MPEDA Newsletter

VOL. XI NO.11 & 12 FEBRUARY & MARCH 2024

MPEDA makes impactful presence at **Gulfood 2024**

MPEDA lights up at the Fish International 2024 Germany

MPEDA kickstarts MY Bharat activities in Kochi

Drones and Sensors in Aquaculture

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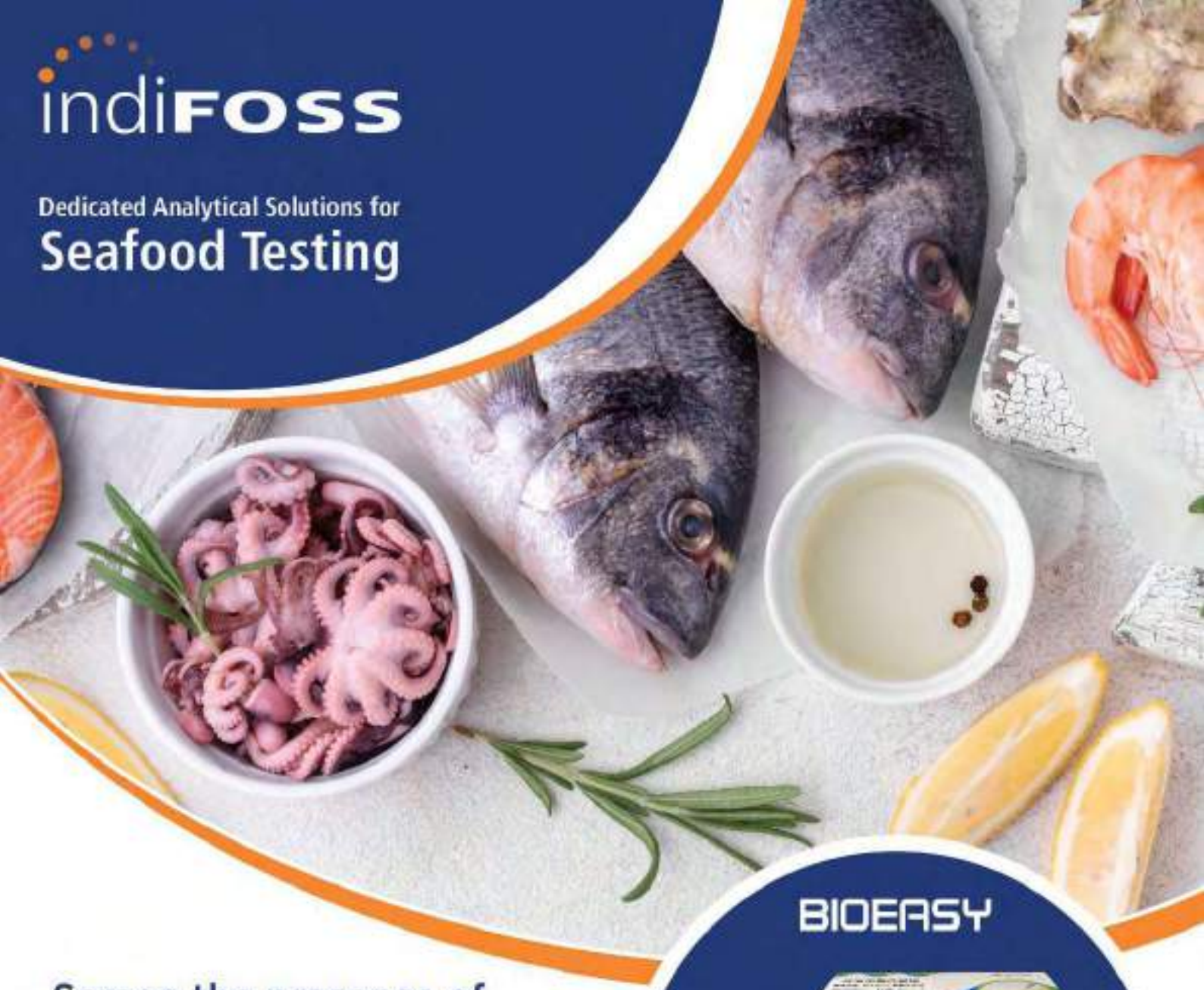

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On the Platter

D.V. Swamy IAS
Chairman

Dear friends,

Indian shrimp exports to the US have been imposed with Anti-Dumping Duty since 2004. The current level of duty imposed on Indian shrimp exports is 3.88%. During 2012-14, India successfully thwarted an attempt by the US Department of Commerce to impose Counter Veiling Duty (CVD) on imports of frozen warm water shrimp from India. However, on 14th November 2023, the US again has initiated a CVD investigation on frozen warm water supply nations such as India, Ecuador, Indonesia, and Vietnam according to the Tariff Act of 1930, responding to the petition filed by the Marine Shrimp Processors Association. The US has set a preliminary countervailing duty (CVD) of 4.36% on Indian shrimps. MPEDA has offered input to the Department of Commerce to prepare a response to the CVD questionnaire by the US Department of Commerce.

MPEDA initiated the MY (Mera Yuva) Bharath events at Kochi on the eve of Republic Day. These events, a series of knowledge-sharing and entrepreneurial development programs, have been arranged at headquarters and the field level. The aim is to impart knowledge about the sector to the youth and foster their entrepreneurial interests. The events have been met with a positive response, with many young participants expressing interest in the sector and its potential.

MPEDA actively participated in two major international trade events, Fish International in Bremen and Gulfood Dubai, in February 2024. Our presence at these events, where we showcased our products to potential clients, was met with overwhelming response. We received numerous inquiries and potential business leads, indicating a growing interest in Indian seafood. The co-exhibitors in the Indian pavilion, along with MPEDA, also had fruitful interactions with buyers, further strengthening our trade relations. Additionally, MPEDA was part of a trade delegation from Thailand, Singapore, and Malaysia, further enhancing our global trade and commerce.

As part of our commitment to comply with international regulations and promote sustainability, MPEDA conducted stakeholder interaction workshops on the implementation of the Turtle Excluder Device (TED) in shrimp trawls. These workshops, held in Mumbai, Vizag, and Kochi, explained the TED design and the necessity of fitting TED in shrimp trawls. The TED is a crucial device that allows sea turtles to escape when caught in shrimp trawls, thereby reducing the impact of shrimp fishing on the sea turtle populations. This initiative is crucial for gaining market access for Indian wild-caught shrimps in the USA, demonstrating our dedication to quality, standards, and sustainability.

MPEDA organised two HACCP training programs in Mumbai and Chennai in January and February 2024. During these programs, 49 technologists were trained to implement HACCP-based food safety systems in their processing units.

Thank you,

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MPEDA makes impactful presence at Gulfood 2024

The 29th edition of Gulfood, one of the world's premier food trade fairs and the largest in the UAE, took place from 19th to 23rd February 2024 at the expansive World Trade Centre in Dubai. The event, hosted by the Dubai World Trade Centre and co-organized by Comnet Exhibitions Pvt. Ltd., featured 5,000 exhibitors from 125 countries spread across various halls. Throughout the event, Gulfood attracted an impressive footfall of over 2,00,000-3,00,000 visitors, showcasing the global significance of this esteemed trade fair.

Exhibition content

The exhibition at Gulfood 2024 hosted business promotion of different segments in the seafood value chain, including the promotion of various seafood items, fresh dried agricultural allied, top tables site for various products, fruits, vegetables, beverages, poultry & meat, fat & oils etc.

India's participation in Gulfood 2024

The Marine Products Export Development Authority participated with Indian seafood exporters taking a table space of 24 sq. m. area. Four seafood exporters participated as co-exhibitors in the Indian Pavilion.

MPEDA stall showcased the diverse frozen and ready to eat/ serve value added seafood items. Publicity materials like co-exhibitors guide featuring the details of the participating exporters, product catalogue, commercial fish chart and exporters directory were uploaded in MPEDA App. Visiting buyers scanned the QR code to access these contents.

Mr. Vinod V., Deputy Director and Dr. Biju V. N., Assistant Director of MPEDA represented the Indian delegation.

Co-exhibitors

Four Indian seafood exporters participated as co-exhibitors in the MPEDA pavilion.

