



Success Stories - Bumper Harvests...

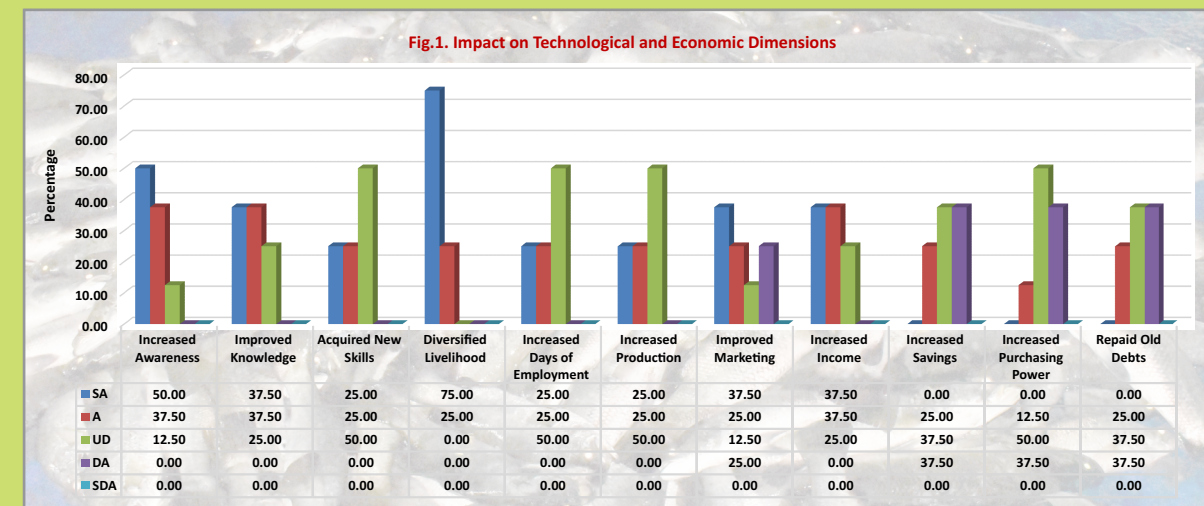
- Under SCSP project, six square cages were installed by three beneficiary groups during 2024. On 12th February 2024, each cage was stocked with 1,000 Asian Seabass live fish fingerlings with an average length of 156 mm and average weight 43 g.
- The fingerlings were fed with raw fish feed. The growth of fishes, their feeding patterns and monitoring of environmental parameters in the cages were carried out regularly.
- The fishes on attaining the marketable size and weight were harvested on 7th November 2024. Around 2.5 tons of healthy fishes were harvested and immediately marketed to traders arranged by the fishermen. The total revenue generated was Rs. 8,89,471/-.



This is the first time that such a huge revenue being generated by the SCSP cage culture beneficiaries. The ICAR-CMFRI sea cage farming technology was well adopted by the fishermen of scheduled caste communities which in turn helped them to generate high revenue and make them self-sufficient by improving their livelihood.

Socio Economic Impact

The impact on livelihood enhancement due to the technological interventions of cage culture demonstrations and training was documented under two dimensions such as technological and economic dimensions. The perceived responses of the beneficiaries were analysed on a five-point continuum viz., Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree, and the findings were expressed as percentages as given in Fig.1.



From Fig.1, it could be found that three-fourth of the respondents (75.00%) have strongly perceived that the cage farming interventions have ensured diversification and sustainability in their livelihood. Most of them either strongly agreed/agreed upon the parameters such as increased awareness (87.50%), enhanced knowledge (75.00%) and increased income (75.00%).

From the focused group discussions, it was envisaged that for improved adoption of cage culture, the following issues are vital viz., policy guidelines on access to water bodies, access to raw materials for cage construction, timely availability of seed and feed, access to market and remunerative price for the harvest, technical know-how/ timely advisories, government support, access to institutional finance, logistics and support from the peer group.

The present technological interventions on cage farming positively impacted the livelihood of traditional fishers under various dimensions viz., technological, social and economic. The cage culture model introduced is perceived by the community as a role model and this model is expected to be emulated by different groups of landless populations living in coastal districts of Tamil Nadu and Puducherry, for their livelihood improvement in the future.



The SCSP project operated by Madras Regional Station of ICAR-CMFRI endeavours to empower the downtrodden and elevate their socio-economic status, fostering their integration and active participation in the nation's development trajectory.

FUTURE PLANS ...



