



MARINE FISHERIES INFORMATION SERVICE

**TECHNICAL AND
EXTENSION SERIES**

No.4
December 1978

**CENTRAL MARINE FISHERIES RESEARCH INSTITUTE
COCHIN, INDIA**

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

EXPERIMENT ON POLYCULTURE IN A BRACKISH WATER FISH FARM IN DAKSHINA KANNADA (KARNATAKA)*

The Karnataka state is having about 5000 ha of brackish water areas suitable for fish culture. In order to study the technical feasibility and economic viability of fish culture in this region a series of experiments are being undertaken by the Research Centre of CMFRI, Mangalore.

Experiments on polyculture of fishes in the brackish water fish farm at Mulky (30 km north of Mangalore) were carried out from November 1976 to September 1977. The experimental pond having an area of 0.5 ha formed a part of the fish farm located

near the confluence of the rivers Shambhavi and Pavanji. The pond has a muddy bottom, the depth being 1 to 1.5 m. Free flow of water to and from the field was maintained through a concrete pipe of 30 cm. diameter laid in between the experimental pond and the adjoining field. By repeated dragnet fishing predatory fishes and other undesirable organisms were eradicated from the field in November. A fine meshed velon screen was placed at the two ends of the pipe to prevent the entry of undesirable organisms into the field and the escape of the stocked fishes. Seeds of mullet (*Liza macrolepis*) and prawn (*Penaeus indicus*) were collected

from the adjoining water area and were stocked on 16th November 1976 at a rate of 700 and 1340 respectively. 1800 fingerlings of *Sillago sihama* collected from the Coondapur estuary were transported and stocked in the pond along with mullets and prawns. After 191 days, the stocked fishes and prawns were harvested by drag netting. The percentage recovery of mullet and *P. indicus* was 38 and 33 respectively. In the case of *Sillago sihama* the rate of recovery was only 1.6%. However, a few more specimens were caught after about 5 months. During the period of culture *P. indicus* grew from 37 mm to 105 mm, the mullet from 40 mm to 220 mm and *Sillago sihama* from 62 mm to 105 mm.

After the harvest of prawns and fishes, 500 numbers of milk fish were introduced into the pond on 30th May, '77 and were cultured for 111 days. During this period the fish grew from an initial size of 37 mm to 249.4mm.

The results of these experiments indicated that fishes like mullets, milk fish and *Sillago sihama* and the prawn, *P. indicus*, could be cultured advantageously in the brackish water fields of the Mulky region. Since the fields are found to be very productive, no artificial or supplementary feeding is required for the culture of these fishes. Further experiments on intensive culture of the fishes and prawns in the brackish waters at different centres in Karnataka is progressing.

* By S. Ramamurthy, M. H. Dhulked, N. S. Radhakrishnan and K. K. Sukumaran