Co-exhibitors in Gulfood 2024

1. M/s. Indo Tech Ice and Cold Storage
2. M/s. Munnuji Foods International Pvt. Ltd.
3. M/s. Jeelani Marine Products
4. M/s. Megaa Moda Private Limited

As per the feedback received, the average business generated by each co-exhibitor ranges from US$ 10-15 million with the number of buyers met ranging from 50-80 visitors.

Visit to Water-Front Fish Market & supermarkets in Dubai

The deputed officials visited the Dubai international fish market. The market is in a two storied building on the seafront, with ample basement parking facilities, restaurant facilities order and take-away stall. The market is well maintained with good hygiene and sanitation. A wide variety of seafood was available in the market. The large number of well-stocked stalls is testimony to the demand for chilled fish in Dubai, which could be further explored by the Indian exporters. The supermarkets of Lulu and Burjman had seafood segments where shrimp, squid, snapper, grouper etc. were displayed.

Trade enquiries

About 51 trade enquiries were received in the MPEDA booth during the participation in Gulfood 2024. The trade enquiries received at the booth are compiled and published in the trade enquiry section of this Newsletter. MPEDA's participation in Gulfood 2024 showcased India's seafood industry globally, providing a platform for exporters to connect with international buyers, explore new markets, and showcase the quality and diversity of Indian seafood products. This event enhanced the industry's reputation and facilitated future collaborations and partnerships.

Trade discussions in MPEDA pavilion

Mr. Vinod V., Deputy Director and Dr. Biju V. N., Assistant Director at the MPEDA pavilion

Seafood segment at Lulu Supermarket in Dubai

View of Water Front Fish market

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MPEDA lights up at the Fish International 2024 Germany

Fish International 2024, Germany's premier trade fair for Fish and Seafood, made waves at Messe Centrum, Bremen, from 25th to 27th February 2024. With 320 exhibitors from 27 nations, this biennial event showcased cutting-edge product technology, processing equipment, packaging solutions, and fishing trends, alongside tailored seminars and networking sessions for industry professionals.

The India Pavilion

The MPEDA pavilion was inaugurated jointly by Mr. Praveen Kumar, Director, Department of Commerce, Govt. of India and Mr. Joydip Roy, Vice Consul, Indian Consulate, Hamburg, Germany. After inauguration, the dignitaries visited the stalls of the co-exhibitors and interacted with them. During the course of the Expo, buyers from various countries as well as retailers and HoReCa sector representatives from Germany visited MPEDA pavilion and held fruitful discussions. The visitors were explained about India's potential, diverse product ranges as well as our food safety and quality regimes.

Inauguration of MPEDA Pavilion

The India pavilion, spanning 56 sq. m., featured 3 exporters as co-exhibitors. Besides Mr. Praveen Kumar, Dr. T.G. Manoj Kumar, Deputy Director, and Mrs. Tulsi Nair, Assistant Director from MPEDA were part of the Indian delegation for organising the Indian participation in the show and in setting up the Indian pavilion.

Co-exhibitors in Fish International 2024

- M/s. Ulka Seafoods Pvt. Ltd.
- M/s. Jude Foods India Pvt. Ltd.
- M/s. Monsoon Bounty Foods Manufacturing Pvt. Ltd.

The MPEDA pavilion displayed an array of frozen seafood samples in various forms such as Individually Quick Frozen (IQF) shrimps (*L.vannamei* and Black tiger), frozen squid rings and cuttlefish, frozen red snapper, mahi mahi, grouper and yellowfin tuna fillets, king fish, swordfish steaks, pony fish, red grouper, emperor fish, yellow scad etc. MPEDA publications like the Indian seafood product catalogue and Fisheries Handbook were displayed in the stall and also distributed to the buyers. The QR code scanning facility in the stall helped the visitors in sourcing information on Indian seafood products and contact details of exporters registered with MPEDA.

Dr. T.G. Manoj Kumar, Deputy Director and Mrs. Tulsi Nair, Assistant Director, MPEDA explaining the products to the buyers

MPEDA officials interacting with the buyers

The Indian pavilion featured a cooking demo led by Chef Jaspal Singh, showcasing a delightful array of seafood dishes crafted from diverse Indian marine delicacies such as shrimps, yellowfin tuna, squid, cuttlefish, and kingfish. The delegates' enthusiastic responses underscored the appeal of these culinary creations.

Glimpses of cooking demo at the MPEDA stall

The trade inquiries received during the event are placed in the concerned section of this newsletter. Co-exhibitors informed that they received good trade inquiries and some confirmed orders too. Participating in Fish International in Germany not only facilitated connections with buyers from Germany and other key players in the EU, but also generated inquiries and contacts from neighbouring countries such as Slovenia and Macedonia, offering promising avenues for expanding our export reach in the future.

German buyers are mainly from HoReCa and retail sectors, demonstrating substantial interest in Indian shrimps. Furthermore, Fish International served as an exceptional networking hub, facilitating connections with established and emerging buyers from a multitude of European Union nations..

India- Singapore Trade Round Table

Singapore - Market Profile

Singapore is the 26th largest seafood export destination of India. During 2022-23 India has exported 7,202 MT worth USD 36.04 million marine products to Singapore. The item-wise export of marine products to Singapore for the last five years is placed in table 1 below.

Table 1: India's exports of marine products to Singapore (Source: MPEDA)

Q: Quantity in M T, V: Value in Rs. Crore, $: US Dollar Million							
ITEM		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24 (up to December)
FROZEN SHRIMP	Q: V: $:	692 28.92 4.23	626 27.43 4.18	274 10.41 1.42	617 28.90 3.90	814 43.89 5.54	526 24.67 3.01
FROZEN FISH	Q: V: $:	252 4.20 0.61	3 0.08 0.01	89 1.72 0.23	95 1.37 0.19	632 7.16 0.90	128 2.13 0.26
FR CUTTLE FISH	Q: V: $:	224 4.66 0.68	113 2.12 0.30	276 5.16 0.70	205 3.81 0.52	83 2.18 0.27	92 2.52 0.31
FR SQUID	Q: V: $:	68 1.50 0.22	46 1.23 0.18	78 2.43 0.33	24 1.10 0.15	22 0.72 0.10	27 1.06 0.13
DRIED ITEM	Q: V: $:	2 5.42 0.78	2 2.19 0.32	6 13.17 1.80	7 9.58 1.32	2 1.40 0.17	1 0.23 0.03
LIVE ITEMS	Q: V: $:	1064 114.74 16.36	2 2.19 0.32	637 75.01 10.12	736 81.27 11.06	899 120.76 15.30	584 96.47 11.86
CHILLED ITEMS	Q: V: $:	344 18.64 2.67	325 20.14 2.88	201 11.55 1.58	122 8.12 1.11	127 11.27 1.39	98 6.77 0.83
OTHERS	Q: V: $:	4707 80.18 11.55	4864 79.84 11.40	4245 72.68 9.95	4575 85.32 11.56	4622 98.45 12.37	3032 59.81 7.31
TOTAL	Q: V: $:	7351 258.25 37.09	6608 225.35 32.48	5807 192.12 26.14	6381 219.46 29.79	7202 285.83 36.04	4488 193.68 23.74

Singapore has imported marine products worth USD 1,241.1 million during 2022, of which India's share is 3%. The major items imported by Singapore from the world included frozen shrimps and prawns, prepared or preserved fish, prepared or preserved abalone, fresh/chilled fish & salmon etc. China, Malaysia, Vietnam, Japan and Norway are the major suppliers of seafood to Singapore. India is the 9th major supplier of seafood to Singapore. The country has also exported seafood products worth USD 288.58 million.

