National Aquaculture Legislation Overview

India

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Profile

Basic legislation

India is a federal republic, subdivided into 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 (i.e. water supplies, irrigation and canals, drainage and embankments, water storage and water power), land (i.e. rights in or over land, land tenure, transfer and alienation of agricultural land), fisheries, as well as the preservation, protection and improvement of stock and the prevention of animal disease. Although there are many laws and regulations that may be relevant to aquaculture adopted at state level, this overview only addresses those laws and regulations adopted by the central government.

At the central level, several key laws and regulations may be relevant to aquaculture. They include the century-old Indian Fisheries Act (1897), which penalizes the killing of fish by poisoning water and by using explosives, and the Environment (Protection) Act (1986), being an umbrella act containing provisions for all environment related issues. They also include the Water (Prevention and Control of Pollution) Act (1974) and the Wild Life Protection Act (1972). Essentially, as will be further discussed below, all this legislation must be read in conjunction with one another to gain a full picture of the rules that are applicable to aquaculture.

On 11 December 1996, the Indian Supreme Court handed out an historic decision with major implications for the aquaculture sector in a case regarding the setting up of shrimp farms in coastal areas. The Supreme Court - among other things - prohibited the construction/set up of shrimp culture ponds within the Coastal Regulation Zone and within 1000 meters of Chilka Lake and Pulika Lake, except traditional and improved traditional types of ponds. It also ruled that an authority should be constituted to protect the ecologically fragile coastal areas, sea shore, water front and other coastal areas and specially to deal with the situation created by the shrimp culture industry in the coastal states/union territories.

To perform the functions indicated by the Supreme Court, Notification SO 88 (E) (1997) established the
Aquaculture Authority, in accordance with the Environment (Protection) Act. The Authority, to which specific responsibilities for aquaculture have been allocated, falls under the administrative control of the Ministry of Agriculture.

**Legal definition**

There is no legal definition of aquaculture.

**Guidelines and codes of conduct**

As mentioned above, the Ministry of Agriculture issued Guidelines for Sustainable Development and Management of Brackish Water Aquaculture (1995). The overall purpose of the Guidelines is to assist in formulating appropriate shrimp farming management practices and adopting measures for mitigating the environmental impact for management of shrimp pond wastes and utilisation of land/water resources in a judicious manner. They recommend States to identify lands that are fit for aquaculture and to discourage the conversion of agriculture land for aquaculture. The Guidelines also recognize the importance of wastewater treatment and prescribe standards for the treatment of wastewater discharged from aquaculture systems, hatcheries, feed mills and processing plants. The introduction of imported shrimp seed should be prohibited since it may bring with it a number of problems including diseases, disease producing pathogens etc. In addition, the Guidelines provide recommendations on the use of chemicals, fertilizers, pesticides, chemotherapeutants and antibiotics/drugs, and recognize the importance of feed quality and its management. The Guidelines can be obtained from [http://www.mpeda.com/](http://www.mpeda.com/). Reportedly, the Guidelines are under revision and will be available soon as Good Management Practices.

Recently, the Aquaculture Authority formulated Guidelines for Adopting Improved Technology for Increasing Production and Productivity in Traditional and Improved Traditional Systems of Shrimp Farming with the objective of optimising yield levels in such systems on sustainable basis. The Guidelines also aim at improving the management of shrimp aquaculture in traditional systems to ensure long-term sustainability of the farming practices and environmental security. The Guidelines can be obtained from [http://aquaculture.tn.nic.in/](http://aquaculture.tn.nic.in/).

In addition, as mentioned above, the Aquaculture Authority recently drafted Guidelines for Effluent Treatment System in Shrimp Farms, the objectives of which are to ensure that the discharge of shrimp farm waste water does not result in long-term increase in nutrients or suspended solids in the open waters. The integration of effluent treatment system as a part of the shrimp farm should assist the farmers to improve waste water quality and provide long-term strategies for sustainable shrimp farming in the country. The Guidelines can be obtained from [http://aquaculture.tn.nic.in/](http://aquaculture.tn.nic.in/).

Finally, Guidelines for the Application of the Precautionary Principle and Polluter Pays Principle in Shrimp Farming are currently under preparation.

