National traceability practices for fish and fishery products - India

THE MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY
Ministry of Commerce & Industry
Government of India
In India, Fisheries (including aquaculture) fall under the State List. Therefore, State / Union Territory Governments are primarily responsible for development and management of fisheries in their Territorial waters (0-12 nm).

Central Government supplements their efforts through various Centrally Sponsored Schemes.

Central Government is responsible for fisheries governance in the Exclusive Economic Zone from 12 to 200 nm beyond territorial waters of 0 to 12 nm.
# MARINE FISHERIES PROFILE OF INDIA

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of coast line (Km)</td>
<td>8,118</td>
</tr>
<tr>
<td>Exclusive Economic Zone (million sq km)</td>
<td>2.02</td>
</tr>
<tr>
<td>Continental Shelf (million sq km)</td>
<td>0.530</td>
</tr>
<tr>
<td>Number of Fish Landing Centres</td>
<td>1,537</td>
</tr>
<tr>
<td>No of Fishing villages</td>
<td>3,322</td>
</tr>
<tr>
<td>No of fishermen families (million )</td>
<td>0.87</td>
</tr>
<tr>
<td>Fisher-folk population (million )</td>
<td>14.49</td>
</tr>
<tr>
<td>Male (million )</td>
<td>4.7</td>
</tr>
<tr>
<td>Female &amp; Children (million )</td>
<td>9.8</td>
</tr>
<tr>
<td>Marine production (2014) million tonnes</td>
<td>3.75</td>
</tr>
<tr>
<td>Exports</td>
<td>1.05 million tonnes / 5.51 Billion US$</td>
</tr>
</tbody>
</table>
The Marine Products Export Development Authority (MPEDA)
Ministry of Commerce & Industry
Govt of India
MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY

- Statutory body under the Department of Commerce, MoCI, for the overall development, promotion and export of fish and fishery products.
- Involved in development of infrastructure for production and post harvest activities across the country
- Registration of exporters, processing plants, handling centres, fishing vessels and regulate marine exports.
- Ensures quality control through training & consultation
- Undertakes and sponsors R&D activities in the sector for commercial purposes
Contd..

- Drawing up programmes for market promotion, product diversification and quality assurance.
- Provide incentives for up-gradation of technology, building and modernising infrastructure.
- Provides market intelligence through participation in International fairs, Trade delegations and organising Buyer-Seller meets.
- Ensures collection, compilation and dissemination of fishery export data.
MPEDA has a network of 28 offices, 3 TPOs and 3 labs.
Item Wise Exports 2014-15 (value in USD)

- Live Items: 1%
- Dried Items: 3%
- Frozen Squid: 4%
- Frozen Cuttlefish: 6%
- Frozen Fish: 11%
- Chilled Items: 2%
- Others: 6%
- Frozen Shrimps: 67%
Item Wise Exports 2014-15 (Quantity in MT)

- Fr. Fish: 29%
- Fr. Shrimps: 34%
- Fr. Cuttlefish: 8%
- Dried Items: 7%
- Live Items: 7%
- Chilled Items: 3%
- Others: 12%

(Summary: 100%)
Market Wise Exports 2014-15 (in USD)

- USA: 26%
- Europe: 20%
- Southeast Asia: 26%
- China: 4%
- Middle East: 6%
- Others: 9%
- Japan: 9%
SOCieties UNDER MPEDA
1. NETFISH

**Network for Fish Quality Management and Sustainable Fishing**, established for capacity building, ensuring standards of hygiene, upgrading technology and quality management of both fishing and fish processing sectors at the grass root level in order to improve the quality of fishery products.

Works in close coordination with international, national / state / district institutions of excellence in the field of extension, training, research and marketing.
2. NaCSA

**National Center for Sustainable Aquaculture**, an outreach organization of MPEDA which organizes small farmers to form primary aquaculture societies, provides technical support to build their capacity to produce quality shrimps in a sustainable manner.