India-Singapore Trade Round table & B2B session on food processing and machinery

The India-Singapore Trade Round Table & B2B Session on Food Processing & Machinery was held on 19th February 2024 in the Holiday Inn, Singapore Orchard City Centre, Singapore. Ms. Navita Myer, Director, Federation of Indian Chamber of Commerce & Industry (FICCI), Singapore offered the welcome address. It was followed by remarks by Mr. Ray Kwan, Director (Africa, Middle East & South Asia), International Business Division, Singapore Business Federation, who has given a broad perspective on the business opportunities and activities of their chamber in Singapore. Ms. Navita Myer has also spoken on the mutual trade between India and Singapore. This was followed by a trade presentations by Mr. Saurav Aggarwal, Assistant General Manager, APEDA and Dr. Ram Mohan M.K., Joint Director, The Marine Products Export Development Authority (MPEDA), Govt. of India. The presentation from MPEDA covered market review and potential areas to be exploited and called for more interventions in trade through business engagement and investments considering the resource potential, proximity and connectivity. The desire to hold hands with Singapore in technology transfer for production of soft-shell crabs and in knowledge sharing of Nano bubble technology for increasing the live shrimp exports to Singapore were also placed before the session participants. The B2B networking and Q&A session followed the introductory session.

Following the B2B interactions, Mr. Vinay Kumar, Deputy Secretary, Department of Commerce & Industry addressed the gathering, who touched upon the activities of the Commerce sector, and purpose of the B2B event. This was followed by an address by Mr. Rajesh Kumar Singh, Secretary, DPIIT, Ministry of Commerce & Industry, Govt. of India, who had briefed the activities of the Department and the objective of the Government for investments from their entrepreneurs in India.

Group photo of the delegation with invitees from Singapore

View of the Round Table session

Interactions during business sessions

During business session, MPEDA official interacted with Mr. Gari Lee, representative of M/s. Grand Delta, which is a company based in Singapore and has operations under Salim Group of Indonesia on farming and processing of Pangasius in India, based on technology applied in SE Asian nations. Mr. C.S. Shankar Ram, Managing Director of M/s. Essar international (S) Pte. Ltd., Singapore and Mr. Kalai, M/s. Veg Pro, Singapore discussed about sourcing seafood from India.

Mr. Rajendra Prasad Kotali who was from M/s. Snow World Marine Exports Pvt. Ltd., Balasore, a registered exporter with MPEDA, also joined the delegation as a member in the B2B sessions. Dr. Ram Mohan M.K., Joint Director, MPEDA, Deputy Secretary, Department of Commerce and AGM, APEDA, visited the nearest supermarket of 'Fair Price Finest' to understand the types of seafood and agri products sold there. Fair Price Finest is a Government Co-operative Department Store under NTUC and it has 220 shops, Sengsiong is the next chain with 180 shops, Giant is the third one with 60 shops. All the NTUC shops have displays of various food products and offer fair prices to the customers. Seafood products are prominently displayed in fresh, frozen, dried and other various breaded, battered and canned forms for the customers.

Singapore is a net importer of food commodities. It is noticed that different seafood varieties are sourced from different countries, mostly from Vietnam, Thailand and Malaysia are being sold in retail forms, and restaurants sell seafood dishes of East Asian, Southeast Asian and Chinese recipes. Chilean and Norwegian Salmon is also imported in large quantities to Singapore. Restaurants also display various finfish and shellfish in live conditions for the customers to choose and

get it served.

Due to cosmopolitan culture and influence of Chinese and East Asian cuisine, Singapore takes fish almost 3 times a day and has very high demand for seafood products. The market also has high quality consciousness and applies stringent quality parameters in choosing their vendors for food products, especially seafood. India has considerable potenial to increase its share of 3% to 10% in this market provided more active engagement with buyers are undertaken. Regular participation in Seafood Expo Asia, more buyer-seller meets and targeted brand promotion campaigns etc. can help India to enhance its share of exports to Singapore.

Supermarket of Fair Price and Finest

Display of live and chilled seafood

Canned seafood

Seafood lunch boxes

Tempura seafood

India-Malaysia trade round table & road show

Malaysia - Market Profile

During 2022-23, India exported 47,024 MT marine products value worth of USD 148.50 million to Malaysia compared to previous year's exports of 18,694 MT worth USD 65.95 million, recording a growth of 151% in quantity terms and 125% in value terms in US $. Malaysia is the 11th largest seafood export destination of India. The major items of India`s export to Malaysia are frozen shrimps, frozen cephalopods, frozen surimi etc. India is the leading supplier of frozen shrimps to Malaysia. Imports from India have been steadily increasing during the past 3 years. However, the imports have shown 37% decline in value during 2023-24 (as of January 2024) compared to the same period in 2022-23. Lower priced supply from other sources and high inventories are attributed to the decline in exports to Malaysia. Other than dried items and frozen shrimps, there has been a decline in unit value offered by the market for seafood from India. An increased uptake of frozen fish and cephalopods by China offering a rate better than Malaysia prompted exporters to switch to China.

Table 1: India's exports of marine products to Malaysia (Source: MPEDA)

Q: Quantity in M T, V: Value in Rs. Crore, $: US Dollar Million							
ITEM		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24 (up to December)
FROZEN SHRIMP	Q:	1274	1293	1403	2933	6462	3078
	V:	67.39	68.10	70.10	151.63	342.26	170.79
	$:	9.75	9.75	9.52	20.50	43.32	20.92
FROZEN FISH	Q:	6636	3265	2804	5091	19834	9946
	V:	89.52	36.58	37.59	68.72	304.85	133.89
	$:	12.71	5.22	5.15	9.28	37.81	16.35
FR CUTTLE FISH	Q:	13	1498	191	398	5589	86
	V:	0.39	39.32	4.20	8.66	134.10	2.41
	$:	0.06	5.58	0.57	1.18	16.69	0.30
FR SQUID	Q:	4673	3782	5156	4437	5925	4212
	V:	104.63	91.64	154.63	161.10	220.53	124.10
	$:	15.07	13.09	21.23	21.81	27.49	15.15
DRIED ITEM	Q:	832	77	1470	1144	1421	91
	V:	9.79	0.99	11.00	9.71	16.75	1.31
	$:	1.40	0.14	1.51	1.30	2.08	0.16
LIVE ITEMS	Q:	6	3	5	12	4	24
	V:	0.92	0.74	1.40	4.47	2.67	8.93
	$:	0.13	0.11	0.19	0.61	0.34	1.09
CHILLED ITEMS	Q:	32	1	90	0	17	3
	V:	1.29	0.06	1.40	0.00	1.30	0.23
	$:	0.19	0.01	0.19	0.00	0.16	0.03

OTHERS	Q: V: $:	5866 108.32 15.60	4781 87.15 12.44	5018 95.92 13.09	4680 83.14 11.26	7774 161.76 20.40	6415 119.76 14.62
TOTAL	Q: V: $:	19332 382.26 54.91	14699 324.58 46.35	16137 376.26 51.47	18694 487.45 65.95	47024 1184.21 148.30	23856 561.42 68.61

Malaysia imported marine products worth USD 1,505.61 million during 2022, of which India's share was 9.8%. The domestic fish production of Malaysia was 1.75 million MT in 2021, and seafood is an integral part of their cuisine, which is typical of Southeast Asia, and has influences of Chinese recipes.

The major items imported by Malaysia from the world include frozen fish, frozen cuttlefish, and squid, fresh or chilled fish. China, Indonesia, Thailand are the major suppliers to Malaysia. Malaysia also undertakes re-processing activities to export processed and value-added seafood. During 2022, Malaysia exported marine products value USD 876.12 million. Major products exported are frozen shrimps, frozen cuttlefish, and squid, prepared or preserved fish etc. China, Singapore, Turkey are the major markets of Malaysia.

India-Malaysia Trade Round table & Business Road Show

India - Malaysia Trade Round table talks on trade was spearheaded by Mr. Rajesh Kumar Singh, Secretary, DPIIT, Ministry of Commerce & Industry, Govt. of India. On 20th February 2024 afternoon there was a briefing meeting arranged by the High Commission of India in Kuala Lumpur in Hotel Sheraton, wherein the objectives and plan of action was explained by His Excellency Mr. B. N. Reddy, High Commissioner of India to Malaysia. Later, a business session was held with Malaysia India Business Council members, wherein the areas of confluence in business relationship and investments were discussed and explored.

Inauguration of India Investment and Trade Promotion Roadshow and Make in India Seminar was held at Hotel Sheraton on 21st February 2024. The Buyer Seller Meet for agri and marine products was held parallelly in a different hall at the same venue. MPEDA was represented in the delegation by Dr. Ram Mohan M.K., Joint Director.

