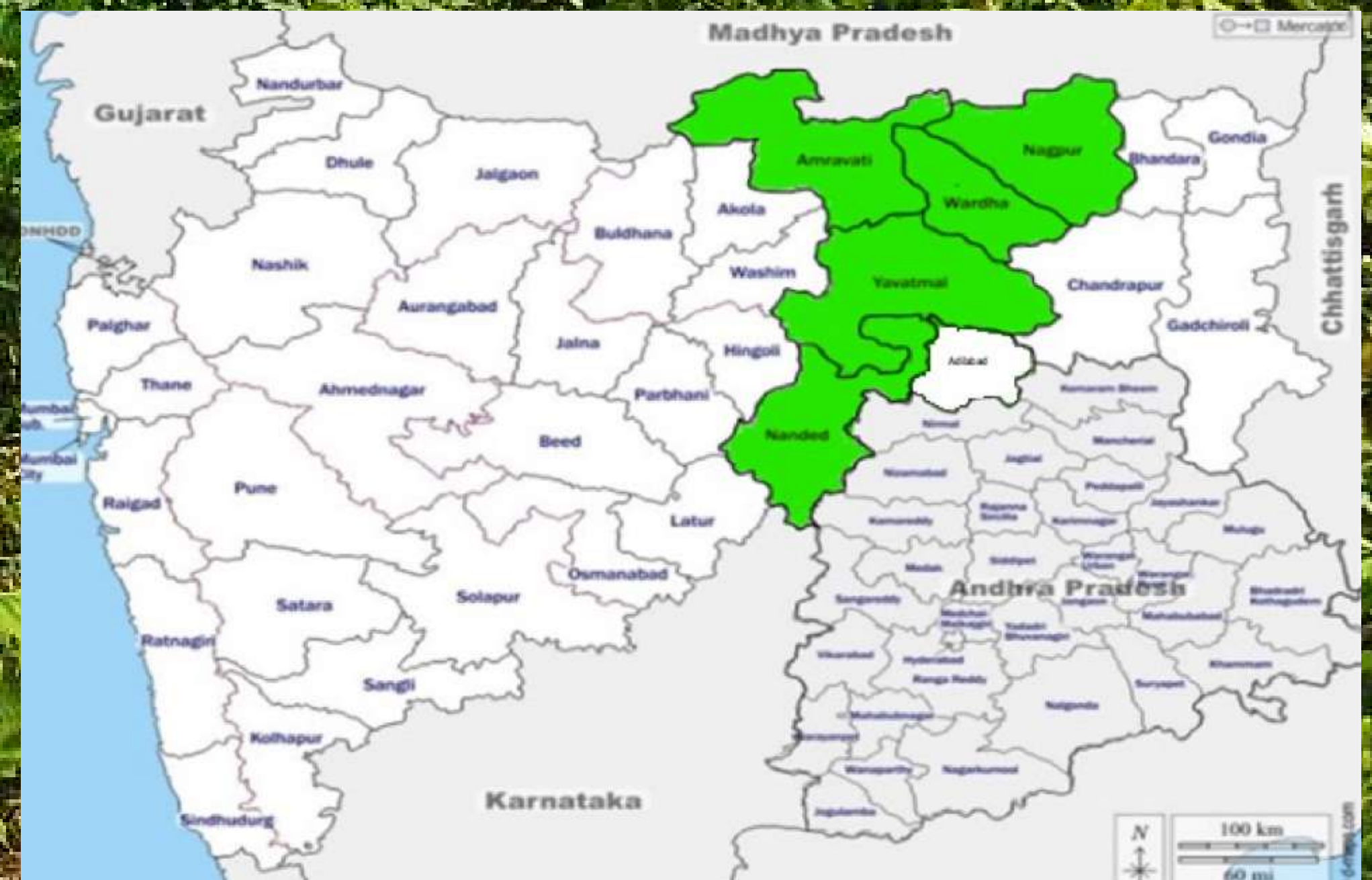
Water pollution

The Vidarbha region of Maharashtra state is highly water-inefficient. Cotton monoculture in the region is dependent on ever-increasing risk of rainfall variability. The production of this major crop involves the use of huge inorganic pesticides and fertilisers which impacts the quality of water as well as the health of the biodiversity in and around.

