

World Trade agreements and fisheries policy instruments

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Introduction

India being a republic with the essence of federal principles encapsulated in its constitution has vested very important responsibilities and power with its 28 states and 6 union territories. According to the constitution the state legislatures have the power to make laws and regulations with respect to a number of subject matters including water, land, fisheries as well as the preservation, protection and improvement of stock and the prevention of animal disease. As regards the implementation of strictures and regulations on matters concerned with the natural resources like fish the three major branches of the nation play equally important roles. They are the legislative, judicial and executive branches, which have been clearly envisaged under the constitution. But when it comes to implementation a smooth division of responsibilities between these federal pillars has also been delineated vide article 240 of the constitution which gives rise to the union list, state list and concurrent lists. The major features coming under union list are:

- (i) Entering into agreement with foreign countries and implementation of treaties, agreements and convention with foreign countries
- (ii) Shipping and navigation on inland waterways
- (iii) Maritime shipping and navigation, including shipping and navigation on their waters
- (iv) Regulation and development of inter- state rivers and river valleys
- (v) Fishing and fisheries beyond territorial waters

The points addressed to by the state list are the following:

- (i) Public health and sanitation
- (ii) Land
- (iii) Fisheries

Whereas the concurrent list attends to the following:

- (i)' Shipping and navigation on inland waterways as regards mechanically propelled vessels
- (ii) Fisheries

Needless to say, fisheries sector plays a very important role in the socio economic development of India. It provides employment to 7 million fishermen. The marine sector

pumps in an estimated 8000 crores INR by way of marine products export and another 200 million USD worth by seafood generation. Not to be left far behind the inland sector too contributes significantly to our GDP. As regards marine sector, from a coastline of 8129 km with a continental shelf of about half a million square kilometers and an EEZ spread to about 2.02 square kilo meters, an estimated potential of 3.9 million tons has been projected consistently in the past decade. The total production including both marine and inland sectors is around 7 million tons as per recent estimates.

With so much at stake and so many countrymen eking out a living from it, fisheries sector needs utmost care and planning when it comes to addressing sustainability and management of the resources. One such step with profound impact has been the legislations passed by successive Governments, which had direct or indirect impact on the fisheries sector.

Trade agreements which India is party to

Apart from the classic bilateral agreements, India is party to many regional trading arrangements (RTAs) which include structures such as free trade agreements (FTAs), preferential trade agreements (PTAs), and comprehensive economic cooperation agreements (CECAs). The following table summarises the TAs of which India is a party.

Table 26. 1 Trade agreements which India is party to

Type	Country/ countries	Features
Bilateral/ multilateral TA	Bangladesh, Bhutan, Srilanka, Maldives, China, Japan, South Korea, Mongolia	Specifies terms of commerce involving mutually beneficial concessions
Trade Treaty	Nepal	
Comprehensive Economic Cooperation Agreement	Singapore	
Framework Agreement	Gulf cooperation council nations, Association of Southeast Asian Nations and Chile	Setting the period for future substantial liberalisation by defining the scope of some new area of discussions.
Regional Trade Agreement	SAFTA with Pakistan, Nepal, Sri Lanka, Bangladesh, Bhutan and Maldives	To promote interests of people of South Asia, increasing economic development and social progress; supporting active partnership in the economic, social, cultural, technical, and scientific fields

Preferential Trade Agreement	Afghanistan, Chile, Latin American community (Brazil, Argentina, Uruguay and Paraguay)	To facilitate free movement of goods, services, capital and people.
Bay of Bengal Initiative for Multi Sectoral Technical and Economic Cooperation	SAARC, Thailand, Myanmar	Cooperation in 13 sectors like trade and investment, technology, fisheries, energy etc.
Association of South East Asian Nations (ASEAN)	India is a summit level partner to the ten member association	Key elements are FTA in goods, services and investment as well as areas of economic cooperation; Fisheries is a prominent sector covered.
Double taxation avoidance treaty	With 83 countries	Tax treaty giving benefits to capital gains with three countries viz. Mauritius, Singapore and Cyprus.

