

**A REVIEW OF THE EXISTING REGULATIONS
IN THE MARITIME STATES OF INDIA IN RELATION TO
EXPLOITATION OF FISHERY RESOURCES AND
THEIR CONSERVATION AND MANAGEMENT***

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ABSTRACT

The rapid growth of the mechanised fishing fleet in the country consequent on the boom in the export trade for frozen shrimp, has increased the fishing pressure on the coastal marine fishery resources leading to stagnation of fish catches and economic overfishing. The consequent competition between the mechanised and artisanal sectors for the same resources lead to frequent conflicts. This has stimulated many maritime States to enact Marine Fishing Regulation Acts for purpose of safeguarding the interests of both the indigenous and industrial fisheries sectors. These regulations are examined in relation to judicious exploitation and conservation of the fishery resources.

The management objectives are more or less similar in all the States and the Rules formulated are more directed towards avoiding conflicts between indigenous fishermen and the mechanised fishing vessels. Little attention has been paid to the management of the fishery resources as such. This is no doubt due to the lack of adequate information for formulating definite regulatory measures.

The importance of the States' capability to enforce the regulations effectively is stressed. Educating the fishermen about the principles of conservation of fishery resources and the benefits that can accrue to them if the regulations are implemented faithfully can go a long way in persuading them to adopt the methods willingly. Proper extension work along these lines is vital to the success of these management measures.

INTRODUCTION

AS EARLY AS 1897 the erstwhile British Government visualised the need to impose some regulatory measures to control fishing activities in inland and marine waters. However, the Indian Fisheries Act of 1897 expressly banned only the use of explosives and poisons to catch fish and provided for the enactment of rules and regulations by the Provincial Governments for the management of fishery resources.

Apart from issuing licences for the operation of various types of fishing gear in the inland waters (including backwaters) the provincial governments did not find any pressing need to regulate fishing in the coastal waters as the fishery was mostly artisanal in character.

The sudden boom in the export market for frozen shrimp in the late fifties was a turning point in the marine fishery sector. With the introduction of mechanised fishing vessels using trawl nets in the early sixties to capture the prawns, the rapid expansion of the mechanised fishing fleet, the induction of purse

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seiners in Karnataka, Goa and Kerala in the late seventies and the influx of large number of big trawlers in the early eighties, the fishing pressure on the marine fish resources increased tremendously leading to economic overfishing and stagnation of fish catch. The consequent competition between the mechanised and artisanal sectors for the same resources lead to frequent conflicts. These developments made the Government of India issue the following guidelines to the State Governments in March 1978.

(a) The waters upto a distance of 5 km from the coast may be reserved exclusively for non-mechanised fishing craft.

(b) Mechanised fishing vessels should operate only beyond the 5 km limit from the coast.

(c) Fishing vessels of 25 GRT (usually above 15 m OAL) which require to be manned by skippers under the existing rules should operate beyond 10 km from the shore.

These guidances were again modified in December 1980 as follows :

(a) The non-mechanised artisanal crafts may be allowed to operate exclusively upto a distance of 10 km from the shore.

(b) The small mechanised boats should operate beyond 10 km distance from the coast.

(c) Vessels of OAL 20 m and above should operate beyond 23 km from the coast, i.e. beyond the territorial waters.

Simultaneous with the issue of these guidelines, the Government of India, with a view to conserving the fisheries resources and also to providing protection to the artisanal fishermen, circulated a model bill to all the maritime States to formulate rules and regulations for management of marine fisheries to be passed

by the respective State Legislatures. However, so far only the States of Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu and Orissa have passed Marine Fishing Regulation Acts. Other States are following *ad hoc* measures to prevent or tackle conflicts between the artisanal and mechanised sectors.