**International arrangements**

India is a member of:

- World Trade Organization (WTO)
- South Asian Association for Regional Cooperation (SAARC)
- Network of Aquaculture Centres in Asia and the Pacific (NACA).

India is a party to the Convention on Biological Diversity (CBD) and has signed the Biosafety Protocol. India is also a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

**Planning**
Authorization system

The Aquaculture Authority has constituted State Level Committees (SLCs) and District Level Committees (DLCs). Applications submitted by farmers are received by the DLCs. After verification of the information and field level inspections, wherever necessary, the applications are forwarded to the SLCs for consideration. After recommendation of the SLC, the applications are forwarded to the Aquaculture Authority for approval.

First, those farmers who are operating traditional and improved traditional systems of aquaculture within the Coastal Regulation Zone (and within 1000 meter of Chilka Lake and Pulicat Lake) are required to apply for prior approval for adoption of improved technology for increased production and productivity. The application should be made in Form I and needs to specify the following issues:

- Name of the applicant.
- Address for communication.
- Details of location/land.
- Details of the traditional/improved traditional farm in operation.
- Date of commencement of operation.
- Details of improved technology proposed to be adopted.

Any approval will be given in Form II for a period of three years and will not be transferable.

Second, applications may be filed for the authorization/approval for aquaculture establishments/shrimp culture farms/shrimp culture ponds, other than traditional and improved traditional, which are already operating/proposed to be set up/constructed outside the Coastal Regulation Zone (and outside 1000 meter of Chilka Lake and Pulicat Lake). The application should be made in Form III and needs to specify the following issues:

- Name of the applicant.
- Address for communication.
- Authorization/approval for farm in operation/proposed.
- Details related to the land, including types of land (i.e. mangroves, wet lands, forest lands etc.).
- Details when the land partly falls within the Coastal Regulation Zone (or within 1000 meter of Chilka Lake and Pulicat Lake).
- Furnish Project Report, giving details with sketch (to scale) of design and layout of the farm in operation/proposed along with operational details, and water intake, supply, drainage and treatment facilities.
- Specification (based on EIA/EMP where carried out) whether:
  1. The aquaculture activity has the effect of causing salinity of soil or the drinking water of wells.
  2. The use of supplementary feeds will consequently increase sedimentation which on decomposition will be harmful to the environment.
  3. Such activity would cause siltation, turbidity of water course and estuaries with detrimental implications on local flora and fauna.
- Environmental Impact Assessment (EIA) report, if carried out.
- Details of the Environmental Management Plan (EMP), if drawn up.
- Layout, design and technical details of the Effluent Treatment Plant (ETP), if in operation/proposed.
- Copies of licenses/consents/approvals for the farm in operation/proposed obtained from any of the central/state authorities.

Any approval will be given in Form IV for a period of three years and will be subject to the following conditions:

- The farm should restart operation/be set up/constructed only after obtaining authorization/approval from the Aquaculture Authority.
- The farm should not deviate from the approved design and operation.
The farm should not cause salinisation of soil or drinking water or wells.
The farm should not cause increased sedimentation and health hazards.
The farm should not cause siltation, turbidity of water course and estuaries with detrimental implications on local fauna and flora.
The farm should establish and operate an Effluent Treatment Plant and ensure that the effluent quality at discharge point conforms to the specific standards prescribed by the Pollution Control Board of the concerned state/union territory.
This authorization/approval be exhibited in the premises and produced for checking whenever demanded by an inspection officer.
The authorization/approval not being transferable.

### Access to land and water

In India, the acquisition of land rights to establish an aquaculture installation is normally a matter of private law. However, in practice this has been controversial due to aquaculture (shrimp) farms obstructing common rights of access to the sea or to water sources.

The **Coastal Regulation Zone Notification No. SO 114 (E) (1991)**, issued under the Environment (Protection) Act, defines the entire coastal stretch of seas, bays, estuaries, creeks, rivers and backwaters from the lowest low tide to highest high tide line and the coastal land within 500 m from the high tide line on the landward side as Coastal Regulation Zone (CRZ). Within the CRZ the setting up of industries and the expansion of new industries is prohibited, although exemptions are granted for activities that require direct waterfront or seafront access. Among the permitted activities, hatcheries are included.

