

# NOVEL CRAB FATTENING SYSTEM FOR COASTAL REGION

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## INNOVATIVE CRAB FATTENING SYSTEM IN VEMBANAD ESTUARY: SUCCESS STORY OF TWO ENTREPRENEURIAL FISHERIES GRADUATES IN KERALA

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### PROBLEMS/CONSTRAINTS

Estuaries are important coastal ecosystems, which provide nursery habitats for many marine/brackishwater fish and crustacean species of commercial and livelihood significance. Cage culture is a major fish farming activity practiced in the estuarine waters of the west coast of India for more than two decades. Though it has evolved as a major source of livelihood for the fishermen in the coastal region besides fishing, pollution-associated water quality deterioration affects cage farming as it results in mass fish kills and stock loss. So, any intervention to compensate the loss or to add to the income of the farmers needs to be appreciated. It can be noted that about 25% of the water area inside and outside the cages remain unutilized where some new ideas can generate increased income for fish farmers. In this context, two young fisheries graduates, **Mr Arun Das NH and Ms. Aswathy T**, who have been incubated at **Kerala University of Fisheries and Ocean Studies, Kochi and ICAR-CCARI, Goa** for aquaculture and integrated farming systems successfully demonstrated a modified crab fattening system at Cheppanam, Kochi as a significant additional income source for the fishermen operating in estuarine regions.



### INTERVENTIONS



The technology uses a modified system from the existing crab box and barrel types. Properly designed FRP drums are used as crab fattening units with provisions for water exchange, feeding and waste removal. Feeding is carried out with low value fish collected from local fish markets. 200 drums can be operated within an area of 1500 m<sup>2</sup> near the cage unit. During a span of 20-30 days of fattening, the water crabs of 400-500 g will be grown to 1000-1500 g and marketed through dealers for export in live condition. The average cost, total returns, net profit and BC ratio per barrel for 20-30 days of fattening are Rs. 950, Rs. 2300, Rs. 1050 and 2.1, respectively. The system can generate an additional monthly income of Rs. 800-1000 per barrel for the fishermen/farmers. The system needs continuous monitoring of crabs especially for feeding and health management. The support and ITK from local fishermen, **Mr. Sidhan**, a venerable sage of the estuaries of Kerala is also associated with the farming system. His traditional knowledge and wisdom help the team to source the water crabs from the natural waters.

### IMPACT

Crab is sensitive to heat stress and the current technology is climate resilient since the barrel system keeps the crab about 0.8-1.2 m under water and reducing the water temperature by 1-1.5 deg. Cel. The technology can benefit about 20000 coastal fishermen operating in the estuaries to increase their average annual income by 75-90%. The value of an individual crab can be increased by about Rs. 1400-1600 in a span of 20-30 days of fattening. The fattening system can also be operated as a backyard activity near the estuarine regions irrespective of the presence of cages or other farming systems. A total of 100 farmers/entrepreneurs got trained already and about 25 famers initiated the crab fattening in different parts of Kerala.