NaCSA facilitates linkages between aquaculture stakeholders and facilitates formulation of Best Management Practices, strategies and voluntary guidelines which benefit the entire shrimp farming community as a whole aiming at a 'bottom up' approach.
3. RGCA

**Rajiv Gandhi Centre for Aquaculture** is the Research & Development arm of MPEDA. It has evolved as a Centre of Excellence in Aquaculture. RGCA is actively involved in the development of various sustainable aquaculture technologies for various aquatic species having export potential. RGCA also has a state-of-the-art technology transfer and training centre for disseminating the technologies developed.

RGCA has set up a central quarantine facility for the first time in India at Chennai to check the imported SPF *L.vannamei* shrimp broodstock.

Rajiv Gandhi Centre for Aquaculture to have the first Aquaculture Genetics laboratory in India with NABLAB Accreditation.
## EXPORT INFRASTRUCTURE

<table>
<thead>
<tr>
<th></th>
<th>Nos</th>
<th>Capacity (MT/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total processing Plant</td>
<td>499</td>
<td>19,893</td>
</tr>
<tr>
<td>EU approved plants</td>
<td>313</td>
<td>14,800</td>
</tr>
<tr>
<td>IQF Plant</td>
<td>133</td>
<td>1729</td>
</tr>
<tr>
<td>Cold storages</td>
<td>652</td>
<td>652</td>
</tr>
</tbody>
</table>
NATIONAL REGULATIONS / LEGISLATIONS
The following legal instruments have enabled development and management of Fisheries in India

1. The Foreign Trade (Development & Regulation) Act 1992
2. The Export (Quality Control & Inspection) Act 1963 and Amendment act 1984
3. MPEDA Act 1972
4. Merchant Shipping Act, 1958
5. The Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act, 1976
7. Marine Fishing Regulation Acts (MFRAs) of the Coastal States / Union Territories
8. Coastal Aquaculture Authority Act, 2005
9. Coast Guard Act, 1978
10. Wild life Protection Act, 1972
11. CRZ Notifications
Related standards and regulations

- **ISO 22005:2007** is the standard for traceability in the feed and Food chain. This focus on tracing the flow of materials (feed, food, ingredients & package). Require each party to be informed of at least his direct supplies and clients and more. i.e. One step up and one step down.

- **EU Regulation 178/2002**, the basic food law: Article 18.1-18.4 of the regulation emphasise the need of traceability to be established at all stages of production, process & distribution. It make the food business operators (FBO) to ensure traceability.
EC 1005/2008 - EU IUU REGULATION: This regulation is intended to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fisheries products from entering European Union member states. The regulation seeks that all marine fisheries products traded with the EU is by means of a catch certificate.

The catch certificate is intended to enable traceability of any lot of seafood imported to the EU back to a legally licensed harvest vessel (or group of harvest vessels) fishing in compliance with conservation and management rules. For this reason catch certificates must be issued by the “Competent Authority” designated by the Flag State to validate the catch certificate.
• **Export Inspection Council of India**: Executive Instructions for fish and fishery products specify the requirements of traceability as indicated below:

• **Clause 8.1f**: Traceability of the raw material, ingredients, permitted chemicals / additives etc. shall be maintained right from the source of production. Test reports pertaining to the quality and safety of the raw material, ingredients and the additives / preservatives used shall be maintained by the processor.
• **Clause 8.3c** Pre processing centres (independent / detached) / Establishments shall maintain Pre Harvest Test (PHT) certificates and other traceability records pertaining to the aquaculture products processed at least for two years for verification. The details of stock of raw material utilized against each health certificate and balance stock, if any, shall be recorded on the back of the PHTC, which shall be countersigned by the verifying official.
Procedures followed for traceability by FBO

- The master cartons of finished product contain the production code and also the traceability code. For sea caught material, the traceability code contains the code of landing site/agent code, shift no etc. Catch certificate will also be the additional document of traceability.

