View of sea cage farm at Mundra, Gujarat

CMFRI establishes a Pilot Farm in the outfall channel of the Coastal Gujarat Powers Ltd., Mundra, Kutch District, Gujarat

Following the visit of the Director, CMFRI and the team of scientists during September, 2012 to the Coastal Gujarat Powers Ltd (CGPL), Mundra of the Tata Powers against the invitation of the CGPL authorities for assessing the suitability of extensive outfall channel of the CGPL for sea farming, a pilot scale sea cage farm has been established in the outfall channel of the CGPL, Mundra jointly by the CGPL and the Veravel Regional Centre of CMFRI. A customized sea cage for the running waters of the outfall channel was designed and fabricated by the scientists of the Regional Centre, Veraval. Two square cages of 5m size made of Galvanised Iron pipes of 1.5" size, with base collars and hand rails was fabricated at the site and mounted with the square shape culture nets of suitable size procured.

These cages are deployed in nearly 2km long masonry outfall channel midway from the discharge point of the factory and provided with walkway from the embankments for easy access to the cages. The cage frames and the walkway are kept afloat using sufficient numbers of 200L HDPE barrels mounted on the base collars. The average width of the masonry outfall channel where the cage farm established is 250m and the depth is 4m (average) with a moderately fast (6, 30,000 cub. meter per hour) unidirectional flow of discharge seawater towards the sea. The physico-chemical parameters of water in the channel are all in the ideal range for marine fish farming save the salinity of the water which stood at comparatively elevated levels of 38ppt or above.

The cages have been stocked with 30 numbers of Cobia, *Rachycentron canadum* of average 336g, collected and transported from the multispecies Seacage Farm of the Regional Centre off Veraval during December, 2012. The stock is being fed with low value fishes such as the clupeids, lizardfishes, soles etc collected from the nearby fish landing centres. The water quality and fish growth are being monitored on a bimonthly basis and the initial results of fish growth are encouraging. This will be a first ever effort in India to utilise such water bodies for fish farming. With increased number of thermal and nuclear power plants being commissioned all along the coastal areas to meet the energy needs of the country, it will be appropriate to carry out research on sea farming in these water bodies in collaborations with the concerned corporate bodies and standardise the protocols for farming of various species so as to increase the fish production in the country and provide quality livelihood to the people affected by such developments. As these are perennial running water systems, the opportunities are golden for utilising these for brood stock development and seed production of marine fish and shellfish species.

(Reported by K. Mohammed Koya, Suresh Kumar Mojjada, Sreenath K.R., Gyanaranjan Dash, and Swatipriyanka Sen, Veraval Regional Centre of CMFRI)

Installation of sea cages in the outfall channel of CGPL, Mundra, Gujarat