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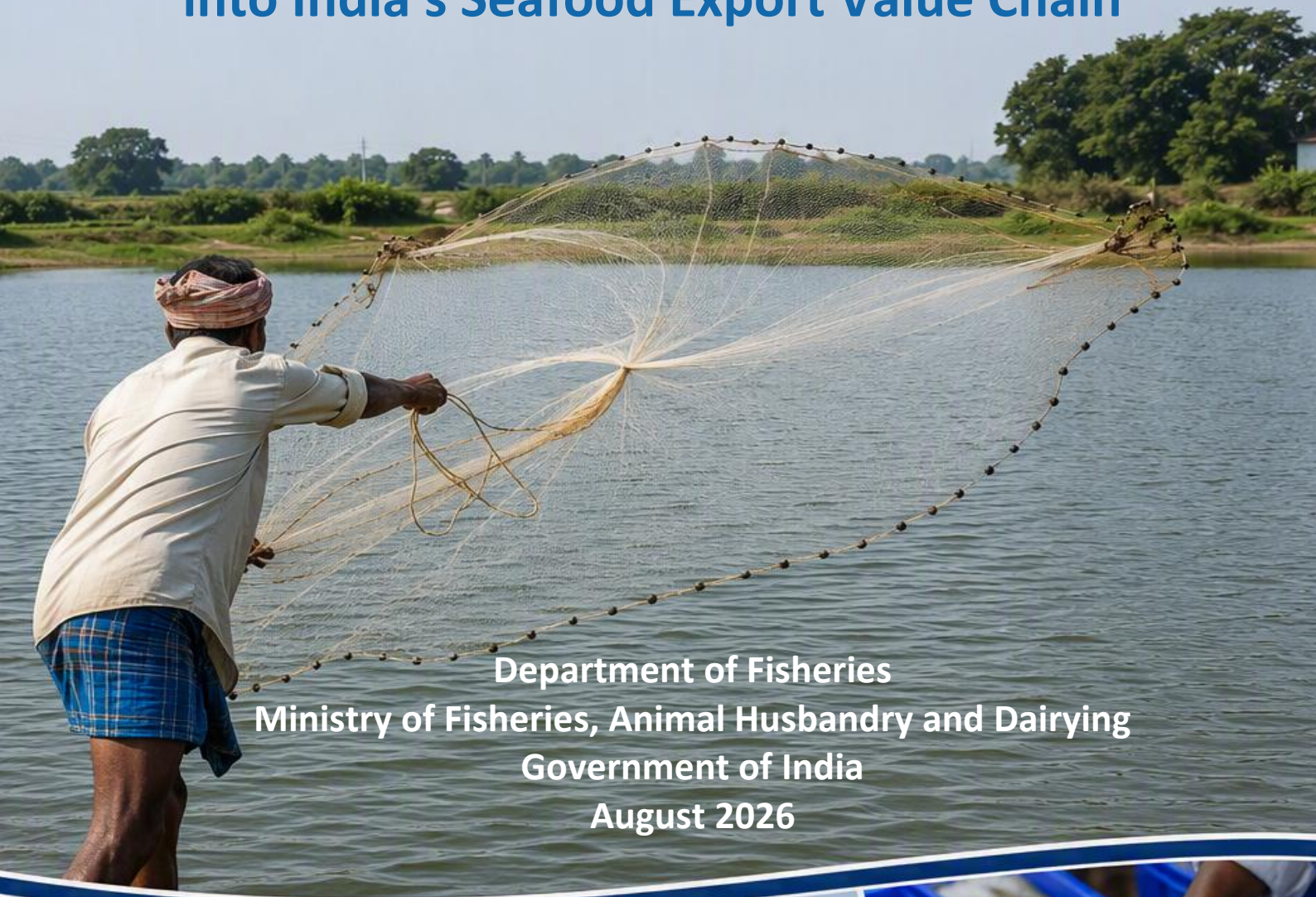
Standard Operating Procedure (SOP)

for

Integrating Inland States and Union Territories into India's Seafood Export Value Chain



Department of Fisheries
Ministry of Fisheries, Animal Husbandry and Dairying
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FOREWORD
Hon'ble Minister of Fisheries, Animal Husbandry and Dairying & Panchayati Raj

It gives me immense pleasure to present the Standard Operating Procedure for Integrating Inland States and Union Territories into India's Seafood Export Value Chain.

The fisheries sector is growing rapidly and is playing an important role in food security, livelihoods, employment and export earnings. India's fish production has increased from 95.8 lakh tonnes in 2013–14 to 197.75 lakh tonnes in 2024–25, with inland fisheries and aquaculture contributing more than 76 per cent of total production. India also achieved record seafood exports of 19.72 lakh tonnes, valued at ₹73,890 crore, in 2025–26.

These achievements show the strength of our fisheries sector. They also show the opportunity that lies ahead, particularly in our inland States and Union Territories.

Our fish farmers, producer organisations, cooperatives and entrepreneurs are producing good quality fish. The next step is to connect this production with processing, cold chain, testing, certification, traceability, logistics and international markets.

This SOP provides a simple and practical pathway for doing so. It will help States and stakeholders identify export opportunities, strengthen production clusters and build linkages with processors, exporters and markets.

This is also in line with the Hon'ble Prime Minister's vision of a strong Blue Economy and Viksit Bharat, where the fisheries sector creates greater opportunities, improves incomes and strengthens rural livelihoods.

If we work together, we can unlock the potential of our inland fisheries, increase value addition, create new markets and take the benefits of seafood exports to more regions and more people.

I congratulate the Department of Fisheries and all stakeholders who have contributed to the preparation of this SOP and extend my best wishes for its successful implementation.

(Shri Rajiv Ranjan Singh)

MESSAGE FROM THE SECRETARY
Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying

India has made significant progress in fisheries and aquaculture, with inland fisheries now contributing more than 76 per cent of the country's total fish production. However, the participation of inland States and Union Territories in seafood exports remains limited. Gaps in aggregation, processing, cold-chain infrastructure, testing, certification, traceability and market linkages continue to constrain their export potential.

The Standard Operating Procedure for Integrating Inland States and Union Territories into India's Seafood Export Value Chain has been developed to address these gaps and provide a clear and practical pathway from production to export.

The SOP brings together the key requirements relating to export-oriented production, farm registration, Good Aquaculture Practices, food safety, traceability, processing, testing, certification, logistics and export documentation. It also provides guidance for identifying export-ready production clusters and establishing linkages with processors, laboratories, exporters and markets.

The successful integration of inland fisheries into the export value chain will require strong coordination and convergence among Central and State Governments, technical and regulatory institutions, research organisations, producer groups and industry. A cluster-based and species-specific approach, supported by appropriate infrastructure and capacity building, will be important in this endeavour.

I encourage State Governments and implementing agencies to use this SOP as a practical guide for action, and to work closely with farmers, producer organisations, cooperatives, processors and exporters to develop viable export-oriented clusters.

The objective is not only to increase exports, but also to promote value addition, improve market access, strengthen competitiveness and create better income opportunities for fish farmers and other stakeholders.

I appreciate the efforts of all institutions and stakeholders who have contributed to the preparation of this SOP. I am confident that its effective implementation will help unlock the potential of inland fisheries and contribute to the development of safe, sustainable, traceable and globally competitive seafood value chains.

(Dr. Abhilash Likhi)

MESSAGE FROM THE JOINT SECRETARY
Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying

Growing fish production in inland States and Union Territories offers significant opportunities to expand and diversify India's seafood exports. Realising this potential requires better aggregation, cold-chain logistics, processing, testing, certification, traceability and strong market linkages.

The Standard Operating Procedure for Integrating Inland States and Union Territories into India's Seafood Export Value Chain provides practical guidance across the value chain. It supports the identification of export-ready clusters, farm registration, Good Aquaculture Practices, traceability, and linkages with approved processors, laboratories and exporters.

Effective implementation will require coordinated action at the State and district levels, continued handholding of stakeholders, and effective utilisation of existing infrastructure and institutional support. The SOP may also be updated periodically in response to changes in regulations, market conditions, technologies and implementation experience.

I appreciate the contributions of MPEDA, EIC, DGFT, NFDB, State/ UT Fisheries Departments, ICAR-CIFT, NIFPHATT, industry bodies and other stakeholders in the preparation of this SOP. I hope this SOP will serve as a practical guide for the effective and sustainable participation of inland fisheries stakeholders in India's seafood export value chain.

(Dr. Surabhi Rai)

List of Abbreviations

Abbreviation	Full Form
APE	Assessment Panel of Experts
BAP	Best Aquaculture Practices
BIS	Bureau of Indian Standards
CAA	Coastal Aquaculture Authority
CAGR	Compound Annual Growth Rate
CFE	Certificate for Export
CITES	Convention on International Trade in Endangered Species of Wild Fauna & Flora
COC	Chain of Custody
CoO	Certificate of Origin
DGFT	Directorate General of Foreign Trade
DoF	Department of Fisheries
e-CoO	Electronic Certificate of Origin
EHC	Export Health Certificate
EIA	Export Inspection Agency
EIC	Export Inspection Council
ELISA	Enzyme-Linked Immunosorbent Assay
EU	European Union
FARMID	Farm Identification Number
FBO	Food Business Operator
FFPO	Fish Farmer Producer Organization
FOB	Free on Board
FPO	Farmer Producer Organization
FSSAI	Food Safety and Standards Authority of India
FTA	Free Trade Agreement
FTP	Foreign Trade Policy
GACC	General Administration of Customs of China
GAP	Good Aquaculture Practices
GMP	Good Manufacturing Practices
GST	Goods and Services Tax
HACCP	Hazard Analysis and Critical Control Point
HBP	Handbook of Procedures
HS Code	Harmonized System Code
HSN	Harmonized System of Nomenclature
ICAR	Indian Council of Agricultural Research
IE	Intimation of Export
IEC	Import Export Code
ISO	International Organization for Standardization
IUU	Illegal, Unreported and Unregulated (Fishing)
MPEDA	Marine Products Export Development Authority
MRL	Maximum Residue Limit
MSME	Micro, Small and Medium EnterprFises
MT	Metric Tonne

Abbreviation	Full Form
NABL	National Accreditation Board for Testing and Calibration Laboratories
NFDB	National Fisheries Development Board
NOC	No Objection Certificate
NPOP	National Programme for Organic Production
NRCP	National Residue Control Programme
OIE/WOAH	World Organisation for Animal Health
PAN	Permanent Account Number
PCB	Pollution Control Board
PET	Pre-Export Testing
PHT	Pre-Harvest Test
PMMSY	Pradhan Mantri Matsya Sampada Yojana
QA	Quality Assurance
QC	Quality Control
QR Code	Quick Response Code
RCMC	Registration-cum-Membership Certificate
RFID	Radio Frequency Identification
RoDTEP	Remission of Duties and Taxes on Exported Products
SEZ	Special Economic Zone
SFD	State Fisheries Department
SHG	Self Help Group
SIP	Sanitary Import Permit
SPS	Sanitary and Phytosanitary Measures
STP	Sewage Treatment Plant
TBT	Technical Barriers to Trade
TPC	Total Plate Count
TVBN	Total Volatile Basic Nitrogen
UNCTAD	United Nations Conference on Trade and Development
USFDA	United States Food and Drug Administration
WOAH	World Organisation for Animal Health *(formerly OIE)*
WTO	World Trade Organization

Glossary of Terms

Batch/ Code means the quantity of fishery products processed under practically identical circumstances during a discrete period, however, not exceeding one calendar day.

Bill of Lading is a legal document that is issued by a carrier to the shipper. It contains details about which goods are being shipped, where the shipment is coming from and going to, as well as details of the shipper, carrier, and consignee. It serves three primary functions; Evidence of a contract of carriage, receipt of goods by carrier and document of legal title of goods.

Certificate of Inspection is a document which certifies the merchandise like perishable goods were in good condition just before its shipment.

Certificate of Origin is a document which certifies that goods in a shipment are wholly obtained, produced, manufactured, or processed in a particular country.

Chilling means the process of cooling fish and fishery products to a temperature approaching that of melting ice.

Clean Bill of Lading is a receipt for goods issued by a carrier indicating that the goods were received in "apparent good order and condition," without any damage or other irregularities.

Consignment means the quantity of fish and fishery products bound for one customer in the country of destination and conveyed by one means of transport only.

Country of Origin is a term used for the country where the merchandise was grown, mined or manufactured, in accordance with the regulations of the customs.

Establishment refers to any premises where fishery products are prepared, processed, chilled, frozen, packaged, or stored.

Exporter is a person who exports or intends to export and holds an IEC number, unless otherwise specifically exempted.

Farm Enrolment means the digital enrollment of an aquaculture farm by MPEDA for traceability, residue control and export certification.

Farm Registration means registration of aquafarm by the concerned authorities like State Fisheries Departments or CAA based on jurisdiction.

Fresh Fish & Fishery Products means any fishery products, whether whole or prepared, including products packaged under vacuum or in a modified atmosphere, which have not undergone any treatment to ensure preservation other than chilling.

Fresh, Frozen and Processed Fish and Fishery Products include all sea water, freshwater or brackish water animals or part thereof, including their roe, in fresh, chilled, frozen or processed form, but excluding frogs.

Frozen Fishery Products means any fishery product which has undergone freezing to reach a core temperature of -18°C or lower after temperature stabilization.

Good Aquaculture Practices represent a set of evolving management strategies adopted by high-performing aquaculture producers to ensure efficient, responsible, and sustainable fish and shellfish farming.

Hazard Analysis Critical Control Point (HACCP) system is a science-based, structured system designed to identify, evaluate, and control hazards critical to food safety, with a strong emphasis on prevention rather than reliance on end-product testing. The HACCP system is inherently adaptable, accommodating changes such as advances in equipment design, processing methods, and technological developments.

Hazard means a biological, chemical, or physical agent that is reasonably likely to cause illness or injury in the absence of its control.

Health Certificate is an official government document that verifies exported food and agricultural products that meet the health, safety, and hygiene standards of the importing country.

Import Export Code (IEC) is a key business identification number mandatory for exports or imports. No person shall make any import or export except under an IEC granted by the DGFT.

Importer means any natural or legal person established within the destination country that places fishery products or related substance, or device from India onto the market of destination country.

Manufacturer Exporter means the owner of an approved processing plant, or an approved fishing vessel having onboard processing facilities, or live fish handling facility, or chilled fish handling facility or dried fish handling facility or other edible/ non-edible handling centers**.**

Means of Transport legally refer to the specific cargo spaces set aside for goods. This includes designated compartments in trucks and cars, rail cars, airplane cargo areas, ship holds, and land, sea, or air transport containers.

Merchant Exporter means someone who does not own a processing plant but utilizes the surplus capacity of an approved processing or handling facility.

MPEDA stands for Marine Products Export Development Authority constituted in 1972 under the Marine Products Export Development Authority Act 1972 (No. 13 of 1972).

National Residue Control Plan (NRCP) is a statutory requirement for export to EU countries and the UK. Under NRCP, definite sampling schedule and sampling strategies are drawn every year for monitoring the residues of substances like antibacterial/ veterinary medicinal products and environmental contaminants.

Official Control is a mandatory, regulatory activity performed by a government-appointed or competent authority. It involves inspections, verifications, audits, or laboratory analyses designed to ensure that businesses, products, and processes comply with the law, typically protecting public health, safety, and consumer.

Ornamental Fish Exporter is the one who exports only ornamental fish but not an exporter of live marine products for human consumption.

Packaging means the procedure of protecting fishery products with a wrapper, a container, or any other suitable device.

Pre-Export Testing (PET) represents the tests conducted by the EIC-recognized laboratory for the consignment before the export.

Pre-Harvest Testing (PHT) represents the tests conducted to screen the aquaculture shrimp for the presence of residues of banned antibiotics like chloramphenicol & nitrofuran metabolites (AOZ, AMOZ, AHD & SEM) before harvesting. PHT of aquaculture products is mandatory for export to EU countries & UK.

Prepared Fishery Products mean any fishery products which has undergone an operation affecting its anatomical wholeness, such as gutting, heading, slicing, filleting, chopping etc.

Processed Fishery Products mean any fishery product which has undergone a chemical or physical process such as the heating, smoking, salting, dehydration or marinating or chilling, frozen etc. whether or not associated with other foodstuffs or a combination of these various processes.

Processing Plant Approval means the approval granted to a processing plant or establishment by EIC after successful completion of APE visits.

Registration-Cum-Membership Certificate (RCMC) is an official document issued by Export Promotion Councils/ Commodity Board/ Development Authority or other competent authority as prescribed in FTP or HBP Vol 1. The certificate is required for exporters to avail benefits under the FTP. MPEDA has been designated as the authority to issue e-RCMC through the DGFT portal.

Route Through Merchant Exporter is an export house/ trading house/ star trading house/ super star trading house, possessing a certificate of approval issued by the DGFT.

Seafood broadly refers to all varieties of fishery products, including finfish, shellfish, shrimp, prawn, lobster, crab, and other aquatic animals or plants, whether whole or in part. Seafood also refers to all varieties of aquatic animals from fresh, brackish and marine waters.

Traceability means the ability to track a product from farm/ harvest/source through processing, storage, shipment until it reaches the end user through documented and verifiable records.

Executive Summary

India's fisheries and aquaculture sector has emerged as a strategic contributor to food and nutritional security, employment generation, rural incomes, export earnings and blue economy growth. The expansion of inland fisheries, aquaculture, inland saline aquaculture and export-oriented species such as scampi, tilapia, pangasius, trout, carps, catfish, Murrels, seabass, pompano and shrimp and ornamental fishes provide a significant opportunity to widen India's seafood export base beyond traditional coastal supply chains.

The purpose of this Standard Operating Procedure is to provide a clear, practical and implementation-oriented pathway to increase the participation of inland States, Union Territories, production clusters, farmers, Fish Farmer Producer Organizations, cooperatives, processors, merchant exporters, manufacturer exporters, startups and State Governments into the seafood export value chain.

The SOP brings together institutional roles, regulatory requirements, quality and food safety protocols, infrastructure needs, traceability systems, market compliance requirements, scheme convergence and capacity-building mechanisms into a single operational document.

The document recognizes that export competitiveness is no longer determined only at the stage of shipment. International markets increasingly require verifiable compliance from farm to fork, including farm registration, residue control, health certification, HACCP-based processing, cold-chain integrity, digital traceability, transparent documentation and sustainability-linked practices. Inland fisheries stakeholders therefore require structured guidance to move from domestic market-oriented production to export-ready value chains.

This SOP is intended to support coordinated action by the Department of Fisheries, Marine Products Export Development Authority, Export Inspection Council/Export Inspection Agencies, National Fisheries Development Board, Coastal Aquaculture Authority wherever applicable, State Fisheries Departments, District Export Promotion Committees, ICAR institutions, processors, exporters, FFPOs, cooperatives, startups, financial institutions and private sector partners. It also seeks to support export diversification, value addition, income enhancement, cluster-based development, digital traceability, and the national vision of Viksit Bharat.

The SOP may be periodically updated based on revised statutory requirements, importing-country mandates, scheme guidelines, digital systems, market access conditions, and validated official data from concerned agencies.

Chapter 1 - Introduction

India is one of the world's leading fisheries and aquaculture nations and has emerged as a major supplier of fish and fishery products to international markets. The fisheries sector plays a significant role in ensuring food and nutritional security, generating employment and livelihoods, supporting rural development and contributing to foreign exchange earnings. Over the past decade, sustained policy support, technological advancements, expansion of aquaculture and strengthening of fisheries infrastructure have enabled India to register remarkable growth in fish production and its exports.

Globally, fisheries and aquaculture have assumed increasing importance in meeting the growing demand for safe, nutritious and sustainably produced aquatic foods. According to the FAO, global fisheries and aquaculture production reached a record 235 million tonnes in 2024[1], with aquaculture emerging as the principal driver of production growth. Inland aquaculture now accounts for nearly two-thirds of global aquaculture production, underscoring its expanding role in international seafood supply chains. India is the world's second-largest fish producer, the largest producer from inland fisheries and aquaculture, and one of the leading producers of farmed shrimp, contributing about 8 per cent of global fish production.

The fisheries sector in India has witnessed unprecedented growth in recent years. Fish production has more than doubled from 95.8 lakh tonnes in 2013-14 to a record 197.75 lakh tonnes in 2024-25[2]. Notably, inland fisheries and aquaculture have emerged as the principal growth engine of the sector, contributing over 76 per cent of the country's total fish production. This transformation reflects the rapid expansion of freshwater aquaculture, adoption of improved farming practices, enhanced seed availability, increasing private investment and focused policy interventions under various Government programmes.

India's seafood exports have also recorded consistent growth. During 2025-26, marine product exports reached an all-time high of 19.72 lakh tonnes, earning USD 8.46 billion (₹73,890 crore) despite global economic uncertainties and increasing trade barriers[3]. Frozen shrimp continued to dominate the export basket, accounting for nearly two-thirds of India's seafood export earnings, while the United States and China remained the principal export destinations. However, the volume exported represents only about 10 percent of India's total fish production, indicating substantial untapped opportunities for expanding exports, particularly through value addition, product diversification and greater participation of inland fisheries.

Despite the rapid growth of inland fish production, India's seafood export ecosystem continues to be predominantly coastal in its institutional and physical configuration. Processing plants, export-oriented infrastructure, cold-chain facilities, accredited laboratories, testing services, certification mechanisms and established exporter networks are largely concentrated in coastal States. Consequently, a significant proportion of inland fish production enters domestic markets, while only a limited quantity reaches export-oriented value chains. Inland fish farmers, farmer producer organisations, cooperatives and entrepreneurs frequently encounter challenges relating to aggregation, traceability, quality

[1] The State of World Fisheries and Aquaculture 2026
[2] Handbook on Fisheries.pdf
[3] MPEDA

assurance, residue monitoring, cold-chain logistics, export documentation, certification and market access.

Concurrently,, global seafood markets are undergoing significant transformation. Importing countries are placing increasing emphasis on food safety, traceability, sustainability, responsible aquaculture practices, residue monitoring, animal health and social compliance. Consumers are increasingly demanding high-quality, value-added and sustainably sourced seafood products. These developments present both challenges and opportunities for India. While compliance requirements are becoming more stringent, they also create new opportunities for export diversification through freshwater species such as pangasius, tilapia, freshwater prawns (scampi), carps, trout, freshwater ornamental fishes and other inland aquaculture products.

Recognising these opportunities, there is a need to systematically integrate inland fisheries and aquaculture into India's seafood export value chain through a coordinated institutional framework. Such integration requires convergence among the Department of Fisheries, State Fisheries Departments, MPEDA, EIC, EIAs, ICAR institutions, EIC-recognised laboratories, exporters, processors, FPOs, cooperatives and other stakeholders. A standardised approach is also required for cluster identification, farmer registration, adoption of GAP, traceability, quality assurance, pre-harvest testing, processing, official control inspections, pre-export testing, certification, logistics and market linkage.

This Standard Operating Procedure (SOP) for integrating the Inland States and Union Territories into the Seafood Export Value Chain has therefore been developed to provide a comprehensive operational framework for facilitating the systematic integration of inland fisheries and aquaculture into export-oriented Value chains. The SOP establishes a harmonised, step-by-step approach for identifying export-ready production clusters, strengthening institutional coordination, ensuring compliance with domestic and international standards, promoting value addition and improving market access. It is intended to serve as a practical guidance document for Central and State Governments, implementing agencies, exporters, processors, farmer organisations and other stakeholders engaged in developing a competitive, traceable and sustainable inland seafood export ecosystem.

Why this SOP?

India has become the world's second-largest fish producer, yet only around 10% of total fish production enters export markets. While inland fisheries contribute over 76% of national fish production, export infrastructure and value chains remain concentrated in coastal States. This SOP provides a structured framework to integrate inland States and Union Territories into India's seafood export ecosystem by strengthening traceability, quality assurance, institutional coordination, export readiness and market access.

1.1 Objectives

The Standard Operating Procedure seeks to achieve the following objectives:

i. Provide a clear and practical framework for integrating Inland States and Union Territories into India's seafood export value chain, covering the pathway from production and aggregation to processing, certification, shipment and post-export compliance.

ii. Facilitate export readiness by standardising procedures relating to cluster identification, farm registration, traceability, aggregation, pre-harvest testing, quality assurance, processing, certification, logistics and export documentation.

iii. Strengthen institutional coordination among the Department of Fisheries, State Fisheries Departments, MPEDA, EIC/EIAs, ICAR institutions, exporters, processors, FPOs, cooperatives and other stakeholders for developing integrated export-oriented value chains.

iv. Promote compliance with international market requirements by encouraging adoption of GAP, food safety standards, residue monitoring, traceability, sustainability measures and importing-country regulatory requirements.

v. Strengthen the technical, managerial and export-related capabilities of value-chain stakeholders through training, awareness, technical guidance, technology dissemination and continuous institutional support.

vi. Enhance the contribution of inland fisheries to India's seafood exports through diversification of exportable freshwater species, promotion of value-added products, development of export infrastructure and strengthening of market linkages, thereby improving farmers' income and increasing India's competitiveness in the global seafood market.

Chapter 2 - Institutional Framework for Promotion of Fish and Fishery Products Exports

2.1 Institutional Framework

India's fisheries sector is supported by a comprehensive institutional framework comprising policy-making bodies, export promotion organisations, regulatory authorities, research institutions, State Governments and private stakeholders. Collectively, these institutions facilitate the development of an enabling ecosystem for seafood exports by supporting production, quality assurance, traceability, processing, certification, infrastructure development, market linkage & promotion and compliance with international standards. While each institution has a distinct statutory mandate, their coordinated efforts are essential for strengthening India's seafood export competitiveness and expanding the participation of inland States and Union Territories in the export value chain.

The institutional framework provides the necessary policy support, regulatory oversight, scientific and technical guidance, infrastructure development, capacity building and market facilitation required for export-oriented fisheries development. It also promotes convergence among Central Ministries, State Governments and allied organisations to ensure seamless implementation of export-related activities across the value chain. The major institutions supporting India's seafood export ecosystem and their respective mandates and roles are summarised in Table 2.1

Governance Principle
India's seafood export ecosystem functions through a whole-of-government and whole-of-value-chain approach, integrating Central Ministries, State Governments, regulatory authorities, research organisations, export promotion agencies, industry and farmer organisations to ensure policy coherence, food safety, traceability, quality assurance and market access.

Table 2.1 Institutional Framework and Roles in India's Seafood Export Ecosystem

Institution	Mandate	Key Role(s) in India's Seafood Export Ecosystem
Department of Fisheries (DoF), Government of India	Nodal Department responsible for the promotion and development of fisheries and aquaculture, fisheries infrastructure, marketing and exports, aquatic animal health, quarantine, certification and implementation of national fisheries programmes.	• Provides policy direction and institutional coordination. • Facilitate convergence among Central Ministries, State Governments, and partner agencies. • Supports export infrastructure, traceability, quality assurance, and SPS compliance. • Promotes export diversification and market access • Facilitates capacity building through subordinate institutions and autonomous bodies.

Institution	Mandate	Key Role(s) in India's Seafood Export Ecosystem
Department of Commerce (DoC), Ministry of Commerce & Industry	Responsible for formulation and implementation of India's foreign trade policy, export promotion, international trade negotiations, market access initiatives and trade facilitation.	• Formulates policies for promotion of exports and international trade. • Facilitates market access through Free Trade Agreements (FTAs) and bilateral trade engagements. • Coordinates with export promotion organisations and other Ministries. • Supports trade facilitation and export competitiveness. • Oversees export promotion institutions including MPEDA
Directorate General of Foreign Trade (DGFT)	Responsible for implementation of the Foreign Trade Policy (FTP) through regulation and facilitation of India's exports and imports	• Issues Importer Exporter Code (IEC) to exporters. • Administers export-related authorisations, licenses and policy provisions under the Foreign Trade Policy. • Facilitates digital trade services and export documentation. • Supports exporters through trade facilitation measures and export promotion schemes. • Coordinates with Customs and other agencies for efficient export procedures.
Central Board of Indirect Taxes & Customs (CBIC) / Indian Custom	Responsible for administration of Customs laws, facilitation of legitimate international trade and enforcement of import and export regulations.	• Facilitates customs clearance of export consignments. • Verifies export documentation and statutory compliance. • Administers customs procedures under the Customs Act, 1962. • Supports electronic filing and trade facilitation through digital customs systems. • Coordinates with DGFT, EIC and other regulatory agencies for seamless export clearance.
Marine Products Export Development Authority (MPEDA)	Apex export promotion agency responsible for the development, regulation and promotion of marine products exports through quality improvement, infrastructure development, market promotion and trade facilitation.	• Facilitates exporter registration and market linkages. • Promotes Indian seafood in international markets. • Supports processing infrastructure, cold chain and value addition. • Develops traceability and branding systems.