Although such bilateral and multi-lateral trade agreements cover many facets of Indian economy, fisheries sector has a role of prominence in SAFTA and ASEAN ventures. India has a legal framework in place to govern the loosely woven marine fisheries setup with a three dimensional perspective (local, regional (state) and national) in place and the understanding of such instruments would shape the future initiatives in view of the global marketing and ecological structures and strictures.

Fisheries legislation in India

Since introduction of legislations in fisheries sector the primary focus has always been on marine fisheries sector. The first such act was the one introduced in British India. The Indian Fisheries Act was introduced in 1857. Though few reviews and re-planning has been taking place subsequently, the major legislative interventions by independent India started only in the seventies. In 1976 Maritime Zones Act was propounded followed by Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act (1981) and Rules in 1982. The pioneering states to implement regulatory acts (MFRAs) were Kerala and Goa in 1980. The Coastal Regulation Zone Protection Act was passed in 1986. The Environment Protection Act was cleared in 2002. The same year witnessed the Biological Diversity Act also.

Towards achieving the main goal of sustainable fisheries, the following acts and regulations were framed:

- (i) Code of Conduct for Responsible Fisheries which came into being on 31st October 1995 which for the first time added a rider to the perpetual right to fishing of fishermen. The right carries with it the obligation, that is to do so in a responsible manner.
- (ii) Another act of relevance is the Wildlife Protection Act of 1973.
- (iii) A Coastal Zone Management Authority was formed in 2003.
- (iv) The Aquaculture Authority of India was established in 1997.

- (v) There was another variant of Coastal Regulation Zone act, which came into effect in 1991.

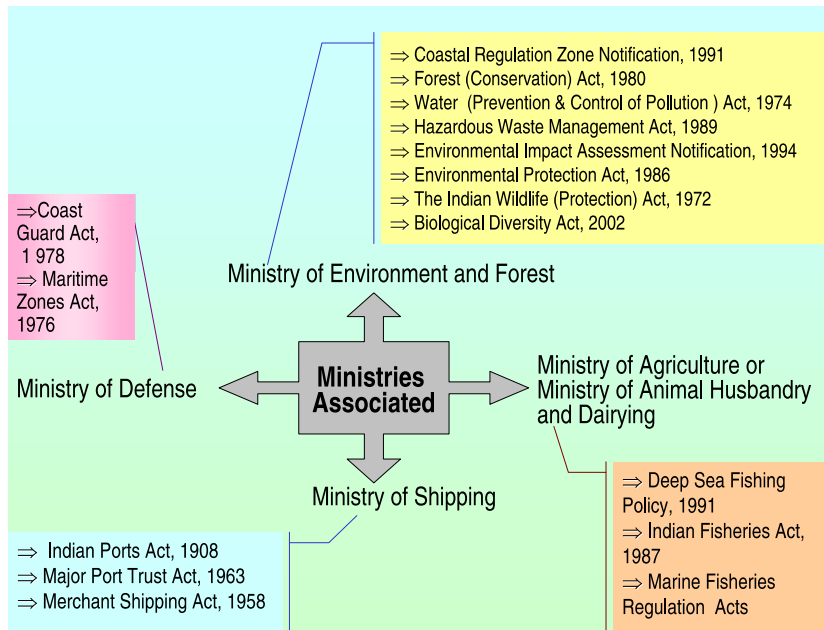


Figure 26.1 Ministries associated with Fisheries legislation

Yet another comprehensive insight into the existing regulations in our country from the Institutional angle would be as follows:

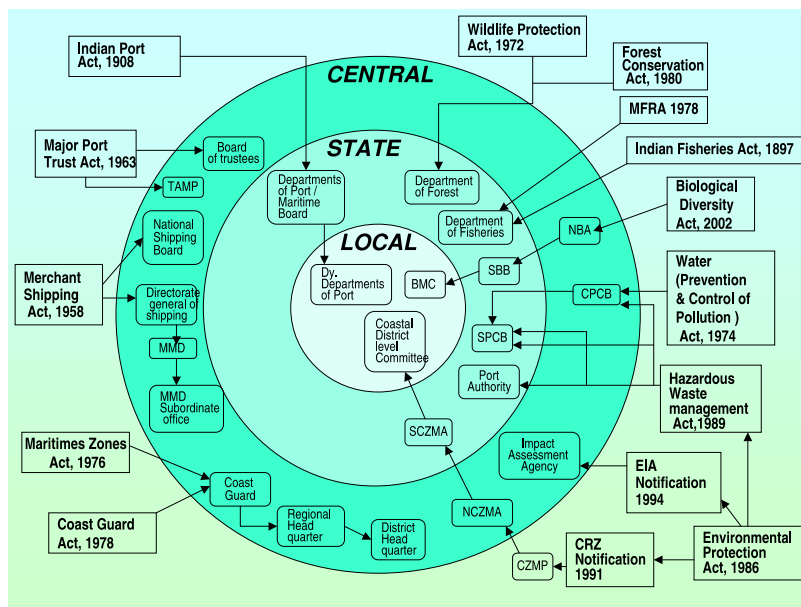


Figure 26.2 Regulations existing in India

An overview of existing policies in India

The Environmental Protection Act (EPA) of 1986 acts as an umbrella act under which a whole lot of activities could be channelised. The Coastal Regulation Zonenotification of 1991 aids in regularizing the various activities in the coastal zone. The Hon'ble Supreme Court's intervention brought in the issue of Coastal Zone Management Plans (CZMP) into focus with an instruction that all the coastal states must prepare their own plan by 1996. The Hazardous Waste Management Act 1989 paves way for hazardous waste management including import and export of such wastes. The Environmental Impact Assessment Notification of 1994 is to conserve and protect environment including that of the coastal precincts. Water (Prevention and Control of Pollution) Act 1974 which was subsequently amended in 1988 gives directions on the control of pollution from land-based sources. As an offshoot of this act Pollution Control Board was formed. The Indian Ports Act of 1908 was for enactment of procedures pertaining to port and port charges. It provides for rules for the safety of shipping and conservation of ports. The Major Port Trust Act of 1963 makes the provision for the constitution of port authorities for certain major ports in India and to vest the administration with control and management of such ports in such authorities and for matters connected therewith. The 1958 introduced Merchant Shipping Act aims at the control of pollution from ships and offshore platforms. The Coast Guard Act 1950 provides for levying of heavy penalties for the pollution of port waters. In 1993 Coast Guard under Ministry of Defence made directly responsible for combating marine pollution. The Maritime zones Act of 1976 describes various zones such as territorial waters, EEZ, continental shelf etc.

The Forest Conservation Act 1980 which was amended in 1988 paved way for protection of marine biodiversity. The Wildlife Protection Act of 1972 which faced amendments in 1983, 1985, 1991, 1997 and 2001 offers protection to marine biota. It further aims at creating conditions favourable for in situ conservation of fauna and flora. The 2001 amendment paved way for the inclusion of several species of fish, corals, sea cucumbers and sea shells in Schedule I and III. It was during this amendment the whale shark was placed in Schedule I. The good old Indian Fisheries Act of 1897 offered for the protection of fisheries against explosives or dynamites being deployed for fishing. The Marine Fishing Regulation Act, 1978 enshrined the following issues in it.

- (i) A model act, which provides guidelines to the maritime states to enact laws for protection to marine fisheries by regulating fishing in the territorial waters.
- (ii) The measures include the regulation of mesh size and gear, reservation of zones for various fishing sectors and also declaration of closed seasons.
- (iii) Laws were framed and amended from time to time by different maritime states.

Conventions to which India is a signatory

The following are the major international conventions which are abiding and applicable to India:

Table-26.2 International Conventions

UNCLOS	Disposal of ship wastes
Basel convention, 1992	The Basel Convention contains specific provisions for the monitoring of hazardous waste. A number of articles in the Convention oblige Parties (national governments which have acceded to the Convention) to take appropriate measures to implement and enforce its provisions, including measures to prevent and punish conduct in contravention of the Convention.
Ocean Policy Statement	Basic principles for ocean development
Convention on migratory species	Convention gives protection to many species of crocodiles, Sharks, turtles etc.
International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78)	Disposal of ship based wastes

Zoning and other regulations

The following are the salient snapshots of the steps initiated by various governments to regulate marine fishery activities.

