

Guidelines for import of Asian seabass/Barramundi (*Lates calcarifer*) seeds and fingerlings

1. Preamble

Fish remains among the most traded food commodities worldwide. In 2012, about 200 countries reported exports of fish and fishery products. The global aquaculture production attained an all-time high of 74.3 million tonnes in 2014. World food fish aquaculture production expanded at an average annual rate of 6.2 percent in the period 2000–2012. The FAO is promoting 'Blue Growth' based on the sustainable, integrated and socio-economic management of oceans and wetlands, focusing on capture fisheries, aquaculture, ecosystem services, trade and social protection of coastal communities. The 'Blue Growth' framework promotes responsible and sustainable fisheries and aquaculture by way of an integrated approach involving all stakeholders.

Following the trade liberalization under World Trade Organization (WTO) Agreement, there is likely to be increase in the movement of animate and inanimate objects across the continents. Due to economic interests, it is expected that live animal movements worldwide will be increasingly posing adverse impact on ecology of the native fauna. The Code of Conduct for Responsible Fisheries (the Code) remains key to sustainable exploitation and management of fisheries and aquaculture. Introduction of exotic aquatic species may pose risk in terms of genetic contamination, disease introduction and ecological interaction with possible threat to native germplasm. Movements of animals and animal products have been known to cause introduction of exotic diseases into new areas causing severe losses in native species of animals. In this context, it is absolutely necessary to make guidelines and regulations for introduction of exotic fish into India for minimizing possible negative impacts.

The Department of Animal Husbandry, Dairying and Fisheries (DADF), Ministry of Agriculture & Farmers' Welfare, Government of India, after having gone through a consultative process, have formulated these guidelines for the import of seabass fingerlings for culture purpose by private entrepreneurs/enterprises. The guidelines provide for responsible fisheries with due consideration of relevant biological, technical, economic, social, environmental and commercial aspects.

2. Definitions

Accidental escape means escape of aquatic organisms into the natural water body unknowingly by the importer / farmer / culturist.

Aquatic animals means all life stages (including eggs and gametes) of fish, molluscs and crustaceans originating from aquaculture establishments or removed from the wild, for farming purposes, for release into the aquatic environment or for human consumption.

Biohazard means an organism, or substance derived from an organism, that poses a threat to (primarily) animal / human health. This can include medical waste or

samples of a microorganism, virus or toxin (from a biological source) that can impact animal/human health.

Biosecurity means in general terms, a strategic and integrated approach to analyze and manage relevant risks to human, animal (including aquatic) and plant life and health and associated risks to the environment.

Certifying official means a person authorized by the Competent Authority to sign health certificates for aquatic animals.

Competent Authority means the Authority responsible for Aquatic Animal Health as may be notified by the Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture & Farmers' Welfare, Government of India. For the purpose of these guidelines, the Secretary, Department of Animal Husbandry, Dairying & Fisheries will approve the proposals on recommendation of the National Committee on Introduction of Exotic Aquatic Species into Indian Waters, Chaired by the Joint Secretary (Fisheries).

Consignment (also termed as shipment) means group of live aquatic animals described in an aquatic animal import health standard, an international health certificate, a health certificate and/or in permit to import or export.

Exporting country means a country from which aquatic animals or aquatic animal products, biological products or pathological material are sent to a destination in another country.

International aquatic animal health certificate means a certificate issued by a member of the personnel of the Competent Authority of the exporting country, certifying the state of health of the aquatic animals, and a declaration that the aquatic animals originate from a source subjected to official health surveillance according to the procedures described in the OIE Aquatic manual.

International trade means import, export or transit of aquatic animals, aquatic animal products, biological products and pathological material.

Import license means the requisite license for importing aquatic organism issued by the Competent Authority.

Importer means person / company importing aquatic organisms / aquarium accessories from outside the country.

Invasive species means non-indigenous species (e.g. plants or animals) that adversely affect the habitats they invade economically, environmentally or ecologically.

OIE-listed diseases mean diseases that are referred to in Chapter 1.2.3. of the Aquatic Code. (Synonym: diseases listed by the OIE.)

Pre-quarantine certificate means health certificate issued by an exporting country's Competent Authority certifying the health status of a consignment of aquatic animals.