Inefficient water use

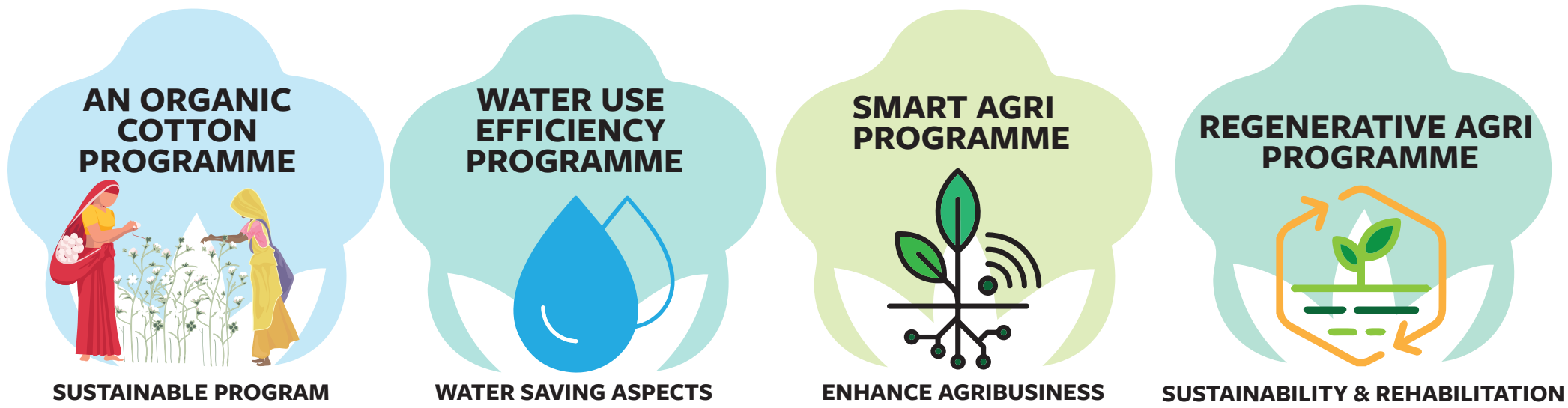
Even though the Vidarbha region of Maharashtra is rainfed, farmers with irrigation facilities practice flood irrigation without any irrigation schedule. This leads to huge loss of water and energy.

The Vidarbha and Marathwada region of Maharashtra comprise of 11 and 8 districts respectively. Around 65 % of the population is dependent on agriculture and allied sectors and cotton crop is one of the important cash crops in this region. The limited availability of natural resources is affecting the social and economic conditions of the farmers.





SHAPING A SUSTAINABLE FUTURE



ORGANIC COTTON PROGRAMME

12494

Farmers supported in organic cotton farming

14 (7000 farmers)