Institution	Mandate	Key Role(s) in India's Seafood Export Ecosystem
		• Conducts training on export requirements and international market standards.
Export Inspection Council (EIC)	National competent authority responsible for quality control, inspection and export certification of notified commodities including fish and fishery products under the Export (Quality Control and Inspection) Act, 1963.	• Approves and official controls on fishery establishments. • Issues Health Certificates, Certification of Origin, Certification of Inspection for export consignments. • Undertakes residue monitoring and food safety surveillance. • Ensures compliance with importing countries' sanitary and phytosanitary (SPS) requirements. • Conducts training on quality food safety, testing requirements and export certification.
Coastal Aquaculture Authority (CAA)	Statutory authority responsible for regulating coastal aquaculture activities under the Coastal Aquaculture Authority Act, 2005, within its notified jurisdiction.	• Regulates coastal aquaculture within its statutory jurisdiction. • Promotes responsible aquaculture and biosecurity practices. • Supports residue-free aquaculture production. • Facilitates compliance with export quality requirements for coastal aquaculture. • Coordinates with DoF, MPEDA, EIC and State Governments on matters within its jurisdiction.
National Fisheries Development Board (NFDB)	Apex organization responsible for promoting holistic and sustainable development of fisheries and aquaculture through infrastructure development, technology adoption, value chain development and capacity building.	• Supports development of export-oriented fisheries clusters. • Facilitates post-harvest infrastructure and cold chain development. • Promotes value addition and market linkages. • Supports technology adoption and entrepreneurship. • Builds capacity of fish farmers, FFPOs and cooperatives.
ICAR Fisheries Research Institutes	National fisheries research institutions mandated to undertake research, education, extension and technology development for	• Develops improved production technologies for export species. • Develops post-harvest and value-added product technologies.

Institution	Mandate	Key Role(s) in India's Seafood Export Ecosystem
	sustainable fisheries and aquaculture.	• Provides scientific support on aquatic animal health and disease management. • Supports traceability, quality assurance and export compliance. • Conducts training and technology dissemination for stakeholders.
State Fisheries Departments	Primary implementing agencies responsible for planning, implementation, extension services and development of fisheries and aquaculture within their respective States and Union Territories.	• Identify export-oriented production clusters. • Facilitate farm registration and traceability systems. • Registration of fishing vessels including country boats • Maintain the facilities at fish landing centres and auction halls • Support infrastructure development and extension services. • Build capacity of fish farmers and producer organizations. • Coordinate with Central agencies and industry for export promotion.
Processing Establishments, Exporters, FFPOs & Cooperatives	Key stakeholders responsible for aggregation, processing, value addition, marketing and export of fish and fishery products.	• Aggregate export-quality raw material from production clusters. • Undertake processing, value addition and cold-chain management. • Ensure compliance with food safety and quality standards. Facilitate export documentation and logistics. • Establish market linkages with international buyers.

Chapter 3 - Inland Fisheries Production, Export Potential and Market Opportunities

India has witnessed remarkable growth in inland fisheries over the past decade, transforming the sector into the principal contributor to national fish production. Expansion of freshwater aquaculture, improved seed quality, adoption of scientific farming practices, and sustained public investment under programmes such as the Pradhan Mantri Matsya Sampada Yojana (PMMSY) have substantially enhanced productivity and production across the country.

Despite this production success, the export potential of inland fisheries remains largely untapped. India's seafood exports continue to be dominated by marine products and shrimp, whereas several commercially important freshwater species possess strong demand in international markets. This disparity reflects structural challenges within the inland fisheries value chain rather than limitations in production. Constraints relating to processing infrastructure, cold chain logistics, quality assurance, traceability, certification, aggregation mechanisms, and market linkages continue to limit the participation of inland States and Union Territories in seafood exports.

The next phase of India's fisheries development therefore requires a strategic shift from production-centric growth to market-oriented development. Rather than focusing solely on increasing production volumes, greater emphasis is needed on developing integrated export ecosystems encompassing production planning, post-harvest management, processing, certification, logistics, and international market access. Such an approach would enable inland States to transform their comparative production advantages into sustainable export competitiveness.

The Export Opportunity

India's inland fisheries have become the principal driver of national fish production, yet only a small proportion of inland fish enters export markets. Bridging this production–export gap through value chain development, quality assurance, processing, traceability and market integration represents one of the greatest opportunities for expanding India's seafood exports and enhancing farmers' incomes.

3.1 Inland Fisheries Production Scenario

India possesses one of the most extensive and diverse inland aquatic resource bases in the world, comprising rivers, reservoirs, lakes, canals, ponds, tanks, floodplain wetlands, estuaries, and groundwater-fed aquaculture systems. This rich natural resource base, combined with favourable climatic conditions and continuous technological advancements, has enabled inland fisheries to emerge as the dominant component of the country's fisheries sector (Table 3.1).

Unlike capture fisheries, inland aquaculture offers greater opportunities for planned production, quality control, species diversification, and traceability attributes that are increasingly demanded by global seafood markets. When backed by appropriate

infrastructure, quality assurance systems, and market linkages, inland aquaculture can support export-oriented production.

However, production growth alone does not automatically translate into export competitiveness. While several inland States have achieved significant production volumes, only a limited proportion of this output presently enters export value chains. In many regions, inadequate processing facilities, fragmented supply chains, insufficient cold chain facilities, limited awareness of international standards, and weak integration with exporters constrain access to overseas markets. Consequently, substantial export opportunities remain unrealised despite the availability of abundant fish resources.

The future growth of inland fisheries therefore lies in developing integrated value chains that connect farmers with processors, exporters, certification agencies, logistics providers, and international buyers. Such integration will enable inland fisheries to contribute more significantly to India's fish and fishery products' exports while generating higher income and employment across rural areas.

Table 3.1: State-wise details of inland water resource and fish production (FY 2024-25)

S. No.	Name of the State/UT	Rivers & Canals (Km)	Raceways	Small Reservoirs	Medium & Large Reservoir	Tanks & Ponds (Ha)	Brackish Water (Ha)	Saline/ Alkaline (Ha)	Beels/ Oxbow Lakes/ Derelict Water (Ha)	Other than rivers and canals (Ha)	Fish production (lakh tonnes)	
			Area (ha)	Area (ha)	Area (ha)						Total of inland & marine	Inland
1	Andhra Pradesh	11514	0	34693	130898	371976	47080	0	130000	0	55.39	48.88
2	Arunachal Pradesh	11035	4	0	3978	49448	0	0	530	57895	0.11	0.11
3	Assam	11304	0	3096	0	169292	0	0	154277	438401	5.29	5.29
4	Bihar	21354	0	5045	14711	125942	0	0	13804	447793	9.60	9.60
5	Chhattisgarh	3573	0	43565	39035	121300	0	0	0	0	8.73	8.73
6	Goa	579	0	484	2964	51	161	0	0	0	1.37	0.09
7	Gujarat	3865	0	92566	255201	22000	89341	0	0	0	10.43	2.78
8	Haryana	14885	0	1177	0	19719	0	2360	0	61	2.32	2.32
9	Himachal Pradesh	3000	6	0	43785	909	0	0	0	0	0.19	0.19
10	Jharkhand	1800	0	28790	104363	93198	0	0	0	19936	3.63	3.63
11	Karnataka	9630	0	7595	265063	313304	8000	0	0	0	9.63	4.37
12	Kerala	3220	0	7551	26654	27625	65213	0	0	85000	9.27	2.80
13	Madhya Pradesh	17088	0	139105	218558	40458	0	0	0	0	4.45	4.45
14	Maharashtra	17861	0	168480	133202	53087	17125	44164	0	5550	7.35	2.71
15	Manipur	1647	0	960	1182	12043	0	0	29161	0	0.37	0.37
16	Meghalaya	5392	0	718	0	5223	0	0	259	303	0.20	0.20
17	Mizoram	1750	0	10	8000	6368	0	0	10	0	0.07	0.07
18	Nagaland	1600	0	0	2258	3750	0	0	1110	0	0.11	0.11
19	Odisha	24879	0	34608	165771	161485	32587	0	180000	0	11.92	9.53

S. No.	Name of the State/UT	Rivers & Canals (Km)	Raceways	Small Reservoirs	Medium & Large Reservoir	Tanks & Ponds (Ha)	Brackish Water (Ha)	Saline/ Alkaline (Ha)	Beels/ Oxbow Lakes/ Derelict Water (Ha)	Other than rivers and canals (Ha)	Fish production (lakh tonnes)	
			Area (ha)	Area (ha)	Area (ha)						Total of inland & marine	Inland
20	Punjab	764	0	687	3525	17473	0	394	0	0	2.03	2.03
21	Rajasthan	30000	0	145823	254475	30266	200	0	0	0	1.14	1.14
22	Sikkim	900	0	850	0	19	0	0	0	0	0.01	0.01
23	Tamil Nadu	7430	0	19586	42156	218691	56000	6228	7000	35284	9.48	2.67
24	Telangana	4287	0	29383	192628	507627	0	0	0	0	4.77	4.77
25	Tripura	1080	0	0	3049	31306	0	0	100	2976	0.89	0.89
26	Uttar Pradesh	70000	0	3223	144693	145809	4674	0	0	1458000	13.31	13.31
27	Uttarakhand	2686	9	0	20587	1012	0	0	0	100	0.10	0.10
28	West Bengal	27859	0	14955	13275	308682	59613	0	42060	0	23.74	20.07
29	A and N Islands	0	0	367	0	195	619	0	0	0	0.53	0.01
30	Chandigarh	0	0	0	300	2	0	0	0	0	0.00	0.00
31	DNH & DD	0	0	0	0	0	0	0	0	0	0.31	0.00
32	Delhi	52	0	0	0	35	0	4	0	0	0.01	0.01
33	Jammu & Kashmir	26211	47	4230	6000	1721	0	0	0	21400	0.29	0.29
34	Ladakh	1885	1	0	250	10	97700	0	0	0	0.00	0.00
35	Lakshadweep	0	0	0	0	0	0	0	0	0	0.19	0.00
36	Puducherry	174	0	4	119	367	63	0	0	0	0.49	0.06
ALL INDIA		**339304**	**66**	**787550**	**2096680**	**2860392**	**478376**	**53150**	**558311**	**2572698**	**197.75**	**151.60**

Reference: Handbook of fisheries statistics 2025, Department of Fisheries, Government of India.

3.2 Production - Export Gap: Unlocking Untapped Export Potential

India has successfully transformed itself into one of the world's largest fish-producing nations; however, this achievement has not been proportionately reflected in export diversification from inland fisheries. While inland fisheries account for over three-fourths of the country's total fish production, India's fish and fishery products' exports continue to be dependent on fishery resources from marine and resources from brackishwater culture sector. This imbalance represents one of the most significant opportunities for future growth of the fisheries sector.

The disparity is not primarily due to production constraints but arises from the absence of an integrated export ecosystem in most inland States. Fish produced by inland farmers is largely marketed through domestic wholesale channels with limited processing, value addition or export orientation. Consequently, considerable economic value is lost despite the availability of commercially important species capable of meeting international market requirements.

The production - export gap is influenced by multiple interrelated factors including fragmented supply chains, inadequate aggregation mechanisms, insufficient cold chain infrastructure, limited processing capacity, non-uniform quality standards, weak traceability systems, and inadequate awareness of export market requirements. In addition, many inland production clusters remain geographically distant from export processing facilities and ports, increasing transportation costs and reducing competitiveness.



Figure 3.1: India's Inland Fisheries Clusters

Bridging this gap requires a shift from a production-centric approach towards value chain development. Export competitiveness depends on production, farm management, harvesting, processing, certification, branding, logistics and international marketing. Strategic investments across these stages will enable inland fisheries to diversify exports, raise farm-gate prices, and generate employment in processing and allied services.

From Production to Exports

High production alone does not create export competitiveness. Sustainable seafood exports require an integrated ecosystem comprising export-oriented production clusters, aggregation, cold-chain logistics, processing, food safety, traceability, certification, branding and access to international markets.

In this regard, Government of India under PMMSY has notified 34 fish production and processing clusters, of which 17 are notified in the inland States and UTs. While these clusters are designed to enhance competitiveness and economies of scale, inland fisheries face significant challenges in reaching international markets. Logistics remains a major constraint, as most inland clusters are far from seaports and airports, making transport costly and time-consuming. Heavy reliance on road transport increases transit delays and exposes perishable commodities to spoilage, reducing their competitiveness compared to coastal clusters. Cold chain and infrastructure gaps further weaken export readiness. The absence of adequate accredited laboratories, standardized certification, and traceability systems restricts compliance with global food safety norms and branding opportunities. Combined with the geographical disadvantage of distance from export hubs, these deficiencies raise costs and reduce quality. Addressing these challenges requires integrated inland export hubs with modern processing, cold chain, and certification facilities, alongside stronger farm-to-export value chains through aggregation, branding, and international marketing. Improved multimodal transport corridors linking road, rail, and air cargo will also be critical. The notification of major production and processing clusters under PMMSY is a step towards bridging these gaps and positioning inland fisheries as a stronger contributor to India's seafood exports.

3.3 Export Competitiveness of Major Inland Aquaculture Species

India's inland aquaculture is diversifying rapidly beyond traditional carp culture. Yet export strategies cannot be uniform - each species has distinct production systems, market opportunities, and quality standards. To maximise competitiveness, a species-specific approach (Table 3.2) is essential.

Future export growth should therefore prioritise species based on international demand, production scalability, processing suitability and comparative advantage rather than production volume alone. Such prioritisation will optimise investments in broodstock development, hatcheries, feed, processing infrastructure and market promotion.

Table 3.2 Comparative Export Competitiveness of Major Inland Species

Species	Export Potential	Processing Suitability	Market Segment	Strategic Priority
Cultured shrimp *(L. vannamei P. monodon*)	Very High	Excellent	• Niche premium demand • High unit value • Gourmet demand	High
Freshwater prawn (Scampi)	Very High	Excellent	• Niche premium demand • High unit value • Gourmet demand	High
Pangasius	Very High	Excellent	• Volume-driven • Affordable (low unit value) whitefish • Suitable for mass retail	High
Tilapia	High	Excellent	• Volume-driven • Affordable (low unit value) whitefish • Suitable for mass retail & Food Service	High
Ornamental fish	High	Not Applicable	• Aquarium Trade • Specialized niche • Potential for diversification.	High
Indian Major Carps	Moderate	Moderate	• Volume-driven • Affordable (low unit value) • Regional & ethnic market	Medium
Rainbow Trout	Moderate	Good	• Niche premium demand	Medium
Asian seabass	Very High	Excellent	• Premium • High unit value	High

3.4 State-wise Comparative Advantage and Export Readiness

India's fisheries export is presently dominated by coastal States and Union Territories (Table 3.3). Yet, the inland fisheries sector holds strong potential for expansion and diversification. Scaling up cluster-based production systems can generate economies of scale, while promoting species such as trout, tilapia, pangasius, and scampi helps reduce dependence on shrimp. Alongside this, value addition and branding can significantly enhance competitiveness, positioning inland states to capture premium segments in global markets.

Table 3.3 State Wise Export Details of Fish and Fishery Products (FY 2025-26)

State	Quantity	Value	Value	Unit Value
	Tonnes	Rs Crore	USD Million	USD/ kg
Andhra Pradesh	409273.78	23765.11	2724.38	6.66
Delhi	409.56	27.48	3.12	7.62
Goa	49358.13	903.60	102.96	2.09
Gujarat	312258.66	7145.67	813.93	2.61
Karnataka	337238.86	5371.85	610.11	1.81
Kerala	194224.12	8466.77	968.60	4.99
Maharashtra	281147.00	9057.83	1034.81	3.68
Odisha	100864.26	5431.95	623.68	6.18
Tamil Nadu	152143.64	7660.48	877.79	5.77
Telangana	11457.77	715.02	82.02	7.16
West Bengal	118336.54	5240.90	602.57	5.09
Others*	5305.90	103.80	11.79	2.22

**Others include Andaman & Nicobar Island, Assam, Bihar, Daman & Diu, Puducherry, Uttar Pradesh and Jharkhand*

At the same time, India's inland fisheries landscape is marked by substantial regional diversity in aquatic resources, production systems, infrastructure, and institutional capacity. This diversity calls for differentiated strategies rather than a uniform development model. Export promotion should therefore build upon the comparative advantages of individual States and Union Territories (Tables 3.4 and 3.5), which may be viewed through four broad development pathways.

i. **Advanced Export Ecosystem States**

States such as Andhra Pradesh have developed integrated aquaculture ecosystems encompassing hatcheries, feed manufacturing, commercial farming, processing plants, laboratories, cold chain facilities and exporter networks. These States can serve as demonstration models for export-oriented aquaculture.

ii. **High Production - Emerging Export States**

States including West Bengal, Odisha, Bihar and Uttar Pradesh possess large production volumes but require greater investment in processing infrastructure, quality assurance systems and export market integration.

iii. **Diversification States**

States such as Madhya Pradesh, Chhattisgarh, Telangana and Jharkhand have significant opportunities for expanding reservoir fisheries, cage culture and species diversification to support future exports.

iv. **Niche Premium Production Regions**

The Himalayan and North-Eastern States possess comparative advantages in cold-water fisheries especially high-value species capable of serving premium international markets like trout.

Table 3.4 State Specific Export Pathways and Focus Areas

Development Pathway	Representative States	Priority Focus
Advanced Export Ecosystem States	Andhra Pradesh	Value addition, market diversification
Emerging Export States	West Bengal, Odisha, Bihar, Uttar Pradesh	Processing, certification, logistics
Diversification States	Madhya Pradesh, Chhattisgarh, Telangana, Jharkhand	Species and culture (cages) diversification, certification, logistics
Premium Niche Regions	Himalayan & North-Eastern States	Trout, ornamental fish, specialty products, production efficiency and quality

At the same time, export readiness requires addressing persistent challenges to achieve global competitiveness (Table 3.5). Infrastructure gaps in cold storage and transport reduce efficiency, while intensive farming systems demand stronger biosecurity to manage disease risks. Climate variability continues to affect water availability and production stability, underscoring the need for resilience measures. Harmonized certification systems are essential to meet international standards and ensure traceability, which importing countries increasingly demand.

CAA mandates antibiotic-free registration of aquaculture inputs and requires PHT Certificates for exports. Voluntary schemes such as MPEDA's Shaphari certification support consistent marketing, Strengthening enforcement across both inputs and harvests, regardless of destination, is therefore vital to safeguard India's reputation.

States can enhance export readiness by formulating inland aquaculture guidelines aligned with national frameworks, as demonstrated by Andhra Pradesh for shrimp. Collaboration with the CAA to ensure strict registration and renewal of aquaculture farms will improve compliance and traceability. This integrated approach allows states to leverage production strengths while meeting global market expectations.

Export readiness should be assessed using measurable indicators such as resource availability, production capacity, species suitability, processing infrastructure, certification systems, logistics connectivity, institutional support, and industry participation. Such assessments provide the foundation for identifying priority interventions and preparing State-specific export roadmaps.

3.5 Priority Inland States with High Fisheries Export Potential

The preceding section demonstrates that inland States and Union Territories do not follow a uniform pathway towards export development. Some States possess a large production base but limited export infrastructure, while others offer opportunities through reservoir fisheries, species diversification, cold-water fisheries or high-value aquaculture. Translating these comparative advantages into exports therefore requires prioritisation at the State, species and production-cluster levels.

Within this broader landscape, Uttar Pradesh, Bihar, Chhattisgarh, Telangana and Haryana emerge as five priority landlocked States with significant potential for focused fisheries export development. Their selection reflects different but complementary pathways:

- Uttar Pradesh and Bihar represent high-production, emerging-export States;
- Chhattisgarh and Telangana offer opportunities through reservoir fisheries and species diversification; and
- Haryana presents a differentiated high-value opportunity through inland saline-water aquaculture.

The identification of these States is based on an indicative assessment of:

- Inland fish production and aquatic-resource availability;
- Concentration of production within identifiable clusters;
- Suitability of species for international markets;
- Scope for aggregation, processing and value addition;
- Potential linkage with approved processing establishments, laboratories and exporters;
- Logistics connectivity with ports, airports and other export gateways; and
- Institutional support for cluster-based fisheries development.

This prioritisation is intended to support focused interventions and demonstrate different models of inland fisheries export development. It does not constitute an official ranking of States based on their existing seafood exports.

Table 3.5: Priority Inland States and Indicative Export Development Pathways

State	Fish Production (FY 2024-25)	Comparative Advantage	Identified Fisheries Cluster	Indicative Export Products	Priority Focus
Uttar Pradesh	**13.31 lakh tonnes**	Large production base and extensive pond, river, canal and reservoir resources	Siddharthnagar Pangasius Cluster	Pangasius, Indian major carps and processed freshwater fish	Aggregation, primary processing, cold chain, traceability and processor-exporter linkage
Bihar	**9.60 lakh tonnes**	High inland production supported by ponds, rivers, wetlands and floodplain resources	Siwan Wetland Fisheries Cluster	Indian major carps, Pangasius and selected freshwater species	Cluster organisation, product standardisation, hygienic harvesting, chilling, processing and logistics
Chhattisgarh	**8.73 lakh tonnes**	Strong pond and reservoir fisheries base with potential for	Raipur Tilapia Cluster	Tilapia, carps and reservoir-based	Production planning, uniform harvest sizes, freezing, value

		organised production		aquaculture products	addition and market linkage
Telangana	**4.77 lakh tonnes**	Extensive tank and reservoir resources, species-diversification potential and an emerging export linkage	Mancherial Murrel Cluster	Murrel, Pangasius, tilapia and other suitable freshwater species	Standardised production, traceability, quality assurance, processing and strengthening of export linkages
Haryana	**2.32 lakh tonnes**	Inland saline and alkaline resources suitable for high-value aquaculture	Sirsa Saline Water Aquaculture Cluster	Inland saline-water shrimp and other suitable high-value species	Farm registration, biosecurity, residue monitoring, cold chain and linkage with Delhi-NCR export infrastructure

Uttar Pradesh: Scale-led opportunity in Pangasius and carps

Uttar Pradesh recorded inland fish production of 13.31 lakh tonnes during FY 2024-25, the highest among the landlocked States identified in this section. Its extensive resource base includes rivers, canals, reservoirs, tanks, ponds and other inland waterbodies. The identification of Siddharthnagar as a Pangasius Cluster provides a potential anchor for developing an organised, export-oriented freshwater fish value chain.

Pangasius and Indian major carps represent the principal opportunities for the State. Potential product forms include whole frozen fish, dressed fish, steaks, fillets and other processed products, subject to confirmed buyer demand and importing-country requirements.

However, the State's production scale should not be equated with the immediate availability of exportable surplus. A significant proportion of production serves domestic markets, and supplies are dispersed across numerous farms and districts. Exporters should therefore assess production at the cluster level and identify farms capable of supplying consistent volumes of fish of the required species, size and quality.

Exporters intending to source fish from Uttar Pradesh should:

- Assess species-wise production, harvest seasonality and exportable surplus within the Siddharthnagar cluster and other potential sourcing areas;
- Identify farmers, ffpos, cooperatives and aggregators capable of supplying commercially viable quantities;
- Communicate buyer specifications relating to species, harvest size, product quality, production practices, permitted inputs and harvest schedule before entering into procurement arrangements;
- Undertake trial procurement to evaluate raw-material quality, processing yield, shelf life and logistics feasibility;
- Establish documented supplier-approval and procurement procedures;

- Agree upon harvest scheduling, grading, icing, collection and payment arrangements with participating suppliers;
- Ensure that supplying farms are registered or enrolled under the applicable framework and maintain the records required for traceability;
- Identify suitable collection points, ice availability, refrigerated transport and approved processing establishments before commencing commercial procurement;
- Assess whether the product can be transported economically as fresh or chilled raw material or should undergo primary processing closer to the production cluster;
- Obtain product samples for evaluation by prospective buyers before scaling procurement;
- Calculate the delivered cost at the processing establishment and export gateway, including procurement, handling, ice, inland transport, processing, testing, packaging and certification costs; and
- Establish written procurement arrangements with farmers, producer organisations or aggregators once product and market viability have been demonstrated.

Since Pangasius and carps primarily compete in price-sensitive international market segments, exporters should prioritise product forms that can support efficient processing, transport and market realisation. Commercial decisions should be based on confirmed buyer specifications and the total delivered cost rather than production volume alone.

Bihar: Cluster-based Development of Carp and Pangasius Value Chains

Bihar recorded inland fish production of 9.60 lakh tonnes during FY 2024-25 and possesses a substantial resource base comprising rivers, canals, ponds, tanks, wetlands and floodplain waterbodies. The designation of Siwan as a Wetland Fisheries Cluster provides a potential base for cluster-level sourcing, aggregation and value-chain development.

The State has potential in Indian major carps, Pangasius and selected freshwater species. However, Bihar also has a strong domestic market for freshwater fish. Exporters should therefore determine the commercially available exportable surplus after considering prevailing domestic prices, seasonal demand and the cost of assembling required volumes.

Organised aquaculture clusters may initially provide a more suitable sourcing base than dispersed or seasonal capture fisheries because production practices, farm inputs, species, harvest size and traceability can be more readily standardised.

Exporters intending to source fish from Bihar should:

- Map potential sourcing locations based on species, production volume, harvest season and concentration of farms;
- Distinguish organised aquaculture production from dispersed or seasonal capture production;
- Assess the quantity that can be procured for export without depending on irregular market arrivals;

- Compare domestic-market prices with the price realisable from the proposed export product;
- Identify farmers, FFPOs, cooperatives or aggregators capable of coordinating production and harvest schedules;
- Communicate required species, harvest size, product form and quality specifications to suppliers in advance;
- Undertake supplier assessment covering farm practices, input records, water quality, fish-health management and traceability;
- Conduct trial harvests and processing tests to assess flesh quality, recovery, shelf life and suitability for freezing or value addition;
- Establish designated collection points with arrangements for grading, weighing, icing and batch identification;
- Identify the nearest suitable approved processing establishment, recognised laboratory and refrigerated-transport provider;
- Evaluate routes to the selected processing facility and export gateway, including transit time and temperature-control requirements;
- Test buyer acceptance of proposed frozen, chilled or processed products before entering into long-term procurement arrangements; and
- Maintain separate records for each farm, harvest batch, collection lot and processing batch.

Exporters should initially work with a limited number of organised suppliers and clearly defined products. Procurement may be expanded after consistency of supply, product quality, traceability and commercial viability have been demonstrated.

Chhattisgarh: Tilapia and Reservoir-based Export Diversification

Chhattisgarh recorded inland fish production of 8.73 lakh tonnes during FY 2024-25 and possesses substantial pond, tank and reservoir resources. The designation of Raipur as a Tilapia Cluster aligns the State with a species suitable for organised aquaculture, processing and international marketing in frozen whole and fillet forms.

The State's comparative advantage arises from the possibility of sourcing concentrated production from ponds, reservoirs and appropriately managed cage-culture systems. Concentrated production can facilitate planned stocking, scheduled harvesting, aggregation and supply of relatively uniform-sized fish to processing establishments.

Tilapia is generally traded as an affordable, volume-driven whitefish. Export viability will therefore depend on the cost of raw material, uniformity of harvest size, processing yield, consistency of supply and inland transport.

Exporters proposing to develop a tilapia or reservoir-fish supply chain in Chhattisgarh should:

- Identify ponds, reservoir sites or cage-culture units capable of supplying commercially viable quantities;
- Verify that the cultured species and production practices comply with the applicable regulatory requirements;

- Determine the current production cycle, expected harvest dates, average harvest size and available volumes;
- Communicate market specifications to farmers before stocking or during the early stages of the production cycle, wherever practicable;
- Agree on the required harvest size, grading criteria and delivery schedule;
- Assess seed source, feed records, fish-health practices, use of inputs and farm traceability;
- Undertake sample harvesting and processing trials to determine fillet yield, flesh quality, shelf life and buyer acceptance;
- Evaluate the commercial feasibility of whole frozen fish, fillets, portions and other buyer-specified products;
- Organise harvesting in batches that can be handled, chilled and transported without delay;
- Arrange suitable ice, insulated containers, refrigerated vehicles and batch-identification systems;
- Identify processing facilities capable of filleting, freezing, packing and storing the intended product;
- Calculate procurement, processing and logistics costs for each proposed product form;
- Obtain buyer approval of samples and product specifications before scaling procurement; and
- Establish a production and procurement calendar with participating farms or producer organisations.

Exporters should avoid encouraging production expansion before confirming product specifications, processing yield, logistics cost and market demand. The proposed export product should be commercially validated through trial consignments before large-scale sourcing arrangements are established.

Telangana: Species Diversification Supported by an Emerging Export Linkage

Telangana recorded inland fish production of 4.77 lakh tonnes during FY 2024-25 and possesses extensive tank, pond and reservoir resources. The designation of Mancherial as a Murrel Cluster provides an opportunity to develop a differentiated freshwater species value chain alongside other scalable species such as Pangasius and tilapia.