As mentioned above, on 11 December 1996 the Supreme Court ruled that the shrimp culture industry is covered by the prohibition of the Coastal Regulation Zone Notification and that no shrimp culture pond can be constructed or set up within the CRZ and within 1000 meter of Chilka Lake and Pulicat Lake (including bird sanctuaries namely Yadurapattu and Nelapattu), except traditional and improved traditional types of ponds. The Supreme Court also ruled that agricultural lands, salt pan lands, mangroves, wet lands, forest lands, land for village common purpose and the land meant for public purposes shall not be used/converted for construction of shrimp ponds.

The Coastal Regulation Zone Notification provides for the preparation of Coastal Zone Management Plans, identifying and classifying the CRZ areas, by State Coastal Zone Management Authorities. At the central level, specific responsibilities have been allocated to the National Coastal Zone Management Authority, established by Notification SO 991 (E) (1998) of the Ministry of Environment and Forests, in accordance with the Environment (Protection) Act.

### EIA

The **Environmental Impact Assessment Notification (1994)**, in accordance with the Environment (Protection) Act, specifies the industries and projects (listed in Schedule I) that require an EIA. The Notification also describes the procedure to be followed. Applications must be submitted to the Ministry of Environment and Forests and assessments should be completed within a period of 90 days. Schedule I does not list aquaculture.

The Guidelines for Sustainable Development and Management of Brackish Water Aquaculture (1995, see below), however, recommend to carry out a site selection process, which should include proper environmental impact assessment. They state that all aquaculture units above 40 ha should be subject to an EIA. State Pollution Control Boards (see below) should ensure that such an EIA be carried out by the aquaculture units. Shrimp culture units of 40 ha or more should also incorporate an Environmental Monitoring Plan and an Environmental Management Plan, which covers the following potential impacts: local watercourses, groundwater, drinking water sources, agricultural activity, soil and salinisation, waste water treatment and green belt development. Smaller farms between 10 ha and 40 ha must also provide information on these items.
**Operation**

**Water and wastewater**

The **Water (Prevention and Control of Pollution) Act (1974, as amended)** provides for the prevention and control of water pollution, for the maintenance or restoration of the wholesomeness of water, and for the establishment of (central and state) Pollution Control Boards. The Act defines "trade effluent" for these purposes as "any liquid, gaseous or solid substance which is discharged from any premises used for carrying on any industrial operation or any treatment or disposal operation other than domestic sewage treatment". Hence, an aquaculture farmer will be required to obtain an authorization from the Pollution Control Board to set up a treatment and disposal system that is likely to discharge sewage or trade effluent into waters or onto the land.

Relevant provisions, though again of a general nature and not specifically related to aquaculture, can also be found in the Environment (Protection) Act. Under the Act, effluents discharged from aquaculture farms may be within the definitions of "environmental pollutant", "environmental pollution" and "hazardous substance". The Act generally prohibits any person carrying on any industry, operation or process to discharge or emit any environmental pollutants in excess of the standards as prescribed in the Schedules under the Act. The **Hazardous Wastes (Management and Handling) Rules (1989, as amended)** further regulates the collection, reception, treatment storage and disposal of hazardous wastes.

Recently, the Aquaculture Authority issued Guidelines on the need for Effluent Treatment System (ETS) in shrimp farms (see below). The Guidelines state that all shrimp farms of 5 ha water spread area and above located within the CRZ, and 10 ha water spread area and above located outside the CRZ, should set up an ETS or effluent treatment ponds/facilities. The Guidelines also refer to the need for a common ETS for clusters of shrimp farms, where each farm is less than 5 ha in size.

**Fish movement**

There is no specific legislation on fish movement.

Relevant to aquaculture may be the **Wildlife (Protection) Act (1972, as recently amended in 2003)**, which provides for the protection of wild animals (including fish) with a view to ensuring ecological and environmental security.

**Disease control**

There is no specific legislation for disease control within aquaculture facilities. However, a Compendium on Aquatic Medicines and Animal Health Management is under preparation within the Aquaculture Authority.