THE MARINE FISHING REGULATION ACTS

Goa Legislature was the first to pass the Marine Fishing Regulation Act, followed by the other States :

State	Month of passing the Act	Month of issuing of Rules
Goa	Oct. 1980	Feb. 1981
Maharashtra	Sep. 1981	Feb. 1983
Karnataka	July 1986	Aug. 1987
Kerala	Nov. 1980	Nov. 1980
Tamil Nadu	Jan. 1983	Aug. 1983
Orissa	June 1982	Jan. 1984

The primary objectives and the order of priorities of all these Marine Fishing Regulation Acts are stated as follows.

(a) The need to protect the interests of different sections of persons engaged in fishing, particularly those engaged in fishing using traditional fishing craft such as country craft or canoe.

(b) The need to conserve fish and to regulate fishing on a scientific basis ;

(c) The need to maintain law and order in the sea ;

(d) Any other matter that may be prescribed.

All these Acts provide for (1) the registration of all fishing vessels, including non-mechanised country craft, at their respective base ports, (2) licensing of fishing vessels for fishing in

specified areas. (3) regulation, restriction or prohibition of fishing in any specific area by such class or classes of fishing vessels as may be specified, (4) regulation or restriction of the number of fishing vessels which may be used for fishing in any specified area, (5) regulation, restriction or prohibition of catching in any specified area of such species of fish and such period as may be specified, (6) regulation, restriction or prohibition of the use of such fishing gear in any specified area and (7) fixation of the hours in a day during which any person may carry on fishing in any specified area using such class or classes of fishing vessels as may be specified.

These Acts have certainly equipped the State Governments with the authority to regulate and control fishing activities in their respective States according to the specific local needs. The system of registering and licensing of all fishing vessels including non-mechanised country craft serves, besides many administrative requirements, the urgent need to have an authentic record of the number of the various types of fishing vessels operating from the different bases/ports along the Indian Coast.

This information is of vital importance to understand the distribution of fishing effort along the coast and is also basic to the formulation of the Plan Schemes by the Central and State Governments. In the absence of such authentic information the fishery administrators and scientists have to be content with estimates based on statistically planned surveys which have their own limitations, considering the diffuse nature of the fishing operations spread over a long coastline of over 6,000 Km.

The Rules formulated by Tamil Nadu and Goa also specify the information that should be supplied in the 'Returns' that should be filed by each registered fishing vessel at quarterly or monthly intervals. The Acts of the other States merely stipulate that the owner of each

registered fishing vessel should furnish to the Registering Officer 'at the prescribed time and in the prescribed manner such returns as may be prescribed'. These States should immediately spell out the type of information that should be given in these returns. The list of items mentioned in Form VII of the Tamil Nadu Marine Fishing Regulation Rules, 1983 is quite exhaustive and may be followed by the other States as well. If such information could be collected and made available to the scientific organisations concerned, the latter could provide authentic information on the biological and economic status of the fishery resources for proper monitoring and management of the marine fisheries.

Although the Acts have empowered the State Government to frame Rules to regulate fishing activities the regulatory measures enacted so far are limited. The salient features of these measures formulated by some States are briefly mentioned below.

Kerala

(a) Fishing nets such as ring seine, pelagic seine and midwater-trawl are totally prohibited in the entire territorial waters (12 nautical miles from shore) of Kerala in all seasons, by all types of boats.

(b) Mechanised vessels below 25 GRT including small mechanised trawlers are permitted to fish only beyond 30 m depth line from Kollengode to Paravoor and beyond 20 m line between Paravoor and Majeswaram.

(c) Vessels of 25 GRT and above are allowed to fish only beyond the territorial waters.

(d) Bottom trawling by mechanised vessels is prohibited from sunset to sunrise in the entire territorial waters.

(e) Bottom trawls using cod-ends with mesh size less than 35 mm (stretched mesh) are also not allowed to operate in territorial waters.

(f) Country crafts and indigenous crafts with outboard engines can fish anywhere in the territorial waters with any type of gear except those mentioned under (a) above.

Tamil Nadu

(a) Mechanised fishing vessels shall not be used within 3 nautical miles from the shore.