Telangana also appears separately in the State-wise export data presented in Table 3.3, with reported seafood exports of 11,457.77 tonnes valued at ₹715.02 crore during FY 2025-26. This indicates the presence of export activity associated with the State. However, the figures should not be treated as confirmation that the entire exported quantity originated from fisheries production within Telangana unless supported by production-origin records.

Exporters should therefore assess the species, product forms, production sources and value-chain participants underlying the available export activity before developing new sourcing arrangements.

Exporters intending to source from Telangana should:

- Identify the species and product categories already being exported through entities located in or associated with the State;
- Distinguish seafood sourced within Telangana from products procured from other States;
- Identify farms, reservoirs and production clusters capable of supplying traceable export-quality raw material;
- Assess the production scale, seasonality, harvest size and commercial consistency of Murrel and other priority species;
- Evaluate whether Murrel is suitable for live, chilled, frozen or value-added export based on buyer requirements and transport feasibility;
- Examine Pangasius and tilapia as complementary volume products where adequate production and processing suitability exist;
- Conduct sample procurement, quality assessment and processing trials for each proposed species;
- Verify farm registration, production records, input use, aquatic-animal-health practices and batch traceability;
- Identify existing exporters and approved processing establishments that can handle the proposed product;
- Arrange farm-to-processing cold-chain movement according to the product's temperature and handling requirements;
- Prepare product specifications covering species, form, size, grade, packaging, storage and shelf life;
- Obtain buyer feedback on samples before entering into long-term supply commitments; and
- Maintain records linking the production farm, harvest batch, aggregator, transport movement, processing batch and export consignment.

Where Murrel is proposed as a differentiated product, exporters should establish reliable production volumes and recognised buyer demand before treating it as a scalable export line. Pangasius and tilapia may be evaluated where larger and more consistent processing volumes are required.

Haryana: High-value Inland Saline-water Aquaculture

Haryana recorded inland fish production of 2.32 lakh tonnes during FY 2024-25. Although its overall production is lower than that of the other priority States, Haryana presents a distinctive export opportunity through the use of inland saline and alkaline areas for high-value aquaculture. The State Fisheries Profile identifies Haryana as a landlocked State that has utilised inland underground saline water for culture of whiteleg shrimp. The Department of Fisheries has also identified Sirsa as a Saline Water Aquaculture Cluster.

Cultured shrimp is already supported by established export markets, processing capacity, exporter networks, residue-control systems and certification arrangements. Exporters may

therefore examine the feasibility of integrating eligible inland saline-water farms in Haryana into existing shrimp procurement and export supply chains.

Exporters intending to procure shrimp from Haryana should:

- Identify inland saline-water farms capable of supplying commercially viable and consistent harvest volumes;
- Verify the registration or approval status of each supplying farm under the applicable regulatory framework;
- Assess the farm's water source, production system, seed source, stocking records, feed use, health-management practices and harvest history;
- Ensure that only permitted and documented aquaculture inputs are used;
- Communicate buyer and importing-country requirements to farmers before procurement;
- Establish a supplier-approval system covering farm documentation, traceability, biosecurity and residue-control requirements;
- Agree upon the required shrimp species, count, size, quality, harvest schedule and handling procedure;
- Ensure implementation of applicable residue-monitoring and pre-harvest-testing requirements before procurement;
- Maintain traceability from the farm and pond to the harvest lot, collection vehicle, processing batch and final export consignment;
- Arrange hygienic harvesting, immediate icing and refrigerated transportation to an approved processing establishment;
- Verify that transit time from the farm to the processing establishment remains compatible with raw-material quality requirements;
- Conduct trial harvests and assess raw-material quality and processing yield before establishing regular procurement;
- Identify the appropriate approved processing establishment and confirm that its approval covers the intended product and destination market;
- Calculate the complete delivered cost, including testing, harvest, ice, inland transport, processing, packaging and export logistics; and
- Maintain contingency sourcing and transport arrangements to address harvest delays, disease events, testing delays or vehicle breakdowns.

Haryana's proximity to Delhi-NCR may provide access to logistics, laboratories, exporters and air-cargo services. However, each sourcing arrangement should be evaluated on the basis of actual distance to the processing establishment, transport time, cold-chain integrity, consignment size and destination-market requirements.

Case Study 3.1

Andhra Pradesh: An Integrated Export-Oriented Inland Aquaculture Ecosystem

Andhra Pradesh has emerged as India's leading aquaculture State by successfully integrating production, processing, quality assurance and export marketing into a single value chain. The State demonstrates that export competitiveness is not achieved through production alone, but through the development of an enabling ecosystem that supports every stage of the supply chain.

The State has established a comprehensive aquaculture ecosystem comprising hatcheries, broodstock units, commercial feed manufacturing, intensive pond culture, processing facilities, accredited laboratories, cold chain infrastructure, export-oriented processing units and efficient logistics connectivity. Strong institutional coordination among the State Fisheries Department, MPEDA, EIC/EIAs, processing industries, exporters and farmer groups has facilitated compliance with international quality and food safety standards. The State has enacted the Andhra Pradesh State Aquaculture Development Authority (APSADA) Act, 2020 (Act 29 of 2020) and its Amendment (2025) dedicated to regulate, sustain, and promote aquaculture and aquaculture business operations across the state. The Act established APSADA to streamline licensing, improve quality control, and enhance the economic sustainability of the fisheries sector.

This integrated approach has enabled producers to access international markets while ensuring better price realization, improved product quality and enhanced traceability. The Andhra Pradesh experience illustrates that export competitiveness is the outcome of coordinated investments across the value chain rather than isolated improvements in production.

3.6 Export Profile of Major Inland Aquaculture Species

India's inland aquaculture encompasses a diverse range of species with varying levels of export potential, market demand and commercial value. While some species such as cultured shrimp, scampi, pangasius and tilapia have already established a presence in international markets, others including carps, trout, ornamental fish and Asian seabass offer significant opportunities for export diversification and value addition. Each species exhibits distinct characteristics in terms of production systems, processing suitability, product forms, destination markets and price realization. A clear understanding of these species-specific export profiles is essential for identifying comparative advantages, prioritising investments and formulating targeted strategies to enhance the participation of inland States and Union Territories in India's seafood export value chain.

This section provides an overview of the major inland aquaculture species, highlighting their production status, export performance, key destination markets and future prospects for strengthening India's global competitiveness

Table 3.5 Comparative Export Competitiveness of Inland Fish Species from India

Species	Leading States in Export	Major Export Markets of Indian Produce	Unit Value (USD/ kg) of Indian export	Market Notes	Major competitors & Unit Value (USD/ kg)
Cultured shrimp • **Frozen** • **Fresh or chilled** • **Prepared or preserved**	**Major-**Andhra Pradesh **Moderate-** Tamil Nadu, Odisha, West Bengal **Small-**Gujarat, Maharashtra, Kerala **Marginal-**Telangana	USA, China, Vietnam, Japan, Belgium, Canada, UK, Germany	5.00 – 11.32 (excluding anomaly)	USA, Japan (8.1) & Canada (8.4) pays premium China (5.65) & Vietnam (6)	***Frozen shrimp & prawn*** *(includes both cultured shrimp & prawn)* Ecuador-5.99 Vietnam-9.74
					Frozen, processed, cooked, IQF in air-tight containers *(includes both cultured shrimp & prawn)* Vietnam-9.46 Indonesia-8.72 China-11.24
Freshwater prawn/ Scampi • **Frozen** • **Fresh or chilled** • **Prepared or preserved**	**Major-** Maharashtra **Moderate-** Gujarat, Kerala **Small-** Andhra Pradesh, West Bengal **Marginal-** Odisha, Telangana	Thailand, Malaysia, Mauritius, USA, Hong Kong, Singapore, Canada, UK	3.38 -17.42	Thailand highest volume with 15/kg Canada pays top premium (17/kg).	***Prepared and preserved, not in air-tight containers*** *(includes both cultured shrimp & prawn)* China-13.22 Vietnam-9.49
Pangasius • **Frozen** **(Whole fish, fillets)**	**Major-** West Bengal **Moderate-** Gujarat	Bhutan, Senegal, Bangladesh, Nepal, Kuwait, Vietnam, UAE, Qatar	0.47 - 13.20	Thailand pays highest Bangladesh pays lowest	***Frozen fish*** Vietnam-1.75 China-1.59 Thailand-1.53

	Small- Andhra Pradesh, Tamil Nadu **Marginal-** Maharashtra, Kerala				***Frozen fillet*** Vietnam -2.53 Netherlands -4.21 Malaysia-1.73
Tilapia • **Frozen (whole fish, fillets)** • **Fresh or chilled**	**Major-** Gujarat, Maharashtra **Marginal-**Kerala, Karnataka **Negligible-**Tamil Nadu	Tanzania, Senegal, UAE, Ivory Coast, USA, Mozambique, Cameroon, Ghana, Nigeria	0.59 - 5.83	Africa drives bulk demand at ~1/kg. USA and Spain pay premium (~4.2 and 5.83).	***Frozen fish*** China-1.57 Taiwan-2.43 Vietnam-2.60 ***Frozen fillet*** China-3.17 Indonesia-7.32 Vietnam-4.80
Ornamental fish • **Live**	West Bengal, Kerala, Tamil Nadu, Maharashtra, Himachal, Ladakh, Karnataka ****Major producers***	Malaysia, Indonesia, Singapore, Japan, Taiwan, Thailand, Germany, China, Philippines	Unit value ranges from 4.74 to 207.30. Unit value >100 for premium species	Asian hubs dominate. Japan & Taiwan pay top rates for premium species (> 150 per kg).	***Major*** Japan Singapore Indonesia ***Minor*** Sri Lanka Thailand Malaysia
Carps • **Frozen (whole, fillets)** • **Fresh or chilled**	Andhra Pradesh, Uttar Pradesh, West Bengal, Chhattisgarh, Odisha, Bihar, Assam, etc. ****Major producers***	Cameroon, Bhutan, Tanzania, Kuwait, UAE, USA, Canada	0.48 – 5.82	Africa drives bulk demand (~1–2/kg). USA & Canada pay higher (4–6/kg).	***Frozen fish*** Myanmar-2.44 Thailand-1.63 ***Frozen fillets*** China-8.41 Peru-5.43 Vietnam-2.26

Trout	Jammu & Kashmir, Himachal, Uttarakhand, NE States ***Major producers***	Limited export	EU large trout ~10-12	Russia, Ukraine, Thailand, Japan, Vietnam, USA, Germany etc. are the major global importers	***Fresh, chilled*** Norway -7.50 Turkiye -6.23 Sweden- 7.17 ***Frozen fish*** Tukiye- 6.25 Chile -6.83 China -8.66 ***Frozen fillet & meat*** Chile-12.04 Turkiye- 8.00 Norway-9.98
Asian seabass • **Frozen (whole, fillets)** • **Fresh or chilled**	Tamil Nadu, Andhra Pradesh, West Bengal, Kerala, Karnataka ***Major producers***	Hong Kong, UK, UAE, Maldives, Singapore, USA, EU, Canada	1.73 - 143.99	Singapore pays extreme premium (144/kg); Hong Kong bulk at 92/kg.	The unit value could not be determined, as the import code for Seabass also encompasses Murrel, making species-specific valuation indistinguishable.

Cultured shrimp

The major cultured shrimp exported from India are Pacific white shrimp, tiger shrimp and Indian white shrimp. In FY 2024-25, Pacific White Shrimp *(Litopenaeus vannamei*) continued to dominate India's cultured shrimp production, contributing 11,86,266 tonnes. The native Tiger Shrimp (*Penaeus monodon*) accounted for 67,039 tonnes, while Indian White Shrimp (*Penaeus indicus*) contributed a modest 722 tonnes. Andhra Pradesh is the dominant exporter, consistently contributing to the largest share. The best markets for Indian cultured shrimp are the US, EU, and East Asia, where premium pricing and steady consumption sustain shrimp's dominance. Its high unit value compared to other species makes it India's most profitable and reliable export.

The overall trade of cultured shrimp in the world is 3.6 MMT worth 26.7 USD Billion. India export of cultured shrimp is 0.796 MMT worth 5.66 USD Billion. India contributes for 21 % of world cultured shrimp trade and occupies second position in cultured shrimp trade.

Among the cultured shrimp produced in India, L vannamei dominates the production and export followed by P monodon and P indicus.

Table 3.6 Comparative Export Competitiveness of cultured shrimp from India

Species	Production (in lakh MT) during 2024-25	Average production cost (Rs/Kg)	Export (in Lakh MT) during 2024-25	Unit value (Rs/Kg)
Cultured Shrimp	12.54	260-280	6.83	595.22

Competitor edge:

Ecuador is the major producer and supplier of cultured shrimp. Ecuador is dominating the L vannamei production and export owing to lower production cost and competitive export prices. The major importer of Shrimp and shrimp products include USA, EU, China, Japan and these markets offer huge scope for expansion of our exports further.

India can enhance the export of cultured shrimp by

a. Scaling up the production and decreasing the production cost to make it more competitive.

Focusing on value addition and shifting from export of products under Chapter 03 to Chapter 16 to enable higher unit value realisation and to overcome competition faced from major cultured shrimp producing nations

Scampi

Once a significant contributor to fish export from India, scampi shows moderate growth with occasional dips, peaking at 4,691 tonnes (2018-19) but stabilizing around 2,200-2,300 tonnes in recent years. The scampi trade is niche but profitable, with Maharashtra clearly dominating. The best markets for Indian scampi are Japan, EU, and gourmet seafood segments, where scampi's distinct taste and higher pricing appeal to specialized buyers. Though volumes are modest, scampi's high unit value ensures profitability in select markets. The overall trade of scampi in the world is 3.3 Lakh MT worth 2.4 USD Billion. India's export of scampi is 3078 MT worth 0.03 USD Billion. India contributes for 1 % of world scampi trade.

Table 3.7 Comparative Export Competitiveness of Scampi from India

Species	Production (in lakh MT) during 2024-25	Average production cost (Rs/Kg)	Export (in Lakh MT) during 2024-25	Unit value (Rs/Kg)
M rosenbergii	0.21	380-425	0.02	976.42

Pangasius

Pangasius exports remain small but show gradual growth, rising from 11 tonnes (2016-17) to 982 tonnes (2025-26). Value increased from ₹0.24 crore to ₹12.7 crore, with dollar earnings reaching $1.45 million. The gradual improvement in both quantity and value, hints at expanding processing and export infrastructure. However, the decline in unit value from $3-4/kg to $1.4/kg, reflects its positioning as a low-cost, bulk fish. The best markets for pangasius from India are South Asia, Middle East, and low-income import regions, where pangasius competes with other inexpensive whitefish.

The overall trade of Pangassiuss in the world is 0.72 MMT worth 1.68 USD Billion. India's export of Pangassius is 2,395MT worth 4.193 USD million. Though the production of Pangassius is 1.52 Lakh MT, only 2,395 MT of Pangassius is exported from India. The contribution of India in world Pangassius trade is 0.25% and the contribution is very meagre.

Table 3.8 Comparative Export Competitiveness of Pangasius from India

Species	Production (in lakh MT) during 2024-25	Average production cost (Rs/Kg)	Export (in Lakh MT) during 2024-25	Unit value (Rs/Kg)
Pangasius	2.65	80	0.01	119.45

Competitor edge:

Vietnam is the major producer and supplier of Pangasius. Vietnam dominates Pangasius production and exports owing to its lower production cost and competitive export prices. Vietnam produces large volumes of Pangasius through intensive pond/cage farming systems with high productivity and relatively low production costs. Currently, Vietnam produces around 1.67 million MT of Pangasius annually and accounts for the majority of global Pangasius production and exports. Pangasius is exported in various forms, including whole/frozen fish, frozen fillets and processed/value-added products. The major Pangasius importing markets are China & Hong Kong, the United States, Brazil, the European Union, Mexico, Thailand, the United Kingdom and Japan

India can enhance its Pangassius exports by

1. Promoting large scale cage farming of Pangassius in all potential water bodies
2. Promoting culture of Pangassius in a large scale
3. Reduction of production cost
4. Ensuring the quality of produce to meet the standards prescribed by importing nations.

Tilapia

Tilapia has emerged as the fastest-growing inland export species from India. However, unit value is low, averaging $1/kg, reflecting its positioning as a volume-driven, affordable fish.

Tilapia being a volume-driven species, Gujarat and Maharashtra leads affordable Tilapia exports. International trade is largely focused on frozen fillets and whole fish.

The overall trade of Tilapia in the world is 0.564 MMT worth 1.44 USD Billion. India's export of tilapia is 19,671 MT worth 23.61 USD million. India contributes for 1.6 % of world Tilapia trade.

Table 3.9 Comparative Export Competitiveness of Tilapia from India

Species	Production (in lakh MT) during 2024-25	Average production cost (Rs/Kg)	Export (in Lakh MT) during 2024-25	Unit value (Rs/Kg)
Tilapia/GIFT	0.04	85	0.16	94.48

Competitor edge:

China and Indonesia are the major producers and suppliers of Tilapia. These countries are dominating Tilapia production and export owing to lower production costs and competitive export prices. China produces large volumes of Tilapia, including through large-scale cage farming and integrated production systems supported by hatcheries, seed-rearing units, feed mills, processing plants and fish-meal plants. Such integrated farming practices help reduce production costs and ensure high productivity. Tilapia is exported in various forms, including whole fish, frozen fish and fillets. The major Tilapia importing nations are the USA, Côte d'Ivoire, Israel, Costa Rica, Mali, Canada, Colombia, Mexico, the Netherlands and the UK

India can enhance its Tilapia exports by

1. Promotion of Integrated farming of Tilapia
2. Reduction of production cost
3. Ensuring the quality of produce to meet the standards prescribed by importing nations.

Ornamental fish

The World trade of ornamental fishes is USD 9 Billion and India's share in the global ornamental fish trade remains modest, accounting for only about 0.4 percent of total exports. The country primarily supplies native freshwater species such as loaches, barbs, danios, etc. with Kolkata serving as the main export hub. Much of the high-value segment in this trade is dominated by wild-caught species, which continue to fetch premium prices in international markets. Singapore stands out as the most significant destination for Indian ornamental fish. It is not the largest importer but also the leading re-exporter in the world.

The major supplying nations of ornamental fishes are Japan, Indonesia, Singapore, Thailand, Malaysia, and Sri Lanka USA is the largest importer followed by European Union, and China.. The Ornamental fishery sector offers potential for expansion if captive breeding, diversification of species, and stronger trade linkages are developed.

Carps

Unit value is low at $1.3/kg, positioning carps as a bulk, low-margin species. The best markets are South Asia, Africa, and low-income regions, where carps are culturally accepted and consumed widely. While not a premium export, carps can serve as a volume-driven diversification option.

The world trade of carps is estimated at over 1 million MT annually, with China being the dominant producer and supplier of carp globally. India is a major producer of carps but has a relatively small share in international trade. India's carp exports are estimated at around 1,700 MT, valued at approximately USD 30 million, accounting for about 5.5% of the reported global export value under the available UN Comtrade-based carp trade classification. China dominates global carp production and supply, while major importing markets include China/Hong Kong, the United States, Germany, Poland, Czech Republic, Romania and other European and Asian markets.

Table 3.9 Comparative Export Competitiveness of Carps from India

Species	Production (in lakh MT) during 2024-25	Average production cost (Rs/Kg)	Export (in Lakh MT) during 2024-25	Unit value (Rs/Kg)
Carps	104.34	120-150	0.059	1.222

The export of carps from India can be facilitated by

1. Ensuring quality production meeting International standards
2. Creation of cold chain facilities
3. Creation of Processing and Value addition facilities

Trout

Cold-water aquaculture has emerged as a niche but high-value segment. The dominant trout species in the global export market is rainbow trout. Europe held a 33% rainbow trout market share in 2025. Jammu & Kashmir leads trout production with 3,010 tonnes, supported by the Kokernag hatchery and over 2,000 private trout units. Himachal Pradesh produced 1,673 tonnes, with 909 trout farmers and 1,739 farming units. Uttarakhand recorded 710 tonnes, supported by nearly 2,500 raceways across districts such as Pithoragarh, Bageshwar, and Chamoli. Even in the harsh climatic conditions of Ladakh, trout production has crossed 50 tonnes, supported by 120 raceways and four hatcheries. These figures demonstrate the potential of cold-water aquaculture to supply premium export markets. Despite infrastructure challenges, in June 2026, Uttarakhand supplied 5 tonnes of Himalayan trout internationally for the first time to Nepal fetching approximately Rs. 23.5 lakhs.

The world trade of trout is 292.57 MMT worth USD 2.22 Billion and India's export of trout is negligible to world trade in Trout. Currently, Chile dominates the export of trout in the world. The major trout importing nations are

India will be able to tap the export market of trout by

1. Ensuring quality production meeting to the standards of importing nations
2. Decreasing the production cost

3. Creation of cold chain facility and export processing facilities near the production clusters

Strategic Direction for Inland Export Development

India's future export strategy should focus on:

✓ **Species prioritisation** based on international demand

✓ **State-specific export pathways** based on comparative advantage

✓ **Value addition** instead of bulk commodity exports

✓ **Traceability and food safety** to meet importing-country requirements

✓ **Market diversification** beyond traditional destinations

3.7 International Market Opportunities

Global seafood consumption continues to expand owing to increasing health consciousness, population growth, urbanization, and rising demand for nutritious animal protein. Consumers are increasingly seeking products that are safe, sustainably produced, traceable, and convenient to prepare. These changing consumption patterns provide significant opportunities for export-oriented inland aquaculture. Future export expansion should target three complementary market segments:

I. **Traditional Markets**
Established destinations such as the United States, European Union, Japan and the Middle East continue to offer significant opportunities for high-quality, certified and value-added freshwater seafood products. Compliance with food safety regulations, traceability and sustainability standards will remain essential for maintaining market access.

II. **Emerging Markets**
Rapidly growing economies in South-East Asia, Africa and Latin America are witnessing increasing seafood consumption and offering opportunities for diversified freshwater products. These markets provide potential for expanding exports of both frozen and processed products. African and Latin American markets are known mainly for bulk, low unit value products.

III. **Premium and Niche Markets**
High-income markets increasingly demand premium freshwater products, cold-water fish, ornamental fish, organic aquaculture products, and sustainably certified seafood. Although these markets may involve relatively smaller volumes, they offer substantially higher unit values and encourage product differentiation.

Expanding India's presence across these market segments will require coordinated efforts in market intelligence, branding, certification, quality assurance, logistics, trade promotion and international buyer engagement. Strengthening these enabling systems will allow inland fisheries to contribute meaningfully to India's long-term seafood export strategy.

Chapter Summary

India's inland fisheries have emerged as the principal driver of national fish production, contributing more than three-fourths of the country's total output. However, their participation in seafood exports remains disproportionately low, highlighting substantial untapped export potential. Unlocking this opportunity requires a transition from production-centric development to integrated export-oriented value chains supported by processing infrastructure, cold-chain logistics, traceability, quality assurance, certification and market linkages. A species-specific and State-specific approach, aligned with comparative advantages and evolving international market requirements, will be essential for enhancing export competitiveness. By developing robust export ecosystems through coordinated institutional support and strategic investments, inland fisheries can significantly increase farmers' incomes, generate rural employment and strengthen India's position in the global seafood market.

Chapter 4 - Current Seafood Export Ecosystem and Supporting infrastructure in India

4.1 Current Seafood Export Ecosystem

India has established a comprehensive institutional and infrastructure ecosystem that supports the export of fish and fishery products to more than **128 countries** across the world. The ecosystem comprises export promotion institutions, regulatory agencies, export-oriented processing establishments, cold chain infrastructure, accredited laboratories, logistics support and a well-developed exporter base that collectively ensure compliance with international food safety, quality and traceability requirements.

The **MPEDA** is the apex organisation responsible for the promotion and development of seafood exports from India. MPEDA facilitates exporter registration, export promotion, market development, traceability, quality improvement, infrastructure development and capacity building across the seafood value chain. As on date, **more than 1,370 exporters** are registered with MPEDA, forming the backbone of India's seafood export industry.

The **EIC**, through its five EIAs, functions as the Competent Authority for inspection, approval and certification of seafood exports. It is responsible for approval of export establishments, implementation of official controls, laboratory-based food safety verification and issuance of Health Certificates in accordance with the sanitary and phytosanitary requirements of importing countries.

Over the years, India has developed an extensive network of export-oriented processing facilities, cold chain infrastructure, fish handling centres, EIC recognised laboratories and regulatory institutions that collectively support the fishery products export supply chain from harvest to shipment. While this ecosystem has primarily evolved to support marine seafood exports, it also provides a strong institutional and physical foundation for integrating inland fisheries into the export value chain.

4.2 Existing Export Infrastructure

India's seafood export ecosystem is supported by an extensive network of export promotion institutions, inspection and certification agencies, processing establishments, cold chain facilities and food testing laboratories distributed across the country. Together, these facilities provide the institutional and physical infrastructure required for processing, storage, quality assurance, inspection, certification and export of fish and fishery products.

Table 4.1: Snapshot of India's Existing Seafood Export Ecosystem and Supporting Infrastructure.

Sl. No.	Infrastructure Component	Existing Network
1	**MPEDA Registered Exporters***	**1,370+**
2	MPEDA Offices	**18**
3	MPEDA ELISA Laboratories	**14**

Sl. No.	Infrastructure Component	Existing Network
4	MPEDA Registered Storage Premises	**854**
5	EIC/EIA Offices	**29**
6	MPEDA Registered Pre-processing Plants	**641**
7	MPEDA registered Region-wise Processing Plants for European Countries	**480**
8	MPEDA registered Region-wise Processing Plants for Non-European Countries	**190**
9	EIA/EIC Laboratories	**8**
10	EIC Recognized Laboratories	**82**
11	MPEDA Registered Fish Handling Centers (Live, Dry & Chilled)	**246**

Detailed State-wise and Region-wise lists of the above facilities are provided in **Annexures 1A-1J**.

4.2.1 Salient Features of the Existing Export Ecosystem

India has already established a robust institutional and physical ecosystem to support seafood exports. The nationwide network of **18** MPEDA offices and 29 EIC/EIA offices provides exporters with access to registration, export promotion, inspection, export certification, testing and technical assistance across major fisheries regions.

The country currently has **624** EIC-approved seafood processing establishments, supported by **850+** registered cold storage premises, 641 registered pre-processing plants, 98 registered fish handling centres. Collectively, these facilities provide substantial capacity for hygienic handling, processing, storage and value addition of fish and fishery products in accordance with international food safety standards.

Food safety and export certification are reinforced through a strong laboratory network comprising 8 EIA laboratories and 82 EIC-recognised laboratories which also accredited as per ISO 17025 located across the country. These laboratories undertake microbiological, chemical and residue analysis, heavy metal testing, marine biotoxin analysis, GMO testing (where applicable) and other importing country-specific analyses, thereby supporting official controls and issuance of Health Certificates for export consignments.

The existing export ecosystem demonstrates that India possesses a well-established institutional and infrastructure base capable of supporting continued expansion of seafood exports. While these facilities have historically catered to marine seafood exports, they also offer significant opportunities for supporting export-oriented value chains for freshwater fish and other inland aquatic products.

Building on Existing Strengths
Existing export infrastructure developed for marine products including processing establishments, laboratories, certification systems, cold-chain facilities and exporter networks can also support export-oriented inland fisheries with appropriate aggregation, traceability, logistics and institutional coordination.

4.3 Integration of Inland Fisheries with seafood eco-system:

The existing seafood export ecosystem presents a significant opportunity for integrating Inland States and Union Territories into India's seafood export value chain. Inland production clusters can effectively utilise the established network of registered exporters, processing establishments, cold storage facilities, accredited laboratories and export certification systems already available across the country.

Freshwater fish, freshwater prawns, ornamental fish and other inland aquatic products can be channelled through existing export-oriented processing establishments with relatively limited additional investment. Similarly, the established inspection, laboratory testing and certification mechanisms operated by EIC can readily support export consignments originating from inland production clusters.

Strengthening linkages between inland production centres and the existing export ecosystem through improved aggregation, refrigerated transportation, digital traceability, quality assurance systems and institutional coordination will significantly reduce infrastructure costs, improve compliance with international standards and enhance market access. Leveraging the existing ecosystem, rather than creating new parallel facilities, provides a cost-effective and practical pathway for accelerating the onboarding of Inland States and Union Territories into India's seafood export value chain.

4.4 Application of Drone Technology in Inland Fisheries Export Value Chains

Drone technology involves the use of unmanned aircraft systems for carrying payloads, collecting aerial information and supporting operations in remote or difficult-to-access areas. In inland fisheries and aquaculture, drones are being explored to improve farm operations, monitoring and short-distance logistics.