In Maharashtra the operation of trawl net by mechanized fishing vessel is prohibited in some specific depth (5 fathoms and 10 fathoms). There is a complete trawl ban during monsoon and there is a prohibition on trawl gear operation between 6 pm and 6 am.

In Goa the area upto 5 km from the coast line is specified area and mechanized fishing vessels are prohibited from fishing in the area. Further there is restriction on mesh size of nets, viz 20 mm for prawns and 24 mm for fish etc.

In Karnataka the area upto 6 km from the shore or up to 4 fathoms is reserved for the traditional craft. The deep sea vessels are requested to operate beyond 20 km.

In Kerala the regulatory setup took legal form as early as in 1950. The Cochin Fisheries Act of 1950 which had a binding on the Travancore area formulated fishing rules. The rules and regulations paved way for Marine Fishing Regulation Act, Fisherman's Welfare Fund Act, Mechanised Fishing Boats Rules, Fisheries Service Special Rules etc. The area from shore up to 30 m line in the coast from Kollengode in the south to Paravoor is called the first zone. The area up to 20 miles line in sea along the coast line from Paravoor

in the south to Manieswar in the north spanning 512 km is called the second zone. Mechanised fishing except fishing by motorized country craft is prohibited in the first and second zones. The Government notification prohibiting the use of purse-seine, pelagic trawl and mid water trawl in the territorial waters has also been an offshoot of this regulation.

The other technicalities involved in regulations are as follows:

- (i) The code end mesh size of bottom trawl - 35 mm
- (ii) Ring seine mesh size - 20 mm
- (iii) Drift net mesh size- 20 mm
- (iv) Mini trawl, mid water trawl and bull trawl were banned.
- (v) Night trawling was prohibited
- (vi) A separate fishing ground was demarcated for traditional fishermen.
- (vii) The breeding season which coincides with the monsoon has been declared as a closed season.

As per Tamil Nadu fishery legislation, area up to 3 nautical miles reserved for traditional vessels. Fishing within 100 m below a river mouth is prohibited. No fishing gear of less than 100 mm mesh from knot to knot in respect of net other than trawl net shall be used. In Andhra Pradesh, the area upto 10 km from shore is reserved for traditional craft. Mechanized boats are allowed to operate beyond 10 km only. In the case of Orissa, non mechanized traditional craft shall be allowed to operate freely without restriction. Mechanized fishing vessels up to 15 m in length shall be allowed to operate beyond 5 km from the coast. Mechanised fishing vessels of 25 GRT and above or 15 m in length shall be allowed to operate beyond 10 km from the coast. West Bengal has reserved the area upto 15 km from the shore to traditional fisherfolk. Fishing craft fitted with more than 30 hp engine are allowed to operate beyond 15 km only.

Exclusive Economic Zone

The Exclusive Economic Zone (EEZ) declaration of 1976 facilitated exploration, exploitation and utilization of marine living resources in the sea around India extending to 200 nautical miles, thereby giving the nation immense opportunities and challenges to harvest the resources and to manage them on sound scientific basis. The past three decades have witnessed rapid initiatives by the government and private agencies in the marine fisheries sector of the country. Upon realizing that most of the deep sea fishery resources beyond the conventional fishing limit and fishing capability of the indigenous crafts can be gainfully exploited only if the upgraded and of adequate size and capabilities are inducted into the fishery and mobilization of capital and expertise indigenously to achieve this was found difficult in short span of time. This was addressed to in the charter policy of the government. After the expiry of five years of operation of this policy, the government revised to rectify the deficiencies noticed during its operation and to make it more beneficial to the country. Accordingly a revised 1986 Charter Policy was pronounced.

