

Pilot seaweed farming enterprise in Indian archipelago boosts local economy

A commercial-scale pilot seaweed farm in Lakshadweep – an archipelago off the coast of Kerala in India – has turned out to be a huge success based on pre-feasibility studies conducted during the recent season.



Farm workers at one of the pilot seaweed farms in the Lakshadweep archipelago

During the eight-month pilot programme women made up the main workforce, earning on average Rs 380 (£3.64) a day guided by the ICAR-Central Marine Fisheries Research Institute (ICAR-CMFRI) and the Lakshadweep Administration, the pilot seaweed farming enterprise by TSC-Purple Turtle Company has boosted the economy of the archipelago and provided a new source of income for the local community.

The pilot seaweed farm was initially launched in Chetlath, one of the smaller islands in Lakshadweep, where six plots – each with 100 tube nets – were established by the end of September 2022, with a seed stock size of three tonnes per plot. The first harvest yielded nearly 15 tonnes in 45 days. The entire harvest was then used to expand the farm horizontally, increasing the farm size to 30 plots with 3,000 net tubes by the end of November 2022. Subsequent harvests were done every 30-45 days, and the farm was further expanded in the same atoll, as well as in the neighbouring atolls of Kiltan and Kadmat.

Women were the main workforce, with some employed from local self-help groups to carry out various farm activities, such as preparing tube nets, seeding, and harvesting. The program generated nearly 3,000 working days during the eight-month period, with an average daily earning of Rs 380 (£3.64). The potential of seaweed cultivation in Lakshadweep has been known since August 2020 from the research and development programmes conducted by the ICAR-CMFRI, with the help of ICAR's National Innovations in Climate Resilient Agriculture (NICRA). The enterprise is currently passing through the initial phase of exploration, capacity building and foundation development.

The ICAR-CMFRI – in collaboration with the Department of Fisheries in Lakshadweep and private companies – conducted farming trials to determine the growth performance of commercially important, indigenous species – such as *Gracilaria edulis* and *Acanthophora spicifera* – in each island over the seasons. During this period, local people from many of the islands were trained in seaweed farming. Periodic consultations were held with the prospective stakeholders, local farmers, the seaweed industry, researchers, and the Government, where the results and experiences were shared and the way forward was discussed. This led to TSC-Purple Turtle Company carrying out the first-ever commercial-scale pilot seaweed farming in the island territory.

The establishment of seaweed hatcheries, seed reserves, seaweed health monitoring facilities, and incubation facilities for mariculture, as well as the processing and value addition of seaweeds, are expected to contribute to the development of the seaweed enterprise in the archipelago. The ICAR-CMFRI is working with the NITI Ayog, as well as the Government of India and the Lakshadweep Administration, to generate scientific information, build skills, provide technical support services, and draw policy guides for sustainable and inclusive seaweed enterprise development in the island territory.