Potential Applications

Exporters and their supplying farms may explore drones for:

- Mapping of farms, ponds, reservoirs and sourcing clusters;
- Monitoring of aquaculture farms, cages and related infrastructure;
- Broadcasting of feed over ponds, reservoirs and cage-culture areas;
- Short-distance transportation of live fish;
- Transportation of fish seed, broodstock and time-sensitive samples;
- Delivery of permitted aquaculture inputs;

- Water sampling and water-quality monitoring;
- Assessment of damage to farms, embankments and access routes; and
- Emergency delivery and surveillance in difficult-to-access areas.

Drone-enabled services may be particularly useful where production clusters are geographically dispersed, road connectivity is limited or rapid movement of high-value fish, seed or samples is required. Their use should be based on technical feasibility, cost, payload, distance and applicable safety and regulatory requirements.

Government Initiatives

The Department of Fisheries has conducted drone demonstrations at ICAR-CIFRI, Kolkata, Patna and Kochi. The applications demonstrated include live-fish and cargo transportation, feed broadcasting and spraying. Details of these activities are available on the Department of Fisheries Drone Initiatives portal .

ICAR-CIFRI, in collaboration with NFDB, is implementing a pilot project to examine the transportation of live fish over short distances. The project, approved at a cost of ₹116.85 lakh, aims to develop a drone system capable of carrying up to 100 kg of live fish for approximately 10 km. A 70 kg payload has been demonstrated over 7 km. The project is also evaluating fish behaviour and stress and the use of specialised containers for maintaining water quality, dissolved oxygen and temperature during transport.

The Department of Fisheries has also constituted a Technical Committee to prepare operating procedures for drone applications including fish transportation, feed distribution, disease management, underwater monitoring and surveillance.

How Exporters May Explore Drone Technology

Exporters may explore the technology through:

- **Department of Fisheries and NFDB:** Information on demonstrations, awareness programmes and emerging operational guidance may be obtained through the Department of Fisheries Drone Initiatives portal and NFDB.
- **ICAR fisheries institutes:** ICAR-CIFRI may be referred to for information on its pilot and demonstrations relating to live-fish transport, feed broadcasting and cargo delivery.
- **State Fisheries Departments:** Exporters may contact the concerned State Fisheries Department for details of local demonstrations, fisheries clusters, FFPOs, cooperatives and available technology providers.
- **FFPOs, cooperatives and aggregators:** Exporters may jointly access drone services with supplying farmers or producer organisations where shared use is more economical than individual ownership.
- **Private drone-service providers:** Exporters may engage qualified manufacturers or service providers for mapping, monitoring, feed distribution or payload transportation.
- **Fisheries schemes:** Drone-enabled activities may be examined as part of an eligible technology, entrepreneurship, common-facility or value-chain proposal under the applicable fisheries schemes. Eligibility shall depend on the prevailing guidelines, technical appraisal and approval by the competent authority.

- Before commercial use, exporters should undertake a field trial and verify the service provider's technical capability, applicable aviation requirements, payload and range, fish-welfare safeguards, operating cost and support arrangements. Drone technology shall supplement, and not replace, farm inspection, laboratory testing, residue monitoring, certification and traceability requirements.

Chapter Summary

India has developed a comprehensive seafood export ecosystem comprising export promotion institutions, regulatory authorities, approved processing establishments, accredited laboratories, cold-chain facilities and a well-established exporter network. While this ecosystem has largely evolved to support marine product exports, it provides a strong institutional and physical foundation for expanding export-oriented value chains for inland fisheries. By strengthening linkages between inland production clusters and the existing export infrastructure through improved aggregation, traceability, quality assurance, logistics and institutional coordination, Inland States and Union Territories can be systematically integrated into India's seafood export ecosystem in a cost-effective and sustainable manner.

Chapter 5 - Step-by-Step Guidance for Becoming a Fish Exporter

5.1 Introduction

India is one of the world's leading producers of fish and fishery products, with a well-established seafood export industry supplying safe and quality products to more than 128 countries. While marine products continue to dominate India's export basket, the rapid growth of inland fisheries and aquaculture has created significant opportunities for Inland States and Union Territories to participate in international seafood trade. Increasing production of freshwater fish, improved aquaculture practices, expansion of processing infrastructure and supportive government initiatives have collectively created a conducive environment for entrepreneurs to enter the seafood export sector.

Establishing a fish export business, however, involves much more than identifying an overseas buyer or obtaining an Import Export Code (IEC). It requires careful planning, selection of appropriate products and markets, establishment of a legally compliant business, development of an efficient supply chain, adherence to food safety and traceability requirements, coordination with approved processing establishments and successful completion of export documentation and customs formalities. Since international markets demand consistent quality, safety and reliability, exporters must adopt a systematic and integrated approach throughout the value chain.

Depending on the nature and scale of operations, entrepreneurs may participate in seafood exports either as Merchant Exporters, who procure products and utilise approved processing facilities owned by others, or as Manufacturer Exporters, who own and operate approved processing establishments. Both models provide viable pathways for entering international markets, subject to compliance with applicable statutory and regulatory requirements.

The objective of this chapter is to provide entrepreneurs, Fish Farmer Producer Organizations (FFPOs), cooperatives, start-ups, MSMEs and other stakeholders with a practical, step-by-step guide for establishing and operating a seafood export business. It outlines the sequential activities involved in developing an export enterprise from assessing export opportunities to building an export-oriented supply chain, ensuring quality compliance, completing export formalities and sustaining long-term business growth.

Export Readiness is a Journey, Not a Single Step
Successful seafood exports require systematic planning and compliance across the entire value chain. Export readiness extends beyond obtaining licences or identifying buyers; it encompasses business registration, traceable sourcing, food safety, quality assurance, processing, certification, logistics and continuous compliance with importing-country requirements. The eight-step framework presented in this chapter provides a practical roadmap for establishing and sustaining export-oriented seafood enterprises.

Step 1: Assess Export Potential and Develop an Export Strategy

Before entering the export business, prospective entrepreneurs should carefully evaluate the commercial potential of their proposed venture. The selection of exportable species, identification of suitable international markets and understanding of buyer requirements are critical factors that influence long-term business success.

Exporters should assess the availability of export-quality raw material within their region, evaluate production capacity, identify target markets and study international demand for specific fish and fishery products. Product selection should be based on market demand, availability of processing facilities, transportation logistics, expected price realization and compliance with importing-country requirements.

A preliminary export business plan should also be prepared, outlining the proposed products, production sources, investment requirements, marketing strategy, regulatory compliance needs and financial viability. Careful planning at this stage minimizes business risks and enables informed decision-making before investments are made.

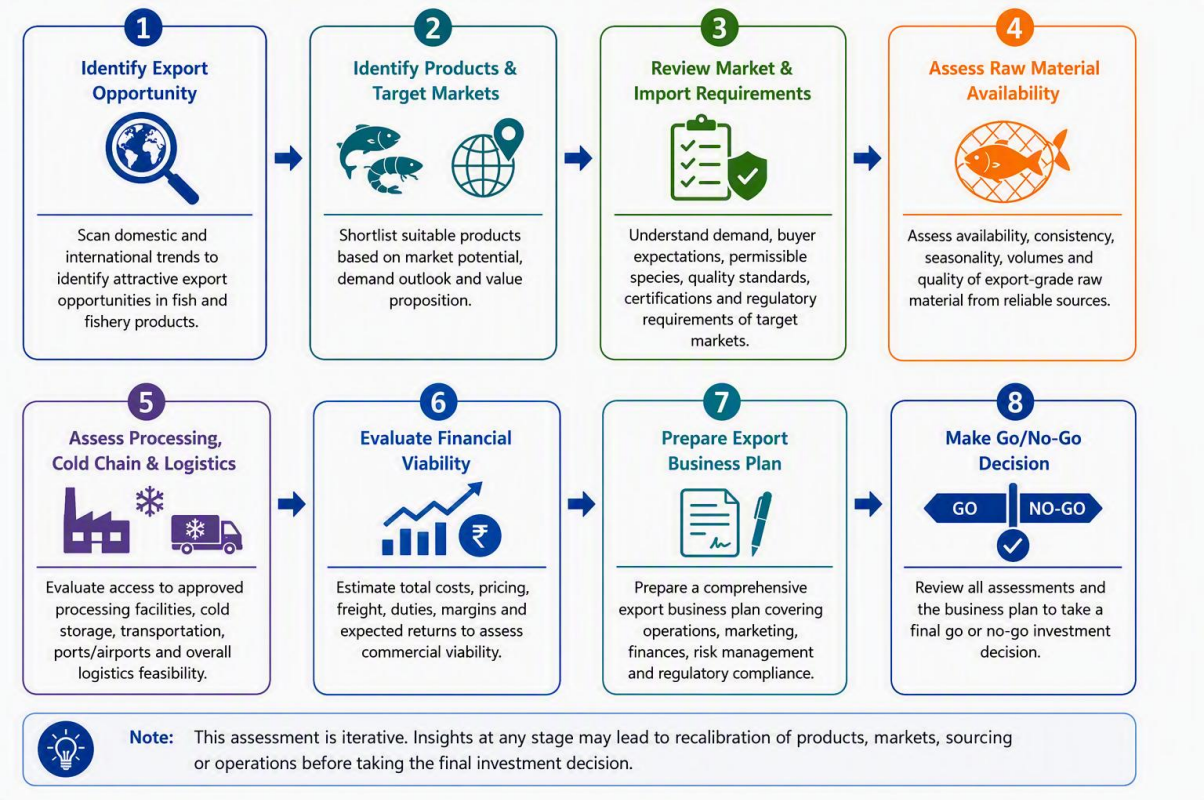


Figure 5.1: Planning Your Export Journey

Step 2: Choose the Appropriate Export Business Model

The next step is to determine the most suitable business model based on the entrepreneur's resources, investment capacity and long-term objectives. Fish and Fishery products may be undertaken as either a Merchant Exporter or a Manufacturer Exporter.

Merchant Exporters procure raw material from producers and utilise approved processing establishments for processing and export. This model requires relatively moderate investment and is particularly suitable for start-ups, MSMEs, FFPOs and cooperatives.

Manufacturer Exporters own or operate approved processing establishments and exercise direct control over procurement, processing, quality assurance, packaging and exports. Although this model requires higher investment, it offers greater opportunities for product diversification and value addition.

Stakeholders such as FFPOs, FPOs, cooperatives and producer collectives may also participate in exports by aggregating production and supplying export-quality raw material to established exporters.

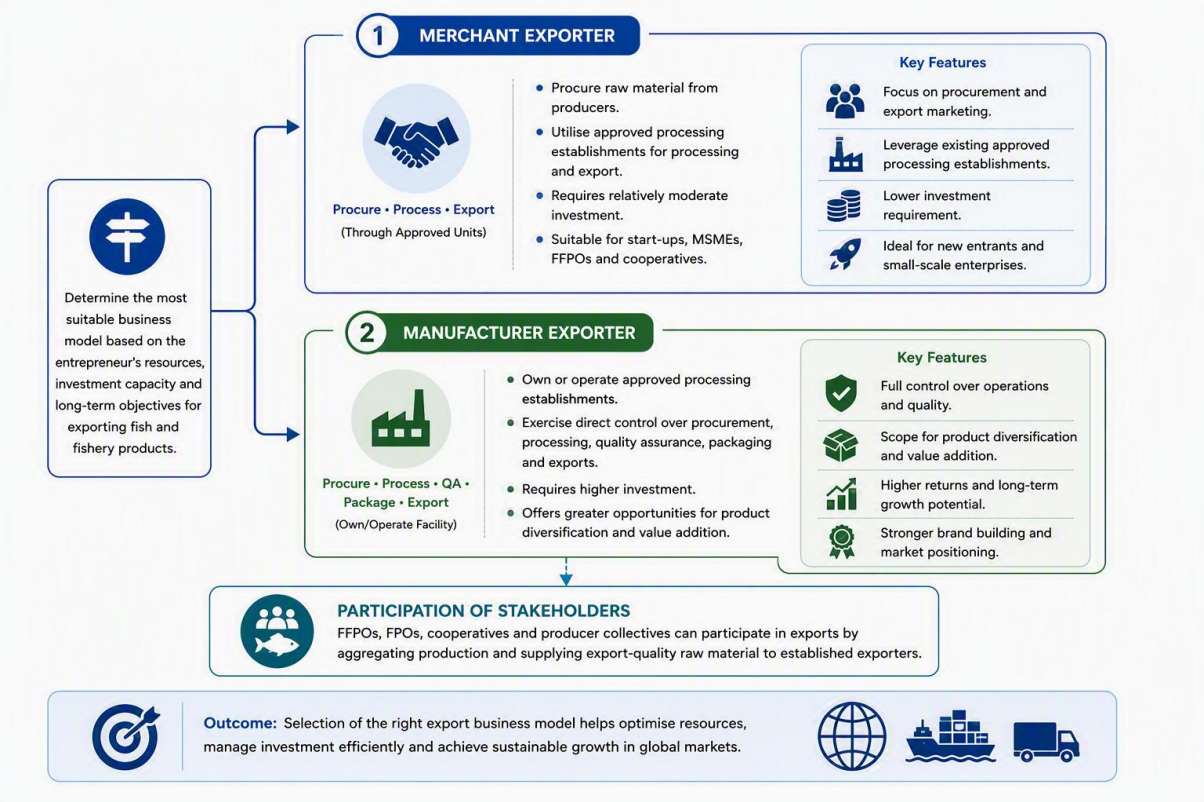


Figure 5.2: Choosing the Appropriate Export Business Model

Table 5.1: Comparison of Merchant and Manufacturer Exporters

Particulars	Merchant Exporter	Manufacturer Exporter
Processing facility	Utilizing EIC-approved processing establishment upon mutual agreement	Owns or operates an EIC-approved processing establishment
Initial investment	Moderate	High
Infrastructure requirement	Minimal	Comprehensive processing and cold-chain infrastructure
Quality control	Shared with processing establishment	Direct responsibility
Suitable for	Start-ups, FFPOs, cooperatives, traders, MSMEs	Established enterprises and processing companies

Particulars	Merchant Exporter	Manufacturer Exporter
Regulatory responsibility	Merchant exporter permission obtain from EIA, Primarily export documentation and procurement	End-to-end compliance including processing, food safety and certification
Long-term potential	Market development and gradual expansion	Product diversification, branding and higher value addition

Step 3: Establish the Business and Obtain Statutory Registrations

Once the business model has been selected, the entrepreneur should establish the business as a legally recognized entity and obtain all mandatory registrations required for export.

Depending on the scale of operations, the business may be established as a Proprietorship, Partnership Firm, Limited Liability Partnership (LLP), Private Limited Company, Producer Company or Cooperative Society.

The entrepreneur should subsequently obtain a Permanent Account Number (PAN), Goods and Services Tax (GST) registration, open a current bank account, obtain an Import Export Code (IEC) from the Directorate General of Foreign Trade (DGFT), register as an exporter with the Marine Products Export Development Authority (MPEDA) and obtain the Registration-cum-Membership Certificate (RCMC).

Completion of statutory registrations establishes the legal foundation for undertaking exports and facilitates customs clearance, banking transactions and participation in export promotion programmes.

Categories of exporter registration by MPEDA based on items to be exported:



Figure 5.3: Categories of exporter registration

Note: Bank Guarantee: – The new Merchant Exporters of frozen marine products and value-added products should submit a Bank Guarantee Rs. 25 lakhs for a period of 5 years and the Bank guarantees to be furnished by new Merchant Exporters of Chilled/Dried marine products and other edible/ non-edible marine products for registration with MPEDA is Rs.5 Lakh. for enforcing accountability and for honouring the settlement in cases of quality complaints and trade disputes.

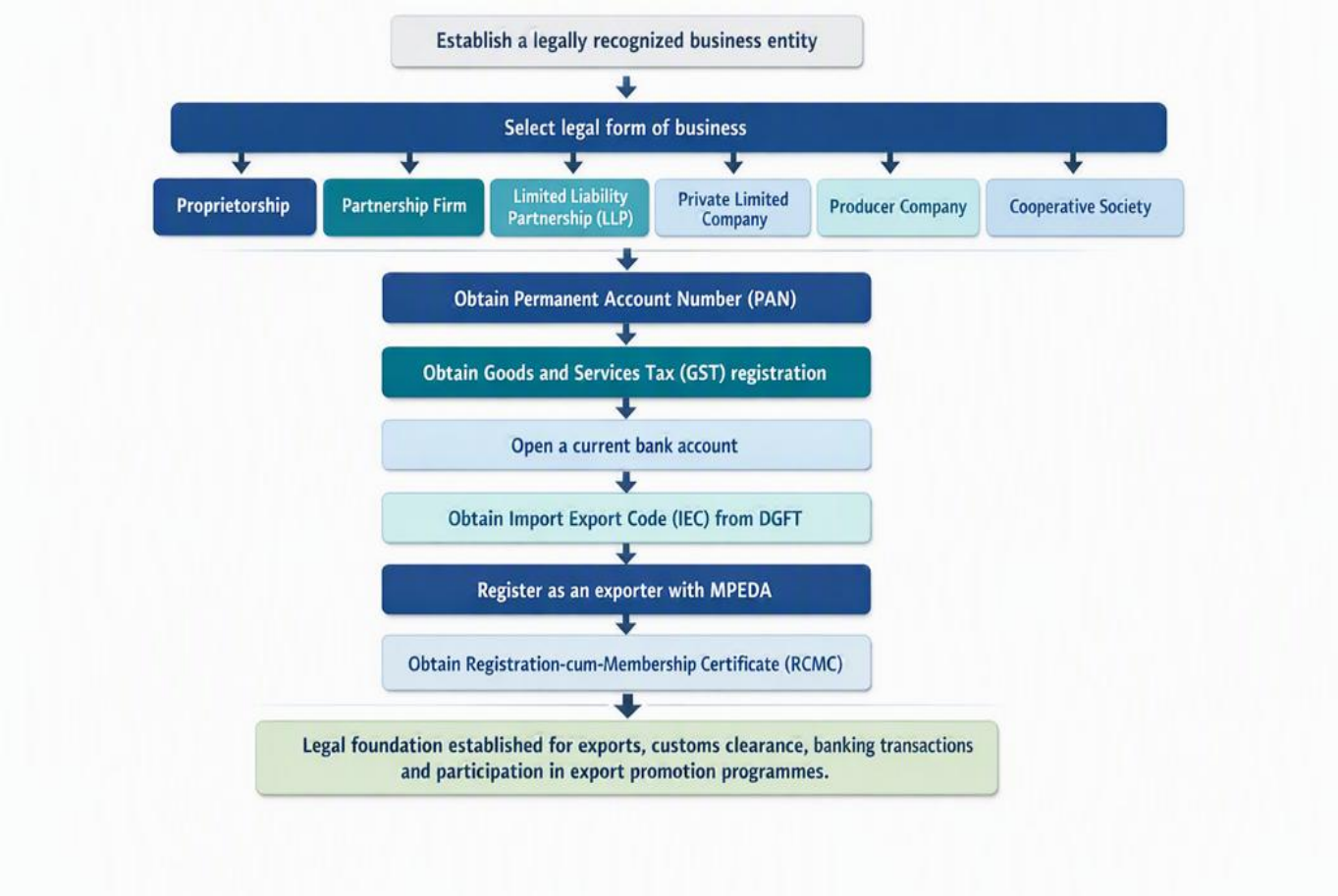


Figure 5.4: Establish the Business and Obtain Statutory Registrations

Note: Additional approvals may be required depending on the nature of business, ownership of processing facilities, product category and importing-country requirements.

Table 5.2: Major Statutory Registrations Required for Export

Sl. No.	Registration / Approval	Purpose	Issuing Authority
1	Business Incorporation (Proprietorship/Partnership /LLP/Company/Cooperative etc.)	Establishes the legal identity of the business	Concerned Registration Authority
2	Permanent Account Number (PAN)	Tax identification and financial transactions	Income Tax Department
3	Goods and Services Tax (GST) Registration	Indirect tax compliance and invoicing	GST Authorities
4	Current Bank Account (AD Bank)	Export receipts and foreign exchange transactions	Scheduled Commercial Bank

Sl. No.	Registration / Approval	Purpose	Issuing Authority
5	Import Export Code (IEC)	Mandatory authorization for import and export	Directorate General of Foreign Trade (DGFT)
6	Registration of the processing entity with MPEDA	Registration as a seafood exporter and access to export promotion services	MPEDA
7	Registration with EIA as an Exporter	Obtaining EIA approval to become an exporter	EIA
8	Registration-cum-Membership Certificate (RCMC)	Required under the Foreign Trade Policy for eligible exporters and export benefits	MPEDA
9	Other statutory registrations, wherever applicable	Compliance with environmental, labour and other applicable laws	Concerned Authorities

5.2 Export Contract, Incoterms and Payment Terms

Before accepting an export order or commencing procurement, processing or shipment, the exporter and overseas buyer should enter into a clear and mutually agreed export contract. The contract should specify the product description and specifications, quantity, price, currency, delivery schedule, inspection and certification requirements, applicable Incoterms® 2020 rule, payment method, documents required for payment, treatment of claims and disputes, and the governing law.

Step 4: Develop an Export-Oriented Supply Chain

The success of an export enterprise depends on the availability of a reliable and integrated supply chain capable of delivering safe and high-quality products consistently.

Exporters should identify production clusters, establish linkages with fish farmers, FFPOs, cooperatives and aggregators, and develop long-term procurement arrangements. Cold-chain infrastructure, transportation, processing facilities, laboratories and logistics service providers should also be identified to ensure efficient movement of products from farm to export.

Developing partnerships across the value chain enhances traceability, reduces post-harvest losses and ensures uninterrupted supplies of export-quality raw material.

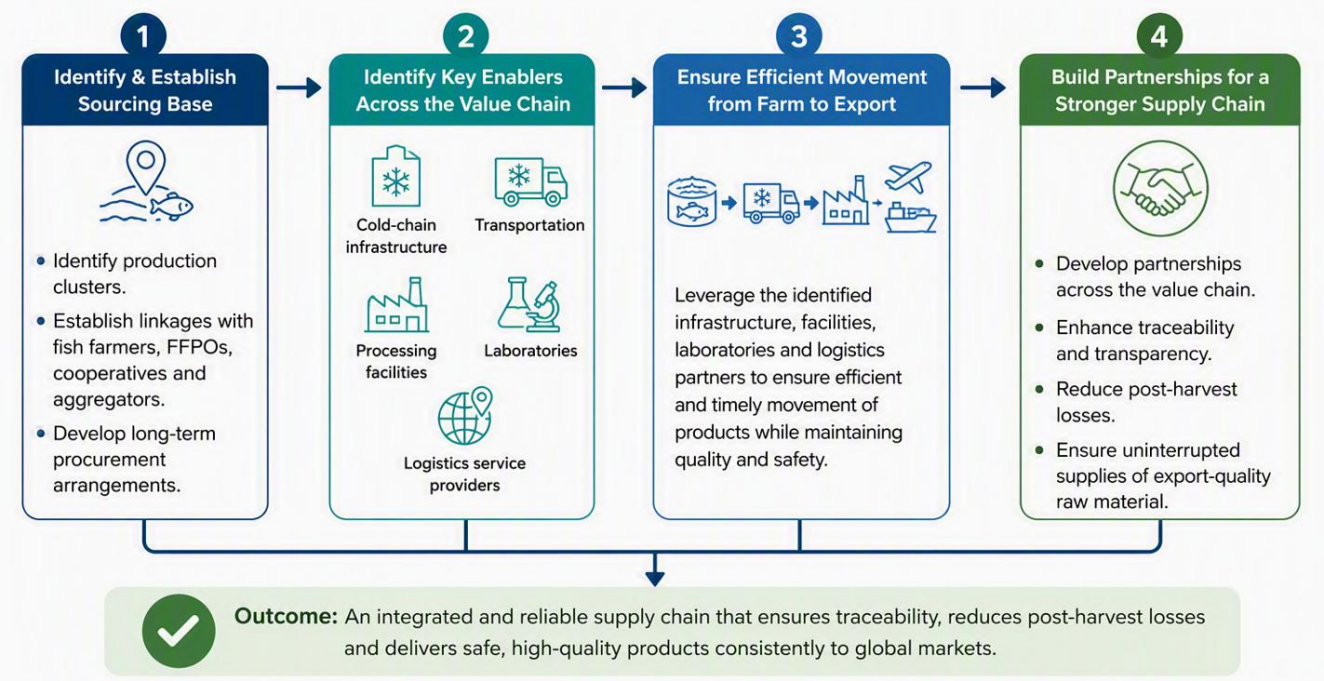


Figure 5.5: Export-Oriented Seafood Supply Chain

Table 5.3: Components of an Export-Oriented Seafood Supply Chain

Component	Purpose	Major Stakeholders
Production Source	Continuous supply of export-quality fish	Farmers, FFPOs, Cooperatives, Reservoir Fisheries
Aggregation	Collection of commercially viable quantities	Aggregators, Producer Organisations
Cold Chain	Preserve freshness and quality	Ice Plants, Cold/Chill Storages, Refrigerated/Insulated Transport
Processing	Value addition and export-ready products	EIC-approved Processing Establishments
Quality Assurance	Food safety and laboratory testing	EIC, EIAs, Recognised Laboratories
Logistics	Domestic transportation and export shipment	Transporters, Shipping Lines, Freight Forwarders

Step 5: Ensure Farm Registration, Traceability and Adoption of Good Aquaculture Practices

Export-quality seafood begins at the farm. Exporters should ensure that the farms supplying raw material are properly registered under the applicable regulatory framework and maintain effective traceability throughout the production cycle.

Farmers should adopt Good Aquaculture Practices (GAP), maintain farm records, implement biosecurity measures, use approved inputs responsibly and comply with residue monitoring requirements. Where applicable, Pre-Harvest Testing (PHT) should be undertaken before harvesting to ensure compliance with importing-country food safety standards.

Proper harvesting, icing and transportation practices are equally important for maintaining freshness and product quality.

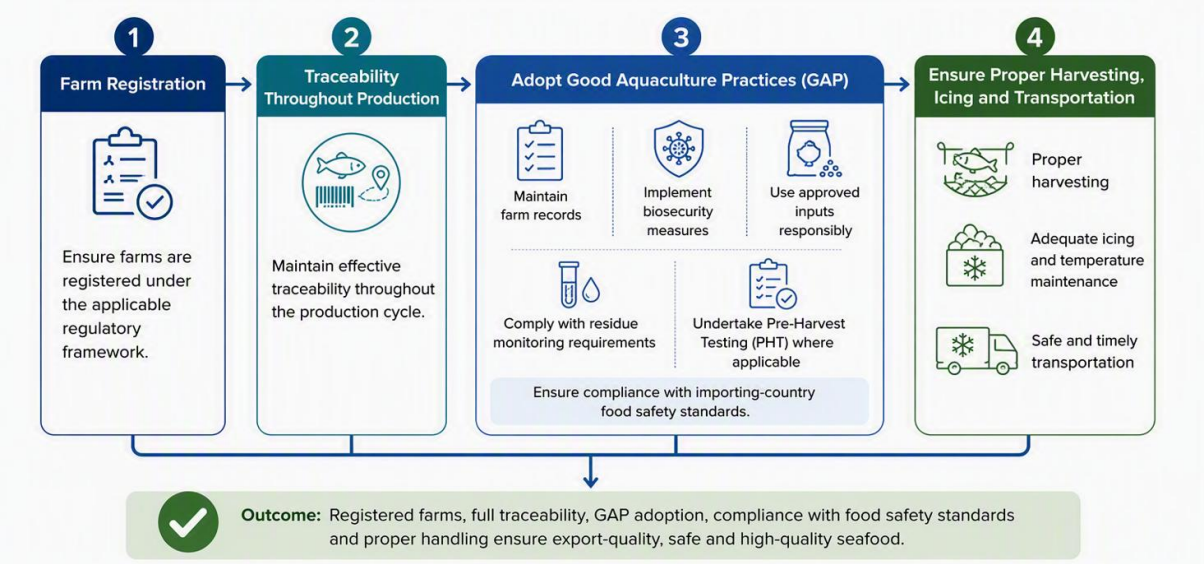


Figure 5.6: Farm-Level Export Readiness Framework

Table 5.4: Farm-Level Export Readiness Checklist

Component	Objective	Responsibility
Farm Registration	Identification of production unit	Farmer / State Fisheries Department / CAA (where applicable)
MPEDA Farm Enrolment	Traceability and export-oriented monitoring	Farmer / MPEDA
Good Aquaculture Practices (GAP)	Safe and responsible production	Farmer
Farm Records	Complete production history and traceability	Farmer
Water Quality & Biosecurity	Disease prevention and quality assurance	Farmer
Responsible Use of Medicines	Compliance with residue limits	Farmer
Pre-Harvest Testing (where applicable)	Verification of residue compliance before harvest	MPEDA / Laboratory / Exporter
Hygienic Harvesting & Icing	Preservation of freshness and product quality	Farmer / Aggregator

Step 6: Processing, Food Safety and Quality Assurance

After procurement, raw material should be processed only in Export Inspection Council (EIC)-approved seafood processing establishments. Processing operations should comply with internationally accepted food safety systems, including Hazard Analysis and Critical Control

Point (HACCP), Good Manufacturing Practices (GMP) and Standard Sanitation Operating Procedures (SSOPs).