The Charter Policy envisaged acquisition of vessels by the Indian Companies either through import / construction or through joint venture etc. As a result of the above charter policy, 97 companies were permitted to operate 311 foreign fishing vessels. Besides augmenting the marine fish production in the country, the policy also facilitated greater inflow of

foreign exchange through export of fish caught by these vessels. All these vessels were operating on 100 per cent EOU basis. The conditions for acquisition of vessels of adequate type and number by Indian companies who chartered vessels helped the growth of Indian deep sea fishing fleet within a short span. Having laid the foundation for the Indian deep sea fishing industry the government went ahead to broad base the initiatives through 1991 policy which envisaged joint ventures, test fishing and leasing besides allowing the vessels chartered under 1988 policy to continue till their permits lasted. It is significant that the new policy is being pronounced during the initial years of the X five year plan, whereby the elements contains therein may be gainfully used for implementation by the government agencies.

The policy objectives as follows

- (i) To augment marine fish production of the country up to the sustainable level in a responsible manner so as to boost export of sea food from the country and also to increase per capita fish protein intake of the masses.
- (ii) To ensure socio-economic security of the artisanal fishermen whose livelihood solely depends on this vocation.
- (iii) To ensure sustainable development of marine fisheries with due concern for ecological integrity and bio-diversity.

Coastal Regulation Zone Notification- 1991

The notification had its genesis in early 80's with a view to initiate measures to protect the ecological balance in the coastal areas of our country. The draft CRZ was published in 1989. On 1990 December 15th MoEF issued notification regulating restrictions on industries operation and processes in the zones.

For regulating activities the coastal stretches were classified into 4 categories

- (i) CRZ-I: sensitive area- Area between L TL and HTL
- (ii) CRZ-II: The coastal stretches of urban and developed areas
- (iii) CRZ-III: Areas which do not belong to the above with the exception of beach resorts etc.
- (iv) CRZ-IV: Lakshadweep, Andaman, Nicobar and other small islands.

As per the zones list of permissible and prohibited activities have been prepared and guarded against. A draft notification on CZM was notified again in 2007 in the post Tsunami scenario. Prof M.S. Swaminathan headed a committee in July 2004 in order to recommend necessary amendments to make CRZ legislation more effective.

Synoptic view of marine fishing regulations enforced by various state governments

The following table lists the ban period state-wise along with the exceptions.

Table 26.3 Closed season/Trawl Ban/Fishing ban practiced by maritime states

State/ UT	Notified Period	Days	Type of fishing banned	Type of fishing permitted
Gujarat	10 th June- 15 th August	67	All crafts	Nil
Maharashtra	10 th June to 15 th August	67	All crafts	Nil
Goa	10 th June to 15 th August	67	All crafts	Nil
Karnataka				
(i) Dakshin Kanada & Udupi	15 th June to 10 th August	57	All except motorized canoes with OBM/IBM upto 25 HP	Motorised up to 25 HP
(ii) Uttara Kanada	15 th June to 29 th July	45	All except motorized canoes with OBM/IBM upto 25HP	Motorised upto 25 HP
Daman and Diu	1 st June to 15 th August	75	Trawl net, Gillnet and dolnets	Motorised and traditional vessels
Kerala	15 th June to 29 th July	45	Mechanised trawling	All traditional and motorized gears including OBM/IBM with capacities upto 110HP
Tamil Nadu				
(i) East Coast	15 th April to 29 th May	45	Mechanised fishing/ trawlers	All non-motorised and motorised with less than 25 OBM
(ii) West coast	15 th June to 29 th July	45	-do-	-do-
Andhra Pradesh	15 th April to 31 st May	45	Trawling and motorized above 25 HP	Traditional and motorized below 25 HP
Orissa	15 th April to 15 th June	60	-do-	-do-
West Bengal	15 th April to 31 st May	45	Trawling, Gillnets, Behundinets, Bir net	Not available

Legal framework of Indian marine fishing policy and its critique

Apart from the previously mentioned major legal instruments, the complex marine fishing policy scenario of India is interwoven with a lot of complexity due to frequent intertwining of jurisdiction and the non-subtlety of the impacts in face of mild aberrations on the ground. The latest and most inclusive of policy initiatives happens to be the Comprehensive Marine Fishing Policy (CMFP 2004).

