
FISHERIES MONITORING, CONTROL AND SURVEILLANCE IN INDIA

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1. ABOUT INDIAN FISHERIES

Fisheries form an important source of food, employment, trade and economic activity. With annual fish production of about 4.9 million t (2.7 million t from the marine sector and 2.2 million t from the inland sector) India ranks 6th among major fish producing countries of the world. The contribution of the sector to GDP is in the order of Rs 109 630 million (\$US 1 = Rs 42). Exports are some 378 000 t, valued at Rs 41 210 million. Fisheries thus play an important role in the economy of the country.

Fisheries MCS in India is rather complex due to the vast EEZ, long coastline, multiple types of fleet, participation of foreign flag vessels, jurisdictional demarcations, etc.

The Indian EEZ covers an area of about 2.02 million km². There are two island archipelagos: Lakshadweep situated in the Arabian Sea and Andaman & Nicobar in the Bay of Bengal. The continental shelf is about 500 000 km² and the coastline is about 8 040 km. The potential yield of fishery resources from the EEZ is estimated to be 3.92 million t.

With the developmental efforts over the successive plan periods the marine fisheries have made remarkable progress during the last decade. The fishing fleet consists of 172 000 traditional craft, 35 000 mechanized boats and 180 deep-sea shrimp trawlers, contributing respectively 61%, 38% and 1% to the annual marine sector production of about 2.7 million t. The inner shelf areas are more-or-less fully exploited where the fishing pressure is comparatively high.

The deep-sea and oceanic sectors are relatively underexploited. Apart from the limited number of Indian-flag vessels, foreign fishing vessels have been operating under charter and test fishing schemes, and still operate under leasing and joint venture projects.

The jurisdiction of territorial waters is with the respective State/Union Territory Governments. Altogether there are 13 such coastal States/Union Territories in the country. Beyond the territorial waters, jurisdiction rests with the Central Government.

2. MCS – THE IMPERATIVE NEED

The need for effective management measures involving sustainable resource utilization at optimum levels, with due consideration for ecosystem biodiversity and conservation is fully recognized in the country. In the coastal sector, the thrust is on monitoring and enforcing fisheries conservation

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and management measures, with the principal objective of ensuring that resources are exploited in an orderly and sustainable manner by the different sectors involved. In the offshore sector, the focus is on regulating and controlling the operation of foreign-flag fishing vessels in accordance with the relevant statutes.

Thus there is an imperative need for effective MCS mechanisms in both the coastal and offshore sectors, though with distinctly different objectives.

3. LEGAL FRAMEWORK

At the global level, UNCLOS (1982) provides the legal framework for conservation and management of resources. Part V addresses the rights, duties and responsibilities of coastal nations with respect to conservation and management of marine living resources within their EEZs. Articles 61 and 62 provide the rights as well as responsibilities of the States to adopt conservation measures to ensure that the living resources falling in their respective EEZ are not overexploited and that the stocks are maintained in a healthy condition, and further to ensure that the living resources are utilized optimally.

At national level, with the enactment of *The Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones of India Act, 1976*, the country extended its jurisdiction up to 200 nautical miles from the coast and acquired sovereign rights and the consequent responsibilities for conservation and management of living resources within the EEZ.

The *Maritime Zones of India (Regulation of fishing by foreign vessels) Act, 1981*, and the rules framed thereunder in 1982, provided for operation of foreign fishing vessels in the Indian EEZ. Under the subsequent fishery policies, four types of activities were permitted, namely chartering, test fishing, leasing, and joint ventures. The chartering and test fishing schemes have already come to an end, while the leasing and joint venture schemes continue to operate.

At state level, in order to safeguard the interests of traditional fishermen and to control and regulate fishing within the territorial waters, several States/Union Territories have enacted a Marine Fishing Regulations Act (MFRA) providing the basic legal framework for MCS in coastal waters.

4. MONITORING

Monitoring involves a continuous check on health of fish stocks and measurement of fishing effort and landings. The data on fish stock assessment, size structure and relevant information on health of fish stocks are collected by the national fisheries institutions. The maritime State/Union Territory Governments are responsible for regular and systematic collection of landing statistics within their respective area. The data on fishing craft are also updated frequently. The information is supplied to the central Ministry of Agriculture, where the statewise and national statistics are compiled and published. The Ministry also provides the fish landing statistics to FAO with respect to Fisheries Statistics Areas 51 and 57.

For monitoring of catches by the foreign flag vessels operated under the charter scheme, there is a well defined system of inspection by designated officers of the Fishery Survey of India after every voyage, and submission of voyage reports by the chartering companies. Joint venture and leased foreign vessels are also required to provide voyage reports giving detailed effort and catch information.

5. CONTROL

As the traditional craft and mechanized boats operate largely within the territorial waters, control of these sectors is vested in the respective State/Union Territory Governments. As regards deep-sea vessels, the Central Government is responsible for issuing licences.

The operation of foreign-flag vessels operating under different schemes are licensed and controlled exclusively by the Central Government. The licences stipulate restrictions in terms of fishing method, type of gear, area, depth, codend mesh size, etc.

The MFRA at State/Union Territory level provide for restrictions in terms of area and depth for the various sectors participating in the fishery, and also in fishing gear and mesh size. In addition, some of the States enforce control mechanisms through executive orders. Closed fishing seasons, bans on trawling during monsoon, etc., are implemented by some of the States through such orders.

6. SURVEILLANCE

For implementation of MFRA provisions, some of the States have organized patrolling at sea by speed boats to ensure compliance with area and depth restrictions, to safeguard the interests of the small-scale sector and also for ensuring compliance with closed fishing seasons.

Under a centrally sponsored scheme, the Central Government provides assistance to state Governments for MFRA enforcement, with the objective of protecting the interests of traditional fishermen, to conserve and regulate fishing within the territorial waters, and to popularize the concept of fishery management for proper utilization of coastal fishery resources. Under this scheme the Central Government will meet 100% of the capital cost of 30 patrol boats to be deployed for surveillance in territorial waters.

Surveillance beyond the territorial waters is undertaken by the Coast Guard, under the Ministry of Defence of the Central Government, which is the maritime law enforcement agency under the 1976 and 1981 Acts. The Coast Guard's functions include monitoring the operation of foreign-flag vessels operating in the EEZ under licence. The Coast Guard also ensures that unauthorized foreign fishing vessels do not operate in Indian waters.

7. STRENGTHENING OF MCS MACHINERY

With the increased participation of different sectors in the fisheries and with fishery production nearing the maximum sustainable yield (MSY) level there is scope for establishing more effective and coordinated MCS mechanisms. It is of central importance to effective fisheries resource utilization, conservation and management in the EEZ.