Products should undergo appropriate quality checks, laboratory testing, packaging and labelling in accordance with importing-country requirements. Finished products should be stored under controlled temperature conditions until shipment.

Maintaining robust food safety and quality assurance systems enhances buyer confidence and strengthens India's reputation in global seafood markets.

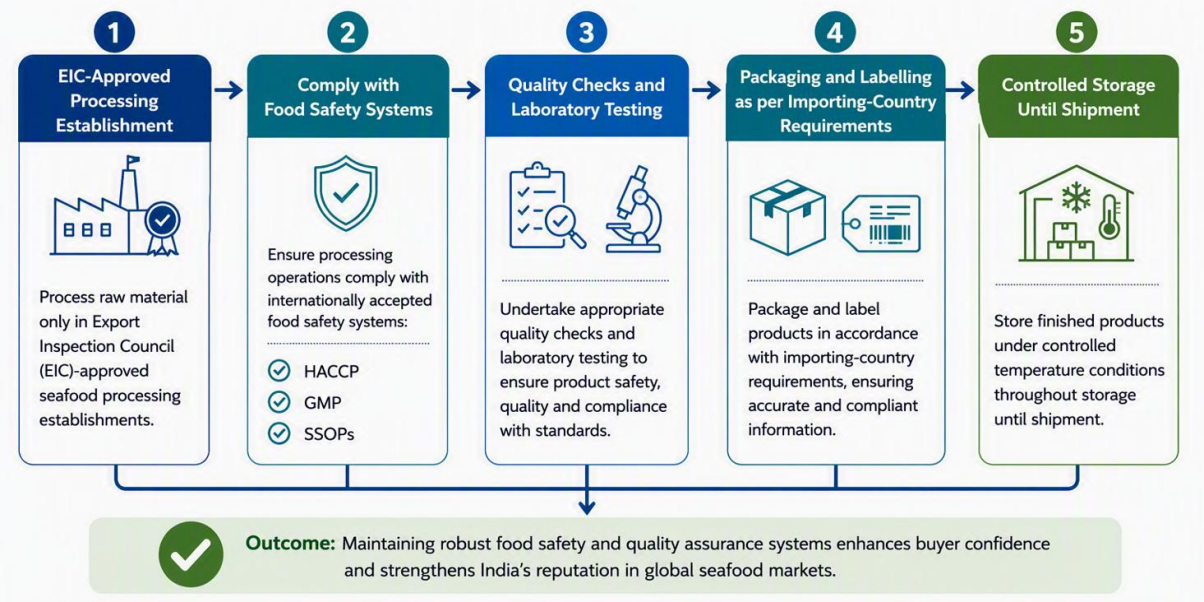


Figure 5.7: Processing, Food Safety and Quality Assurance

Table 5.5: Processing and Quality Assurance Components

Stage	Key Activities	Primary Responsibility
Raw Material Reception	Quality inspection, temperature check and acceptance	Processing Establishment
Processing	Washing, grading, filleting, freezing, packing and value addition	Processing Establishment
Food Safety Management	Implementation of HACCP, GMP and SSOP	Processing Establishment
Laboratory Testing	Microbiological, chemical and residue analysis (where applicable)	EIC-recognised Laboratory
Packaging and Labelling	Product identification and compliance with importing-country requirements	Processing Establishment

Stage	Key Activities	Primary Responsibility
Cold Storage	Maintenance of frozen or chilled products until shipment	Processing Establishment

Step 7: Export Documentation, Inspection, Certification and Customs Clearance

Following successful processing, exporters should complete all commercial documentation and obtain the statutory certifications required for export.

The documentation generally includes the Commercial Invoice, Packing List, Shipping Bill, Health Certificate issued by the Export Inspection Council (through EIAs), Certificate of Origin, Catch Certificate (where applicable), Bill of Lading or Air Waybill and other destination-specific documents.

After completion of customs formalities and issuance of the required certificates, consignments are loaded for shipment to overseas buyers.

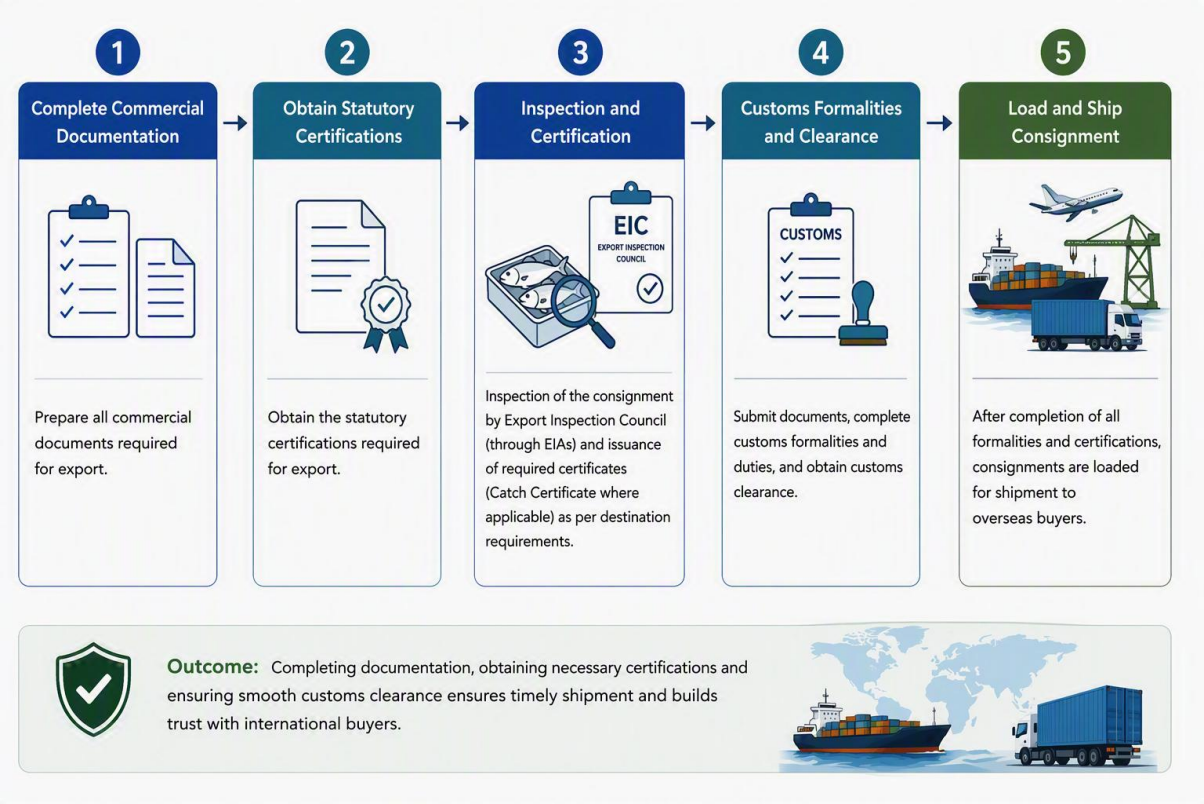


Figure 5.8: Export Documentation to shipment flow

Table 5.6: Major Documents Required for Seafood Export

Sl. No.	Document	Purpose	Issuing Authority / Prepared By
1	Commercial Invoice	Details of goods and commercial transaction	Exporter
2	Packing List	Description and packing details of the consignment	Exporter
3	Purchase Order / Export Contract	Commercial agreement between buyer and exporter	Buyer & Exporter
4	Health Certificate	Certifies compliance with importing-country sanitary requirements	EIC / EIA
5	Certificate of Origin (where applicable)	Certified country of origin of the product	Authorized Issuing Agency
6	Catch Certificate / Other Country-specific Certificates (where applicable)	Compliance with destination-country regulations	MPEDA/Competent Authority
7	Shipping Bill	Customs declaration for export	Indian Customs (filed by Exporter/Customs Broker)
8	Bill of Lading / Air Waybill	Evidence of shipment and transport contract	Shipping Line / Airline
9	Insurance Certificate (where applicable)	Coverage against transit risks	Insurance Company

Step 8: Post-Export Responsibilities and Continuous Improvement

Successful shipment represents the beginning of a long-term relationship with international buyers. Exporters should maintain complete records of procurement, processing and exports, obtain buyer feedback, address complaints promptly and monitor changes in international regulatory requirements.

Continuous improvement through product diversification, value addition, infrastructure development, workforce training and adoption of emerging technologies enables exporters to remain competitive and expand into new international markets.

Developing a culture of quality, transparency and continuous learning is essential for sustaining long-term growth in seafood exports.



Figure 5.9: Continuous Improvement Cycle for Seafood Exporters

Table 5.7: Post-Export Responsibilities

Activity	Objective	Expected Outcome
Maintain Export Records	Ensure traceability and regulatory compliance	Efficient verification and audits
Obtain Buyer Feedback	Assess customer satisfaction	Improved product quality and repeat business
Address Complaints & Non-conformities	Resolve quality issues promptly	Enhanced buyer confidence
Monitor Regulatory Changes	Comply with evolving import requirements	Continued market access
Review Business Performance	Improve operational efficiency	Increased competitiveness
Product Diversification & Value Addition	Expand market opportunities	Higher export value and profitability
Capacity Building & Training	Strengthen technical and managerial capabilities	Sustainable export growth

Establishing a successful seafood export enterprise requires systematic planning, legal compliance, efficient supply chain management, adherence to food safety standards and continuous engagement with international markets. This chapter has presented a step-by-step roadmap covering every stage of the export journey—from assessing export

opportunities and selecting an appropriate business model to obtaining statutory registrations, developing an export-oriented supply chain, ensuring farm-level compliance, processing products in approved establishments, completing export documentation and sustaining business growth through continuous improvement.

By following these sequential steps, entrepreneurs, FFPOs, cooperatives, MSMEs and other stakeholders can confidently establish export-oriented enterprises and contribute to expanding seafood exports from Inland States and Union Territories. The subsequent chapter builds upon this foundation by detailing the regulatory, technical and quality compliance requirements applicable to seafood exports, thereby enabling exporters to meet both national and importing-country standards.

End-of-Chapter Aids

Table 5.8: End-to-End Roadmap for Becoming a fish & fishery Exporter

Step	Activity	Key Outcome
Step 1	Assess export potential and identify target markets	Selection of exportable species, destination country and business opportunity
Step 2	Choose the appropriate export business model	Merchant Exporter or Manufacturer Exporter identified
Step 3	Establish the business and obtain statutory registrations	Business legally established with IEC, MPEDA registration and other statutory approvals
Step 4	Develop an export-oriented supply chain	Reliable sourcing, aggregation, cold chain and processing arrangements established
Step 5	Ensure farm registration, traceability and adoption of Good Aquaculture Practices	Export-quality raw material with complete traceability
Step 6	Processing, food safety and quality assurance	Product processed in EIC-approved establishment and compliant with food safety requirements
Step 7	Export documentation, inspection, certification and customs clearance	Consignment legally cleared and ready for international shipment
Step 8	Post-export responsibilities and continuous improvement	Buyer satisfaction, regulatory compliance and sustainable business growth

Table 5.9: *Common Documents Required for Seafood Exports*

Document	Purpose	Issuing Authority/Agency
Import Export Code (IEC)	Authorization to undertake exports	DGFT
Registration-cum-Membership Certificate (RCMC), where applicable	Registration for export promotion benefits	MPEDA

Document	Purpose	Issuing Authority/Agency
Certificate of Approval	Approval of processing establishment for export of fish and fishery products	Export Inspection Council (EIC)
Commercial Invoice	Commercial details of the shipment	Exporter
Packing List	Details of packages and product specifications	Exporter
Purchase Order / Export Contract	Commercial agreement with buyer	Buyer & Exporter
Shipping Bill	Customs clearance for export	Indian Customs
Bill of Lading / Air Waybill	Evidence of shipment	Shipping Line / Airline
Certificate of Origin	Country of origin certification	Authorized Agency
Health Certificate / Official Export Certificate	Compliance with food safety requirements	Export Inspection Agency
Insurance Certificate (where applicable)	Insurance coverage during transit	Insurance Company

Note: Depending on the importing country and product category, additional documents such as catch certificates, laboratory reports, sanitary certificates, phytosanitary certificates (where applicable), radioactive, fumigation certificates or species-specific permits may also be required. Exporters should verify destination-specific documentation requirements well in advance of shipment to avoid delays during customs clearance.

Increasingly, export documentation is being processed through digital platforms, enabling electronic submission, verification and issuance of certificates. Adoption of digital documentation systems not only improves efficiency but also enhances transparency, traceability and ease of doing business for exporters.

Chapter Summary

Export success depends on systematically completing each stage of the export process, from business planning and statutory registrations to traceability, processing, quality assurance, certification, logistics and post-export compliance. While the sequence presented in this chapter provides a practical roadmap, successful exporters must continuously adapt to evolving international standards, market requirements and buyer expectations. By following a structured and compliant approach, farmers, FFPOs, processors, cooperatives and entrepreneurs can progressively build competitive and sustainable seafood export enterprise



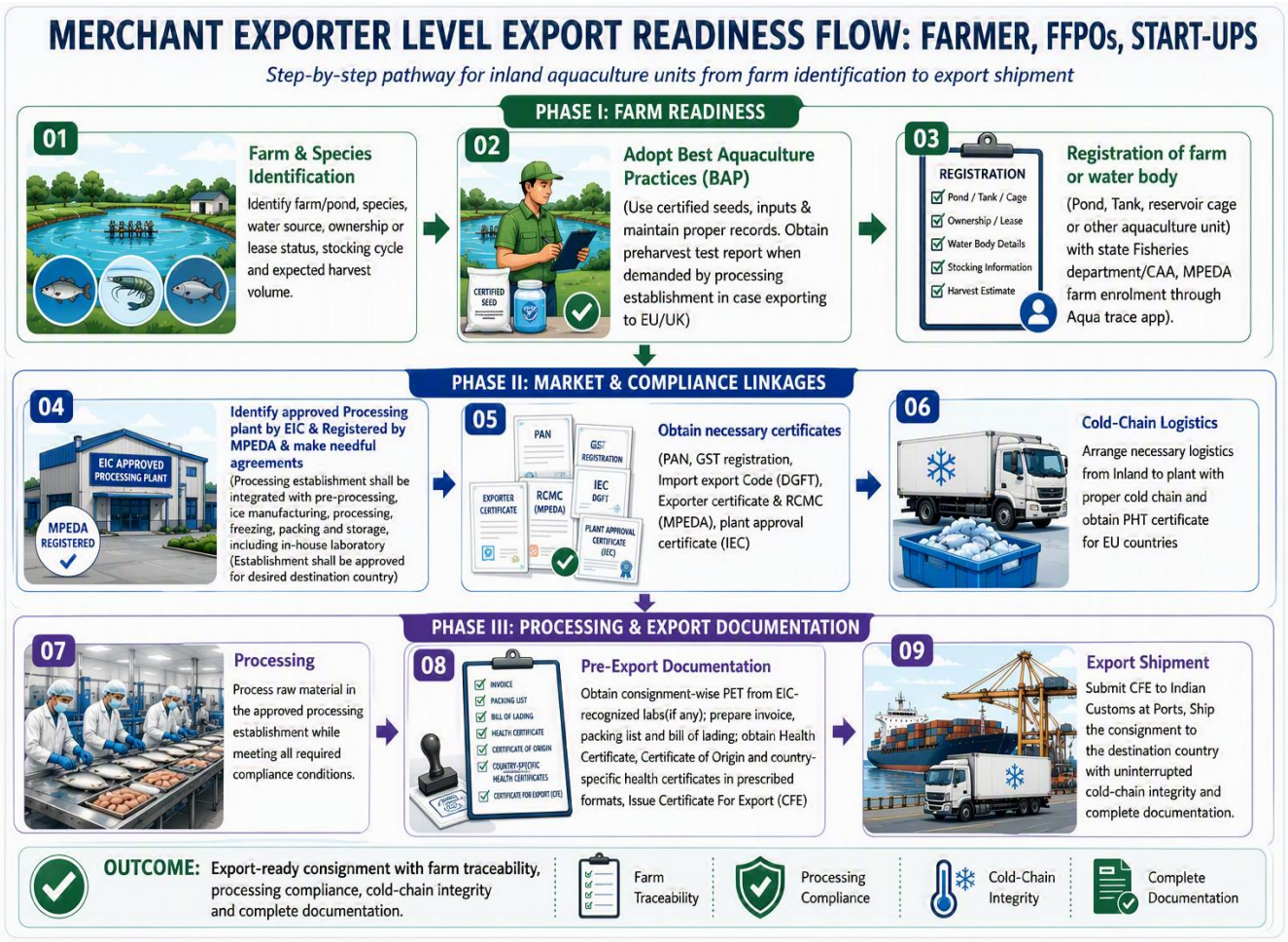


Figure 5.10: Step by step process flow for merchant and Manufacturer exporters

Chapter 6 - Quality & Compliance Requirements for International Market for Fish and Fishery Products

Access to international markets for fish and fishery products is contingent upon compliance with the applicable food-safety, product-quality, animal-health, traceability, processing, packaging, labelling, storage, transportation, inspection and certification requirements. Such requirements may vary depending upon the product category, species specific, production system, processing method, intended use and country of destination.

The Government of India framework subjects fresh, frozen and processed fish and fishery products intended for export to quality control, inspection and monitoring. The recognised specifications are to be determined in the following order of precedence:

1. Standards prescribed by the importing country;
2. Contractual specifications agreed between the foreign buyer and the exporter, provided that such specifications satisfy the health and other requirements of the importing country;
3. Minimum specifications notified under the applicable Government of India Order
4. In case all above three requirements are exist, most stringent one will be considered by the EIC.
5. Where no applicable standard is available under the above categories, specifications determined through the mechanism prescribed in the relevant notification.

Quality and Compliance: The Foundation of Seafood Exports
International seafood trade is governed by stringent food safety, animal health and regulatory requirements to protect consumers and facilitate fair trade. Compliance with these requirements is not merely a regulatory obligation but a prerequisite for market access. Export success depends on maintaining product safety, traceability, quality assurance and conformity with the importing country's official requirements throughout the value chain.

6.1 General Quality and Compliance Principles

6.1.1 Compliance with importing-country requirements

Fish and fishery products shall conform to the standards and health requirements prescribed by the importing country. Where such requirements are more stringent than the applicable national minimum specifications, the importing-country requirements shall be complied with.

Before accepting an export order, the exporter shall verify whether the product is permitted for import into the destination country and whether the exporting establishment must be listed or registered by the importing-country authority. The exporter shall also verify the applicable product and process standards, microbiological and chemical criteria, residue and contaminant limits, animal-health and biosecurity conditions, packaging and labelling requirements, health-certificate format, testing and sampling requirements, and traceability and record-keeping requirements. Any buyer-specific requirements shall not be lower than the importing-country requirements.

6.1.2 Approved and registered facilities

Fish and fishery products intended for export shall be handled, pre-processed, processed, frozen, packaged and stored only through facilities registered and approved by the concerned competent authority, wherever such registration or approval is applicable.

The EIC executive instructions cover approval and monitoring requirements for feed mills, hatcheries, aquaculture farms, inland fish landing or auction centres, processing units, freezing units, pre-processing centres, ice plants, processing establishments and cold storages.

The exporter shall ensure that the scope of approval covers the product, facilities and importing countries undertaken. The approval shall remain valid on the date of processing and export. Additional products, processes or facilities shall not be used without the required approval of the EIC. Processing for a merchant exporter shall be undertaken only through an approved establishment after getting prior permission from EIA. Records related to the product, establishment, batch and export consignment shall be maintained

6.1.3 Quality Assurance and Operational Controls

Quality assurance and operational controls shall apply across all stages of production, harvesting, landing, handling, pre-processing, processing, packing, storage and transportation. Processing establishments shall implement documented food-safety and quality-management systems appropriate to the products and processes undertaken.

All stages shall be undertaken in a manner that protects the product from microbiological, chemical and physical contamination, cross-contamination, temperature abuse, decomposition and spoilage, pest infestation, exposure to dust, soil, sewage or other contaminants, and substitution, misdescription or loss of traceability. Potable water and clean ice shall be used wherever they come into direct or indirect contact with fish and fishery products and shall meet the applicable requirements prescribed for the facility and destination market. Documented systems may include Good Manufacturing Practices, Good Hygienic Practices, Sanitation Standard Operating Procedures, Hazard Analysis and Critical Control Point plans, pest-control programmes, water and ice quality monitoring, equipment calibration, personnel hygiene and training, product-recall procedures, corrective and preventive actions, and internal verification and record review. The EIC executive instructions require HACCP documentation, including SSOPs, GMP, process-flow charts, product descriptions, manufacturing details and hazard-analysis documentation, as applicable.

An effective traceability system shall be maintained from the source of production or harvest to the final export consignment. Traceability documentation shall, wherever applicable, capture farm, hatchery, vessel, landing-Centre or supplier identification, species and product description, harvest or catch date, procurement date and quantity, batch or lot number, processing establishment and approval number, processing and packing date, test-report references, storage and dispatch details, container or transport identification, consignee and country of destination, and health-certificate or certificate-of-inspection reference. The EIC rules define a batch or code in relation to products processed under practically identical circumstances during a discrete period and define a consignment in relation to products intended for one customer in the destination country and conveyed by one means of transport.

Product testing shall be undertaken according to the applicable product, process, farm-risk and destination-market requirements. Testing may include, as applicable, organoleptic examination, microbiological examination, veterinary-drug and antibiotic residues, pesticide residues, heavy metals, environmental contaminants, marine biotoxins, histamine, additives and processing aids, water and ice quality, species authentication, composition and net quantity, and other parameters prescribed by the importing country. Samples shall be tested through EIA laboratories or EIC-recognized laboratories, as applicable. The EIC framework provides for approved laboratory testing as part of official control and conformity assessment. A laboratory report shall not, by itself, substitute for compliance with facility approval, process control, traceability, inspection, certification or importing-country requirements.

Packaging materials shall be suitable for the intended product, clean and of appropriate food-grade quality for edible products, capable of protecting the product during storage and transportation, compatible with the intended temperature and method of preservation, and compliant with importing-country and buyer requirements. Labels and accompanying product information shall accurately describe the product and contain the particulars prescribed by the destination country. Such particulars may include the common and scientific name of the species, product form, net quantity, batch or lot identification, production or packing date, storage conditions, establishment approval number, country of origin, allergen declaration, ingredients and additives where applicable, importer or consignee details, and other mandatory destination-market declarations. No label, mark or accompanying document shall contain a misleading declaration relating to species, production method, origin, certification, sustainability status, quality grade or intended use.

6.2 Product-specific Export Requirements

While the common regulatory framework described in the previous section applies to all fish and fishery products intended for export, additional requirements vary depending on the nature of the product, processing method, storage conditions and destination market. Product-specific handling practices are critical for preserving quality, ensuring food safety and meeting the technical specifications prescribed by importing countries as well as by the EIC. Exporters should therefore adopt appropriate harvesting, processing, packaging and transportation practices based on the characteristics of the product being exported.

The principal product-specific requirements for major categories of fish and fishery products are summarised in **Table 6.1**, followed by a brief description of each category.

Table 6.1 Product-specific Export Requirements

Product Category	Major Processing Requirement	Key Quality Considerations	Typical Storage/Transport
Fresh and Chilled Fish / Shrimps	Hygienic handling, Immediate icing and maintenance of cold chain, procure from traceable sources	Freshness, temperature control, absence of contamination, organoleptic parameters, testing of raw material for banned antibiotics (if applicable)	Chilled (0-4°C)
Frozen Fish / Shrimps	Hygienic handling, rapid freezing and	Product integrity, glazing, microbiological safety,	Frozen (-18°C or below)

Product Category	Major Processing Requirement	Key Quality Considerations	Typical Storage/Transport
	maintenance of cold chain, , procure from traceable sources	organoleptic parameters, testing of raw material for banned antibiotics (if applicable)	
Live Fish and Aquatic Animals	Maintenance of animal health and survival during transport	Water quality, oxygenation, biosecurity	Live transport packing / systems
Value-added Products	Processing under validated procedures	Product formulation , details of additives / preservatives, colors, spices / condiment any other chemicals used for processing shall be traceable, packaging integrity, shelf life	As per product specification
Dried Fish and Fishery Products	Controlled drying and protection from contamination	Moisture content, hygiene, pest control, Organoleptic and microbiological requirements, proper packaging and labelling	Dry, moisture-free conditions
Ornamental Fish	Health certification and stress-free transport	Disease-free status, packing density, water quality	Oxygen-filled bags/containers

Key Considerations Across Product Categories

Although operational requirements differ among product categories, all exporters should ensure:

- Procurement of quality raw materials from traceable sources;
- Implementation of recognised food safety management systems;
- Maintenance of appropriate storage and transportation conditions;
- Compliance with importing country regulations; and
- Preservation of product quality and integrity throughout the export supply chain.

6.3 Export Inspection, Certification and Official Controls

The credibility of India's seafood exports is founded on a robust system of official inspection, certification and regulatory oversight. These official controls provide assurance to importing countries that fish and fishery products exported from India comply with applicable food safety requirements, hygiene standards and importing country regulations. The regulatory framework is administered by the Export Inspection Council (EIC) through its regional Export Inspection Agencies (EIAs), which function as the competent authority for inspection and certification of fish and fishery products intended for export.

Official controls are based on a preventive approach that combines establishment approval, implementation of food safety management systems, routine surveillance, laboratory testing and certification of export consignments. Rather than relying solely on end-product inspection, the system focuses on ensuring that food safety risks are effectively controlled throughout procurement, processing, storage and transportation. This integrated approach

strengthens international confidence in Indian seafood products while facilitating access to global markets.

6.3.1 Approval of Export Processing Establishments

Fishery processing establishments approved by the EIC through the EIA are only eligible to process fish and fishery products for export to international markets. Approval is granted following a comprehensive assessment of the establishment's infrastructure, hygienic design, sanitation systems, operational procedures, personnel hygiene, water quality, waste management practices and implementation of all aspects of HACCP-based Food Safety Management System.

The approval process is intended to ensure that establishments possess the technical capability to consistently produce safe and wholesome fishery products in conformity with national regulations and importing country requirements. Depending upon the destination market, approved establishments may also require inclusion in the official list of establishments recognised by the competent authority of the importing country before exports can commence. Periodic reassessment is undertaken to verify continued compliance with the prescribed standards.

6.3.2 Official Surveillance and Monitoring

Approval of an establishment is followed by continuous official surveillance to verify sustained compliance with regulatory requirements. Export Inspection Agencies undertake periodic monitoring visits, supervisory visits and HACCP audit to evaluate the effectiveness of food safety management systems, hygienic practices, traceability arrangements and quality assurance procedures implemented by approved establishments.

Official surveillance focuses on the implementation of HACCP plans, sanitation programmes, process controls, laboratory testing, maintenance of records and corrective actions taken against identified deficiencies. The frequency and intensity of surveillance are determined on the basis of risk, compliance history, product category and importing country requirements. Findings from surveillance activities are documented and communicated to the establishment for timely corrective action, thereby promoting continuous improvement in food safety performance.

6.3.3 Inspection of Export Consignments and Health Certification

Prior to export, consignments intended for export are subjected to official inspection in accordance with applicable regulatory procedures and importing country requirements. Inspection may include verification of product identity, traceability records, processing history, storage conditions, packaging, labelling and supporting documentation. Where necessary, consignments may also be sampled for laboratory analysis to confirm compliance with prescribed microbiological, organoleptic, chemical and / or residue standards.

Following satisfactory verification, the competent authority issues the appropriate export certification, including the Health Certificate or other country-specific health certificates

required by the importing country. These certificates provide official assurance that the products have been produced, handled, processed and inspected in accordance with requirements of importing country requirements and are fit for human consumption. Increasingly, certification is being facilitated through electronic systems that enhance efficiency, transparency and traceability in the export certification process.

6.3.4 Listing of Establishments for Export Markets

Several importing countries permit imports of fish and fishery products only from establishments that have been specifically approved and listed by their competent authorities. Accordingly, processing establishments intending to export to such markets are required to satisfy additional market-specific requirements beyond the national approval process.

The list of approved establishments is periodically updated based on regulatory assessments, compliance history and bilateral agreements between the competent authorities. Exporters should therefore ensure that their establishments continue to meet the requirements applicable to the destination market and remain included in the relevant approved lists before dispatching export consignments.