(b) Non-mechanised vessels shall be used for fishing within 3 nautical miles from the shore.

(c) Mechanised fishing vessels shall leave the notified places of berth only after 5 a.m. and should report back at the place of berth not later than 9 p.m. and shall remain there till 5 a.m. of the following day.

(d) As an *ad hoc* measure to avoid clashes between fishermen using mechanised and indigenous vessels for night fishing which is prevalent in the Palk Bay region, the mechanised vessels are allowed to fish only on Monday, Wednesday and Saturday nights while the indigenous boats are operated on the rest of the 4 nights in the week. The mechanised boat owners association is entrusted with the work of issuing tokens to mechanised boats on the allotted day after collecting a nominal fee of Rs. 3 to Rs. 5 per trip depending on the fishing centre. Apart from this token money, each mechanised boat operator deposits one good sized prawn to the Association. The sale proceeds go into the general fund, which is used to pay compensation to damages that may, inadvertently, be caused to the indigenous gear.

Karnataka

Although the 'Acts' and 'Rules' have been published by the Karnataka State Government, no specific regulatory measures have been announced so far. However, the conventions followed by the fishing community in Karnataka are given below:

(a) Rampani nets operate from 15th September to 15th April. A coastal area upto 5 km is reserved for Rampani and traditional fishing operations.

(b) No mechanised vessels operate during the monsoon months. They commence operation on the 1st of September. Shrimp trawlers are allowed to operate within 1.6 km (one mile) of the shore in September alone. From October to May they should operate only beyond 5 km from the coast.

(c) Purse seines are allowed to operate beyond 8 km from shore.

(d) Big trawlers shall operate only beyond 16 km.

(e) No night fishing by purse seiners is allowed.

Goa

(a) Apart from fishing vessels, even the fishing nets will have to be registered and licensed.

(b) No person shall use a net with a mesh size of less than 24 mm for catching fish and 20 mm for catching prawns.

(c) No stake nets shall be erected in estuaries or backwater canals within 100 m from the bank or on banks of shellfish or in regions where small drag nets are usually used. The distance between two rows of stake nets shall be at least 500 m. Fishing stakes should not be located in the normal navigational channels.

Maharashtra

(a) No mechanised fishing vessels of any type with more than six cylinder engine shall be operated within the territorial waters.

(b) No mechanised vessel fitted with more than 3 cylinder engines shall use gill nets for fishing within territorial waters off Thane District.

(c) Trawl gear shall not be used by mechanised fishing vessels in the following areas :

- (i) From seashore upto 5 fathom depth line off Thane, Bombay suburban, city of Bombay and Raigad Districts and off the area between Bankot and Burondi in Ratnagiri District.
- (ii) From the seashore to the 10 fathom depth zone off the area south of Burondi in Ratnagiri and off Sindudurg District.

(d) Mechanised fishing vessels are banned from fishing during the monsoon season *i.e.* from 1st June to *Narali Purnima*.

(e) Mechanised vessels operating trawls is prohibited between 6 p.m. and 6 a.m. There is no restriction of timings on other fishing gear operated by mechanised vessels.

(f) Purse seine gear should not be operated within the territorial waters.

Gujarat

No Marine Fishing Regulation Act has been passed by the State Legislature. However, the Port authorities strictly ban fishing by mechanised vessels from 15th May to 15th September as a measure of safety during the rough monsoon period. But, the dug-out canoes and indigenous craft fitted with out-board motors are allowed to fish during the monsoon.

Pondicherry

The Union Territory has not yet formulated any Marine Fishing Regulation Act. However the following conventions are followed :

(a) Mechanised fishing vessels should operate beyond 7 fathom depth.

(b) Mechanised fishing vessels should operate only between 6 a.m. and 6 p.m. to avoid damage to non-mechanised craft operating during night time.