Quarantine means maintaining a group of aquatic animals in isolation with no direct or indirect contact with other aquatic animals, in order to undergo observation for a specified length of time and, if appropriate, testing and treatment, including proper treatment of the effluent waters.

Quarantine officer is a technically competent person authorized by the Competent Authority for purposes of inspecting and certifying compliance with the health requirements of the Competent Authority concerning the import and export of live aquatic animals.

Quarantine period means a minimum period of quarantine, typically as specified in an aquatic animal import health standard or other legally binding document (e.g. national or state regulations).

Risk analysis means the complete process composed of hazard identification, risk assessment, risk management and risk communication.

Shipment means a group of aquatic animals or products thereof destined for transportation.

Surveillance means a systematic series of investigations of a given population of aquatic animals to detect the occurrence of disease for control purposes and which may involve testing samples of a population.

Susceptible species means a species of aquatic animal in which infection has been demonstrated by natural causes or by experimental exposures to the disease agent that mimics the natural pathways for infection. Each disease chapter in the Aquatic Manual contains a list of currently known susceptible species.

3. Pre requisites for import

No import of the Asian seabass shall be permitted without prior permission from the Department of Animal Husbandry, Dairying & Fisheries (DADF), Ministry of Agriculture & Farmers' Welfare, Government of India.

4. Mode of application.

4.1. The entrepreneur intending to import Asian seabass shall apply in the prescribed format given in Annexure I.

4.2. The permission of import shall be issued by the Competent Authority in DADF after examination of the proposal and due consideration of the recommendations of the National Committee on Introduction of Exotic Aquatic Species into Indian Waters. The permission in approved cases shall be communicated to the applicant within six weeks from the date of receipt of the complete proposal.

The permission so granted:-

- shall be valid for one year from the date of issue
- shall not be transferable
- no amendments thereto shall be issued

4.3. The issuing authority may consider one revalidation of the permission not exceeding maximum of three months, provided such request for extension of validity is made to the issuing authority before the expiry of the permission with adequate justification.

5. Designated seaports / airports for import: Import of fish shall be allowed only through designated seaports / airports

6. Packaging and Transport

6.1. The packaging shall facilitate easy inspection of the consignment by the Quarantine Officer at the port of entry.

6.2. The fish to be imported must be packaged in leak-proof bags, each bag containing only one age group and must not exceed standard stocking density as indicated below:-

Standard Stocking Density		
	Size of seed (cm)	Packing density (No./l water)
Early fry	0.8-1.0	75-100
Fry	2.5	30
Fingerlings	5.0	5

6.3 The bag must be transparent to enable proper inspection and identification of the fish and must not contain any extraneous matter, unapproved plant material, pests or unauthorized species.

6.4. No live feed is permitted during transport of fingerlings.

6.5. Each bag must be placed within polystyrene boxes or cartons fitted with a plastic inner lining. Each box or carton must be clearly identified with label mentioning number and age of fish and identification number of each box/carton. In case, any sedative/anesthetic has been used during transport, it should be clearly mentioned in the packaging list.

6.6. The consignment shall be accompanied by relevant documents including case history, import permit, DNA barcode of fish, health certificate indicating absence of pathogens listed in Annexure II by an OIE approved or Government approved laboratory of the country of origin and other documents issued by the transport authority of exporting country.

6.7. Importer must make all reasonable efforts to expedite the clearance of the consignment and its transport to destination.

6.8. Trans-shipment: In case of trans-shipment, the consignment should be held in a sterile area of the trans-shipment point.