Comprehensive Marine Fisheries Policy 2004

The 2004 CMFP is the current national fisheries policy framework for India. The policy document establishes three key objectives:

- i) Augment marine fish production of India up to the sustainable level in a responsible manner so as to boost export of seafood from the country and also increase per capita fish protein intake of the masses;
- ii) Ensure socio-economic security of the artisanal fishermen whose livelihood solely depends on this vocation;
- iii) Ensure sustainable development of marine fisheries with due concern for ecological integrity and biodiversity.

The 2004 CMFP consists of ten components which include establishing a “stringent fisheries management system” encompassing an improved regulatory and Monitoring, Control, Surveillance (MCS) systems. The CMFP also proposes a new legal framework to enable various components of the new policy to be implemented. What makes the CMFP significant is that it also identifies a need to reform the legal framework. An Inter-Ministerial Empowered Committee on Marine Fisheries has been established to steward the implementation of the Policy under the Chairmanship of the Secretary in the DAHDF. Outside this framework, regional consultations have apparently been held to discuss how best to make this policy operational.

A comparative juxtaposition of major policy components out on display in the Indian marine fisheries scenario is given below in Table. 3

Table 3. Comparison of fisheries objectives in key policy documents in India

Tenth Five Year Plan	Eleventh Five Year Plan	CMFP 2004	Policy elements
<p>To enhance fish production from aquaculture and marine fisheries and in particular to utilise the full potential of the deep sea fisheries to enhance fish consumption</p> <p>Management of coastal fisheries</p> <p>Increase fish seed production</p> <p>Equity of participation</p>	<p><i>Enhancing the production of fish from Indian waters, both marine and inland, on an environmentally sustainable and socially equitable basis;</i></p> <p>Address the hitherto unexplored potentials of the Indian fisheries such as inland fisheries and non-food fisheries;</p>	<p>To augment India's marine fish production up to the sustainable level in a responsible manner so as to boost export of seafood from the country and also increase per capita fish protein intake of the masses</p>	<p>Fish production outcomes: Increased production Increased consumption Increased exports</p>
<p>Train fisherwomen</p> <p>Optimal exploitation of the fishery wealth</p> <p>Increased investment for infrastructure</p>	<p>Promoting fish as health food and meeting the changing requirements of both domestic and export markets to make the sector globally competitive;</p> <p>Increasing profitability of fishers and aqua-farmers through an integrated approach from production to consumption;</p> <p>Strengthening of infrastructure in harvest, post harvest, value addition and marketing and upliftment of fisher and aqua-farmer communities with gainful employment opportunities and capacity strengthening</p>	<p><i>To ensure socio-economic security of the artisanal fishermen whose livelihood solely depends on this vocation</i></p> <p><i>To ensure sustainable development of marine fisheries with due concern for ecological integration and biodiversity</i></p>	<p>Socio-economic outcomes</p> <p>Social equity</p> <p>Socio-economic security</p> <p>Increased profitability/optimal use of fishery resources</p> <p>Infrastructure development</p>
	<p>Enhancing the production of fish from Indian waters, both marine and inland, on an <i>environmentally sustainable and socially equitable basis;</i></p> <p>Conservation of aquatic resources and genetic diversity, as also preservation of the health of eco-systems;</p>	<p>To ensure sustainable development of marine fisheries with due concern for ecological integration and biodiversity</p>	<p>Environmental outcomes</p> <p>Protection/ preservation of the environment</p> <p>Environmental sustainability</p>

Assessment of policy performance and efficacy of implementation of legal stipulations

The most perplexing part of analysis of Indian marine scenario is the study of the impact of interventions introduced by the fishers, governments and natural developments. Though the overall assessment would paint a not so rosy picture, the causes and opportunities are the real matter of interest as they hold the key for the future prospects. Let us take a couple of such issues.