- As regard to aquaculture product, Pre Harvest Test certificate shall be a supporting traceability document. The code depicts farm name, production shift etc.

- Fishing vessels and enrolled aqua farms supplying raw material to processing plants having unique identification number which is a tool for traceability.
Compliance with EU Regulation

Declaration of designated national authorities –

- Fishing authorization by DADF/MoA (EEZ), Fy Depts in Coastal States/UTs (in territorial waters)
- Vessel registration (DG Shipping/MMDs & Fy Depts in Coastal States/UTs)
- For Catch Certification MPEDA is designated

International Agreements:

- UNCLOS, 1982 : India signed and ratified
- UN Fish Stocks Agreement (1995): India is party w.e.f. 19.8.2003
Port State Measures

- Port access, landing or transhipment of fish catch at Indian Port by foreign vessels is not allowed.
- MZI Act, 1981 provides for notified/designated Ports in India for undertaking legal procedures to deal with illegal fishing vessels/illega catch.
- Inspection of vessels by MMD’s surveyors and Fisheries Depts & Indian Coast Guard, as per existing norms/Guidelines.
MCS Measures

• Resource estimation – done periodically (10 yrs)
• Estimation of Fishing efforts – monitoring of fish landings by CMFRI and coastal States/UTs; off-shore surveys by FSI vessels
• Registration & Licensing of Fishing vessels- by DoF of Coastal States/UTs, MMDs, DADF/MoA
• ReALCraft – uniform registration, online record of vessels
• MCS by Coast Guard, maritime states/UTs
• Transponders in vessels, Biometric ID Cards for fishers
• VMS – implementation of VMS is in progress
TRACEABILITY ON AQUACULTURE
ENROLMENT OF AQUACULTURE FARMS BY MPEDA

• The aqua farms producing shrimp (for export intended production), are enrolled by MPEDA
• The information of aqua farms are collected & digitised
• Each farm to be enrolled is physically verified to obtain the Geo-spatial information through GPS instrument and the centroid of the farm is recognized by its latitude and longitude.
• Each farm enrolled is recognized by a unique identification number of 8 characters.
• The GIS data is processed in GIS software (ArcGIS) to arrive at the unique GIS reference.
PRE HARVEST TESTING FOR AQUACULTURE

• Pre harvest testing (PHT) of farmed shrimp was introduced from April 2009 to ensure the absence of banned antibiotics residues like nitrofuran metabolites and chloromphenicol in aquaculture products.

• The pre harvest test is mandatory for export of all aquaculture products to EU

• MPEDA has 19 ELISA labs an three national level labs for testing antibiotic residues.
• All the enrolled farmers of MPEDA are maintaining pond data register in which all input details are available including, source of seed, feeding details, other inputs, sampling details, size of the shrimp during harvest, Quantity harvested and to whom the harvested material is supplied.

• All the stake holders have been asked to keep the forward and backward linkages to ascertain the traceability
NATIONAL RESIDUE CONTROL PLAN

• NRCP of India for aquaculture products has been formulated for monitoring the presence of residues of veterinary substances like antibiotics anthelmintics, growth promoters, substances like dyes, aflatoxin and environmental contaminants like, pesticide, chemical elements etc.

• All Aquaculture farms, processing establishments, feed mills, and hatcheries are included in the NRCP.

• The testing & certifying laboratories are covered under the NRCP in order to ensure and over all monitoring of the aquaculture products at different stages of production to guarantee safe products from farm to table.
TRACEABILITY ON CAPTURE FISHERIES
CATCH CERTIFICATION SYSTEM

• Seafood exporters into the EU market require a EU catch certificate (as per Council Regulation 1005/2008) for wild caught material

• MPEDA is the nodal agency approved by the Government of India for the validation of catch certificate to EU.

