

CLIMATE RESILIENT AGRICULTURE TECHNOLOGY- A WAY AHEAD – ANDAMAN AND NICOBAR ISLANDS

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INTRODUCTION:

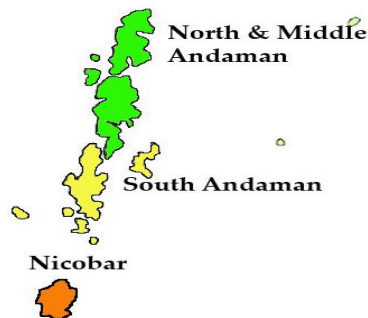
What Is climate-resilient agriculture?

Climate resilient agriculture (CRA) is a type of technology used to improve sustainability, productivity and reduce poverty in the rural areas where poor farmers practice agriculture despite climate change and hope for an increase in the yield of the harvested crops. CRA helps to maintain sustainability. The basic knowledge of CRA is that making the crops withstand the sudden change of climate without the deterioration of its yield. CRA is using appropriate natural resources and to make the crops more productive and to have increased the income of the farmers.

Why Climate resilient agriculture?

The countries, states, and cities have been facing crises due to disasters and conflicts not only disasters but these areas have been affected by severe food security and it has unfavourably affected the food stocks, increased high demand for agro based fuels, food price fluctuations, and the weather changes.

- a. CRA is a practice that helps in reducing hunger and poverty in the face of climate change for the advancing generation.
- b. It can adapt to the current situations and help in sustaining agricultural production from the local to the intercontinental extent.
- c. Enhanced access and implementation of technology, pellucid trade regimes, extended use of resources conservation technologies, an extended adaptation of crops and livestock to climatic stress are the outcomes.

Knowing the island – and its agriculture.

The Andaman Islands lie in the east of the Indian landmass in the Bay of Bengal which is positioned in the Indian ocean. In 2004, an earthquake-triggered tsunami damaged Andamans coastal ecosystems and caused severe life and economic loss. The earthquake and tsunami destroyed all the barriers. The entire field was flooded with saltwater which damaged the purity of the other water types. In South Andaman, because of the tsunami, we have land subsidence, because of this land subsidence of land, larger sea water will come inside. Where there is a rise of plates, the sea water will unforthcoming. This will have a successive effect on the flora and fauna of that specific location. The research says the area damaged by saltwater inundation during the tsunami was about 11,000 ha agricultural land and 9100 ha plantation area which has banana, coconut, areca nut as the plantation crops.

Andaman depends on the two-phased rainfall seasons, to sustain agriculture. In a low-lying area with Andaman like conditions, there is no other way of irrigating the crops, there are no bigger Streams, there are no irrigation facilities, the farmers cannot go for dams or large check dams. Every technology has to centre around rainwater harvesting as there is no adequate land for such projects to come up. The absence of rainfall at one stage, cyclones, and overabundance of rainfall during another result in losses and cause agony to the farmers.

Climate change is a slow process, as it requires time to adapt and adjust and to maintain its severity. Apart from this, the land availability on the island is very limited so the option lies in the efficient use of resources like water and land. CIARI – Central Island agricultural research institute found that land shaping techniques are the best way forward. Land shaping is the modification of farmland to diversify and increase cultivation, harvest rainwater, reduce salinity and improve soil conditions.

Broad bed and furrow system, farm pond with broad dykes, three tier- farming system, paired bed system. All these land shaping methods are suitable for farming situations. The creation of ponds, furrows and bunds using land shaping methods has many benefits which will be applicable for the local farmers of the Andaman Island.

If the farmers are raising a bund, they can grow 3 crops in a year. The cropping intensity will be around 300%. So, instead of just growing rice, the farmers can grow 3 vegetables. The major advantage is, the water will not only be used for irrigation but for the fish culture also. The farmers' income will be diversified in many ways and after all the stability and sustainability will be more.

Another land shaping technique, three-tier farming ecosystem, allows farmers to grow paddy and vegetables and also practice fish culture. This technology is called climate-resilient technology. Adapting to drought conditions or water-logged conditions the adjusting to the rise of sea level or sea waves.



CONCLUSION:

The climate-resilient agriculture is a boon to the farmers of Andaman and Nicobar Island. This type of agriculture helps in getting sustainably ready and producing high-yielding crops by applying suitable technology. The farmers and the production of the crops are and have been the national concern. Climate and climate change have never been in the hands of anyone but reacting and adapting to climate change is definitely in our hands and we can do it by implementing climate-resilient technology. The alteration will require a more resilient configuration, more climate-resilient technologies, and new agricultural practices to encounter the extended climate threat. Improving approaches to energy in unjustified areas and using low emission technology can label the development needs of endangered populations while encouraging a transition to green and climate-resilient development.