Problems of Open Access

What is now evident is that marine fisheries in India have largely reached a plateau in terms of production, especially for inshore waters. Efforts to stimulate expansion of fishing in unexploited deep water fisheries may materialise but will not address the issues surrounding inshore fishing. Clearly, the problems classically found in fisheries worldwide when the open access incentives of fishing are not adequately managed are emerging in India. A basic tenet of the FAO International Code of Conduct is that: *States should prevent overfishing and excess fishing capacity and should implement management measures to ensure that fishing effort is commensurate with the productive capacity of the fishery resources and their sustainable utilisation;*

It is very difficult to increase these natural limits, and although some suggest that interventions such as artificial reefs, restocking, and marine ranching can increase productivity, results have been far from spectacular. Such measures can theoretically speed up recovery of degraded natural resources back to natural limits, but the costs often do not justify the results, except where overall labor costs are low. Further, stock enhancement strategies must be linked to policies and regulations that limit new entry of fishers; otherwise increased stocks could induce still further fishing capacity. Allowing fish stocks to recover naturally will ultimately give greater yields with reduced risks of stock collapse. Reducing the fishing effort can increase the value of the catch by reversing the “fishing down the food chain” phenomenon that has occurred in all the maritime states in India, thus restoring eco-system health and resilience, increased catches of prime species etc.

Policy Complexity

Fisheries policy in India has become increasingly complex and seeks to achieve a wide range of objectives aimed at industrial and artisanal fisheries, fish production and use, the generation of economic returns, providing social benefits and ensuring conservation of fish stocks and the environment. Many of these objectives are conflicting and have accumulated during the development of successive planning documents. Even with a high level of funding and capacity, it would still be difficult to achieve these objectives across the range of fisheries jurisdictions in India in the short-term. The reforms proposed in this report will take many years of stakeholder commitment, support and investment.

Policy Implementation Failure

Where fisheries management rules are applied, their implementation is often fragmented and the capacity to implement is weak. The management and use of fisheries information is one such example. Both the Fishery Survey of India (FSI) and CMFRI are mandated to provide information on the status of the resource. The fishery potential of the Indian EEZ is periodically assessed by an expert committee consisting of the scientists of the

CMFRI, FSI and other fisheries institutes of the country. The last such assessment was done in 2000. These findings are approved by the Ministry of Agriculture and are considered for planning and development activities. However, there is an urgent need for more formal and frequent reporting structures and a framework on which the decision-making in response to the findings can be applied, so as to make fisheries research in India more application-oriented. This will also help to bridge the gaps among the fisheries research community, fisheries policy, and day-to-day fisheries management, with scope for better public scrutiny and review of scientific advice.

The fisheries laws themselves generally provide a weak environment for officials to enforce. Penalties are very low in relation to international standards. For example, the Maritime Zones of India (Regulation of fishing by foreign vessels) Act, 1981 lists the powers of search and seizure by authorised officers, but only in the context of boarding vessels. There is no authority to exercise enforcement powers on land – for example, to conduct searches for fish that may have been landed or are being transported after landing, to inspect documentation or to carry out other activities to investigate compliance. Offences under the Rules are punishable by a maximum Rs50,000 (US\$1,282) fine. Compared to other global jurisdictions, this is exceedingly low and would have little or no deterrent effect for larger operators. Higher fines for “serious offences”, such as those described in Article 21 of the 1995 UN Fish Stocks Agreement, are not distinguished. However, in the 1980s, there were more stringent penalties when the offending foreign fishing vessels were detained, crew arrested and put in jail, and vessels were confiscated and auctioned.

Other reasons for poor implementation of fisheries rules include (i) inadequate human resources and capacity, especially to police long stretches of coast scattered with landing sites²⁶, (ii) a lack of focus in the DOF on the role of officers to enforce (it often conflicts with the role of providing welfare support, especially to poor fishers), (iii) low awareness of the rules and regulations by many stakeholders, and, more importantly, (iv) an absence of effective co- management arrangements where self-regulation could be fostered and encouraged, building on local experience, for example the traditional Padu system for managing common property inshore fisheries in southern India and Sri Lanka.