Interactions during business sessions

MPEDA official interacted with Mr. Mohd. Safwan Bin Sabri, Seafood Merchandising Division, Aoen Co (M) Bhd, which is the Malaysian arm of Aeon supermarket chain in Japan. There are 34 Aeon Supermarkets in Malaysia, making them the largest in the country. The annual sales is around MYR 49 million. They are interested in sourcing chilled shrimps (both black tiger and vannamei), chilled cuttlefish and whole fish such as Barramundi (Asian seabass) and snappers.

Lulu Group entered Malaysia 8 years ago and has 8 hyper markets in the country. Mr. Shiroj Iyyakkad, Buying Manager, Lulu Group Retail Sdn Bhd, represented the group in business discussions and has expressed interest in sourcing seafood such as frozen sea caught shrimps (in PD/PUD form), whole Black Tiger shrimps, clams and other bivalves from India. Mr. Shailesh, Country Head of M/s. Haresh Enterprises Sdn Bhd, headquartered in Singapore is currently dealing with food and healthcare products. They have also participated in the meeting and evinced interest in

Group photo of the delegation

dealing seafood and is in the process of gathering information about the products and market channels. Mr. Abd Aziz, Managing Director of M/s. Perniagaan Azhir, imports agri, poultry, and dairy products as well as seafood for supply to grocery stores. He sources seafood such as shrimps, tuna and crabs mostly from Thailand. He is interested in buying these items, especially frozen sea crab products from India.

It is gathered that Malaysians prefer to eat seafood daily and the consumption goes up during festival seasons such as Eid, Chinese New Year, Christmas – New Year season etc.

Joint Director, MPEDA, Deputy Secretary, Department of Commerce and AGM, APEDA, visited the hypermarket of Lulu Group in Capital Square, Jalan Munshi Abdullah, Kuala Lumpur to have an overview of the seafood and agri products sold there. The hypermarket has a display of various food products. Seafood section is separate and the products from aquaculture and marine sources are prominently displayed in fresh, frozen, dried, breaded, battered and canned forms for the customers. Most of the seafood is sourced locally, and imports are also effected from Norway, Chile, Thailand, Indonesia, and Vietnam. Customers are also offered to serve fresh seafood in ready-to-cook form. It is also understood from the store personnel that seafood from local and neighbouring countries are preferred due to logistic and price advantage. However, they feel that India is a formidable supplier of seafood, and the prices are competitive for certain items.

Malaysia sources seafood mostly within, but also imports from neighbouring markets. It is learned from EOI that Bangladesh is doing specific campaigns for their shrimps. The population consumes a lot of seafood and restaurants also sell seafood dishes of Malaysian, East Asian, Southeast Asian and Chinese recipes. The market also has a high sense of quality. With more promotional activities and networking, India can increase its market share of 9.8% to 20%.

Whole vannamei shrimps

Barramundi (Lates calcarifer)

Rohu (freshwater fish)

Dried seafood display in Lulu Hypermarket

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MPEDA joins Andaman and Nicobar delegation in Thailand visit

Thailand has imported marine products worth USD 4,295 million in 2022, with India's exports to Thailand at USD 367 million holding a share of 8.5%. Major items imported included frozen skipjack, frozen cuttlefish and squid, prepared and preserved tuna, frozen shrimp etc. Considering the proximity, the Andaman and Nicobar Islands have immense potential to export various products, especially seafood, to Thailand. The interaction is also expected to boost fisheries exports and tourism. Taking into consideration the scope of trade interaction and business cooperation, a trade delegation visited Thailand from 15th to 19th January 2024. Mr. Keshav Chandra, the Chief Secretary of A&N Administration led the delegation. Mr. A. Sakthivel, Assistant Director, represented MPEDA in the delegation, which also had officials from A&N Administration, National Institute of Ocean Technology (NIOT), Seafood Trade Representatives, fishing vessel operators of A&N Island, seafood exporters of mainland and Embassy of India, Thailand.

Group photo of the A&N delegation and Thai Officials

During the delegation visit, a series of visits and meetings were arranged. It included a visit to the Department of Fisheries & institutes in Thailand, in which the Embassy of India, Bangkok, facilitated the meetings with senior officials from various fisheries Institutes in Thailand, such as the Department of Fisheries, Ministry of Agriculture and Cooperatives of Thailand, Southeast Asian Fisheries Development Center (SEAFDEC), Network of Aquaculture Centers in Asia-Pacific (NACA), Asian Institute of Technology (AIT). During the meeting, Thai officials detailed their ongoing fisheries project, developmental activities in fisheries, technology available for deep-sea fishing, processing, hatchery operations, intensive farming, cage culture, sea ranching and disease management.

A&N delegation sought Department of Fisheries/Institutes of Thailand for their cooperation and technology transfer in deep sea fishing, island aquaculture development, including marine cage farming, seaweed culture, sea ranching, seafood value addition, and nano bubble technology for promoting live shrimp exports.

The delegates visited Mahachai (Samut Sakhon) fishing harbour in Thailand to understand the infrastructure facilities available in their harbour, vessels and its management system. It was observed that Thailand has implemented an effective logbook system in the fishing vessel. The owners of fishing vessels maintain species-wise catch details, which is verified by the Department of Fisheries, Thailand before unloading, in order to ensure the traceability of the catch.

The harbour is kept neat and tidy. The harbour has jet washing pumps for cleaning the harbour premises, tables for grading of fishes, ice plants to ensure adequate icing to maintain the cold chain, a proper drainage system etc. All the fishing vessels in Thailand have a VMS facility which is monitored by the Department of Fisheries, Ministry of Agriculture and Cooperatives of Thailand, to prevent IUU fishing.

Visit of delegation team to Department of Fisheries/Institutes of Thailand

During the visit to fishing harbour

The team visited freshwater prawn (Scampi) hatchery in Nakhon Pathom province, and observed the operations involved in the all-male scampi seed production. The team also visited Tilapia hatchery at Kamphaengsaen fisheries research station, which is part of Kasetsart University, and observed various activities.

Intensive *L.vannamei* farming in freshwater was also observed, and the farms were located in inland areas near to Kamphaengsaen fisheries research station. All the ponds were constructed with proper scientific design, covered with polythene (P) lined, fenced with biosecurity measures, water exchange through gravitational force, 100% water recycling, are controlled with inverters; thereby reducing the electricity charges and production cost.

Delegation members visited the processing establishment of M/s. C.P. Foods, Rayong factory, which is completely automated for producing value added products "Shrimp Wonton Soup with Noodles". The processing unit sources fresh shrimp from the contracted farmers in around Rayong village for ensuring the traceability and to avoid any possible contamination in the final product, and implements HACCP based food safety management system.

Further the team also visited Thale Thai fish market and Talad Klang Khung Samut Sakhom local shrimp market. It was observed that fishers/farmers and traders are keeping the fish/shrimps in the local market in live and chilled condition and getting higher prices. The local market has facilities such as aerated tanks, aerator facility in the transportation vehicle to keep the fish and shrimps in live conditions throughout the value chain.

View of hatcheries and farms




View of processing establishment and local market

Investment seminar

On the final day of delegation visit, the Embassy of India, Bangkok, in collaboration with Andaman and Nicobar Administration, Department of Fisheries and Department of Tourism in Bangkok arranged an investment seminar to discuss about the investment opportunities available in Deep Sea Tuna Fishing, Processing and Aquaculture in the Andaman and Nicobar Islands. The seminar commenced with an address by His Excellency Mr. Nagesh Singh, Ambassador of India to the Kingdom of Thailand. Following this, Mr. Keshav Chandra, Chief Secretary, A&N Administration explained the investment opportunities in the islands. He invited Thai Seafood Exporter Association and its members to make a delegation visit to Island for a Reverse Buyer-Seller Meet (RBSM) to kick start the export business between Island and Thailand. A total of 106 participants, representing various sectors from Thailand actively participated in the seminar.