7. Quarantine

- 7.1. Every batch of seabass fingerlings imported into the country shall be subject to quarantine procedures in a quarantine facility at the importers premises approved by the Competent Authority.
- 7.2. The imported fish shall be accompanied by the permission of import issued by the DADF and import license issued by DGFT along with pre-quarantine certificate issued by the competent authority of exporting country stating that the farm from where the consignment is exported, is covered under their national aquatic animal health surveillance or a pre-quarantine certificate showing status of OIE and NACA listed fish diseases (Annexure II) of the farms and exporting country, and DNA barcode of fish.
- 7.3. On arrival of the consignment, accompanying pre-quarantine certificate should be verified and imported species should be rechecked at the quarantine facility and certificate of quarantine would be issued by the designated authority by checking the DNA barcode of fish.
- 7.4. Upon clearance from the port of entry, the consignment shall be transferred immediately to the approved quarantine facility.
- 7.5. On receipt of consignment at quarantine facility, the imported stock should be subjected to prescribed quarantine protocol
- 7.6. The imported fish would undergo quarantine in approved quarantine facility for 21 days.
- 7.7. During the quarantine period, animals will be screened for OIE and NACA listed pathogens (Annexure II) to ascertain whether they are pathogen free. If the stock is found containing any exotic pathogens, the stock will be destroyed by incineration, and water will be disinfected appropriately. The cost of screening and testing shall be borne by the importer.
- 7.8. After satisfactory completion of quarantine, the consignment shall be released to the importer with the quarantine certificate issued by the Quarantine Officer.
- 7.9. Direct sale of imported fingerlings shall not be allowed for domestic or international market.
- 7.10. The imported fingerlings of seabass shall be used by the importer only in his own farm, approved by the competent authority, for culture purposes.

8. Penalties for violations

- 8.1. The importer shall strictly comply with the environmental safeguards and biosecurity requirements, exclusion and mitigation of biohazards and economic interest of the nation. The importer shall ensure that the imported fish is not released into the natural waters.

- 8.2. The importer shall take adequate care to prevent any accidental escape. In spite of this, in the event of accidental escape of imported fish into natural waters, the matter should be immediately reported to the competent authority and the nearest Quarantine Officer.
- 8.3. In case, the consignment does not pass quarantine, the entire consignment shall be destroyed at importer's cost as per the prescribed protocols.
- 8.4. If during the course of inspection, it comes to the notice of the Competent Authority that the importer willfully suppressed certain important information / deliberately furnished wrong information or that the consignment actually imported are not the same or that the imported stock also consists of species for which approval has not been obtained, the import permit shall be cancelled forthwith and all the imported stock destroyed without any notice to or permission of the importer.

9. Post quarantine Inspection:

The Competent Authority shall have right to carry out the post-quarantine inspection of hatchery, rearing facility and farms of the importer to confirm the specified norms for assuring that the imported fishes are used for the purpose for which they are imported; and to look at the magnitude of multiplication and horizontal spread of the imported fish species. The Competent Authority may also assign this responsibility to any designated Agency/Committee as and when required. The importer shall submit monthly status report on transport, culture, rearing, breeding and retail etc. after the import. Report shall contain details on culture, pathogen screening, and disease, if any.

10. Breeding and culture of imported seabass

- 10.1 Hatchery and fish farms intending to breed and culture sea bass shall require to be registered with the Coastal Aquaculture Authority (CAA).
- 10.2 Coastal Aquaculture Authority (CAA) Inspection Team will visit the hatchery and farm and provide its recommendation on the suitability of the facility for breeding or rearing seabass fingerlings.
- 10.3 Hatchery and farms should have complete bio-security including fencing, reservoirs, bird-scare, separate implements for each of the ponds and trained technical personnel.
- 10.4 Hatchery/ farms irrespective of their size should have Effluent Treatment System (ETS). Since loading of the environment with suspended solids is very high during the harvest, the Effluent Treatment System (ETS) should be able to handle the waste water let off during harvest. *i.e.*, the size of the Effluent Treatment System (ETS) should be more than the size of the largest pond in the farm. Harvesting should be sequential depending on the size of the Effluent Treatment System (ETS). The quality of the waste water should conform to the standards prescribed in the Guidelines issued under Coastal Aquaculture Authority Rules, 2005.