FPOs engaged and strengthened

11600

Farmers trained in bio pesticides practice

12200

Farmers trained in bio fertilisers practice

11774

Farmers trained in composting & vermicomposting

9271

Farmers trained in water management

13287

Farmers trained in soil management

11381

Farmers trained in harvesting techniques





WATER USE EFFICIENCY PROGRAMME

20,000

Farmers mobilised & trained on good practices

6

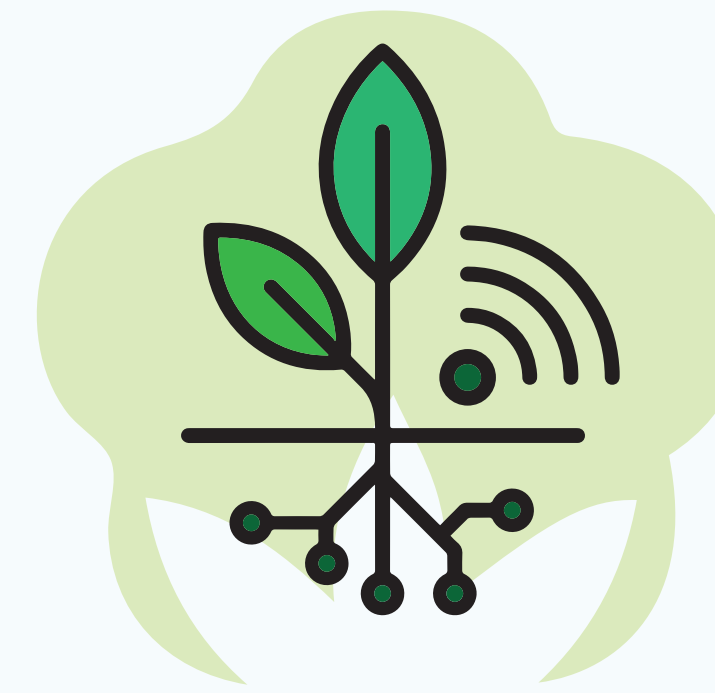
Water user groups initiated

1500

Existing water structures recorded & farmers trained on structures' management

39

New farm ponds constructed



SMART AGRI PROGRAMME

30534
farmers

307
villages

05
districts

1543
trainings conducted





REGENERATIVE AGRICULTURE PROGRAMME



Fertile soil is a prerequisite for sustainable agriculture and human wellbeing. Regenerative agriculture promises decreased GHG emission, climate change reversal, drought resistance to soil, thriving biodiversity, restored grasslands, revitalised local economy, improved nutrition and better food security. Regenerative agriculture essentially benefits soil, restoring its organic carbon through sequestration and reversing industrial agriculture's contributions to climate change, erosion, pest invasions, desertification, salinisation, decarbonisation, chemical contamination among others. The resultant is a highly productive soil that supports a more resilient food system.

Solidaridad initiated the programme on regenerative practices with 7,000 cotton farmers in Nagpur and Amravati, Maharashtra during the 2020-2021 crop cycle, adopting the regenagri certification as a framework for implementation and assessment.