View of investment seminar

India – Italy Joint Working Group on Food Processing

Italy - Market Profile

Italy, the world's eighth largest economy and the third largest in the European Union (EU), boasts a population of 58.7 million. The country's high levels of disposable income are reflected in its per capita fish consumption of 29.9 Kg. As the seventh largest seafood importer globally and the third largest in the EU, Italy's major imports include frozen squid, cuttlefish, fish fillets, octopus, frozen shrimp, and canned tuna. The country's seafood imports are valued at USD 869.18 million, with India ranking as the ninth largest supplier.

The major items exported to Italy include frozen squid, frozen cuttlefish, frozen shrimp, and frozen octopus. Dried, chilled, and live marine products are also exported, albeit with a minimal share percentage. The item-wise export of marine products to Italy for the last five years is detailed in Table 1. In terms of market potential, Italy imported marine products worth USD 7.62 billion during 2022, of which India's share was to the tune of USD 180 million, representing 2.36% of the total.

The India-Italy Joint Working Group

The India-Italy 1st JWG meeting was held at New Delhi, India, on 27th February 2019 and the 2nd JWG meeting was organized at Rome, Italy from 14th to 17th February 2024. The Indian delegation was led by Mr. Sanoj Kumar Jha IAS, Additional Secretary, Ministry of Food Processing and Industry, Govt. of India and comprised of representatives of MoFPI, Department of Commerce representing Agricultural and Processed Food Products Export Development Authority (APEDA), Food Safety and Standards Authority of India (FSSAI), National Institute of Food Technology, Entrepreneurship and Management (NIFTEM), Invest India, The Marine Products Export Development Authority (MPEDA) and Fanidhar Mega Food Park. The JWG program encompassed a session with Italian trade associations, facilitated by the Indian mission, as well as a JWG meeting hosted at the Ministry of Foreign Trade in Italy. Additionally, visits to the Food and Agriculture Organization (FAO) and a fish auction center at the fishing harbour were arranged.

Meeting with Italian trade

The meeting was organized at the Embassy of India, Rome. Dr. Neena Malhotra, Her Excellency Ambassador of India to Italy welcomed the guests. A presentation from the Indian side was made by Mr. Anilkumar P. Joint Director (Marketing), MPEDA followed by remarks of various Italian trade associations representatives. A discussion with Mr. Giuseppe Palma, General Secretary, Assoitica Italia was carried out during the networking dinner. The Assoitica Italy has about 165 companies with a total revenue of Euro 10 billion (Rs. 84,000 Crore) per year.

To promote Indian seafood in Italy, the DG Assoitica proposed a campaign by the Chef school of Italy. Indian seafood recipes will be adapted to Italian taste and will be promoted in Italy. Importers enquired about the processing capabilities of Indian processing units and the potential for Indian processors to prepare value-added products for supply to the Italian market. They explored the idea of producing shrimp samosas using Vietnam's exported broken shrimp, proposing that Indian processors could supply such value-added products to the Italian market.

From left Mr. Anilkumar P., Joint Director (Marketing), MPEDA, Mr. Giuseppe Palma, General Secretary, Assoitica, Dr. Neena Malhotra, H. E. Ambassador of India to Italy and importers of Italy

MPEDA and Embassy officials with Italian importers

The 2nd JWG meeting

During the JWG meeting, Mr. Anilkumar, Joint Director, MPEDA, delivered a presentation on marine product exports to the Italian delegation, outlining three proposals.

1. Mounting a trade delegation to Italy to familiarize the requirements of the importers and consumers and understand the latest technology in processing, aquaculture and capture fisheries followed by an RBSM.
2. Hands on training of seafood processing unit workers on value addition in association with NIFPHATT.
3. Technical collaboration on R&D for product development, packaging technology, automation and robotisation of the value chain processes in association with ICAR-CIFT. In addition, it was also proposed that speakers for the workshop on new technologies in the seafood value chain proposed to be organized in India may be identified by the Italian side. All the suggestions were appreciated by the Italian side and were mentioned as key action points by the Italian side.

Visit to FAO

A visit to FAO was arranged by Dr. Selvaraj, Senior Agriculture Expert, FAO, during which a meeting was also held with Ms. Shirlene Maria Antony Samy, Senior Fishery Officer Globefish, FAO. Discussions were held on the current international market trend and possible cooperation with Globefish for sharing of market information for the betterment of the Indian seafood industry.

Visit to the fish auction centre at the fishing harbour Fiumicino

The auction centre in the Fiumicino fishing harbour, located about 1 hour from Rome was visited. The auction centre is owned by 3 individuals and caters to 15 larger vessels of 15-24 meters OAL and 10 smaller vessels of 10 m OAL. The fishing trip is for about 18 hours, which starts late in the evening and returns by 2 pm the next day. The auction will be completed by about 5 pm and the catch will reach the nearby Italian cities by dinner time and to France, the next day by road.

The auction process involves grocery shops, supermarkets, local fish shops, and wholesale shops. Preserved fish are transported by fishing boats to a receiving room, where they are loaded onto a conveyor belt. The conveyor belt passes to the auction hall, where a weighing balance and cameras are installed. The auctioneer sits in a cabin with a screen and computer, while buyers sit in an amphitheater-style arrangement. Each buyer has a remote to bid, and details of the fish are displayed on screen. The final price is fixed when the crate reaches the weighing balance area in the conveyor belt. A sticker with the buyer's name, quantity, and price is fixed on the crate. The buyer pays at the auction hall's corner office and the trolley is moved to trucks. The auctioneer charges about 10% of the price as his commission. The system is simple, transparent, and efficient, and a pilot scale demonstration could be conducted in a fishing harbour in India to improve its efficiency.

Auction centre

Fish moving in conveyor belt

Skewered shrimp

Seafood display in supermarket

Table 1: India's exports of marine products to Italy (Source: MPEDA)

Q: Quantity in M T, V: Value in Rs. Crore, $: US Dollar Million						
ITEM		2019-20	2020-21	2021-22	2022-23	2023-24*
FROZEN SHRIMP	Q: V: $:	5829 233.28 33.30	7441 291.82 39.85	7841 322.85 43.76	7069 310.63 38.99	5688 237.98 29.03
FROZEN FISH	Q: V: $:	954 24.07 3.45	881 27.90 3.82	928 34.32 4.66	1846 71.95 9.01	1124 41.67 5.09
FR CUTTLE FISH	Q: V: $:	9916 327.65 46.88	7028 225.24 30.84	9342 382.03 51.73	7125 358.02 44.79	6030 293.24 35.74
FR SQUID	Q: V: $:	7003 222.57 31.83	6639 261.36 35.82	10541 453.20 61.39	11295 560.73 70.67	8227 355.35 43.37
DRIED ITEM	Q: V: $:	1050 7.05 1.01	150 1.08 0.14	40 1.73 0.23	6 0.48 0.06	225 2.69 0.33
LIVE ITEMS	Q: V: $:	3 0.14 0.02	0 0.00 0.00	0.002 0.0030 0.0004	1 0.00 0.00	0 0.00 0.00
CHILLED ITEMS	Q: V: $:	201 10.04 1.42	86 3.11 0.43	193 10.33 1.40	118 7.82 0.98	70 4.16 0.51
OTHERS	Q: V: $:	2321 64.98 9.30	2659 68.76 9.40	3697 116.02 15.67	3102 108.93 13.85	2168 73.30 8.95
TOTAL	Q: V: $:	27277 889.79 127.21	24883 879.26 120.32	32582 1320.48 178.84	30564 1418.58 178.35	23532 1008.38 123.02

** 2023-24 (April to Jan) - Provisional*

Crabbing opportunities: South Korean buyer explores Porbandar and Veraval in Gujarat

Mr. Michael (K.S.) Park, CEO of M/s. COMES Ins., South Korea and Mr. Steve Hwang, CEO of M/s. STE SEAMENA, Tunisia, a subsidiary company of M/s. COMES visited Porbandar and Veraval in Gujarat for exploring the opportunities in importing crabs from India. The buyers have a yearly requirement of 50 to 60 tons of crab meat and have expressed interest in purchasing other products in the future. The visit was organised by MPEDA Regional Division, Veraval and Sub Regional Division, Porbandar.