- 10.5 In case of any outbreak of disease, the hatchery/farm may undertake distress harvesting if permitted by the Competent Authority or its designated Agency. The distress harvesting shall be done through netting only and the water should be chlorinated and dechlorinated before release into source water. However, this has to be done by informing the Competent Authority. The concerned farm should get the disease problem investigated through Competent Authority by paying the costs for testing.
- 10.6 Waste water should be retained in the Effluent Treatment System for a minimum period of 2 days before discharge into common water body.
- 10.7 Farms which follow Zero Water exchange system of farming will be encouraged to take up imported seabass farming.
- 10.8 Farms approved for imported seabass culture would not be permitted to raise any other fin-fish species.
- 10.9 The imported seabass fingerlings, tested and certified, should be procured only from original authorized exporter.
- 10.10 Stocking densities should not exceed beyond permissible levels as stipulated by the Coastal Aquaculture Authority (CAA).
- 10.11 Strict compliance for the waste water standards is a mandatory requirement and Coastal Aquaculture Authority (CAA) authorized Inspection team will regularly monitor the quality of waste water as per the procedures laid down in the Regulations of Coastal Aquaculture Authority Act, 2005.
- 10.12 The farmers should maintain detailed records of the imported seabass culture and should be made available to the Coastal Aquaculture Authority (CAA) through quarterly compliance reports (Annexure - III).

11. Submission of Reports by the Importer

- 11.1 The hatcheries and farms which are permitted to rear seabass will submit quarterly performance report to the Coastal Aquaculture Authority (CAA) indicating the number of seed produced, the farms to which sold, the number of seed stocked the source and the production levels.
- 11.2 Processing plant should procure seabass from the farms which are permitted to culture seabass and they should also send a report of Farm wise data on quantity of seabass procured, to Coastal Aquaculture Authority (CAA).
- 11.3 These reports will help in introducing a traceability mechanism in the entire process of seabass culture in the country.

Format of Application for importing the Asian seabass fish

- 1.0 Name of the country from where the fish is proposed to be imported:
- 2.0 Source (Wild/Cultured):
- 3.0 Salinity of packed water
- 4.0 Details of the import:
 - 4.1 Life stage to be imported (fingerlings; days post-hatch):
 - 4.2 Number of seed imported
 - 4.3 Average body weight (g) including the range
 - 4.4 Average total length (cm) including the range
 - 4.5 Feed supplied (specify) during transportation (no live feed permitted)
- 5.0 Genetic profile
 - 5.1 If developed - Originals/ Stocks used for the development:
 - 5.2 Genetic mechanism used for developing (Selection/Hybridization/Genetic Engineering)
- 6.0 Earlier import details:
 - 6.1 Approval No. and Date (issued by the Ministry):
 - 6.2 Details of License issued by DGFT
 - 6.3 Year of import:
 - 6.4 Total number of fish imported against the permitted number:
 - 6.5 End use of the imported varieties in details:
- 7.0 Are the imported fish meant for export/internal market?
- 8.0 Name and Address of the firm/person importing the fish
- 9.0 The location of hatchery /farm where the imported fish will be kept:
- 10.0 Whether quarantine facility is there or not:

Date and Signature of importer with Seal

Essential enclosures:

1. Photographs of fish to be imported (The photograph should be of the specimens of the fish from where the import is proposed and not from published or other sources).
2. Address of hatchery/farm where the fish will be maintained after importing

Instructions for filling proforma:

No column should be left blank. If information is not available fill N.A. and if the item is not relevant, N.R.

OIE and NACA listed diseases relevant to sea bass

1. Red sea bream iridoviral disease
2. Viral haemorrhagic septicaemia
3. Viral encephalopathy and retinopathy (SJNNV, TPNNV, BFNNV strains only)
4. Epitheliocystis
5. Grouper iridoviral disease

Quarterly compliance report from Farms

1. Name and Address
2. Date and No. of Certificate of registration from CAA
3. Date and No. of permission letter for culturing Asian seabass
4. No of fingerlings purchased
5. Name and address of the hatchery/ farm
6. No, and Date of the certificate of registration of the hatchery /farm
7. Letter from the hatchery indicating the number of fingerlings sold to the farmer
8. Total No. stocked
9. Total weight harvested
10. Average size at harvest
11. Days of culture
12. Details of sequential Harvesting (Depending on the size of the ETS) carried out
13. Dates on which Inspection committee visited and collected samples

List of Abbreviations used:

CAA: Coastal Aquaculture Authority

DADF: Department of Animal Husbandry, Dairying & Fisheries

DGFT: Directorate General of Foreign Trade

DNA: Deoxyribo nucleic acid

ETS: Effluent Treatment System

FAO: Food and Agriculture Organisation of the United Nations

NACA: Network of Aquaculture Centres in the Asia-Pacific

OIE: World Organisation for Animal Health