6.3.5 Management of Non-compliance and Import Rejections

An effective regulatory system requires prompt identification and resolution of deficiencies that may affect food safety or regulatory compliance. Where official inspections, laboratory findings or notifications from importing countries indicate non-compliance, appropriate corrective measures are initiated to identify the root cause, prevent recurrence and restore confidence in the affected establishment or product.

Corrective actions may include enhanced internal monitoring, review of HACCP plans, process validation, staff retraining, intensified laboratory testing and implementation of preventive measures across the production system. In cases involving repeated or serious deficiencies, regulatory authorities may undertake additional inspections, impose enhanced surveillance or temporary suspension of export and or production until compliance is satisfactorily re-established. Root cause of the contamination responsible for import rejections and border notifications are systematically analysed to strengthen quality management systems and improve future export performance.

6.4 Market-specific Regulatory Requirements

Although the fundamental principles of food safety, quality assurance and traceability are common across international seafood markets, individual importing countries prescribe additional regulatory requirements based on their food safety legislation, consumer protection policies, animal health measures and import control systems. Exporters should therefore familiarise themselves with the specific import conditions applicable to their target markets and establish appropriate compliance systems before commencing exports.

Market-specific requirements may relate to approved processing establishments, residue limits, microbiological standards, traceability systems, health certification, labelling, sustainability measures and import documentation. These requirements are periodically revised by importing countries in response to scientific developments, emerging food safety risks and changes in regulatory frameworks. Consequently, exporters should regularly monitor notifications issued by the competent authorities and importing countries to ensure continued market access. (https://eping.wto.org/)

Table 6.2 Indicative overview of the major regulatory considerations applicable to India's principal seafood export destinations.

Export Market	Major Regulatory Focus	Mandatory Certification / Documents	Additional Requirements & Constraints	Listing / Regulatory Portal
European Union	Food safety, traceability and antibiotic residues	• TRACES-listed establishment (establishment shall export category-specific, i.e. sea-caught and aquaculture as approved by the EIC) • Health Certificate – EIA/EIC • Catch Certificate – MPEDA (wild-caught) • NRCP residue compliance for source farm • Certificate of Origin – DGFT/EIA/MPEDA	• Enhanced sampling applies to farmed shrimp consignments • establishment approved by the EIC, under the sea-caught category cannot export aquaculture product	Establishment Lists – TRACES NT
United Kingdom	Food safety and traceability	• Recommendation for listing communicated by the EIC for each establishment • UK-approved establishment listing (separate from EU listing) • Health Certificate - EIA/EIC • Catch Certificate - MPEDA (wild-caught) • Traceability and batch records	• EU approval does not confer UK eligibility; confirm your unit's UK status before contracting • Maintain antibiotic residue controls at farm and establishment level	food.gov.uk

Export Market	Major Regulatory Focus	Mandatory Certification / Documents	Additional Requirements & Constraints	Listing / Regulatory Portal
United States of America	Preventive food safety, TED compliance and trade remedies	• FDA Food Facility Registration (FURLS) • HACCP plan and records • DS 2031 Certificate • TED compliance declaration (wild-caught shrimp) • MMPA comparability finding • Buyer-side FSVP verification records • Social compliance / labour audit report	• Wild-caught shrimp from non-TED trawlers will be refused entry • Maintain auditable labour and supplier due-diligence records; buyers will seek social compliance certification • Regulatory Partnership Agreement route available where applicable	https://www.access.fda.gov/
China	Establishment registration and consignment certification	• GACC / CIFER establishment registration by the EIC for each establishment • Health Certificate - EIA/EIC • Consignment testing for Microbiological, chemical parameters prescribed by the P.R.China at EIA laboratories on post facto basis. • GACC-compliant product labelling	• Species and product forms must both appear on the GACC portal verify before contracting; • Upon registration effective on CIFER, Processing of products for export to P.R.China shall be planned	CIFER
Japan	Product quality and antibiotic residue free	• Health Certificate - EIA/EIC • Antibiotic residue test report from EIA laboratory	• 100% antibiotic sampling applies to farmed *Vannamei*, factor testing time and cold-	mhlw.go.jp

Export Market	Major Regulatory Focus	Mandatory Certification / Documents	Additional Requirements & Constraints	Listing / Regulatory Portal
			chain cost into contracts • Meet residue, microbiological, packaging and labelling requirements	
South Korea	Aquatic animal health	• Health Certificate – EIA with declaration and testing of aquatic disease status • Consignment-wise virus test report	• Virus testing is required for every consignment, build lead time and cost into contracts • Arrange testing through MFDS designated laboratories	mfds.go.kr
Thailand	Aquatic disease control (IMNV)	• Establishments and aquaculture farms listed by DoF Thailand • Health Certificate - EIA/EIC • IMNV and all WoAH listed aquatic disease free test certificate issued by any EIC recognized laboratory	• *Vannamei* is permitted; other cultured shrimp species remain restricted on IMNV grounds • Confirm species eligibility before contracting • Source from disease-free farms with verifiable health history	dld.go.th
Australia	Biosecurity and pathogen testing	• Health Certificate - EIA/EIC • Organoleptic inspection by the EIA prior to shipment • Pre-export virus testing report (uncooked shrimp)	• Uncooked shrimp is subject to both pre-export and on-arrival sampling and testing • Arrival-stage failure results in consignment	BICON

Export Market	Major Regulatory Focus	Mandatory Certification / Documents	Additional Requirements & Constraints	Listing / Regulatory Portal
			rejection at exporter's cost, pre-export testing must be robust	
Kingdom of Saudi Arabia	Food safety and aquatic animal health	• SFDA establishment listing • Health Certificate - EIA/EIC • Disease-free (WSSV) certification where permitted • Public attestation on freshness and disease status (wild-caught) • Country-specific import documentation	• Presently, Temporary restrictions apply to aquaculture shrimp, cultured fish and wild-caught shrimp and lobster on WSSV grounds. • Fresh fish consignments must reach within the prescribed period from date of fishing • Shell-on frozen shrimp restricted; processed and peeled forms tested for WSSV	sfda.gov.sa
Sultanate of Oman	Import documentation and consignment clearance	• Health Certificate - EIA/EIC • Import permit / written buyer clearance confirmation • Catch Certificate - MPEDA (wild-caught only, if buyer insists)	Health certificate format is prescribed by the Oman depends on the product	maf.gov.om
Russia	Establishment listing (FSVPS) and domestic standards	• FSVPS establishment listing	Russian food safety standards wrt microbiological	fsvps.gov.ru

Export Market	Major Regulatory Focus	Mandatory Certification / Documents	Additional Requirements & Constraints	Listing / Regulatory Portal
		• Health Certificate - EIA/EIC • Test reports demonstrating conformity to Russian limits ; Microbiological parameters testing at EIA Laboratories	and residue are stringent than Codex and Indian norms, test against Russian limits, not domestic ones	
Indonesia	Aquatic animal health	• Health Certificate - EIA/EIC • WOAH pathogen-free certification (live finfish and shellfish) • WSSV and YHV pre export test reports (frozen shrimp)	WSSV and YHV testing is required	kkp.go.id
Vietnam	Establishment registration	• Department of Livestock and Veterinary Health, Ministry of Animal Health establishment listing • Health Certificate - EIA/EIC	• Applications are accepted in hard copy only through EIC, submit physical documentation for listing, well ahead of planned shipments • Listing mandatory for domestic consumption at Vietnam • In case of reexport from Vietnam, listing not mandatory	https://cucthuy.gov.vn/en/danh-sach-doanh-nghiep-xk-thuy-san
Republic of Turkey	• Establishment listing	• Establishment listing based on submission application endorsed by the EIC	• Delay in listing if not on EU TRACES list.	https://trois.tarimorman.gov.tr).

Export Market	Major Regulatory Focus	Mandatory Certification / Documents	Additional Requirements & Constraints	Listing / Regulatory Portal
		• Health certificate in EU format • PET testing for micro, chemical parameters as applicable	• Seek EU listing first to simplify Türkiye list. • Establishments not listed on EU TRACES NT, will be listed after onsite inspection	
Brazil	Establishment and Product registration,	• Establishments and it's producing fishery products for export must be registered through EIC with **DIPOA**	• Product wise registration with DIPOA	Importing animal products - Ministério da Agricultura e Pecuária
Canada	Food safety and preventive controls	• Preventive Control Plan (importer-side) • Health Certificate - EIA/EIC • Aquatic animal health certification where applicable	• Biosecurity-related conditions apply to shrimp consignments, confirm current requirements with the buyer • Traceability and recall procedures must be documented and demonstrable	-

The requirements indicated above are illustrative and may vary depending on the product category, importing country regulations and bilateral agreements in force at the time of export.

In addition to complying with destination-specific requirements, exporters should maintain regular communication with overseas buyers and importing agents to understand evolving market expectations. Participation in trade fairs, buyer-seller meets, market intelligence programmes and export promotion initiatives organised by MPEDA and other agencies can also assist exporters in identifying new opportunities and responding proactively to changing international market requirements.

Chapter Summary

Compliance with food safety, traceability and importing-country regulatory requirements is fundamental to successful exports of seafood. Exporters must ensure that every stage of the value chain from production and harvesting to processing, testing, certification and shipment meets applicable national and international standards. Adherence to official inspection and certification procedures not only facilitates market access but also strengthens buyer confidence, minimizes the risk of export rejections and enhances the credibility of Indian seafood in global markets

Chapter 7 – Export Contract, Incoterms and Payment Terms

Before accepting an export order or commencing procurement, processing or shipment, the exporter and overseas buyer should enter into a clear and mutually agreed export contract. The contract should specify the product description and specifications, quantity, price, currency, delivery schedule, inspection and certification requirements, applicable Incoterms® 2020 rule, payment method, documents required for payment, treatment of claims and disputes, and the governing law.

Particular attention should be given to the selection of the applicable Incoterms rule and payment method. The Incoterms rule determines the agreed place or point of delivery and allocates specified responsibilities, costs and risks between the seller and buyer. The payment terms separately determine when, how and against which documents the exporter will receive payment. These provisions should be negotiated together because they directly influence export pricing, logistics arrangements, insurance responsibilities, documentation requirements, working-capital needs and the exporter's overall commercial risk.

The agreed Incoterms rule should be stated precisely in the export contract, purchase order, pro-forma invoice and commercial invoice by mentioning the selected three-letter rule, the named place, port or point, and the applicable version. Exporters should avoid using a trade term without specifying the named place or port, as responsibilities and costs may otherwise remain unclear.

7.1 Understanding International Commercial terms (INCOTERMS)

Incoterms are the selling terms that the buyer and seller of goods both agree to during international transactions. These rules are accepted by governments and legal authorities around the world. Understanding Incoterms is a vital part of International Trade because they clearly state which tasks, costs and risks are associated with the buyer and the seller. The Incoterm states when the seller's costs and risks are transferred onto the buyer.

It's also important to understand that not all rules apply in all cases. Some encompass any mode or modes of transport. Transport by all modes of transport (road, rail, air and sea) covers FCA, CPT, CIP, DAP, DPU and DDP. Sea/Inland waterway transport (Sea) covers FAS, FOB, CFR and CIF.

An overview of Incoterms 2020 for 11 Terms, 7 for any mode of transport

Groups	Any Mode or Modes of Transport		Sea and Inland Waterway Transport				Any Mode or Modes of Transport				
Incoterm	**EXW**	**FCA**	**FAS**	**FOB**	**CFR**	**CIF**	**CPT**	**CIP**	**DAP**	**DPU**	**DDP**
	Ex Works (Place)	Free Carrier (Place)	Free Alongside Ship (Port)	Free On Board (Port)	Cost and Freight (Port)	Cost Insurance & Freight (Port)	Carriage Paid To (Place)	Carriage & Insurance Paid to (Place)	Delivered at Place (Place)	Delivered at Place Unloaded (Place)	Delivered Duty Paid (Place)
Transfer of Risk	At Buyer's Disposal	On Buyer's Transport	Alongside Ship	On Board Vessel	On Board Vessel	On Board Vessel	At Carrier	At Carrier	At Named Place	At Named Place Unloaded	At Named Place
Obligations & Charges:											
Export Packaging	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Loading Charges	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Delivery to Port/Place	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Export Duty, Taxes & Customs Clearance	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Origin Terminal Charges	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Loading on Carriage	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Carriage Charges	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Insurance	Negotiable	Negotiable	Negotiable	Negotiable	Negotiable	*Seller	Negotiable	**Seller	Negotiable	Negotiable	Negotiable
Destination Terminal Charges	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller
Delivery to Destination	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller
Unloading at Destination	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller
Import Duty, Taxes & Customs Clearance	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller

Figure 7.1 overview of Incoterms 2020

7.1.1 Rules for sea and inland waterway transport:

I. **FAS - Free Alongside Ship:** "Free Alongside Ship" means that the seller delivers when the goods are placed alongside the vessel (e.g., on a quay or a barge) nominated by the buyer at the named port of shipment. The risk of loss of or damage to the goods passes when the goods are alongside the ship, and the buyer bears all costs from that moment onwards.

II. **FOB - Free on Board:** "Free On Board" means that the seller delivers the goods on board the vessel nominated by the buyer at the named port of shipment or procures the goods already so delivered. The risk of loss of or damage to the goods passes when the goods are on board the vessel, and the buyer bears all costs from that moment onwards.

III. **CFR - Cost and Freight**: "Cost and Freight" means that the seller delivers the goods on board the vessel or procures the goods already so delivered. The risk of loss of or damage to the goods passes when the goods are on board the vessel. The seller must contract for and pay the costs and freight necessary to bring the goods to the named port of destination.

IV. **CIF - Cost, Insurance and Freight**: "Cost, Insurance and Freight" means that the seller delivers the goods on board the vessel or procures the goods already so delivered. The risk of loss of or damage to the goods passes when the goods are on board the vessel. The seller must contract for and pay the costs and freight necessary to bring the goods to the named port of destination. 'The seller also contracts for insurance cover against the buyer's risk of loss of or damage to the goods during the carriage. The buyer should note that under CIF the seller is required to obtain insurance only on minimum cover. Should the buyer wish to have more insurance protection, it will need either to agree as much expressly with the seller or to make its own extra insurance arrangements."

For more details about such export or trade terms, please refer to the URLS below

i. MPEDA (General Exim Terms) - *https://mpeda.gov.in/?page_id=1045*
ii. DFGT (How to Export – a practical guide)- *https://content.dgft.gov.in/Website/HTE.pdf*
iii. International Chamber of Commerce – *https://iccwbo.org*

7.2 Payment Terms in an Export-Import Contract:

Payment terms should be distinguished from the selected **Incoterms rule**. Incoterms 2020 allocates delivery responsibilities, costs and risks between the seller and buyer, but the contract must separately state the price, payment method, payment timing, transfer of ownership and consequences of non-payment. These rules determine the allocation of tasks, costs and risks and the point at which the seller's risk passes to the buyer.

7.2.1 Common Payment Methods

I. Advance Payment or Cash in Advance

Under this arrangement, the importer pays the full contract value, or an agreed percentage, before production or shipment. Full advance payment provides the highest payment security to the exporter but may be less attractive to an overseas buyer, particularly where there is no established trading relationship. The parties may alternatively agree to a partial advance to cover procurement, processing, packaging or production costs, with the balance payable before shipment or against specified shipping documents.

Suitable when**:** The buyer is new or unverified; the product is customised; the consignment is relatively small; commercial or country risk is elevated; or resale to another buyer may be difficult.

Exporter risk: Very low, provided payment is received and verified before procurement or shipment.

Key precaution: Confirm receipt of cleared funds through the authorised dealer bank before committing to production or dispatch.

II. Cash in advance allows the exporter to avoid credit risk because payment is received before ownership of the goods is transferred, although it may place an unfavourable cash-flow burden on the importer. Irrevocable Documentary Letter of Credit

A documentary letter of credit, commonly referred to as an LC or documentary credit, is an undertaking issued by a bank on behalf of the importer to honour payment to the exporter, subject to presentation of documents that comply with the terms and conditions of the credit.

Suitable when: Bank-backed documentary payment assurance is required and the exporter can comply with the stipulated documentary conditions.

Exporter risk: Low, subject to bank acceptability and presentation of complying documents.

Key precaution: Have the credit reviewed by the authorised dealer bank and obtain necessary amendments before shipment.

An LC is considered one of the more secure instruments in international trade because the issuing bank undertakes to pay when the exporter presents the stipulated complying documents. Nevertheless, an LC is a document-based arrangement. Errors or inconsistencies in documents may result in discrepancies, delayed payment, additional charges or refusal of

documents. The exporter should therefore have the LC reviewed by its bank immediately after receipt and request necessary amendments before shipment.

III. Documentary Collection

Under documentary collection, the exporter ships the goods and submits the commercial and shipping documents to its bank with instructions for collection through the importer's bank. Banks facilitate the handling and release of documents but do not ordinarily provide an independent payment undertaking comparable to an LC.

Documentary collection may be structured as:

- Documents against Payment, or D/P: Documents are released to the importer against payment, usually on presentation.
- Documents against Acceptance, or D/A: Documents are released after the importer accepts a time draft or bill of exchange and undertakes to pay it on the specified future date.

Suitable when: The parties have an established relationship and the exporter is satisfied with the buyer and destination-country risk.

Exporter risk: High, particularly under Documents against Acceptance.

Key precaution: Recognise that the collecting banks handle documents but ordinarily do not provide an independent undertaking to pay.

D/P provides the exporter greater control over shipping documents than D/A, but it does not eliminate the possibility that the importer may refuse to pay or take delivery. Under D/A, the exporter additionally bears the importer's credit risk during the agreed usance period. Documentary collection is generally more appropriate where the parties have an established relationship, the importing country has stable commercial conditions, and the exporter is satisfied with the buyer's ability and willingness to pay.

IV. Open Account

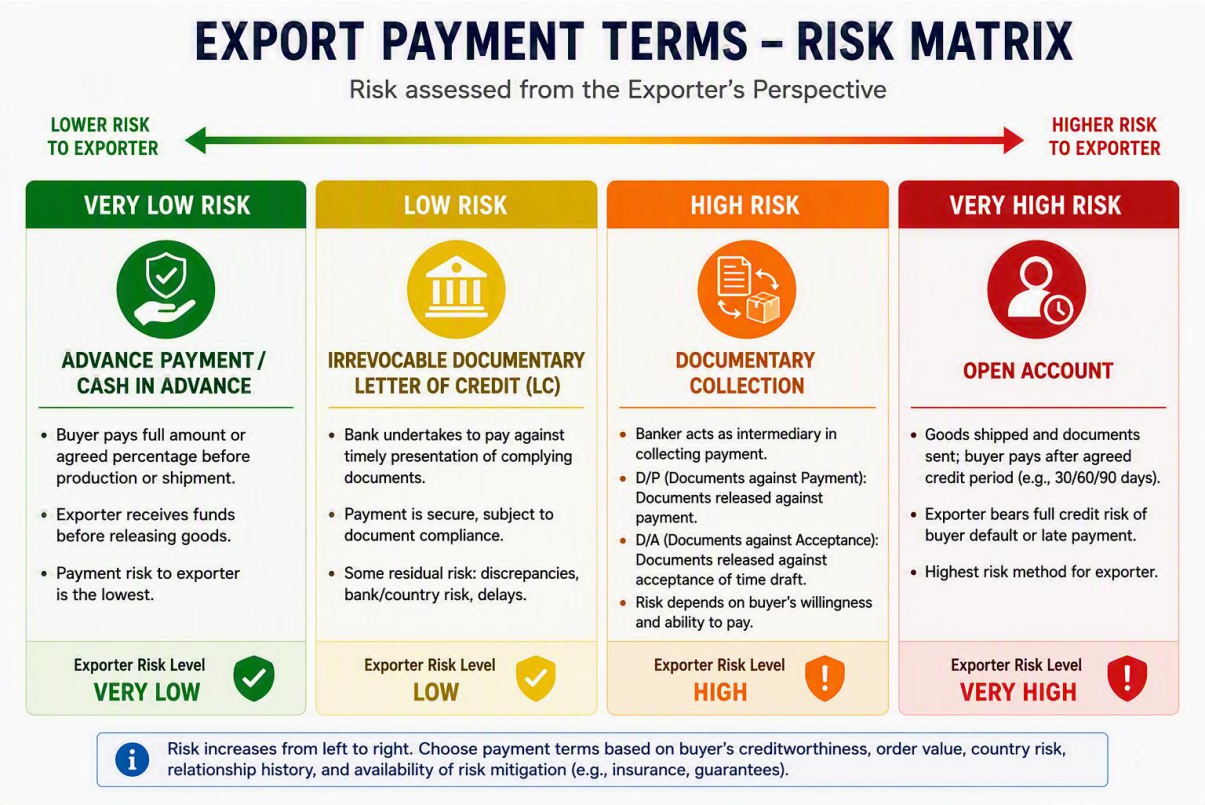
Under an open-account arrangement, goods and documents are supplied to the importer before payment becomes due, for example within an agreed number of days from the invoice date, shipment date or bill of lading date. This arrangement is commercially attractive to the importer but exposes the exporter to a higher risk of delayed payment, default and recovery difficulties.

Suitable when: The buyer has a satisfactory credit assessment, a dependable payment history and an approved credit limit.
Exporter risk: Very high.
Key precaution: Consider export credit insurance, a bank guarantee or other suitable protection and include clear overdue-payment and suspension provisions.

7.2.2 Practical Guidance on payment terms for a New Exporter

For a first transaction with an overseas buyer, the exporter should preferably seek full or partial advance payment or an irrevocable LC issued by an acceptable bank. More liberal arrangements such as D/A, open account or consignment should normally be considered only after due diligence, satisfactory transaction history and appropriate risk protection.

The payment clause should be reviewed together with the price, product specifications, shipment schedule, inspection requirements, Incoterms rule, insurance, quality-claim procedure, force majeure, governing law and dispute-resolution clauses. Before signing, the exporter should have the proposed payment provision reviewed by its authorized dealer bank and a qualified trade-law professional, particularly for deferred payment, foreign-currency, sanctions, tax, exchange-control or country-specific requirements.



Chapter Summary

A clear export contract is essential for defining the responsibilities, costs, risks and payment obligations of the exporter and overseas buyer. Exporters should carefully select the appropriate Incoterms 2020 rule, specify the named place or port, and align it with suitable payment terms, documentation, insurance and delivery arrangements. For new or unverified buyers, secure options such as advance payment or an irrevocable Letter of Credit are preferable, while documentary collection and open-account terms should be used only after proper buyer due diligence and adequate risk protection.

Chapter 8 - Sustainable Seafood Exports: Best Management Practices and Compliance

The long-term growth and global competitiveness of India's seafood exports depend on the production of safe, high-quality, traceable and sustainably produced fish and fishery products. As Inland States and Union Territories integrate into the national seafood export value chain, stakeholders across the production-to-export continuum, including fish farmers, Farmer Producer Organizations (FPOs), cooperatives, processors, exporters, State Fisheries Departments and supporting institutions should adopt Best Management Practices (BMPs) that ensure compliance with national regulations and international market requirements.

Sustainable seafood exports require an integrated approach encompassing responsible production, biosecurity, aquatic animal health management, food safety, traceability, value addition, environmental sustainability and continuous capacity building. Adoption of these practices will enhance consumer confidence, improve market access, minimize export rejections and strengthen the competitiveness of Indian seafood in global markets.

Sustainability: A Competitive Advantage

Global seafood markets increasingly demand products that are safe, traceable, environmentally sustainable and socially responsible. Sustainable production practices are no longer optional they are becoming essential for maintaining market access, strengthening buyer confidence and enhancing the long-term competitiveness of Indian seafood exports.

8.1 Sustainable and Responsible Aquaculture

Export-oriented aquaculture should be developed on the principles of sustainability, productivity and environmental responsibility. Farmers should adopt Good Aquaculture Practices (GAP), including the use of quality seed and feed from approved sources, scientific farm management, efficient resource utilization, proper water quality management and maintenance of farm records. Sustainable use of natural resources, responsible waste management, climate-resilient farming practices and conservation of aquatic ecosystems should be promoted to ensure long-term productivity and compliance with evolving international sustainability requirements.

8.2 Farm Registration and Digital Traceability

A robust farm registration and traceability system should form the foundation of export-oriented inland fisheries. All farms supplying fish for export should be registered with the State Fisheries Department and assigned a unique identification number. States should progressively establish digital databases containing farm details, production information and geographical location to facilitate traceability, disease surveillance and regulatory oversight.

End-to-end traceability should be maintained from farm to export consignment through reliable documentation and digital record management systems. Processing establishments

should procure raw material from registered farms with adequate production and traceability records, thereby ensuring transparency and facilitating certification, product recall and market confidence.

8.3 Biosecurity and Aquatic Animal Health Management

Strong biosecurity systems are essential to prevent the introduction and spread of aquatic animal diseases and to safeguard export production systems. Farms should adopt appropriate biosecurity measures including controlled farm access, sanitation, quarantine of new stock and responsible disposal of mortalities.

States should strengthen aquatic animal health management through disease surveillance, laboratory diagnostic facilities, epidemiological monitoring and early warning systems in collaboration with ICAR Fisheries Research Institutes, Fisheries Universities and other competent agencies. Farmers should promptly report unusual mortalities or suspected disease outbreaks to the State Fisheries Department and designated centres under the National Surveillance Programme for Aquatic Animal Diseases (NSPAAD).

8.4 Food Safety, Responsible Use of Inputs and Regulatory Compliance

Compliance with food safety standards is fundamental to maintaining India's credibility in international seafood markets. Export-oriented farms and processing establishments shall comply with national regulations and importing country requirements relating to veterinary medicines, antibiotic residues, contaminants and food safety.

The use of banned antibiotics, prohibited chemicals and other unauthorized substances shall not be permitted. Veterinary medicines should be used judiciously under professional guidance with proper observance of withdrawal periods. Stakeholders should maintain records of veterinary medicines, chemicals and other farm inputs to facilitate residue monitoring, regulatory inspections and certification.

EIC approved processing establishments should implement internationally accepted food safety management systems including Good Hygienic Practices (GHP), Good Manufacturing Practices (GMP), Sanitation Standard Operating Procedures (SSOP) and Hazard Analysis and Critical Control Point (HACCP).

Why Antibiotic Compliance Matters?
Residues of prohibited antibiotics remain one of the leading causes of seafood export rejections in international markets. Preventing such rejections requires responsible use of veterinary medicines, strict adherence to withdrawal periods, residue monitoring, farm-level traceability and adoption of Good Aquaculture Practices. These measures not only safeguard market access and consumer confidence but also strengthen India's reputation as a reliable supplier of safe and high-quality seafood.

8.5 Quality Assurance and Export Certification

Quality assurance should be maintained throughout harvesting, transportation, processing, storage and export. Processing establishments should ensure compliance with applicable national standards and importing country requirements through appropriate testing, documentation and certification.

States should encourage adoption of standardized quality assurance systems, digital record management and certification mechanisms that strengthen consumer confidence and facilitate seamless market access. Continuous monitoring and periodic audits should be undertaken to ensure sustained compliance with international food safety and quality standards.

8.6 Diversification, Value Addition and Market Orientation

Inland States and Union Territories should promote production of export-oriented freshwater species based on regional resource availability, production potential and international market demand. Diversification towards commercially important species such as Pangasius, Tilapia, Freshwater Prawn, Trout, Murrel and ornamental fish should be encouraged through cluster-based development, quality seed production, extension support and market linkages.

Greater emphasis should also be placed on value addition through processing, packaging and product diversification. Development of fillets, individually quick frozen (IQF) products, ready-to-cook, ready-to-eat and other value-added seafood products should be supported through modern processing infrastructure, cold-chain facilities, testing laboratories, packaging technologies and efficient logistics. States should also promote branding, market intelligence and buyer–seller linkages to improve export realization and enhance farmers' income.

8.7 Capacity Building, Institutional Convergence and Continuous Improvement

Sustainable export growth requires continuous capacity building of all stakeholders. The Department of Fisheries, Department of Commerce, MPEDA, EIC,EIAs, NFDB, ICAR Fisheries Research Institutes, State Fisheries Departments and other partner organizations should jointly organize regular training programmes on export standards, traceability, biosecurity, aquatic animal health, food safety, value addition and international market requirements.

Institutional convergence should be strengthened through coordinated planning, information sharing and regular stakeholder consultations to address emerging trade issues and regulatory changes. States should establish mechanisms for periodic review of export performance, analysis of export rejections, dissemination of best practices and continuous improvement to ensure long-term competitiveness of India's inland fisheries sector.

