

#### 4. Community crop storage and seed bank

Storage is yet another preventive measure that protects the yield and in turn the livelihood of farmers. Climate change would increase the frequency of unpredicted extreme events. To avoid loss of yield during such situations, a community based storage system to protect the farm produce is beneficial. Moreover, community seed banks would help in increasing the resilience of farmers as it improves the access to and availability of diverse, locally adapted crops and varieties.



#### 5. Markets, value chain and insurances

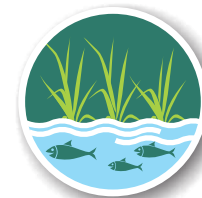
In order to improve the profitability of small-hold farmers, it is necessary to strengthen the market and the buyers for the agriculture products, which can realise better value for the produce, reduce the cost of production and secure the livelihoods of the farmers. Furthermore, crop insurances and weather-based agriculture insurances would provide financial support and security, especially to small-hold farmers, in the face of a changing climate. Pradhan Mantri Fasal Bima Yojana and the Weather Based Crop Insurance Scheme (WBCIS) are examples of insurance schemes which offer several benefits to farmers.



# Safeguard your Farms and Livelihoods

**We<sup>4</sup> Climate**  
Climate Literacy and Marine Litter Management in the East Coast of India

## Towards a Climate Resilient Agriculture in Coastal Areas



Integrated farming



Salt/flood/drought tolerant farming



Water smart practices



Crop storage and seed bank



Markets, value chain and insurance



## Towards a climate resilient agriculture in coastal areas

Agriculture is the most important economic sector in India and one of the most vulnerable to climate change. Farmers and farmlands across coastal regions are affected by climate change directly and indirectly. The predicted sea-level rise poses a hazard to valuable coastal agricultural land, particularly in low-lying areas. Coastal agriculture is also threatened by frequent and intense extreme weather events. Seawater intrusion and increase in salinity of coastal aquifers and farmlands are also more acute in the face of climate change.

In order to safeguard agriculture and the associated livelihoods from such dire conditions, climate resilient and sustainable agriculture practices must be adopted and practised in coastal regions.

### Some of the adaptation measures for resilient coastal agriculture are explained below

#### 1. Integrated farming

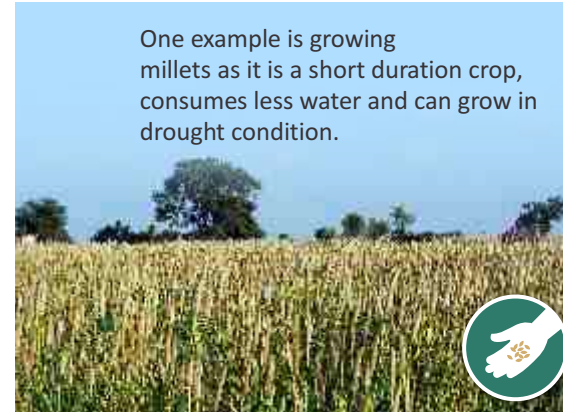
In an integrated farming system, all components are mutually supportive and dependent on each other such that the outputs (by-products) of one component are used as inputs for another component within the context of the same farming system. Integrated farming incorporates several approaches for sustainable agriculture, for example, multiple cropping practices (growing one or more vegetables along with the staple paddy crop), aquaculture, chicken and livestock rearing, seed banks, vermi-composting and biogas plants that operate on farm waste.



#### 2. Salt/flood/drought tolerant farming

Agro-scientists are developing different species of crops that can grow in saline soils and flooded conditions. These include newly developed crop varieties as well as traditional crop

One example is growing millets as it is a short duration crop, consumes less water and can grow in drought condition.



varieties that have naturally evolved to tolerate high salinity, stress and flooding. Supporting and cultivating these salt-tolerant crops over conventionally grown crops could help secure the livelihoods of coastal farmers. Salt-tolerant varieties of beet, broccoli, cotton, okra and paddy are being developed and cultivated as pilot projects.

#### 3. Water smart practices

Due to climate change, coastal farms are subjected to seawater intrusion, increase in salinity, floods and droughts. It is necessary that farmers adopt sustainable water conservation methods so as to safeguard their farms' productivity, yield and livelihood and conserve water. Water smart practices include all those on farm ways that conserve and ensure optimal utilisation of water. Some of examples of such methods are drip irrigation, dry farming, capturing and storage of water, irrigation schedule, crop rotation and conservation tillage among others.