Supporting Capture Based Aquaculture (CBA)



Development of farming of bivalves, clams, value addition and trade



Supporting marine ornamental fish culture and marketing



Gender mainstreaming with the inclusion of women SHGs to take up cage farming



Scaling up marine cage farming production with the inclusion of more beneficiaries



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Half a Decade of SCSP PROGRAMMES...

... socio-economic empowerment of Scheduled Caste fishing communities in the Coromandel Coast



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Scheduled Caste Sub Plan (SCSP) Programme

The SCSP programme is being operated at Kottaiikkadu Panchayat, Chengalpattu district, Tamil Nadu. Kottaiikkadu is a very remote coastal village located at the southern end of the Chengalpattu district, blessed with continuously flowing clean estuarine backwaters and a permanent open bar mouth. There are nearly 200 fishers belonging to the *Adi Dravidar* community registered with the State Fisheries Department from nearly 350 families. They are traditionally involved in oyster picking, crab and shrimp fishery, and wild fishing.



The community is very backward in many aspects like literacy rates, and living standards are very poor in terms of revenue generation.

The open sea marine fishing capacities are very limited and restricted to only a few during the lean season in the creek waters. The women also contribute to the communities' economy by regularly working with the fishing activities. Due to the availability of skilled manpower resources, cage farming initiatives can really promote their income levels and improve their living standards.



Demographic Profile of the Beneficiaries

- The analysis of socio-economic profile of the beneficiaries was carried out from a sample of 25 respondents from Kottaiikkadu village using semi structured questionnaires. The analysis revealed that the mean age of the beneficiaries was 46.64 years (standard deviation: 9.19).
- The literacy status was found to be very low, as more than 90 percent of them had education only up to primary school level. The primary occupation of all the beneficiaries was artisanal fishing, with the mean professional experience of 24.60 years (standard deviation: 8.85).
- The mean annual days of engagement in fishing was found to be 230.80 days (standard deviation: 36.39). The average annual family income from fishing was reported to be Rs.83,080/- with the standard deviation of 32,546/-.



Technologies Transferred

The technology transfer was facilitated through stakeholder consultations, training and on- site demonstrations. Regular field visits for onsite advisories, handholding support and distribution of critical inputs were also facilitated for enhanced adoption. The technical parameters of the technological interventions under the SCSP programme are given in Table 1.



Table 1. Technical Specifications of Technological Interventions

| Technology Transferred | Coastal Sea Cage Farming |
|----------------------------------------------------|----------------------------------------------|
| Location | Kottaiikkadu, Chengalpattu Dist., Tamil Nadu |
| Number of Cages | 10 square cages |
| Number of Beneficiaries | 36 (SC) |
| Type of the Cage | GI square cage |
| Size of the Cage | Inner (4 x4 m) and Outer (5.5x5.5 m) |
| Depth of Water (m) | 4-5 m |
| Species Farmed | Asian Seabass (<i>Lates calcarifer</i>) |
| Average Stocking Density (Number/ m ³) | 16 (Number/m ³) |
| Average Stocking Size (Total length in cm) | 13-19 cm |
| Type of Seed (Wild/ Hatchery) | Wild and hatchery produced |
| Crop Duration (months) | 9-10 months |
| Feed Type | Low value fish |
| Number of Harvests/ Crop | One time |
| Average Size at Harvest (kg) | 0.6-2.3 kg |
| Survival (%) | 45-50% |
| Feed Conversion Ratio | 1:4.8 |
| Average Production (in tonnes)/ Cage/ Crop | 0.25-0.40 tonnes/cage/crop |
| Average Yield (kg/m ³) | 4-6.4 (kg/m ³) |
| Farm-gate Price (₹/ kg) | ₹ 350-380 |

For the assessment of water quality and other environmental parameters in and around the cage culture site, the following samples were also collected on monthly basis, viz., water, phytoplankton, zooplankton and sediment. Assessment of health and growth of fishes was made during every visit.



Training Programmes and Outreach Activities

Realizing the importance of skill development and technology dissemination for achieving the true potential of mariculture, multiple training programmes and demonstrations were carried out on different culture methodologies. Different aspects of cage culture including cage fabrication, installation and maintenance, assessment of environmental parameters, feeding and disease management, harvest and sources of financial support available for cage culture were apprised to trainees.



Publications for Knowledge Building on Latest Technologies



Two training manuals were brought out in local language for the information dissemination and knowledge enrichment among the beneficiaries. The technical aspects covered in the manuals include design and construction of cages, mooring, suitable marine finfish species for cage farming, feeding, disease management, good management practices, harvesting techniques, government schemes for the promotion of cage farming and related parameters.