Table 7.1 Framework for Fisheries Sustainable Development

Area	Key Focus
Sustainable Production	Good Aquaculture Practices (GAP), responsible resource use, climate-resilient farming
Farm Registration & Traceability	Digital farm registry, end-to-end traceability and record management
Biosecurity & Fish Health	Disease prevention, surveillance, early reporting and NSPAAD linkage
Food Safety & Compliance	Responsible use of veterinary medicines, residue monitoring, HACCP, GHP, GMP and SSOP
Quality Assurance	Testing, certification, documentation and compliance with importing-country requirements
Value Addition	Species diversification, modern processing, cold chain, branding and market intelligence
Capacity Building	Training, institutional coordination, stakeholder awareness and continuous improvement

Chapter Summary

Sustainable seafood exports require responsible aquaculture practices, robust biosecurity, farm registration, digital traceability, food safety, quality assurance and continuous compliance with environmental and regulatory standards. Integrating these best management practices across the value chain enhances product quality, strengthens market confidence and supports long-term access to international seafood markets. By adopting sustainable production systems and promoting continuous improvement through institutional support and capacity building, Inland States and Union Territories can develop resilient, competitive and future-ready seafood export value chains.

Chapter 9 - Institutional Support, Training and Capacity Building

9.1 Overview

The successful integration of Inland States and Union Territories into India's seafood export value chain depends not only on the availability of infrastructure and financial assistance but also on the availability of skilled human resources, institutional support and continuous technical guidance. International seafood trade is governed by stringent sanitary and phytosanitary measures, food safety regulations, traceability requirements, quality assurance systems and importing-country specific standards. Compliance with these requirements requires sustained capacity building at every stage of the value chain, beginning from farm production and extending to processing, certification and export marketing.

The Government of India, through various Ministries, statutory organizations, research institutions and development agencies, has established an institutional framework to strengthen the knowledge, skills and competitiveness of fisheries stakeholders. These organizations regularly conduct training programmes, workshops, exposure visits, technical demonstrations, buyer-seller interactions, entrepreneurship development programmes and awareness campaigns to facilitate adoption of scientific aquaculture practices, improve product quality, promote value addition and strengthen compliance with international standards. Such initiatives are essential for developing an export-oriented fisheries ecosystem capable of meeting the evolving requirements of global seafood markets.

Capacity Building: The Bridge to Export Readiness

Access to international seafood markets requires continuous learning, technical competence and institutional support. Through coordinated efforts of Government agencies, research institutions and export promotion organizations, stakeholders can strengthen their knowledge, adopt international best practices and build the capabilities required to participate successfully in the global seafood trade

9.2 Institutional Support Framework

Capacity building for fisheries exports is supported through coordinated efforts of multiple organizations, each contributing according to its institutional mandate. While the Department of Fisheries provides overall policy direction and convergence of Government programmes, specialized organizations such as MPEDA, Export Inspection Council (EIC), National Fisheries Development Board (NFDB), ICAR institutions and the Ministry of Food Processing Industries provide technical expertise, export facilitation, research support and entrepreneurship development.

Table 8.1 Institutional Support Framework for Fisheries Export Development

Organization	Major Areas of Support	Primary Beneficiaries
Department of Fisheries	Policy guidance, scheme implementation, convergence and awareness	States, Fish Farmers, FFPOs, Entrepreneurs
MPEDA	Export promotion, market development, exporter facilitation and technical training	Exporters, Processors, Farmers
Export Inspection Council (EIC) / EIAs	Food safety, HACCP, export certification Laboratory testing requirements, Residue controls and importing country requirements	Processing establishments, Exporters
NFDB	Skill development, fisheries extension, entrepreneurship and technology dissemination	Fish Farmers, Youth, Cooperatives
ICAR-CIFT	Fish processing, quality assurance, value addition and product development	Processors, Entrepreneurs
NIFPHATT	Skill development and capacity building in fish processing; fisheries extension and technology dissemination; entrepreneurship development; post-harvest technology; value addition and product development; and consultancy services.	Fishers, Fish Farmers, Entrepreneurs, Processors, Self Help Groups (SHGs), Cooperatives, Women, Youth, Students, Fisheries Professionals, and other stakeholders.
Ministry of Food Processing Industries	Food processing, entrepreneurship and investment promotion	MSMEs, Start-ups, Entrepreneurs
RGCA	Aquatic Quarantine Facility, Aqua Technology Transfer, Certified Seed supply	Hatchery Operator, Farmer

9.3 Capacity Building for Export Readiness

Capacity-building programmes should address the entire seafood export value chain rather than individual components in isolation. Training should strengthen competencies in export-oriented aquaculture, scientific fish farming, aquatic biosecurity, hygienic harvesting, post-harvest handling, cold chain management, processing technologies, food safety management systems, traceability, export documentation, international market requirements, branding and entrepreneurship. Such programmes should also promote awareness regarding Government schemes, financial assistance, certification procedures and digital platforms available for fisheries development and export promotion.

Training programmes may be delivered through classroom sessions, field demonstrations, exposure visits, hands-on practical training, webinars, digital learning modules and industry interactions. Particular emphasis should be placed on developing the capacities of fish farmers, Fish Farmer Producer Organizations (FFPOs), cooperatives, women Self-Help Groups (SHGs), fisheries entrepreneurs, processors and officials of State Fisheries Departments, thereby creating a skilled workforce capable of supporting export-oriented fisheries development.

9.4 Major Training and Capacity Building Providers

9.4.1 Marine Products Export Development Authority (MPEDA)

The Marine Products Export Development Authority (MPEDA) plays a central role in strengthening the export capabilities of India's fisheries sector through a wide range of capacity-building and market development initiatives. The Authority regularly organizes training programmes, workshops, exposure visits and awareness campaigns for fish farmers, aquaculture entrepreneurs, processors, exporters and Fish Farmer Producer Organizations (FFPOs) to improve technical knowledge and export preparedness. MPEDA also conducts Buyer-Seller Meets, Reverse Buyer-Seller Meets, participation in international trade fairs and Seafood Expo Bharat, enabling stakeholders to interact with domestic and international buyers and understand emerging market trends. Through its specialized institutions, namely the Network for Fish Quality Management and Sustainable Fishing (NETFISH), the National Centre for Sustainable Aquaculture (NaCSA) and the Rajiv Gandhi Centre for Aquaculture (RGCA), MPEDA provides training on export-oriented aquaculture, sustainable farming practices, biosecurity, traceability, seafood quality management, certification systems, value addition and modern processing technologies.

9.4.2 Export Inspection Council (EIC) and Export Inspection Agencies (EIAs)

The Export Inspection Council (EIC) and its Export Inspection Agencies (EIAs) are responsible for providing technical guidance on compliance with food safety, residue controls and importing-country requirements for export of fish and fishery products. They conduct specialized training programmes on Hazard Analysis and Critical Control Point (HACCP), Good Manufacturing Practices (GMP), Sanitation Standard Operating Procedures (SSOP), food safety management systems, laboratory testing, official controls, export certification and importing-country regulations. These programmes enable processing establishments, exporters and quality managers to implement internationally accepted quality assurance systems and maintain compliance with evolving regulatory requirements of global markets.

9.4.3 National Fisheries Development Board (NFDB)

The National Fisheries Development Board (NFDB), under the Department of Fisheries, supports human resource development through structured training, extension and entrepreneurship development programmes. The Board organizes workshops, demonstrations, exposure visits and technology dissemination programmes covering scientific aquaculture, hatchery management, seed production, feed management, reservoir fisheries, ornamental fisheries, cold-water fisheries, post-harvest management, value addition and fisheries entrepreneurship. NFDB also promotes innovation and knowledge dissemination through initiatives such as the National Fisheries Olympiad, encouraging scientific learning among students, young professionals and fisheries stakeholders. These initiatives strengthen institutional capacity, facilitate adoption of improved technologies and contribute to the development of an export-oriented fisheries sector.

9.4.4 Indian Council of Agricultural Research (ICAR)

The Indian Council of Agricultural Research (ICAR), through its specialized fisheries institutes, provides scientific and technical support for capacity building across the fisheries value chain. The ICAR-Central Institute of Fisheries Technology (ICAR-CIFT) conducts training programmes on fish processing, value addition, packaging technologies, quality assurance, food safety and product development. Together, these institutions facilitate technology transfer and promote adoption of scientific practices for improving product quality and export competitiveness.

9.4.5 National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT)

NIFPHATT is the national institute under the Department of Fisheries, Government of India, mandated to promote skill development and capacity building in fish processing, fisheries extension and technology dissemination, entrepreneurship development, post-harvest fisheries technology, value addition and product development, and consultancy services. The Institute also undertakes technology transfer, training, demonstration, and capacity-building programmes for fishers, fish farmers, entrepreneurs, processors, self-help groups, cooperatives, students, and other stakeholders to strengthen the fisheries post-harvest sector.

9.4.6.6 Ministry of Food Processing Industries (MoFPI)

The Ministry of Food Processing Industries complements fisheries sector initiatives by promoting food processing, value addition and entrepreneurship through various national programmes and outreach activities. The Ministry organizes technical workshops, investor interactions, business networking events and the flagship **World Food India**, which provides a platform for interaction among entrepreneurs, technology providers, financial institutions and international buyers. These initiatives encourage investment, innovation and adoption of modern processing technologies, thereby supporting the development of export-oriented fisheries enterprises.

9.5 Accessing Institutional Support and Training

Stakeholders seeking technical guidance or capacity-building support may approach the respective organizations directly or through their State Fisheries Departments. Information relating to training calendars, workshops, exposure visits, buyer-seller meets, technical sessions, certification programmes and awareness campaigns is periodically made available through the official websites and digital portals of these organizations. Active participation in these programmes enables stakeholders to remain updated on technological advancements, regulatory changes and international market requirements while strengthening their preparedness for seafood exports.

Table 8.2 Major Institutions and Information Portals

Organisation	Nature of Support	Official Website
Department of Fisheries, Government of India	Policies, schemes and advisories	https://dof.gov.in
e- MPEDA	Farm Registration	https://mpeda.gov.in/farmers/?page_id=1778
EIC	Outreach programme includes HACCP training, export certification, Laboratory testing requirements and importing-country requirements, approval, Health certificate	https://www.eicindia.gov.in/WebApp1/
e-MPEDA	Exporter registration and online services	https://empeda.nic.in/registration/Reg_login.aspx https://e-mpeda.nic.in
ICAR-CIFE, Mumbai	Processing technologies, quality assurance and training, business incubation Centre	https://www.cife.edu.in/
ICAR-CIFT, Kochi	Processing technologies, quality assurance and training, business incubation Centre	https://www.cift.res.in
NIFPHATT	Capacity building and skill development; fisheries extension and technology dissemination; entrepreneurship promotion; technical support in post-harvest fisheries technology; support for value addition and product development; and consultancy services	https://nifphatt.gov.in/
LINAC-NCDC Fisheries Business Incubation Centre (LIFIC)	Fisheries business incubation support	https://lific.ncdc.in/
Ministry of Food Processing Industries, Government of India	Food processing initiatives and World Food India	https://mofpi.gov.in
MPEDA	Training calendar, exporter services, Buyer-Seller Meets, Seafood Expo Bharat	https://mpeda.gov.in
NFDB	Training programmes, extension activities and Fisheries Olympiad	https://nfdb.gov.in
National Institute of Agricultural Extension Management (MANAGE), Hyderabad	Fisheries business incubation support	https://www.manage.gov.in/

The Government of India is promoting innovation, entrepreneurship and technology-led growth in fisheries and aquaculture through dedicated incubation facilities established under the Pradhan Mantri Matsya Sampada Yojana (PMMSY). These include the National Institute of Agricultural Extension Management (MANAGE), Hyderabad; the LINAC-NCDC Fisheries Business Incubation Centre (LIFIC), Gurugram; ICAR-Central Institute of Fisheries Education

(CIFE), Mumbai; and ICAR-Central Institute of Fisheries Technology (CIFT), Kochi. LIFIC, is the country's first dedicated fisheries business incubation centre approved under PMMSY. The centres provide training, technical guidance, business mentoring, capacity building and incubation support to fisheries start-ups, cooperatives, Fish Farmer Producer Organisations and Self-Help Groups, helping convert innovative ideas into commercially viable and sustainable enterprises.

These facilities are also relevant to seafood exporters and export-oriented enterprises, as they can support the development and validation of new technologies, value-added products and business models across the fisheries value chain. Exporters and processors may leverage the incubation ecosystem to collaborate with start-ups working in areas such as cold-chain logistics, smart chilling and ice-production systems, quality grading, traceability, waste utilisation and value addition. Such solutions can help reduce post-harvest losses, improve value-chain efficiency, maintain export-grade quality and strengthen access to domestic and international markets. Fisheries entrepreneurs can also benefit from mentorship, opportunities for product and service validation, exposure to market linkages and, under eligible government programmes and challenges, seed-funding and incubation support for scaling commercially viable solutions.

9.6 Fisheries, aquaculture and seafood expos organised in India

India hosts several government-supported fisheries, aquaculture, seafood and food-processing exhibitions that provide important business and networking platforms for Indian marine-product exporters. Exporters may use these events to present their products, interact with domestic and international buyers, understand emerging consumer and market trends, explore processing and value-addition technologies, and establish linkages with logistics, packaging, cold-chain and other service providers.

Table 8.3 Major Fisheries, aquaculture and seafood expos organized in India

Event	Government linkage	Frequency to record
Seafood Expo Bharat	Organized by MPEDA	Annual - occurs in July Month
India International Seafood Show	MPEDA-SEAI association; 2025 edition organized by SEAI alongside WFI	Biennial - month may vary, subject to MPEDA notification
AAHAR	Jointly organized by MoFPI and ITPO	Annual; month may vary, subject to MoFPI and ITPO notification
World Food India	Organized by MoFPI	Recent editions were held in successive years. Subject to MoFPI notification
Indian Dairy Industry & Fisheries Expo incorporated in the Government Achievements & Schemes Expo	Listed as an ITPO partner event	Subject to ITPO notification
Global Fisheries Conference India	Department of Fisheries	Occasional/special event; Subject to ITPO notification

9.7 Indicative Training Structure

To facilitate the systematic integration of Inland States and Union Territories into India's seafood export value chain, a structured capacity-building framework may be adopted by the Department of Fisheries, State Fisheries Departments, MPEDA, EIC, NFDB, ICAR institutions and other implementing agencies. The proposed training modules are indicative in nature and are intended to provide a common framework for developing export-oriented competencies among fish farmers, Fish Farmer Producer Organizations (FFPOs), cooperatives, entrepreneurs, processors, exporters and Government officials. The curriculum may be customized according to regional production systems, priority species, infrastructure availability and target export markets. Training programs should combine classroom sessions, practical demonstrations, field visits, exposure visits to export-oriented facilities and interactive discussions to ensure effective knowledge transfer and skill development.

Table 8.4 Module-wise Indicative training structure

Training Module	Module Contents	Lead Institution(s)	Target Participants
Module 1: India's Seafood Export Ecosystem and Export Opportunities	Introduction to India's fisheries and seafood export sector, export trends, major export destinations, export value chain, role of key institutions, export potential of inland fisheries, priority export species, market opportunities and the roadmap for integrating Inland States and UTs into the seafood export value chain.	Department of Fisheries (DoF), MPEDA, NFDB	State Fisheries Departments, Fish Farmers, FFPOs, Entrepreneurs, Start-ups
Module 2: Export-oriented Aquaculture Production and Good Aquaculture Practices (GAP)	Selection of export-oriented species, production planning, scientific aquaculture practices, pond preparation, water quality management, feed and nutrition, biosecurity, aquatic animal health management, responsible use of veterinary medicines, sustainable aquaculture practices and climate-resilient production systems.	NFDB, ICAR Institutes, State Fisheries Departments, CAA (where applicable)	Fish Farmers, Hatchery Operators, Extension Officers
Module 3: Farm Registration, Traceability and Digital Systems	Farm registration procedures, digital traceability, maintenance of farm records, batch identification, input management, harvest records, QR-based traceability systems and documentation required to establish end-to-end traceability from farm to export.	MPEDA, State Fisheries Departments, CAA	Fish Farmers, FFPOs, Cooperatives
Module 4: Food Safety, Quality Assurance and	Food safety principles, hygienic harvesting and handling, responsible use of veterinary medicines, prohibited antibiotics	EIC/EIAs, MPEDA, ICAR-CIFT	Processors, Exporters, Quality Managers, Entrepreneurs

Training Module	Module Contents	Lead Institution(s)	Target Participants
Regulatory Compliance	and residue monitoring, HACCP, GMP, GHP, SSOP, laboratory testing, official controls, importing-country requirements.		
Module 5: Post-Harvest Management, Processing and Value Addition	Scientific harvesting, icing, grading, cold-chain management, packaging, processing technologies, value-added seafood products, storage, transportation, product quality preservation, packaging, branding and minimization of post-harvest losses to improve export competitiveness.	ICAR-CIFT, NIFPHATT, NFDB, MoFPI	Fish Farmers, Processors, Cooperatives, MSMEs
Module 6: Export Procedures, Documentation and Market Access	Export business models, IEC and MPEDA registration, RCMC, export documentation, approval and official control system, health certification, customs clearance, logistics, importing-country regulatory requirements, SPS measures, market-specific compliance, trade portals, buyer expectations and export risk management.	MPEDA, DGFT, EIC/EIAs, Indian Customs	Exporters, Entrepreneurs, Government Officials
Module 7: Entrepreneurship, Business Development and Financial Support	Export business planning, entrepreneurship development, branding, packaging, market intelligence, participation in buyer-seller meets and seafood expos, Government schemes, PMMSY support, financial assistance, preparation of bankable projects and investment opportunities.	MPEDA, NFDB, MoFPI, ICAR-CIFT, MANAGE, NCDC, NABARD.	Entrepreneurs, FFPOs, Cooperatives, Start-ups
Module 8: Exposure Visits and Practical Demonstrations	Exposure visits to export-oriented farms, hatcheries, processing establishments, EIC-approved facilities, EIC recognized laboratories, cold-chain infrastructure and seafood expos; interaction with successful exporters and demonstration of best management practices to provide practical understanding of export operations.	MPEDA, EIC/EIAs, NFDB, ICAR Institutes, State Fisheries Departments	All Stakeholders

Note: *The above modules are indicative and may be customized by the Department of Fisheries, State Fisheries Departments, MPEDA, EIC/EIAs, NFDB, ICAR institutions and other implementing agencies based on regional priorities, target groups, cultured species, export markets and evolving international regulatory requirements. Refer Annexure – 2 for Capacity Building Programmes by MPEDA*

Chapter Summary

Institutional support and continuous capacity building are essential for developing competitive and export-ready fisheries value chains. Through coordinated efforts of the Department of Fisheries, MPEDA, EIC, NFDB, ICAR institutions, State Governments and other partner organizations, stakeholders can access technical guidance, training, certification support, market intelligence and exposure to international markets. Continuous learning, institutional convergence and effective handholding will strengthen compliance, improve product quality and enable Inland States and Union Territories to participate successfully in India's growing seafood export sector.

Chapter 10 - Way Forward

India's fisheries sector has emerged as one of the fastest-growing sectors of the national economy and has established itself as a reliable supplier of safe, high-quality and sustainable seafood to global markets. During FY 2025-26, the country recorded an all-time high seafood export of 19.72 lakh tonnes, valued at ₹73,890 crore (US$ 8.46 billion). However, against a total national fish production of nearly 197.5 lakh tonnes, only about 10% of the country's fish production currently enters the export market. This clearly demonstrates the immense untapped potential for expanding seafood exports through improved value addition, quality assurance, diversification of export basket and greater participation of Inland States and Union Territories in the export value chain.

Vision for the Future

India's inland fisheries have the potential to become a significant contributor to the country's seafood export growth. By strengthening production clusters, developing export-oriented infrastructure, adopting international quality standards, promoting value addition and ensuring effective institutional convergence, Inland States and Union Territories can emerge as important participants in global seafood trade. This SOP provides a practical roadmap to transform inland fisheries from a production-driven sector into a globally competitive export ecosystem, contributing to the vision of Viksit Bharat @2047.

The growing contribution of inland fisheries and aquaculture to national fish production presents a unique opportunity to diversify India's export basket beyond traditional marine products. Realizing this potential requires a coordinated approach encompassing scientific production practices, robust biosecurity, modern post-harvest infrastructure, efficient cold chain logistics, internationally compliant processing facilities, traceability systems, market intelligence and seamless institutional coordination. Strengthening these critical components will enable producers and entrepreneurs from inland regions to meet international quality standards and successfully access global seafood markets.

This Standard Operating Procedure (SOP) provides a comprehensive roadmap for integrating Inland States and Union Territories into India's seafood export ecosystem by bringing together the entire export value chain from production and aggregation to processing, certification, logistics, marketing and export promotion. Its effective implementation will require close collaboration among the Department of Fisheries, Government of India State Fisheries Departments, MPEDA, Export Inspection Council (EIC), National Fisheries Development Board (NFDB), Coastal Aquaculture Authority (CAA), ICAR institutions, financial institutions, industry associations and private sector stakeholders. Such convergence will facilitate the development of export-oriented production clusters, strengthen institutional capacities and improve compliance with international regulatory requirements.

Going forward, priority should be accorded to expanding export-oriented aquaculture, promoting high-value inland fishery species, strengthening traceability and digital certification systems, improving cold chain and logistics infrastructure, encouraging value addition and product diversification, and enhancing capacity building across the value chain.

Simultaneously, greater emphasis on research and innovation, aquatic animal health management, climate-resilient production systems, sustainable fisheries practices and adoption of international food safety standards will further strengthen India's competitiveness in global seafood markets.

The successful implementation of this SOP will contribute to higher farmer incomes, increased employment opportunities, enhanced private sector participation, greater foreign exchange earnings and balanced regional development by enabling Inland States and Union Territories to become active participants in India's seafood export growth story. By leveraging its vast inland fisheries resources, strong institutional framework and expanding processing capabilities, India is well positioned to significantly enhance the share of fish production entering international markets and consolidate its position as a global leader in sustainable seafood production and exports. This vision is fully aligned with the national aspirations of Viksit Bharat @2047, Atmanirbhar Bharat, the Blue Economy, and the Government's commitment to building a resilient, inclusive and globally competitive fisheries sector.

"From inland waters to global markets every export-ready farmer, every compliant value chain and every empowered State strengthens India's journey towards becoming a global seafood leader."

Annexure-1A

List of Region-Wise MPEDA registered Exporters

Sl.No.	State	Manufacturer Exporter	Merchant Exporter	Route-through Merchant Exporter	Ornamental Fish Exporter	Total
		(MT)	(ME)	(RX)	(OF)	
1	Kerala	124	60	32	10	226
2	Andhra Pradesh	100	74	32	0	206
3	Tamil Nadu	115	96	4	4	219
4	Karnataka	52	19	1	0	72
5	Maharashtra	71	74	28	2	175
6	Odisha	25	28	15	0	68
7	West Bengal	83	54	15	27	179
8	Assam	2	3	0	1	6
9	Gujarat	121	53	24	0	198
10	Delhi	2	4	4	0	10
11	Telangana	5	10	2	0	17
	Total	**700**	**475**	**157**	**44**	**1376**

Source: MPEDA

Annexure-1B

List of MPEDA offices

State	City	Address	Phone Number	Email ID
Andaman & Nicobar Islands	Port Blair - Sub Regional Division	MPEDA Desk Office, Administrative Building, Fish Landing Centre, Juglighat, Port Blair, Andaman & Nicobar Islands	91 95318 70017, 91 96795 21641	kumar.ujjwal58@gmail.com
Andhra Pradesh	Visakhapatnam - Sub Regional Division	Door No. 9-24-3, Flats 101 & 104, CBM Compound, Opp. Timpany School Main Gate, Rama Talkies Road, Visakhapatnam – 530 003, Andhra Pradesh	91 891 2701134, 91 891 2552077	ro.viz@mpeda.gov.in
	Bhimavaram - Sub Regional Division	1st Floor, Integrated Office Complex, R.S. No. 130, Agriculture Market Committee, Narasayya Agraharam, Bhimavaram, West Godavari District, Andhra Pradesh – 534 201	91 8816 297219, 297395	sro.bhi@mpeda.gov.in
	Kakinada - Sub Regional Division	Door No. 70-1A-6/1, 1st Floor, Vasireddy Vari Street, Beside Municipal Corporation High School, Ramanayyapeta, Kakinada – 533 005, Andhra Pradesh		
Assam	Guwahati - Sub Regional Division	Door No. 1, Ground Floor, Nabagraha Road, Silpukhuri, Guwahati – 781 003, Assam	91 361 2663083	sro.guw@mpeda.gov.in
Gujarat	Veraval - Regional Division	Kaveri Building, 3rd Floor, Above SBI, 80 Feet Road, Veraval – 362 266, Gujarat	91 2876 241429	ro.ver@mpeda.gov.in
	Valsad - Sub Regional Division	Ekta Building No. 1, 3rd Floor, Above HDFC Bank, Tithal Road, Valsad – 396 001, Gujarat	91 2632 253740, 91 2632 242642	rc.val@mpeda.gov.in
	Porbandar - Sub Regional Division	1st Floor, Shanti Complex, 3 Wadi Plot, Opp. TACON Complex, Porbandar – 360 575, Gujarat	91 2862 210074	sro.por@mpeda.gov.in
Karnataka	Mangalore - Regional Division	1st Floor, Sri Vinayak Krupa Building, Anand Shetty Circle, Attavar Katte, Mangalore – 575 001, Karnataka	91 824 2985988	sro.man@mpeda.gov.in
Kerala	Kochi - Head Office	MPEDA House, P.B. No. 4272, Panampilly Avenue, Panampilly Nagar P.O., Kochi – 682 036, Kerala	91-484 2311901, 91-484 2311854, 91-484 2311803, 91-484 2313415	ho@mpeda.gov.in

State	City	Address	Phone Number	Email ID
Kerala	Kochi - Regional Division	MPEDA House, 4th Floor, Panampilly Avenue, Panampilly Nagar P.O., Kochi – 682 036, Kerala	91-484 2323245, +91-484 2321725	ro.koc@mpeda.gov.in; rc.koc@mpeda.gov.in
Lakshadweep	Kavaratti - Sub Regional Division	Directorate of Fisheries, Kavaratti, Union Territory of Lakshadweep – 682 555	04896 262766	admpedakavaratti@gmail.com
Maharashtra	Panvel - Regional Division	103 Sai Arcade, First Floor, Line Ali, Near Panvel ST Bus Stand, Panvel Taluka, Raigad District, Maharashtra – 410 206	91 22 27481481	rc.pan@mpeda.gov.in; ro.mum@mpeda.gov.in
Odisha	Bhubaneswar - Regional Division	2nd Floor, Raptani Bhavan, IRC Village, Nayapalli, Bhubaneswar – 751 015, Odisha	91 674 2362360, 2362161	rc.bhu@mpeda.gov.in
Tamil Nadu	Chennai - Regional Division	No. 167, First Floor, Interpretation Building, TNFDC ECOPARK, Poonamallee High Road, Chetpet, Kilpauk, Chennai – 600 010, Tamil Nadu	044 28365152	ro.che@mpeda.gov.in
	Sirkali - Sub Regional Division	No. 3/197, Poompuhar Road, Karaimedu Village, Sattanathapuram P.O., Sirkali Taluk, Mayiladuthurai District, Tamil Nadu – 609 109	91 4364 270048	rc.nag@mpeda.gov.in
	Tuticorin - Sub Regional Division	No. 82, New Colony, Tuticorin – 628 003, Tamil Nadu	0461-2310602	sro.tut@mpeda.gov.in
West Bengal	Kolkata - Regional Division	5th Floor, Tea Board Building, 14 BTM Sarani (Brabourne Road), Kolkata – 700 001, West Bengal	91 33 22345908	ro.kol@mpeda.gov.in

Source: MPEDA

Annexure-1C

List of MPEDA ELISA Laboratories

State	City	Address	Phone Number	Email ID
Andhra Pradesh	Nellore	Srinivas Towers, 4th Floor, D. No. 26-1-1766/A-1, Srinagar Colony, Mini Bypass Road, SPSR Nellore, Nellore – 524 003	0861 2339144	elisa.nel@mpeda.gov.in
	Ongole	Door No. 37-1-413 (24/2), Ram Nagar 8th Lane, Ongole – 523 001, Prakasam District	08592 224728	elisa.ong@mpeda.gov.in
	Machilipatnam	MPEDA ELISA Screening Laboratory, Door No. 28/208-1, Circlepeta, 28th Ward, Near BC Welfare Hostel, Machilipatnam – 521 001, Krishna District	08672 229410	elisa.mac@mpeda.gov.in
	Bhimavaram	2nd Floor, Pattabhi Plaza, JP Road, Bhimavaram – 534 202, West Godavari District	08816 223958	elisa.bhi@mpeda.gov.in
	Amalapuram	Door No. 10-397, Teja Towers, SKBR College Road, Amalapuram – 533 201, East Godavari District	08856 232332	elisa.ama@mpeda.gov.in
	Kakinada	MPEDA ELISA Screening Laboratory, House No. 1-128/5, Ramanayyapeta, Kothuru Junction, Near Primary School, Kakinada – 533 005, Andhra Pradesh	0884 2367076	elisa.kak@mpeda.gov.in
	Bapatla	D. No. 5-2-6/3, Cheel Road, Opp. Mahalakshmi Talli Temple, Bapatla, Guntur District – 522 101, Andhra Pradesh, India		elisa.bap@mpeda.gov.in
Gujarat	Valsad	Third Floor, Ekta Building No. 1, Above HDFC Bank, Tithal Road, Valsad – 396 001	0263 2253750	elisa.val@mpeda.gov.in
Kerala	Kochi	MPEDA House, 5th Floor, Panampilly Avenue, P.B. No. 4272, Kochi – 682 036	0484 2315199, 2311033	lab.koc@mpeda.gov.in
Odisha	Balasore	Plot No. 959/1326, Bhaskarganj, OT Road, Opp. Hotel Kalinga, Balasore – 756 001	06782 262417	elisa.bal@mpeda.gov.in

