



PARTICIPATORY APPROACH FOR ESTUARINE FISHERIES MANAGEMENT

Success Story/2022-17

PARTICIPATORY SMALL-SCALE FISHERIES MANAGEMENT IN ZUARI ESTUARY: A COMMUNITY-BASED APPROACH TO FISHERIES SUSTAINABILITY

Authors: Dr. Sreekanth G. B., Senior Scientist (Fisheries Resource Management)
Shri Trivesh Mayekar, Scientist (Fish Genetics & Breeding)
Mr. Amit S. Patil, (YP-I), ICAR- CCARI, Old Goa

PROBLEMS/CONSTRAINTS

Fish catch from the Zuari estuary showed a fluctuating trend in the last decade (700-1000 tonnes annually). The gillnet fishing in the estuary used mesh sizes ranging from 18 to 52 mm to catch multispecies such as white sardines, mackerel, sardines, silver bellies, mullets, and shrimps. Due to the use of small meshed gillnets (< 30 mm mesh size), the proportion of juveniles was more in the fish catch (more than 50%). The indiscriminate catch of juveniles of fish species would cause growth overfishing and a reduction in the fish catch in long term. In this regard, managerial interventions are required to prevent the juvenile catch and to improve the fishery.

INTERVENTIONS

1. The fishing community assisted study by the Institute during 2014-2020 yielded a total of 400 finfish and shellfish species from the estuary. Institute and fishermen of Zuari estuary evolved a participatory approach to manage the fishery.
2. Under the Tribal Sub Plan project of Govt. of India, gillnets of greater than 30 mm mesh size (36, 42 mm), ropes, and life jacket floats were provided to 100 fishermen of the estuary.
3. The fishing activities involved five mesh sizes (18, 30, 36, 42, and 52 mm) of which two were (36 and 42 mm) given under the STC project.
4. Regular visits and awareness programs were conducted at the fishing village to make them aware about the sustainability of estuarine fisheries.

IMPACT

1. The mean length of fish caught, and the value of the catch was significantly higher in large meshed gears and the fishermen earned a better return from the use of 36 and 42 mm compared to the small meshed gears.
2. The average income earned by an individual fisherman in a day from fishing using different mesh-sized gears were Rs. 780, Rs. 810, Rs. 1025, Rs. 1105, and Rs. 1010 respectively for gillnets of mesh sizes 18, 30, 36, 42 and 52 mm respectively.
3. The catch of juvenile fish was reduced by about 25-30% in fishing operations. Similarly, the income of the fishermen has improved by 30-40%.
4. Involving the fishermen in our initiatives brought awareness on large mesh-sized gill nets and to improve the economic efficiency in fishing.
5. A mesh size of 36 and 42 mm can be recommended for sustainable fishing in the estuary considering the juvenile catch, and value of the catch.
6. The future initiatives would also include monitoring of the catch, locating the fishermen grounds (safety measures), involvement of fisheries management (to regulate indiscriminate fishing), and development of an online marketing channel for fish catch (to ensure premium price for the fish catch).
7. About 300 fishermen are benefitted from this intervention of the institute on 'sustainable fishing operations'.



ADDRESS AND CONTACT DETAILS:

A group of 100 traditional fishermen (ST- Gawde Tribe), Tiswadi, North Goa, Goa.

Shri Sanjay Pereira, Shri Shantadurga Fishermen Association, Tiswadi, North Goa, Goa, Phone no.: 9834664264