During their visit to Porbandar on 6th February 2024, Mr. Steve Hwang visited the processing plant of M/s. Hiravati Marine Products, while Mr. Michael Park held business meetings with the owners of M/s. Navrang Sea Food and M/s. Nilesh Sea Foods. A visit to processing plants of M/s. Navrang Sea Food and M/s. Nilesh Sea Foods was also organised later. Mr. Shrimali Vinodkumar M., Deputy Director, SRD Porbandar joined the plant visits, and explained regarding the plant procedure, HACCP compliance, and MPEDA registration. The buyers appreciated the quality and facilities of the units. The availability of other seafood items from cephalopods and crustaceans was also explained to Mr. Steve Hwang. On 7th February 2024, Korean buyers visited Veraval, where MPEDA Regional Division organized a meeting with seafood exporters. Representatives from M/s. Sailganga EU Exports, M/s. Gopal Fisheries, and M/s. Kartik Cold Storage attended the meeting, discussing the products and specifications required by the buyers in detail.

View of business meets with exporters of Veraval region and the Korean buyers in the presence of MPEDA officials

MPEDA participates in International Fisheries Congress & Expo 2024

The International Fisheries Congress & Expo 2024 Kerala University of Fisheries and Ocean Studies (KUFOS) & College of Fisheries Panangad Alumni Association (COFPAA) was held from 12th to 14th January 2024 at KUFOS Campus, Panangad, Ernakulam district. The congress featured invited talks from eminent scholars, scientific sessions, panel discussions, and poster presentations on a wide range of topics related to fisheries and aquaculture. It brought together experts, researchers, managers, fisheries industries and entrepreneurs, to exchange knowledge, explore innovative solutions and ensure a sustainable future for enhancing fisheries and aquaculture productions aligning with the principles of SDGs.

MPEDA participated in the exhibition as part of IFC & Expo 2024 by setting up MPEDA Stall through its Regional Division at Kochi, and displayed commercially important species like tiger shrimp, GIFT and Asian seabass besides showcasing the activities of MPEDA and its societies.

Mr. Anilkumar P., Joint Director (Marketing), MPEDA presented papers on “Visioning seafood trade in the globalized economy" and “Innovations and insights in seafood export”. Mr. Johnson D’ Cruz, Deputy Director, RD Kochi was the panellist for “Industry Meet: Innovations and Insights in Seafood Export” held on the sidelines of IFC. Mrs. Elsamma Ithack, Deputy Director, MPEDA attended the technical session on “Sustainable Intensification of Aquaculture through Innovative Systems and Bio-circular Production”; “Cage aquaculture and the environment: Ensuring sustainability in India”.

About 800 delegates registered for IFC 2024, and 500 participants attended the Fishermen - Aqua farmers meet. Awards were distributed to eminent farmers/stakeholders in the fisheries sector.

Mr. Anilkumar P., Joint Director, MPEDA presenting at IFS

Mr. Johnson D’ Cruz, Deputy Director, MPEDA as panelist at IFS

Mrs. Sreelu N. S., Additional Director, DoF, Govt. of Kerala at the MPEDA stall

Visitors at MPEDA stall

MPEDA at Global Kokan Festival 2024

MPEDA Regional Division, Mumbai participated in the 9th edition of the Global Kokan Festival 2024, held at Savlaram Krida Sankul Kalyan-Dombivli Municipal Corporation from 25th to 30th January 2024. The event, organized by Kokan Bhumi Pratishthan, social organisation working to support the economic development of Kokan, in association with the Department of Tourism, Fisheries, and Micro Small & Medium Industries, showcased natural beauty, tourism, industries, agriculture, horticulture, arts, culture, and cuisine from Kokan.

MPEDA showcased value-added seafood products in the stall and passed on information to the visitors enquiring on the process of exporting the fishes, diversified export-oriented fish farming and training programs offered by MPEDA. The festival also featured commercial stalls, cultural programs, food courts, seminars, and interactive sessions on tourism, fisheries, and entrepreneurship development in the Kokan region. Around 1,70,000 visitors attended the festival, with government agencies, commercial stalls, and food courts offering local cuisine. The event aimed to promote sustainable fishing practices and promote tourism.

Visitors at MPEDA stall

MPEDA at India Fisheries and Aquaculture Forum (IFAF), 2024

The 13th edition of the India Fisheries and Aquaculture Forum (IFAF), 2024, jointly organized by the Asian Fisheries Society Indian Branch (AFSIB), ICAR-Central Inland Fisheries Research Institute (CIFRI), and the Inland Fisheries Society of India (IFSI), was held at the Biswa Bangla Convention Centre in New Town, Kolkata, from 23rd to 25th February 2024. The event was inaugurated by Mr. Parshottam Rupala, Hon'ble Minister of Fisheries, Animal Husbandry and Dairying, Government of India. "Fostering Indian Fisheries and Aquaculture for attaining Sustainable Development Goals" was the theme of 13th IFAF.

MPEDA Regional Division in Kolkata participated in the event by taking a stall displaying a range of value-added items and priced publications. Officials from MPEDA, NETFISH, and NaCSA explained about the various promotional activities and capacity-building programs for the fisheries and aquaculture sector. The exhibition also saw participation from various ICAR institutes, including CIBA, CIFT, NBFGR, CMFRI, CIFA, CIFE, and CIFRI.

View of MPEDA stall

Mr. Lokenath Chakraborty, Technical Officer, ICAR-CIFRI, Barrackpore, handing over the participation mementos to MPEDA

Dr. Ganesh K., Assistant Director (Aqua), MPEDA presents Aquaculture Diversification: Efforts in India by MPEDA-RGCA

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MPEDA kickstarts MY Bharat activities in Kochi

Mera Yuva Bharat (MY Bharat) is an autonomous body set up by the Ministry of Youth Affairs & Sports, Government of India catering to the youth of India, and serving as an overarching enabling mechanism powered by technology for youth development and youth-led development by providing them equitable access to opportunities. Thus, enabling youth to actualise their aspirations and contribute towards the vision of Viksit Bharat by 2047.

MPEDA launched its MY Bharat Activities on 25th of January 2024 with the first event organized by MPEDA Regional Division, Kochi. Mr. D. V. Swamy IAS, Chairman, MPEDA inaugurated the event "Explore careers in marine sector-Discovering the Limitless Potential" in which 25 students from Government Regional Fisheries Technical Vocational Higher Secondary School, Thevara, Kochi actively participated by registering and joining the event through MY Bharat portal. The Chairman encouraged the participating youth to adhere to three principles the career provider seeks in an aspirant which are "Knowledge, Skills, and Attitude. Mr. K. S. Pradeep IFS, Secretary, MPEDA, Dr. Ram Mohan M.K., Joint Director (QC), Dr. S. Kandan, Joint Director (Trg.) and the senior officials of MPEDA were also present in the inaugural function.

A technical session on "Introduction to Aquaculture" was given by Mr. Bijimon, Junior Technical Officer (Aquaculture), MPEDA Regional Division, Kochi. The students gained new insight into the principles, species being cultured, and opportunities in the aquaculture sector. The students visited MPEDA's Quality Control laboratory where the officials demonstrated the technology being used in quality control analysis of seafood. They also explored an interactive multimedia display at the seafood stall, discovering more about MPEDA, its societies and the seafood trade.

The inaugural MY Bharat event successfully equipped youth with valuable insights for their career paths, and made them understand the value chain of marine products, interventions of MPEDA in the export of marine products, quality assurance, capture and culture fish production, market access, and career progression avenues in the sector.

Mr. D. V. Swamy IAS, Chairman, MPEDA inaugurates MY Bharat event by MPEDA

Mr. K.S. Pradeep IFS, Secretary, MPEDA addressing the youth

Youth interacting in the event

A participating youth addressing the gathering

Mr. D.V. Swamy IAS, Chairman, MPEDA, Mr. K.S. Pradeep IFS, Secretary, MPEDA and other officials of MPEDA with youth

The event kickstarted a series of MY Bharat events by other field offices of MPEDA and societies across various states.