One classic case of conflict of interests is the MPA issue prevalent in Odisha coast. In Orissa, inshore fishers suffer from loss of access to fishing grounds in traditional coastal Mangrove areas due to the restrictions related to conserving the Olive Ridley turtle. Although the non-motorised sector has been granted certain exemptions, the smaller motorised boats have not. The ban affects 120 km of the state’s 480 km coast for 7 months each year, from November to May. The restricted fishing area covers about 2,800 km² or 14 per cent of the harvestable area up to 100 meters depth, with a potential loss of 20,000 tonnes of fish harvest. According to the Orissa Department of Fisheries (DOF), around 17,546 families, comprising some 100,000 people are subjected to loss of livelihood because of the ban. In Kendrapara district alone, over 85 fishing villages, comprising about 40,000 fishers, are affected. The NGOs, Orissa Traditional Fish Workers Union and Samudram, put the number of families affected at 27,825. While few dispute the need to protect the turtles during egg laying and hatching periods, the affected fishers have not been compensated for the loss of fishing access and income.

International regulations and Indian position vis-à-vis marine fishing regulations

With the advent of WTO rooted policies and norms like antidumping, HACCP regulations etc. taking firm root in the global marketing scenario, quite a large number of resources which have very high export value have been brought under special scrutiny. Oceanic resource like Tuna, Marlin and sailfish have been brought under an inter-governmental gaze and the issues pertaining to such migratory resources are compelled to be viewed with one more dimension alongside the existing three viz. local, state and EEZ. The fourth is the major ecosystem based view, which presumes a cross country at times cross-continental delineation of the common resource base and shared exploitation. The classic case is that of the IOTC, whose regulations and recommendations released from time to time is bound to influence Indian policy perspectives. An incisive peek into the hitherto compiled regulations and recommendations throw up the following points of discussion which would be of special focus under existing marine fishing policies of the country. These are sufficient to highlight the type of divergence of purpose as envisaged by the international policy instruments and the reality enveloping Indian fisheries scenario.

- (i) In India Tuna fishing is carried out by variegated type of fishermen who put different gears to target the species. The crafts range from non-motorised country crafts (catamarans) to highly sophisticated mechanized vessels. Hence certain stipulations envisaged under IOTC norms like mandatory reporting of each trip that targets Tuna like species need to be relooked.
- (ii) As the range of crafts is so divergent, it becomes more complicated to tow the trips and record the figures. In any case under the existing setup it would be nearly impossible to have complete census of the tuna targeting crafts. Hence there is a need for sampled estimation of catch.
- (iii) Landings and subsequent handing over of tuna and tuna like resources take place in three major paths: (i) Mid-sea inter vessel transfer (ii) Transfer to designated processing hands, through dedicated channels and (iii) Classical landings in centres alike other marine resources. The third happens to be the most volatile channel with frequent spikes and lulls which are very difficult to track, sample and study.
- (iv) Based on the resource research carried out by institutions like CMFRI, it can be concluded that only a composite hybrid estimate involving inputs from centres, processors and markets could provide a scientific basis for a robust estimate of tuna being caught/ handled in the country.
- (v) Further there is a need for taking up review of resource assessment efforts made in the past decade on tuna like resources, both using exploratory vessels as well as based on commercial landings.
- (vi) As the gears usually employed for tuna catching range from trawlnet and ring seine on one extreme to hooks and lines and pole and line on the other, only a dedicated and concerted study (if not done already) can try help ascertain the resource status of tuna and similar resources.
- (vii) Specially endemic fishery of tuna resources, as those existing in Lakshadweep and the north east coast of main land (off Vizag) need to be given due focus as these involve livelihood issues which can never be considered at par with the huge long line vessels.

The international instruments of marine governance have come here to stay, their implementation with respect to Indian condition needs a rather careful planning. The marine policy outlines existing in our country have to be revised to the extent it reaches out to international standards without suffocating the livelihood issues of the fishers while concerted efforts are required in the international arena towards sensitising the agencies formulating and governing such regulations on the essentiality of tweaking their stipulations to match the reality of constituent countries.