State	City	Address	Phone Number	Email ID
	Bhubaneswar	2nd Floor, Raptani Bhavan, Near ID Market, IRC Village, Nayapalli, Bhubaneswar – 751 015	0674 2360106	elisa.bhu@mpeda.gov.in
Tamil Nadu	Nagapattinam	Door No. 1, Public Office Road, Kadambadi, Nagapattinam – 611 001	04365 247733	elisa.nag@mpeda.gov.in
West Bengal	Contai	Karkuli, Purba Medinipur – 721 401	03220 296075	elisa.con@mpeda.gov.in
	Haroa	Near Safique Ahmed Girls High School, Haroa, North 24 Parganas – 743 425		elisa.hor@mpeda.gov.in

Source: MPEDA

Annexure-1D

State-Wise MPEDA Registered Storage Premises

Sl.No.	State	Cold Storage		Chilled Storage		Dry Fish Storage		Other Storage		Total
		No	Capacity (MT)	No	Capacity (MT)	No	Capacity (MT)	No	Capacity (MT)	Capacity (MT)
1	Kerala	168	1,12,171	3	1,693	1	542	6	1,088	1,15,494
2	Andhra Pradesh	183	2,54,783	6	9,424	14	13,351	4	4,515	2,82,073
3	Tamil Nadu	67	40,039	15	2,604	6	1670	9	5,273	49,586
4	Karnataka	52	57,778	0	0	11	2,767	22	28,837	89,382
5	Maharashtra	60	71,397	3	3,210	9	10,151	3	5,835	90,593
6	Odisha	50	52,076	17	11,004	1	1,500	0	0	64,580
7	West Bengal	52	51,620	1	930	17	1,531	2	35	54,116
8	Assam	0	0	0	0	2	92	0	0	92
9	Gujarat	134	1,19,574	5	4,198	20	5,218	1	20	1,29,010
10	Delhi	0	0	0	0	1	5,000	0	0	5,000
11	Telangana	1	143	1	143	0	0	0	0	286
		767	**7,59,582**	**51**	**33,206**	**82**	**41822**	**47**	**45603**	**8,80,212**

Source: MPEDA

Annexure-1E

List of EIC/EIA Offices

State	City	Address	Phone Number	Email ID
Andhra Pradesh	Bhimavaram	Door No. 7-150, Second Floor, Venkataraju Nagar, Chinnamiram Juvallapalem Road, West Godavari District, Bhimavaram – 534204	91-8816-229075	eia-bheemavaram@einindia.gov.in
	Visakhapatnam	Sy. No. 142/1, Plot No. C1, Green Industrial Park, Anandapuram, Gambheeram – 531163	91-8933-295552 / 53	eia-vizag@eicindia.gov.in
	Nellore	3rd Floor, South Wing, G.K. Imperial Towers, Door No. 23, Plot No. 468, Kings Court, Magunta Layout, Nellore – 524003	91-861-2359900	eia-nellore@eicindia.gov.in
Delhi	Delhi	Thakkar Bapa Smarak Sadan, 2nd Floor, Dr. Ambedkar Marg (Link Road), Behind Jhandewalan Metro Station, Delhi – 110055	91-11-23626320 / 21 / 22 / 23 / 24 / 25 / 26 / 27	eia-delhi@eicindia.gov.in
Goa	Panaji	Y-15, 5th Floor, Building A-1, Jairam Complex, Rua De Ourem, Mala, Panaji – 403001	0832-2222380	eia-goa@eicindia.gov.in
Gujarat	Ahmedabad	T.P. Scheme No. 38, F.P. No. 275, Thaltej, Ahmedabad – 380059	079-22162398	eia-ahmedabad@eicindia.gov.in
	Gandhidham	Room No. F-01, F-02, Old Administrative Office, Kandla Special Economic Zone, Gandhidham – 370230	02836-253036	eia-gandhidham@eicindia.gov.in
	Porbandar	4, Bhojeswar Plot, Porbandar – 360575	0286-2246376	eia-porbandar@eicindia.gov.in
	Rajkot	Sharad Villa, 25, New Jagnath Plot, Rajkot – 360001	0281-2463620	eia-rajkot@eicindia.gov.in
	Baroda	Kuber Bhavan, Room No. 824, 'I' Block, 8th Floor, Near Kothi, Baroda – 390001	265-2415706	eia-baroda@eicindia.gov.in
	Veraval	1st Floor, Jaikishan Complex, 80 Feet Road, New Chandramauleshwar Temple, Veraval – 362265	02876-245385	eia-veraval@eicindia.gov.in
Karnataka	Bengaluru	2nd Floor, Jeevan Sampige Building, No. 1/1, 2nd Main, Sampige Road,	91-80-23444931 / 23567556	eia-bangalore@eicindia.gov.in

State	City	Address	Phone Number	Email ID
		Malleswaram, Bengaluru – 560003		
Karnataka	Mangalore	First Floor, Testing Centre, Business Development Park for Export, NH-66, Panambur, Mangalore – 575010	91-824-2983381	eia-mangalore@eicindia.gov.in
Kerala	Kochi	27/1767 A, Shipyard Quarters Road, Panampilly Nagar (South), Kochi – 682036	91-484-2314645 / 46	eia-kochi@eicindia.gov.in
	Kollam	XL III/948, 1st Floor, Coaxial Building, Chinnakada, Kollam – 690001	91-474-2749087	eia-quilon@eicindia.gov.in
Madhya Pradesh	Indore	303, Capt. C.S. Nayudu Arcade, 10/2, Old Palasia, Indore – 452001	91-731-2566057	eia-indore@eicindia.gov.in
Maharashtra	Mumbai	E-3, MIDC, Andheri (East), Mumbai – 400093	022-20889619 / 20883401 / 282016401	eia-mumbai@eicindia.gov.in
	Ratnagiri	Sahil Mansion, Shivaji Nagar, Maruthi Mandir, Behind Lotlikar Hospital, Ratnagiri – 415612	0235-2222589	eia-ratnagiri@eicindia.gov.in
Odisha	Bhubaneswar	IDCO Plot No. 45/A/1, Chandaka Industrial Estate, Patia, Bhubaneswar – 751024	91-674-2975868	eia-bhubaneswar@eicindia.gov.in
Punjab	Jalandhar	1st Floor, CFC Building (Council for Leather Export), Near Sant Rubber, Leather Complex, Jalandhar – 144021	91-181-2651424	eia-jalandhar@eicindia.gov.in
	Ludhiana	First Floor, SCO 17, Near NRI Police Station, Sector 39, Chandigarh Road, Ludhiana – 141010	91-161-5050021	eia-ludhiana@eicindia.gov.in
Rajasthan	Jaipur	201–202, Tirupati Trade Centre, 4, Sansar Chandra Road, Jaipur – 302001	91-141-2366973	eia-jaipur@eicindia.gov.in
Tamil Nadu	Chennai	6th Floor, CMDA Tower II, No. 1, Gandhi Irwin Road, Egmore, Chennai – 600008	91-44-28552841 / 42	eia-chennai@eicindia.gov.in
	Coimbatore	1st Floor, North Wing, Jawan Bhavan, No. 27, Travellers Bunglow Road, Coimbatore – 641018	91-422-2391662 / 2393365	eia-coimbatore@eicindia.gov.in
	Nagercoil	125/70, Water Tank Road, Nagercoil – 629001	91-4652-232704	eia-nagercoil@eicindia.gov.in
	Tuticorin	No. 271, Aishwariya Towers, Sivanthakulam Road, Tuticorin – 628003	91-461-2320261	eia-tuticorin@eicindia.gov.in

State	City	Address	Phone Number	Email ID
Telangana	Hyderabad	B-50, TSIICL, Lakshmis Icon, 4th Floor, Sanath Nagar, Hyderabad – 500018	91-40-23712224	eia-hyderabad@eicindia.gov.in
Uttar Pradesh	Kanpur	MD Plaza, 38/105, Meston Road, 2nd Floor, Near Bada Chauraha, Kanpur – 208001	91-512-2369927	eia-kanpur@eicindia.gov.in
West Bengal	Kolkata	World Trade Centre, 14/1B Ezra Street, Kolkata – 700001	91-33-24410601 / 24410603	eia-kolkata@eicindia.gov.in

Source: EIC

Annexure-1F

Region-wise MPEDA registered Pre-Processing Plants

Sl.No.	State	No	Capacity (MT)
1	Andhra Pradesh	150	5,783
2	Gujarat	119	1,028
3	Karnataka	43	1,094
4	Kerala	129	1,035
5	Maharashtra	55	1,331
6	Odisha	45	954
7	Tamil Nadu	54	628
8	Telangana	1	3
9	West Bengal	45	588
	Grand Total	**641**	**12,444**

Source: Online Registration System - MPEDA

Annexure-1G

MPEDA registered Region-wise Processing Plants for European Countries

Sl.No.	States	No	Capacity (MT)
1	Odisha	30	1,644
2	Tamil Nadu	38	1,418
3	Kerala	103	4,731
4	West Bengal	33	1,780
5	Karnataka	36	4,297
6	Maharashtra	48	4,552
7	Gujarat	80	5,013
8	Andhra Pradesh	112	6,054
		480	**29,489**

Source: MPEDA

MPEDA registered Region-wise Processing Plants for Non-European Countries

Sl.No.	State	No	Capacity (MT)
1	Odisha	15	660
2	Tamil Nadu	25	1880
3	Kerala	16	360
4	West Bengal	11	376
5	Karnataka	35	2912
6	Maharashtra	14	1054
7	Gujarat	52	2182
8	Andhra Pradesh	21	1233
9	Telangana	1	66
		190	**10723**

Source: MPEDA

Annexure-1H

List of EIA/EIC Laboratories

Sl. No.	Name of laboratory	Address	City	Phone number	Email ID
1	Export Inspection Agency	27/1767 A, Shipyard Quarters Road, Panampilly Nagar (South), Kochi – 682036, Kerala, India	Kochi	91-484-2314645 / 2314646	eia-kochi@eicindia.gov.in
2	Export Inspection Agency	Sy. No. 142/1, Plot No. C1, Green Industrial Park, Anandapuram, Gambheeram, Visakhapatnam – 531163, Andhra Pradesh, India	Visakhapatnam	91-8933-295552 / 295553	eia-vizag@eicindia.gov.in
3	Export Inspection Agency	World Trade Centre, 14/1B Ezra Street, Kolkata – 700001, West Bengal, India	Kolkata	91-33-24410601 / 24410603	eia-kolkata@eicindia.gov.in
4	Export Inspection Agency	6th Floor, CMDA Tower II, No. 1, Gandhi Irwin Road, Egmore, Chennai – 600008, Tamil Nadu, India	Egmore	91-44-28552841 / 28552842	eia-chennai@eicindia.gov.in
5	Export Inspection Agency	Door No. 7-150, Second Floor, Venkataraju Nagar, Chinnamiram–Juvvalapalem Road, West Godavari District, Bhimavaram – 534204, Andhra Pradesh, India	Bhimavaram	91-8816-229075	eia-bheemavaram@eicindia.gov.in
6	Export Inspection Agency	Thakkar Bapa Smarak Sadan, 2nd Floor, Dr. Ambedkar Marg (Link Road), Behind Jhandewalan Metro Station, New Delhi – 110055, India	New Delhi	91-11-23626320 / 21 / 22 / 23 / 24 / 25 / 26 / 27	eia-delhi@eicindia.gov.in
7	Export Inspection Agency	IDCO Plot No. 45/A/1, Chandaka Industrial Estate–Patia, Bhubaneswar – 751024, Odisha, India	Bhubaneswar	91-674-2975868	eia-bhubaneswar@eicindia.gov.in
8	Export Inspection Agency	E-3, MIDC Area, Marol, Andheri (East), Mumbai – 400093, Maharashtra, India	Mumbai	022-28363401 / 28349619 / 28363396	eia-mumbai@eicindia.gov.in

Source: MPEDA

Annexure-1I

List of EIA/EIC recognized Laboratories

S.No.	Name of Laboratory	Date of Approval (dd/mm/yyyy)	Valid Upto
1	ABC Techno Labs India Private LIMITED, Mumbai	13-01-2026	12-01-2028
2	Accurate Universal Laboratories Private Limited Ahmedabad Gujrat	18-04-2025	10-10-2027
3	AES Laboratories (P) Limited Noida	24-10-2025	23-10-2027
4	Alex Stewart International (India) Private Limited, Chennai, Tamil Nadu	29-12-2025	28-12-2027
5	Alfred H. Knight India Private Limited, Navi Mumbai	28-11-2025	31-07-2027
6	ALS Testing Services India Pvt. Ltd., Bengaluru, Karnataka	26-06-2024	24-06-2026
7	ANACON Laboratories Pvt Ltd. Nagpur	07-02-2026	08-01-2028
8	ANALYTICAL TECHNOLOGY LABORATORY, SRI GOMUKI TEX CHEM PVT. LTD. Tamil Nadu	31-03-2025	30-03-2027
9	Arbro Pharmaceutical PVT. LTD New Delhi	23-11-2025	22-12-2027
10	Ashwamedh Engineers Consultants, Nashik	23-11-2025	22-11-2027
11	Assurance Laboratory, LT Foods Limited Sonipat	07-05-2025	06-05-2027
12	Audentes Labs & Analytics Pvt. Ltd., Navi Mumbai, Thane, Maharashtra	21-10-2024	20-10-2026
13	Avon Food Lab Pvt. Ltd Delhi	15-11-2024	14-11-2026
14	Basmati Export Develoment Foundation, Meerut Uttar Pradesh	18-01-2025	17-01-2027
15	Bureau Veritas (India) Pvt. Ltd Chennai	03-11-2025	02-11-2027
16	Bureau Veritas India Testing Services Pvt Ltd Hyderabad	08-12-2023	07-02-2026
17	CALF (Centre for Analysis and Learning in Livestock and Food), NDDB, Anand	14-10-2025	13-10-2027
18	Chemtex Labs India Pvt. Ltd. (Telangana ,Hyderabad)	16-04-2025	15-04-2027
19	Chennai Mettex Lab Pvt. Ltd. Chennai	16-06-2024	15-09-2026
20	Cultivator Phyto Lab Private Limited (Jodhpur, Rajasthan)	18-05-2025	17-05-2027
21	Delhi Test House, Azadpur Delhi	03-03-2026	02-03-2028
22	Ebro India Food Research and Analysis Centre, Taraori ,Karnal	26-06-2024	18-06-2026
23	ECO GREEN LABS INDIA PRIVATE LIMITED, Aroor, Kerala	01-04-2025	31-03-2027
24	ECO Green Labs Pvt. Ltd. Bhimavaram, West Godavari, Andhra Pradesh	12-02-2026	11-02-2028
25	Edward Food Research Analysis Centre Ltd., Kolkata	20-04-2024	23-04-2027
26	Eminence Analytical Private Limited, Navi Mumbai	24-03-2026	23-03-2028
27	Envirocare Labs Pvt. Ltd. Thane	23-12-2024	22-12-2027
28	Equinox Labs Private Ltd, Navi Mumbai	10-09-2025	09-09-2027
29	Eureka Analytical Service Pvt. Ltd. Sonipat Haryana	17-11-2024	16-11-2026
30	Eureka Analytical Services Private Limited, Guntur, Andhra Pradesh	22-12-2024	21-12-2026
31	Eureka Analytical Services Private Limited, Thane	20-09-2025	26-08-2026

S.No.	Name of Laboratory	Date of Approval (dd/mm/yyyy)	Valid Upto
32	Eureka Analytical Services Pvt. Ltd. Bengaluru, Karnatak	03-07-2025	02-07-2027
33	Eurofins Analytical Services India Private Limited, Gurugram	15-03-2025	14-03-2027
34	Eurofins Analytical Services India Pvt. Ltd. Bangalore	02-05-2026	01-05-2028
35	Eurofins Analytical Services Pvt. Ltd , Navi Mumbai ,Maharashtra	24-02-2025	23-02-2027
36	FARE LABS PVRIVATE LIMITED LOCATION 2, GURGAON.	12-01-2026	13-09-2026
37	Fare Labs Pvt. Ltd Gurgaon, Haryana	13-01-2024	12-01-2028
38	FHHL Pvt. Ltd., Pune, Maharashtra	28-08-2025	27-08-2027
39	FICCI Research and Analysis Centre (New Delhi)	09-03-2026	08-03-2028
40	GEO CHEM LABORATORIES PVT. LTD. Gandhidham	08-05-2026	14-05-2027
41	GEO-CHEM Laboratories(P) Ltd, Mumbai	15-05-2025	14-05-2027
42	Geochem Laboratories Pvt. Ltd. Aroor	01-08-2025	31-07-2027
43	HTH Laboratories Private Limited, Panipat Haryana	17-10-2024	16-10-2026
44	Interfield Laboratories, Kochi	21-10-2024	20-10-2026
45	Interfield Laboratories, Vishakhapatnam, Andhra Pradesh	04-01-2025	03-01-2027
46	INTERSTELLAR TESTING CENTER PVT. LTD. PUNCHKULA, HARYANA	14-11-2024	04-09-2026
47	Interstellar Testing Centre Private Limited Chennai	21-03-2025	30-07-2026
48	Intertek India Pvt. Ltd. Hyderabad	09-03-2024	08-07-2026
49	Intertek India Pvt. Ltd., Gurgaon	19-08-2024	18-08-2026
50	ISSPL Limited, Jaipur	03-03-2025	02-03-2027
51	ITC Limited , Agri business Division - ILTD , Spice Laboratory	19-08-2024	18-08-2026
52	KIIT-Technology Business Incubator - Analytical Testing Facility, Bhubaneshwar	13-01-2026	12-01-2028
53	Megsan Labs Private Limited ,Telangana Hyderabad ,	26-06-2025	25-06-2027
54	MicroChem Silliker Private Limited, Navi Mumbai	17-03-2026	16-03-2028
55	MPEDA, Quality Control Laboratory, Porbandar, Gujrat	07-05-2025	06-07-2027
56	Multani Food Testing Laboratories (A Unit of Multani Pharmaceuticals Ltd.,)	09-05-2025	08-05-2027
57	National Commodities Management Services Limited-NCML Labs, Navi Mumbai	13-01-2024	12-01-2026
58	Nawal Analytical Labs India Private Limited, Tamil Nadu	01-02-2026	31-01-2028
59	NCMS Limited- Commgrade -Testing services regional Laboratory, North), Gurugram	24-02-2026	23-02-2028
60	Pious Laboratories Pvt. Ltd. Madhya Pradesh	03-07-2025	02-07-2027
61	Punjab Biotechnology Incubator Mohali	16-12-2025	24-07-2027
62	Qualitek Labs Limited, Navi Mumbai	18-08-2025	16-11-2026
63	Regional Research & Analytical Laboratory (A Division of AEIPL), Bhimavaram	16-12-2024	15-12-2026
64	Reliable Analytical Laboratories Private Limited Thane	29-03-2025	05-09-2027
65	Sea Lab Aroor	24-02-2026	23-02-2028
66	SGS India Pvt. Ltd, Ahmedabad	01-08-2026	31-03-2028

S.No.	Name of Laboratory	Date of Approval (dd/mm/yyyy)	Valid Upto
67	SGS INDIA PVT. LTD, Chennai	20-11-2025	19-11-2027
68	Shiva Analyticals (India) Pvt. Ltd. Laboratory.(Bengaluru)	31-01-2024	30-01-2028
69	Shriram Institute for Industrial Research (19, University Road ,Delhi)	15-10-2023	14-12-2025
70	SMS Labs Services Private Limited Bangaluru	14-03-2025	13-03-2027
71	SMS Labs Services Pvt. Ltd Chennai	07-09-2024	06-09-2026
72	Sophisticated Industrial Materials Analytic Labs Limited, Delhi	15-12-2024	14-12-2026
73	Testing and Analysis Laboratory, Environmental Technology Division, Kerala	18-10-2024	17-10-2026
74	The Marine Products Export Development Authority Quality Control Laboratory Bhubaneswar	08-02-2025	07-02-2027
75	The Marine Products Export Development Authority Quality Control Laboratory, Nellore	24-05-2026	23-05-2028
76	The Marine Products Export Development Authority Quality Control Laboratory, Kochi	31-10-2025	30-10-2027
77	TUV INDIA Pvt. Ltd Pune	18-03-2025	17-03-2027
78	TUV SUD South Asia Private Limited Visakhapatnam	15-12-2025	14-12-2027
79	TUV SUD South Asia Pvt. Ltd., Bangalore	24-08-2025	23-08-2027
80	Vimta Labs Limited Nellore	23-11-2025	22-11-2027
81	Vimta Labs Limited, Noida	27-08-2024	26-08-2026
82	VJS Phytosanitary Service Private Limited (Food Testing Laboratory), Tuticorin	12-07-2025	11-07-2027

Source: Refer link for updated information
https://www.eicindia.gov.in/WebApp1/pages/menuInfo/Lab_List.xhtml EIC

Annexure-1J

Live / Fresh / Chilled / Dried / Salted Fish Handling Centers

Sl No.	State	No. of Live Fish Handling Centres	No. of Fresh/Chilled Handling Centres	Dried/Salted Handling centres
1	Kerala	5	6	7
2	Maharashtra	5	5	27
3	Assam	1	0	2
4	West Bengal	33	13	15
5	Odisha	1	2	1
6	Tamil Nadu	20	22	22
7	Andaman & Nicobar Islands	1	1	0
8	Andhra Pradesh	2	6	20
9	Goa	0	1	0
10	Gujarat	0	2	17
11	Karnataka	0	1	1
12	Puducherry	0	1	0
13	Telangana	0	3	0
14	Rajasthan	0	0	1
15	Tripura	0	0	1
16	Uttar Pradesh	0	0	1
	Total	**68**	**63**	**115**

Source: MPEDA

Annexure - 2

Capacity Building Programmes by Regional Divisions/societies of MPEDA

Sl no.	Name of capacity building programme	Topics Covered	Targeted Beneficiary	Duration (Days)	Batch size (nos)	Estimated annual programmes	Office
1	Seafood HACCP Training	CGMP, SSOP, HACCP	Plant technicians	4	25	10	All regional division
2	Hands-on training programme on seafood Value addition	Popular value-added products, hygiene and presentation	Plant workers/ Supervisors	2	50	40	All regional division
3	Three-day Training Programme for farmers in General Category	Eco-friendly and Sustainable Shrimp Farming	Aqua farmers/ New entrepreneurs	3	20	30	All regional centres
4	Five-day Training Programme for Farmers in SC/ST Category	Eco-friendly and Sustainable Shrimp Farming	SC/ST entrepreneurs	5	20	30	All regional centres
5	Farmers meet/Seminar/ Workshop	Eco-friendly and Sustainable Shrimp Farming	Aqua Farmers	1	100	14	All regional centres
6	Training for Aquaculture farm and Hatchery Technicians	Standards, Upskill in Food Safety, Traceability & Trade Barriers, Global Market Issues, New Export Technologies, Banned Input Usage	Aqua Technicians	2/3/4/5	30	12	All regional centres
7	Awareness campaign on species diversification or any other topics relevant to the region and sector	Aquaculture diversification and certification	Aqua Farmers	1	30	100	All regional centres
8	Awareness campaigns on Abuse of banned antibiotics in Aquaculture and Better Management Practices	Banned Antibiotics and BMPs	Aqua farmers	1	25	1200	All regional centres/ NaCSA
9	Capacity building for SC/ST workers in farms,	Biosecurity and personal hygiene aspects	SC/ST Aquaculture farmers	1	30	165	All regional centres

Sl no.	Name of capacity building programme	Topics Covered	Targeted Beneficiary	Duration (Days)	Batch size (nos)	Estimated annual programmes	Office
	hatcheries, processing plants, pre-processing plants, harbours and fishermen in biosecurity and personal hygiene aspects						
10	Capacity building on BMP & diversification in Aquaculture SC/ST	Sustainable and diversified aquaculture	SC/ST farmers	3	20	60	NaCSA
11	Training on Hygiene and Biosecurity	One day capacity building programme on personnel hygiene and Biosecurity	SC/ST Farmers/Fisher	1	30	350	NaCSA/ NETFISH
RGCA							
12	Hands-on Training Programme on PCR and Its Application in Aquaculture Genetics Research	PCR and Its Application in Aquaculture Genetics Research	Farmers/ Hatchery operators	2	10	12	RGCA-HQ, Sirkazhi, (TN)
13	Hands-on Training Programme on PCR Techniques and its Applications in Aquaculture Pathology	PCR Techniques and its Applications in Aquaculture Pathology	Farmers/ Hatchery operators	2	10	12	RGCA-HQ, Sirkazhi, (TN)
14	Hands-on training programme on Nursery, Grow-out and cage culture for Asian Seabass	Nursery, Grow-out and cage culture for Asian Seabass	Aqua Farmers	4	-	11	RGCA-HQ, ADF Karaikal
15	Hands-on training programme on Nursery, Grow-out and soft-shell culture of Mud crab	Nursery, Grow-out and soft-shell culture of Mud crab	Crab Farmers	4	-	11	RGCA-HQ, ADF Karaikal
16	Hands-on training programme on Hatchery	Hatchery Production of Cobia	Hatchery operators	4	-	4	RGCA Pozhiyoor, (Kerala)

Sl no.	Name of capacity building programme	Topics Covered	Targeted Beneficiary	Duration (Days)	Batch size (nos)	Estimated annual programmes	Office
	Production of Cobia						
17	Hands-on training programme on Cage culture of Marine finfishes	Cage culture of Marine finfishes	Marine Aqua Farmers	4		4	RGCA Muttom (TN)
18	Hands-on training programme on breeding, seed production and grow-out farming of Genetically Improved Farmed Tilapia (GIFT)	Breeding, seed production and grow-out farming of Genetically Improved Farmed Tilapia (GIFT)	Aqua Farmers	4	-	12	RGCA Vijayawada (AP)
19	Two Days Hands-on Training Programme on "Artemia Cyst & Biomass Production"	Artemia Cyst & Biomass Production, processing and Packing	Farmers/ Hatchery operators	4		4	RGCA Tuticorin & Uppur (TN)
20	Hands-on training programme on "Hatchery seed production of Asian Seabass" includes live feed production, Broodstock quarantine, Broodstock maintenance in RAS, larval and nursery rearing of Seabass	Hatchery seed production of Asian Seabass" includes live feed production, Broodstock quarantine, Broodstock maintenance in RAS, larval and nursery rearing of Seabass	Hatchery operators	30	-	2	RGCA Thoduvai (TN)
21	Hands-on training programme on "Hatchery seed production of Mangrove mud crab	Hatchery seed production of Mangrove mud crab	Crab farmers	30	-	2	RGCA Thoduvai (TN)
22	Artificial Insemination Techniques used for SPF Black Tiger Shrimp Penaeus monodon with special reference to Broodstock Management, Maturation and Seed Production with special	Artificial Insemination Techniques used for SPF Black Tiger Shrimp, Broodstock Management, Maturation and Seed	Hatchery operators	1	-	12	RGCA BMC Vizag

Sl no.	Name of capacity building programme	Topics Covered	Targeted Beneficiary	Duration (Days)	Batch size (nos)	Estimated annual programmes	Office
	reference to Broodstock Management, Maturation and Seed Production						
23	Internship prog for students at MAC and Central Laboratory	Seed production, Disease diagnostic	Students	-	5-10	30	RGCA MAC and Sirkali
24	Harbour based Training prog	Sustainable fishing/ Quality control	Fisher	1	20	1500	NETFISH
25	Pre-processing centre prog	Personnel hygiene, GMP	Pre-processing Workers	1	30	50	NETFISH
26	Dry fish Programme	GMP, Personnel hygiene, Drying, Packaging	Dry fish centre workers	5	20	100	NETFISH
27	Harbour based TED awareness prog	TED specification/ Fitting, Sustainability,	Fishers	1	30	150	NETFISH

Source: MPEDA