The **Prevention of Cruelty to Animals Act (1960)** prevents the infliction of unnecessary pain or suffering on animals. Animal is defined as "any living creature other than a human being". Under the Act, the **Breeding of and Experiments on Animals (Control and Supervision) Rules (1998, as amended)** state that no establishment shall carry on the business of breeding of animals, perform experiments on animals or trade animals for the purpose of experiments, unless it is registered. Under the Rules, experiments include new technologies involving transgenic or genetic manipulation.

**Drugs**

At present, there is no specific legislation to control the use of chemicals and drugs in aquaculture. However, **Order No 722 (E) (2002)** (see below) includes a list of antibiotics and other pharmacologically active substances that are prohibited in the culture of, or in any hatchery for producing the juveniles or larvae or nauplii of, or in any unit manufacturing feed for or in any unit pre-processing or processing shrimp, prawns or any other variety of fish and fishery products.
The Marine Products Export Development Authority (MPEDA) has published standards for shrimp feed (and seed), available at http://www.mpeda.com/.

Food safety

The Export (Quality Control and Inspection) Act (1963) empowers the central government to notify commodities which should be subject to quality control or inspection prior to export, to specify the type of quality control or inspection, and to establish, adopt or recognize one or more standard specifications for such notified commodities. Accordingly, Order SO 729 (E) (1995) recognizes that fresh, frozen and processed fish and fishery products must be subject to quality control, inspection and monitoring prior to export, taken into consideration the health requirements of importing countries such as the European Union, the United States and Japan. Standard specifications for fish and fishery products can be found in Schedule I and an Appendix.

Order SO 729 (E) was recently amended by Order No 722 (E). The latter inserts the Maximum Residual Limits (MRLs) for pesticides, heavy metals and antibiotics and other pharmacologically active substances in fish and fishery products. MRLs fixed by importing countries should be complied with if these MRLs are more stringent than the MRLs prescribed in the Order. As mentioned above, the Order includes a list of antibiotics and other pharmacologically active substances that are prohibited.

The Export of Fresh, Frozen and Processed Fish and Fishery Products (Quality Control and Inspection and Monitoring) Rules (1995) establish the primary responsibility of the industry to ensure that fish and fishery products intended for export are handled, processed at all stages of production, stored and transported under proper hygienic conditions so as to meet the health requirements laid down under these Rules and to conform to the specifications of Order SO 729 (E). The Rules contain a definition of “aquaculture products” and state that these products must be treated under proper conditions of hygiene. They must not have been soiled with earth, slime of faces or otherwise contaminated. If not processed immediately after having been pre-processed, they must have been chilled. The Rules also contain provisions on the sanitary certification of aquaculture products. Several Annexures to the Rules lay down specific conditions and requirements concerning, for example, premises, building and equipments, health control and monitoring of production conditions, storage and transport, packaging, HACCP etc.

Pursuant to the Export (Quality Control and Inspection) Act, Order SO 477 (E) (2002) recognizes that live fish including molluscs and crustaceans meant for human consumption must be subject quality control and inspection prior to export. Specifications for live fish can be found in Schedule I.

The Export of Live Fish (Quality Control, Inspection and Monitoring) Rules (2002) establish the responsibility of the processor to ensure that live fish intended for export are handled and held at all stages, including transport, under proper hygienic conditions so as to meet the health requirements laid down under these Rules and to conform to the specifications of Order SO 477 (E). The Rules also contain provisions on the sanitary certification of live fish. Two Annexures to the Rules lay down specific requirements during and after landing as well as general conditions relating to premises, building and equipment and relating to hygiene.

Miscellaneous

Aquaculture investment

At present, India does not have a separate act dealing with the promotion of (foreign) investment and there is no specific reference to investment in the aquaculture sector. More information on investment in India, including links to State policies, can be obtained from the Ministry of Commerce and Industry, Department of Industrial Policy and Promotion, Secretariat for Industrial Assistance (http://dipp.nic.in/).
GMOs
The legal framework for GMOs is constituted by the Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms, Genetically Engineered Organisms or Cells (1989), adopted under the Environment (Protection) Act.

References

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<td>Kerala Inland Fisheries and Aquaculture Act, 2010 (Act No. 15 of 2010).</td>
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These Rules enter into force on 21 April 1971.

Aquaculture Authority
Export Inspection Council of India
Marine Products Export Development Authority


Related links
Country profiles: India