Sl. No.	MPEDA Regional Office / Society	Title	Date of the event	No. of Youth Participated
1	Regional Division, Kochi, Kerala	Explore Careers in Marine Sector- Discovering the Limitless Potential.	25.01.2024	25
2	MAC Vallarpadam, Kochi, Kerala	Unlocking the Potential of Aquatic Chicken.	29.01.2024	16
3	MAC Vallarpadam, Kochi, Kerala	Barramundi - the Delicacy of the Orient.	30.01.2024	16
4	MAC Vallarpadam, Kochi, Kerala	Unlocking the Potential of Aquatic Chicken Series 2.	14.02.2024	16
5	MAC Vallarpadam, Kochi, Kerala	Recent Trends in Aqua Farming.	16.02.2024	16
6	Regional Division, Kochi, Kerala	Unlock the Opportunities in Marine Exports Sector.	05.02.2024	66
7	Sub Regional Division, Valsad, Gujarat	Black Tiger Farming - A stride to regain the spot in the export market.	13.02.2024	70
8	NETFISH, Alappuzha, Kerala	Exploring black clam resources for promoting exports	14.02.2024	83
9	RGCA HO, Sirkali, Tamil Nadu	Molecular markers and its application in Aquaculture Genetics research	21.02.2024	44
10	Regional Division Kochi, Kerala	Unlock the opportunities in marine exports sector-Event Series -3	22.02.2024	34
11	Regional Division Mumbai, Maharashtra	Introduction to Aquaculture Practices.	22.02.2024	43
12	Sub Regional Division Bhimavaram, Andhra Pradesh.	Exposure Visit to MPEDA, QC Lab, Bhimavaram & NaCSA Aqua One Center, Korukallu (Event 1)	20.02.2024	21

13	NaCSA, Kakinada, Andhra Pradesh	Exposure Visit to MPEDA, QC Lab, Bhimavaram & NaCSA Aqua One Center, Korukallu (Event 2)	20.02.2024	21
14	Regional Division, Mangalore, Karnataka	Seafood Sector – Prospects & Opportunities.	23.02.2024	45
15	MPEDA RGCA GIFT Project, Andhra Pradesh	Learn About Aquatic Chicken	27.02.2024	88
16	Sub Regional Division Nagapattinam, Tamil Nadu	Marine Seafood Sector: Opportunities and Prospects	27.02.2024	72
17	MPEDA-RGCA, Tamil Nadu	Learn about Asian Seabass Hatchery Operation	28.02.2024	50
18	MPEDA, Regional Division, Vijayawada, Andhra Pradesh	Exposure visit to seafood processing plant-empowering young aspirants in the marine sector	29.02.2024	35

Glimpses of MY Bharat events





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Marine landing report December 2023

Dr. Afsal V.V. & Dr. Joice V. Thomas MPEDA-NETFISH

MPEDA-NETFISH collects real-time data on marine landings from around 100 major fishing harbors and landing centers in India for supporting traceability and MPEDA's catch certification system. Regular tracking of marine landings is done through the Harbour Data Collectors stationed at selected locations. They collect information on incoming fishing vessels and approximate catch landed by these vessels, specific to each species. The collected data is uploaded to the MPEDA catch portal on a daily basis. This report presents an overview of the trends observed in marine landings during December 2023.

1. Observations on catch landings

In December 2023, data on marine catch landings was gathered from 85 fish landing sites scattered along the coastal states of India. The cumulative catch for the month amounted to 82,627.68 tons. The pelagic finfishes dominated the catch with a substantial 60% share, accounting for 49,812.81 tons. Demersal fin-fishes followed at 25%, contributing 20,379.88 tons to the overall catch. Crustaceans claimed an 8% share, representing 6,423.24 tons, while molluscs contributed 7% share, with 6,011.75 tons (refer Fig. 1).

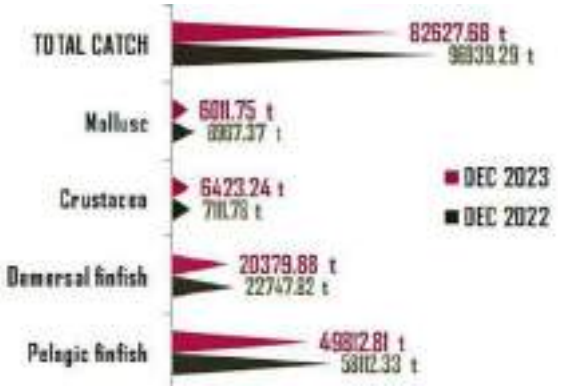

Fig.1: Catch composition of marine landings (in tons) in December 2023

The catch landing during the period comprised 249 species, encompassing both marine finfishes and shellfishes. The five dominant species of the month were *Sardinella longiceps, Rastrelliger kanagurta, Lepturacanthus savala, Odonus niger & Nemipterus japonicus* (refer Table 1).

Sl. No.	Common name	Scientific name	Quantity (tons)
1	Indian oil sardine	*Sardinella longiceps*	13,303.34
2	Indian mackerel	*Rastrelliger kanagurta*	11,619.62
3	Ribbon fish	*Lepturacanthus savala*	7,764.23
4	Red-toothed triggerfish	*Odonus niger*	3,341.36
5	Japanese threadfin bream	*Nemipterus japonicus*	2,944.26

Table 1: Top five species landed during December 2023

Analysis of the group-wise landing data showed that sardines, mackerels, ribbon fishes, coastal shrimps and croakers were the dominant species landed in the month (refer Fig. 2). These top five fishery items accounted for 53% of the total catch. Other notable landed items included triggerfish, tuna and threadfin bream.

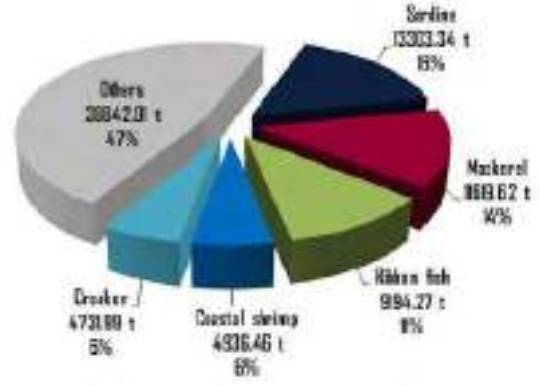

Fig. 2: Major five fishery items landed in December 2023

Sardines, mackerels and ribbon fishes dominated the pelagic finfish landings, while croakers, trigger fish and threadfin breams were the major demersal catches. Coastal shrimps constituted over 77% of the total crustacean harvest, with Karikkadi shrimp (*Parapenaeopsis stylifera*) being the most abundant species, with a catch of 1,846.97 tons. Squid and cuttlefish were the major molluscs landed during the month.

State-wise landings

The north-western states of Maharashtra and Gujarat recorded the highest marine fish landings in December 2023 (refer Fig. 3). Maharashtra led with 25,652.37 tons, accounting for 31% of the total catch, followed by Gujarat with 16,324.60 tons (20%). The south-western states of Karnataka and Kerala also made significant contributions to the total catch, with 12% and 13% share, respectively. Together, the western coastal states accounted for 79% of the total marine fish landings. Among the eastern coastal states, Tamil Nadu and West Bengal were in the lead, each contributing around 8% to the total catch and Odisha and Andhra Pradesh had the lowest landings.

Fig.3: State-wise Marine Landings (in tons) in December 2023

Harbour-wise landings

Ratnagiri-Mirkarwada harbour in Maharashtra recorded the highest fish landings in December 2023 among the 85 selected fish landing sites. Table 2 lists the top ten harbours in terms of total catch quantity landed.

Sl.No.	Harbour	Quantity (tons)
1	Ratnagiri	11,213.30
2	Munambam	4,789.51
3	Sakharinate	4,626.38
4	Mangrol	4,317.39
5	Porbandar	4,148.45
6	New Ferry Wharf	3,998.55
7	Veraval	3,956.85
8	Vanakbara	3,524.55
9	Malpe	3,157.33
10	Sasoon Dock	2,627.86

Table 2: Top ten harbours based on catch landings

2. Observations on boat arrivals

The number of fishing vessel arrivals recorded from the 85 designated fish landing sites totalled 33,332. Gujarat recorded the highest number of boat arrivals, with 7,715, accounting for 23% of the total. Kerala, Maharashtra and Tamil Nadu were next in line (refer Fig. 4). Considering the harbour-wise boat arrivals, the Mangrol and Porbandar harbours in Gujarat were in the top, with 2,100 and 1,891 boat arrivals, respectively.