OUTCOMES



Crop diversification



Soil health management



Conservation of biodiversity



Regeneration of soil and water bodies

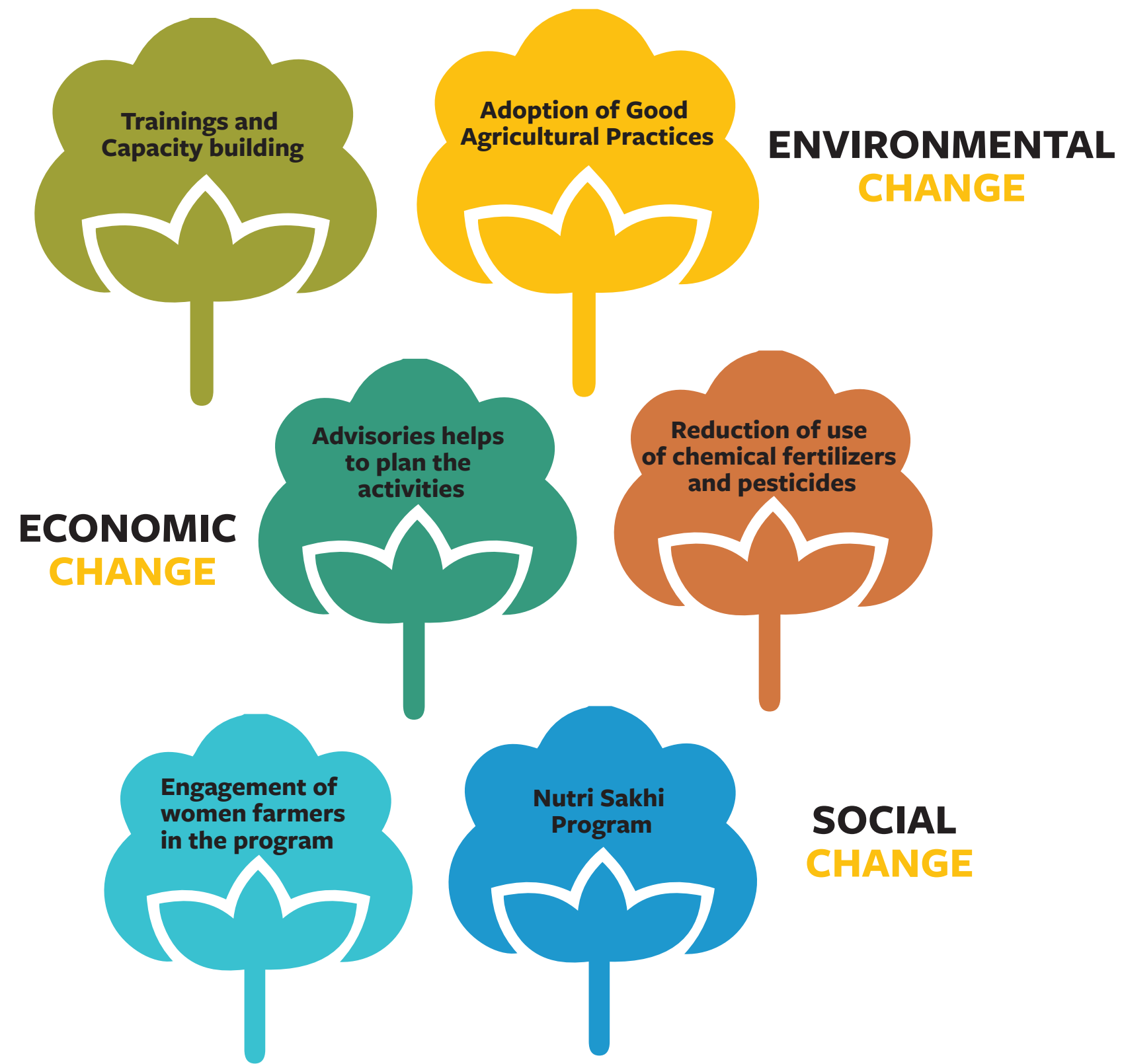


Reduced GHG emissions



Carbon sequestration





Training and awareness programmes were conducted to educate farmers on the smart agri technology and use of digital platforms to access agricultural information.

A nutri sakhi programme has been initiated to conduct training and capacity building of women, focussing on health and nutrition.

Special training programmes were organized for women farmers engaged in the agricultural business to empower and capacitate them with entrepreneurial skills.

KEY ACTIVITIES

In 2020-21, Solidaridad disseminated a total of 227 audio and 120 text advisories on weather and crop management. Based on real time data, weather and crop advisories were provided to the farmers, enabling them to adopt good agricultural practices, thereby reducing the use of chemical fertilisers and pesticides and its impact on the environment.



SUCCESS STORIES

Farm ponds: A boon for farmerS

Wardha being a rainfed zone, and subject to the vagaries of the monsoon, agricultural productivity continues to lag behind. Dependence on groundwater for irrigation leads to its depletion and quality deterioration.

Nilkanth M. Kolhe is an active farmer from Manora village, Wardha district and owns a farm pond. However, the farm pond was lying idle due to silt deposits and could not contain water even during the monsoons. Ground water was insufficient to irrigate his more than two-hectare agricultural land.

With Solidaridad's intervention, Nilkanth's farm pond of 10x10x3 metres was rejuvenated. With improved and assured water availability, he was encouraged to diversify crops and venture into wheat cultivation in addition to cotton, leading to an income enhancement.

“It was good to see a huge amount of water in the farm pond after a long time. This will help me to plan the crops round the year”, says Nilkanth.

