

## **Implementation of Traceability in seafood exports**

The following article is a part of FIFP webinars conducted on 25th January 2025 on the topic “Implementation of Traceability in seafood exports”

Note from the Chief Editor:

Implementation of traceability in seafood exports was the topic of FIFP webinar conducted on 25<sup>th</sup> January 2025. Mr. Archiman Lahiri's presentation provided valuable insights into the issues related to traceability in seafood exports. He highlighted the significant opportunities in international markets, underscoring the vital importance of traceability. He brought out the importance of implementation of traceability in seafood exports to ensure food safety. MPEDA's initiatives to comply with traceability regulations were covered in the presentation. Mandates for future compliance of enhanced traceability were explained for the benefits of all stakeholders particularly seafood exporters. Role and responsibilities of agencies like DFO, MPEDA and NACSA involved in seafood traceability were spelt out clearly including documents required for submission of online catch certificate application.

### **Introduction**

The implementation of traceability in seafood exports is crucial for ensuring food safety, regulatory compliance, and market access. The Marine Products Export Development Authority (MPEDA), an autonomous body under the Government of India, focuses primarily on five key areas: Capture Fisheries; Culture Fisheries; Processing Infrastructure & Value Addition; Quality Control; and Market Promotion. Traceability in seafood exports tracks products through production, processing, and distribution to ensure food safety, prevent IUU fishing, and manage risks. It consists of supplier, process, and customer traceability. This system enhances accountability, exporter credibility, and regulatory compliance, ensuring a sustainable, transparent, and responsible seafood supply chain. Post-COVID, seafood sales have shifted towards institutional and household markets, with a preference for value-added and certified products over uncertified ones, reinforcing the principle that quality surpasses quantity.

### **Benefits of Traceability system**

Traceability systems benefit producers by enhancing quality assurance and boosting bargaining power while providing exporters with confidence in global trade, reducing rejection risks. Many international markets, including

the USA (Seafood Import Monitoring Programme - SIMP), EU (IUU fishing regulations), Japan, and China, have strict traceability requirements.

### **MPEDA's initiatives to comply with Traceability regulations**

To comply with Traceability regulations, MPEDA has introduced initiatives such as farm enrolment with GPS mapping, ELISA testing for antibiotic residues, and real-time fish catch data collection. Regulatory frameworks like EIC and CAA ensure compliance for aquaculture farms and hatcheries. The EU has intensified inspections on Indian seafood due to past violations, necessitating strict monitoring, while Japan enforces stringent antibiotic-free requirements. The USA's SIMP program mandates tracking seafood origins to combat Illegal, Unreported, and Unregulated (IUU) fishing. To strengthen traceability, MPEDA leverages automation, GIS mapping, and mobile applications, supporting sustainable seafood exports from India.

Shrimp farming is a major sector, with 81% cultured shrimp and 19% captured shrimp, predominantly Vannamei shrimp (93%). MPEDA's farm enrolment is recognized by international certification bodies such as BAP, ASC, GAA, and Aquaculture Certification Council, alongside global standards like HACCP, ISO 22000, BRC, SQF, and EU organic certifications (Naturland, Euroleaf, NPOP).

To combat IUU fishing, global fisheries policies such as the Common Fisheries Policy (CFP) and FAO's 2001 action plan emphasize sustainability. The Catch Certificate System, under EU Council Regulation No. 1005/2008, ensures traceability from catch to market, enforcing conservation rules and international compliance.

### **Mandates for future compliance of enhanced traceability**

The Chain of Custody Records ensures traceability by identifying the product and its custodians at various stages, including transshippers, processors, and storage facilities. Farm enrolment is a key initiative for meeting SIMP and traceability requirements, ensuring that seafood is responsibly sourced. With the FDA FSMA (Food Safety Modernization Act) Final Rule 204 set for full compliance by January 20, 2026, seafood exporters must prepare for enhanced traceability. This rule mandates maintaining Key Data Elements (KDEs) for Critical Tracking Events (CTEs) across the supply chain and requires providing records to the FDA within 24 hours upon request. FSMA applies to both domestic and foreign firms handling seafood for U.S. markets, covering high-risk foods on the Food Traceability List (FTL), including finfish, crustaceans, and molluscan shellfish.

Companies must establish traceability plans detailing procedures for record-keeping, food identification, traceability lot code assignment, and farm mapping for aquaculture. Records must be stored for at least two years in paper or electronic formats, and during outbreaks or recalls, firms must submit an electronic sortable spreadsheet within 24 hours to assist FDA investigations. Compliance inspections will begin in 2027, making it essential for businesses to implement robust traceability measures now.

### **Role and responsibilities of agencies involved in seafood traceability**

Team (DFO/MPEDA/NACSA) plays a crucial role in seafood traceability, focusing on farm enrolment, verification, and certification. Their responsibilities include village-wise farm detail extraction, application collection, GPS-based farm surveys, latitude and longitude decoding, and farm ID generation. The process undergoes multiple verification levels (L1 & L2) before issuing enrolment cards with unique identification numbers (UINs). These cards include state-specific codes and QR codes to prevent duplication and ensure authenticity.

### **Role of MPEDA in facilitating catch certificate application process**

MPEDA facilitates traceability through an online catch certificate application process, requiring essential documents such as supplier approvals, farmer declarations, export consignment records (SIMP), health certificates, and lab test reports. Additionally, MPEDA has deployed 100 Harbour Data Collectors (HDCs) across 98 fishing harbours to record daily boat arrivals and fish catch data, which is uploaded to the MPEDA Catch Certificate website. This real-time data collection assists MPEDA officials in monitoring fishing activity, analysing major fish landings, and validating catch certificates submitted by exporters.

### **Conclusion**

By implementing stringent traceability measures, compliance frameworks, and digital innovations, MPEDA strengthens India's seafood export credibility, ensuring sustainable, responsible, and high-quality seafood products meet international trade requirements.

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Mr. Archiman Lahiri joined the Marine Products Export Development Authority (MPEDA) in 2013 as Assistant Director and is currently serving as Deputy Director, Regional Division, Bhubaneswar. He holds a Master's degree in Industrial Fisheries from the School of Industrial Fisheries at Cochin University of Science and Technology and is also an MBA graduate.

He has extensive expertise in aquaculture and export promotion and has driven initiatives such as GPS-based Aqua farm enrolment, antibiotic control in aquaculture, and harbour monitoring. He has taken a lead role in the promotion of exporting value-added seafood from West Bengal to the USA and EU. Internationally, he has represented India in promoting seafood on global platforms and participated in trade delegations. He champions diversification in aquaculture species, value addition in seafood exports, and innovative trials like Turtle Excluder Devices in Odisha. An accomplished professional in aquaculture development, export promotion, and quality assurance, he is committed to elevating India's fisheries sector on the global stage.