Orissa

(a) Non-mechanised fishing crafts shall be allowed to operate freely without any restrictions. Waters upto 5 km from the shore shall be reserved exclusively for such fishing crafts.

(b) Mechanised fishing vessels upto 15 m of length shall be allowed to operate beyond 5 km limit from the coast.

(c) Mechanised fishing vessels of 25 GRT and above or above 15 m of length shall be allowed to operate beyond 10 km from the shore only.

Further Orissa is the only State which has fixed the optimum number of mechanised vessels of various categories for the different fishing bases :

Fishing Base	Optimum No. of vessels below 15m length or below 25 GRT	Optimum No. of offshore vessels above 15m length	Optimum No. of deep sea vessels above 25 GRT
Kirtania ..	45	—	—
Kasafal ..	35	—	—
Chandipur ..	250	—	—
Adhuan ..	50	—	—
Dhamara ..	100	15	—
Paradeep ..	300	10	40
Astarang ..	100	—	—
Ganjam ..	120	15	—

Andhra Pradesh

Although this State has not enacted Marine Fishing Regulation Act, the State Govt. has issued orders to the effect that

(a) Only non-mechanised fishing craft should be allowed to operate upto 10 km from the shore.

(b) Mechanised vessels should operate beyond the 10 km limit from the coast.

(c) The large mechanised vessels above 20 m length should operate beyond 23 km from the coast.

REMARKS

It will be seen that all these States have formulated some restrictions on the areas that can be fished by different classes of fishing vessels mainly to avoid conflicts between them. Although the Central Government in their guidelines have defined these areas in terms of distance from the shore, many States have rightly taken depth as the criterion for the purpose, because the fishermen can easily measure the depth, but not the distance from the shore. Depth criterion may be followed by all the State. The differences in the depth limits specified by the various States is understandable on the basis of the differences in the width and slope of the continental shelf in different regions. However, the order of the Andhra Pradesh Government restricting the mechanised vessels to fish beyond 10 km seems to be unrealistic since the continental shelf is steep on the Andhra Coast and at a distance of 10 km the depth may be too great for the small mechanised vessels to fish.

Except for Kerala and Goa no other State has specified legal mesh sizes for the trawl cod-ends. In Goa the minimum allowed mesh size is 20 mm, while it is 35 mm in Kerala. The cod-end mesh size of 35 mm has been scientifically established as the optimum dimension for a prawn fishery dominated by the two species *Parapenaeopsis stylifera* and *Metapenaeus dobsoni* by Panicker and Sivan (1965). Similarly George *et al.* (1974) have indicated that the optimum mesh size of cod-ends of the stake nets used in the Cochin Backwater is 20 mm.

The foregoing review of the provisions made in the Marine Fishing Regulations Acts of the various States brings out the limited scope of the Rules framed so far, admittedly due to the paucity of adequate information on the advisability or necessity for imposing more restrictions by way of limiting the number of fishing boats in specific areas, declaring closed seasons/areas for fishing, introducing catch quotas or minimum legal size for different types of fish and crustaceans, specifying minimum legal mesh sizes for different types of gear, etc. To study these aspects it is essential to constitute for each State a permanent Advisory Committee in which representatives from the State Fisheries Department, Research Organisations, Port Department and the Revenue Department will be members. Such a Committee will continuously monitor the changes taking place in the fishery and suggest suitable changes in the regulatory measures to be adopted by the State Government.

The regulatory measures proposed should be such that they could be enforced effectively by the States. Enforcement personnel and machinery may have to be strengthened in all the States by increasing the number of speed boats for patrolling the fishing grounds to see that the Rules are not violated. It should also be realised that unless the fishermen themselves voluntarily cooperate, no regulation could be enforced. Towards this end an aggressive extension programme to educate the fishermen in the principles of conservation of fishery resources and the benefits that could accrue to the fishermen by faithful implementation of the regulations will have to be taken up by the State Fisheries Departments. This is of vital importance to the success of these management measures.

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