• Since 1\textsuperscript{st} Jan 2010 exports of all marine fishery products traded with EU have been accompanied by a validated catch certificate

• As on February 2016 MPEDA validated 58,923 simplified catch certificates

• Primary catch data for export is collected through Log sheets
DATA COLLECTION

• MPEDA identified 49 Fishing Harbours/Fish landing centres of all the 9 maritime states of India

• Data Entry Operators are posted for capturing Vessel wise purchase data on the basis of landing of commercially important species for export.

• MPEDA has developed software to capture vessel wise purchase data.

• Same software is also used for validation of catch certificate.
INDIA

Major Harbours/Fish Landing Centres across 9 Maritime States & 2 Union Territories
**VESSEL LOG SHEET**

**Area of catch: Arabian sea / Bay of Bengal**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Commercial name of fish items purchased</th>
<th>Quantity (kg.)</th>
<th>Remarks</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td></td>
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<tr>
<td>2</td>
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<td>9</td>
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<tr>
<td>10</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Unique id of Exporter

Signature

Date: ____________________________  Name & Address of Exporter or his representative with seal

Filled in log sheets must be deposited in the designated drop box within 7 days from the date of voyage return

MODEL VESSEL LOG SHEET
CATCH CERTIFICATION SYSTEM

Records pertains to catch Certification maintained and updated by exporters

1. Raw material receiving register
2. Production register
3. Catch certification register
4. File containing Log sheet duplicate copies
5. Catch certification file
6. Shipment register/ Invoice register
ACTIONS IN PIPELINE FOR IMPROVING CATCH CERTIFICATION TRACEABILITY

• Integration of ReAL Craft Data in catch certification system

• Network for Fish Quality Management and Sustainable Fishing (NETFISH), a society functioning under MPEDA provide updated information on the vessel arrival details in all major Harbours/Fish landing centres
Ecolabelling...

Cooperation with RFMOS
RFMOs & RFBs

Regional Fisheries Management Organisatiions (RFMOs)

IOTC (Indian Ocean Tuna Commission)
CCAMLR (Convention on the Conservation of Antarctic Marine Living Resources)

Regional Fisheries Bodies (RFBs)

APFIC (Asia-Pacific Fishery Commission)
SACEP (South Asia Co-operative Environment Programme)
BoBP-IGO (Bay of Bengal Programme)
BIMSTEC (BoB Initiative for Multi-Sectoral Tech. & Eco. Coop.)
BoB-LME (Bay of Bengal Large Marine Ecosystem Project)
IOR-ARC (Indian Ocean Rim Association for Regional Cooperation)
INFOFISH
• India is a member of the IOTC and CCAMLR.
• The information sought by these RFMOs is provided as and when required.
• The resolutions of RFMOs are implemented to the extend possible.
• Vessels authorized to fish in EEZ are following log-book system of catch reporting as per IOTC formats.
SHARK CONSERVATION
1. Under Wild Life (Protection) Act, 1972 India banned the capture and trade of 10 species of elasmobranchs (sharks, saw fishes, guitar fishes and rays)

2. Prohibition on shark finning was imposed from 25 Aug 2013

3. India banned the export of shark fins from all species of shark w. e. f. 6 Feb 2015
• Identify the knowledge gaps to be addressed
• Present an overview of the current status of India’s shark fishery
• Assess the current management measures and their effectiveness
• Suggest a theme-based action plan
CONSTRAINTS & CHALLENGES
1. The complexity of supply chains in national and international food supply/trade.

2. For majority of Indian fisher, fishing is done for subsistence.

3. Mixing of raw materials at various stages of processing & handling.

4. Due to involvement of many stake holders and handling of material by unskilled workers especially at primary production area, the concept of traceability is challenging.

5. Enormous number of small scale operators in capture and culture fisheries.

6. No uniformity in the requirements of various countries on traceability.


8. Certification of Indian fisheries.
Thank you for your attention

Dr. T R GIBINKUMAR

Deputy Director (Craft & Gear)
Marine Products Export Development Authority
Ministry of Commerce & Industry, Govt. of India
Ph. +91 484 2321720
Email: gibin@mpeda.gov.in