

# Bringing the Adyar Creek back to life can also mean restoring livelihoods of the local population

by Expert Contributors | Jul 16, 2018 | Environment | 0 comments



By Magentic Manifestations (Wikimedia Commons)

## English, தமிழ்

Adyar creek is one of the primary and vibrant estuarine ecosystems of Chennai. In the 1950s, the department of fisheries, government of Tamil Nadu, was involved in the setting up of fish and shrimp farms adjacent to the creek under the all-India network project on fish farming. It was one among the first brackishwater shrimp farms in south India. But in later years, with the urbanisation of Chennai, the Adyar estuary lost its pristine condition along with the rich fauna, and was under great ecological stress due to progressive encroachment, discharge of untreated sewage, effluents, and solid waste disposal.

As a result of degradation, many vital biological attributes of Adyar estuary such as clean brackishwater, faunal and floral diversity and its role as spawning and nursery ground of commercially important finfish and shellfish were lost. In order to restore the ecology of Adyar estuary, the government of Tamil Nadu has taken up ambitious restoration measures. The eco-restoration activities of Adyar creek under the Chennai Rivers Restoration Trust (CRRT)

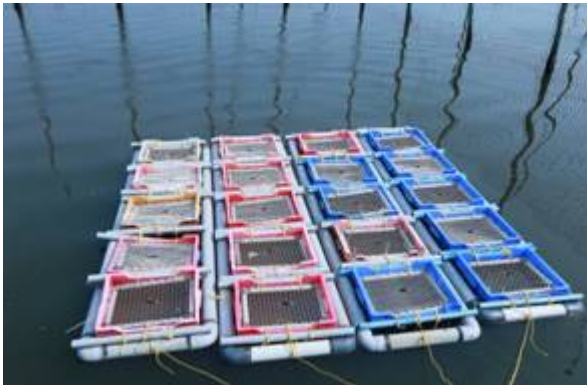
was launched in January 2008, in an area covering (58 acres), with a budget of around Rs 60 crore, witnessing the rebirth of Adyar creek.

At this point, in 2015, the ICAR-Central Institute of Brackishwater Aquaculture (CIBA), under Government of India, took up a baseline study for assessing the water quality and biological indicators of the Adyar Creek jointly with CRRT. Results revealed that the biotic and abiotic indicators of the creek were within the desirable limit and could be used for brackishwater aquaculture initiatives. For evaluating the suitable candidate species for farming in this water body, an experiment was initiated during 2016-17 with selected finfishes and shellfishes in cage and pen. Popular local species such as milkfish, *mystusgulio*, seabass, snapper, pearlspot and mudcrab were used in the study.



Mud crab culture at Adyar creek

This study revealed that the restoration effort by CRRT has been fruitful and the estuary ecosystem is slowly regaining its life and the conditions are suitable for growing the fishes. Considering the potential, CIBA explored the possibility of farming of suitable brackishwater shellfish and finfish, using sustainable farming techniques such as pen and brackishwater cage units, involving the nearby villages as a partner in the fish farming. Three nearby villages, Srinivasapuram, Mullikuppam and Mullimanagar, adjacent to the Adyar Creek, have been identified as partners in 'sustainable brackishwater aquaculture' that would support livelihoods.



Brackishwater pen culture and cage farming were chosen in the first milkfish and mudcrab farming taken up during December 2017 to February 2018. CIBA scientists provided the technological and input support and worked with the selected group from the village. During the farming period, they faced the problem of water

exchange in the creek, due to the poor water flow into the creek where fish and crab culture units were maintained. The incoming water from the sea towards Adyar creek from the month of January has been progressively reduced due to the closure of the Adyarbar mouth. The sandbar formation prevents exchange of water between the sea and Adyar creek, leading to the deterioration of the water quality in the creek, creating a system not conducive for life in the estuary, ultimately leading to the mortality of the farmed fishes. In spite of these adversities, the beneficiaries in the villages realized Rs 18785/- worthy of fish and crab through partial harvest in the month of February 2018.

Brackishwater aquaculture Initiatives by CIBA and CIBA in the Adyar estuary with the participation of self-help groups from nearby villages has revealed the potential of the estuary as a food production system, with scope for generating employment and income generation. However, obstruction at the barmouth of the Adyar estuary especially during the summer months due to sandbar formation has emerged as a constraint, in keeping the aquaculture activity and healthy biotic condition in the waterbody.



In order to keep the living environment in the estuary, and promoting aquaculture which has the potential to provide food, employment and income to the nearby village folks, CRRT has already spent more than Rs 60 crore in cleaning and restoring life to the valuable estuary in the heart of Chennai city. Regular dredging to enhance and ensure free flow of water to the estuary is a requirement, which could be

coordinated by CRRT along with other related government department, to upkeep the life of Adyar estuary.

The cleaning and restoration of the dead Adyar estuary to life through a sincere effort by the state government and using the water body for production of food livelihood activities, can be a model for other such estuarine water bodies in urban conditions.

*(This article has been compiled by P Mahalakshmi, C P Balasubramanian, M Kailasam, R Saraswathy, T Ravisankar, Aritra Bera, C V Sairam, R Aravind, S Sivagnanam and K K Vijayan of Central Institute of Brackishwater Aquaculture)*