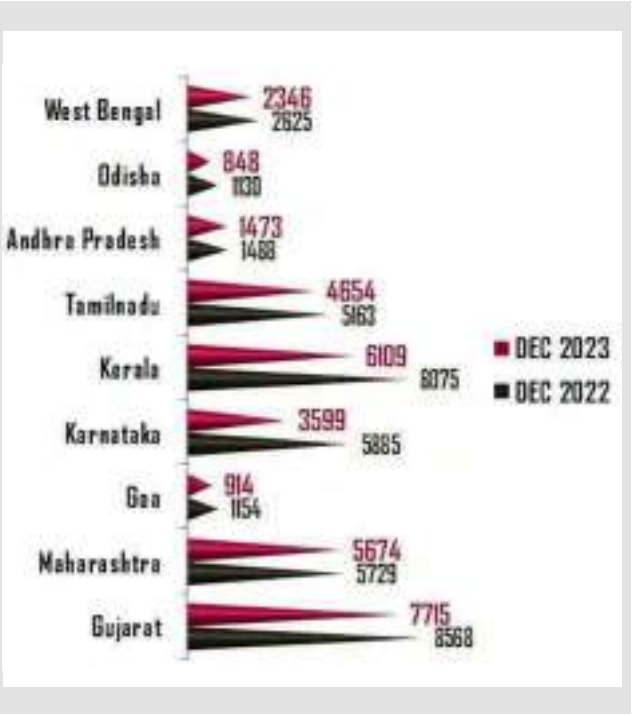

Fig.4: State-wise boat arrivals (nos.) in December 2023

Summary

During December 2023, marine landings and boat arrivals from the 85 major fish landing sites in India totalled to 82,627.68 tons and 33,332 vessels, respectively. A decrease of about 11,425 tons in catch landings and 2,200 vessels in boat arrivals was noted compared to the previous month.

Pelagic finfish resources remained the major contributor to the overall catch, with Indian oil sardine (*Sardinella longiceps*) being the most landed species of the month. Maharashtra remained in the top position in terms of catch landing and whereas Gujarat attained the highest position in terms of number of boat arrivals.

Among the various landing sites, Mirkarwada harbor retained its top position in catch landings, while Mangrol harbor continued having the highest number of boat arrivals.

Monthly outlook forecast report

Mr. Ritiesh Victor – Co-founder & Country Head – Myforexeye Fintech Pvt. Ltd.
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INR USD

This month witnessed some volatility in the USDINR pair as the rupee swiftly recovered, surpassing its initial support at 83.00 (Yellow Line) and ultimately testing a 3-month low at 82.905.

Consistent with our previous reports, the USDINR pair exhibits key support levels at 83.00 (Yellow Line) and 82.80 (White Line). These levels are in line with the 100-day EMA (Blue Line), reinforcing their strength at 83.00, while the subsequent support lies at 82.64 marked by the 200-day However, a breach of the second support at 82.50 may lead to a sustained decline towards 82.00.

For hedging, it is advisable to use a combination of plain vanilla and forwards. Importers are advised to initiate hedging below the 83 levels for near-term exposures. Exporters, on the other hand, should consider covering their unhedged exposure at 83.20 or above, with a recommendation to increase their hedge ratio, anticipating a rupee recovery.

EUR USD

EURUSD reached a multi-month high, hitting the 1.1139 level last seen in July, yet closed the year slightly lower at 1.1037. With both countries observing New Year closures, along with major economies, the markets remained muted. Despite the year- end dip, the Euro secured a 3.04% gain for the year, marking its first positive performance since 2020. This uptrend was fuelled by a positive risk appetite, as markets anticipated an earlier cut in the U.S. while expressing uncertainty about the European Central Bank's (ECB) pace of cuts. ECB members have consistently maintained their stance, indicating a reluctance to implement rate cuts in the near future. Looking forward, market attention is keenly focused on the ECB's release of the Consumer Price Index inflation reading for December on January 5, 2024. A higher-than-expected inflation figure is anticipated to reinforce the ECB's commitment to keeping interest rates higher, potentially propelling the EURUSD price higher in the coming weeks.

The currency pair initiated the month at 1.0874 but later surpassed a crucial threshold at 1.1000, reaching its five-month peak at 1.1139, last observed on July 24th, 2023. However, it relinquished some gains as the upward movement appeared stretched. Despite being above the 200-week EMA, the current scenario doesn't seem notably bullish. On the weekly candlestick chart, the pair encountered both the 200-Week EMA (1.1017) and the 50-Week EMA (1.0750), highlighting these levels as significant resistance and support markers. The 1.0850 level holds significance, potentially serving as a short-term support and a rebound point if the pair enters an overbought territory. The RSI and MACD indicators show waning positive momentum, suggesting a potential decline toward the previous resistance level of 1.1000. Conversely, the 1.1100 level might offer immediate resistance if bullish

trends try to push the market higher. Breaking through that threshold could lead to the most recent five- month high of 1.1139. Further advancement beyond that zone could potentially drive the pair back to its 2023 peak of 1.1275.

GBP USD

In the initial phase of the month, the sterling demonstrated strength but subsequently experienced a consistent decline, attributed in part to the strengthening dollar index following the US NFP data release. November's data revealed the addition of 199K jobs in the US, reducing the unemployment rate to 3.7% and emphasizing a robust labor market, which sparked inflationary concerns. Both the Fed and the BoE maintained their prevailing interest rates as anticipated. However, market dynamics were significantly influenced by the forward guidance from central bank governors. Fed Chair Powell conveyed a dovish sentiment, indicating potential rate reductions in 2024, while the BoE projected a more hawkish stance, signaling the likelihood of sustained elevated rates. Nevertheless, following the UK CPI's release at 3.9%, speculations arose about a prospective BoE rate reduction in March. The US bond yields decline, coupled with a 73% probability of Fed rate reductions in March as per the Fed Rate Monitor, bolstered the dollar index and briefly propelled the sterling to a 4-month peak of 1.2827. However, given the UK's negative GDP growth and impending economic challenges, the BoE's potential rate adjustments may exert downward pressure on the sterling.

It was a positive month for sterling as the pair made a 3-month high of 1.2827. The pair fell initially but retraced its path and gained towards the end of the month. The 20-week EMA has crossed the 50-week EMA from downwards, which is a bullish crossover. The gains in the pair can be seen after the cross-over. Upward trend of the pair is predicted. As per the weekly chart frame of the pair, we can see there is a strong resistance at the 200-week EMA of 1.2734. If the pair manages to breach this level, the next resistance is at 1.2850 level. The support can be seen at 1.2030 level, protecting the downside. The formation of an inverted hammer green candle at the end of the month suggests bullishness in the pair, suggesting the strength in the pound and buyers interest too. The RSI indicator is in the neutral zone, providing mixed signals.

JPY USD

The Japanese Yen finished the year strongly as the sell-off in the US dollar index gained traction. The USDJPY exchange rate fell to 141.75 on Friday, its lowest level since August and significantly lower than the year-to-date high of 151.80. As investors continue to monitor the Bank of Japan's operations, the USDJPY pair will remain the important currency rate to watch in 2024. Even when other central banks raised interest rates, the bank maintained a somewhat dovish tone in 2023.In the United States, the Federal Reserve raised interest rates to their highest level in almost two decades. Similarly, the European Central Bank increased them to its greatest level ever. Other central banks, such as the Bank of England and the Swiss National Bank, raised interest rates in 2023 as well. The Bank of Japan, on the other hand,

kept interest rates in the negative territory. Its single hawkish move came a few months ago, when it expanded the yield band on its 10-year bonds. As a result, traders should focus on what the bank does in 2024. Some economists believe the ECB will raise interest rates, causing it to leave the sub-zero range. If this is right, it will occur at a time when other central banks, such as the Federal Reserve and the European Central Bank, are decreasing interest rates.

It was a positive month for the Japanese Yen, as the pair gained continuously throughout the month. The JPY gained almost by 4.7% against the US dollar. The pair made a 5-month low of 140.24 and ended the month lower at 140.98. As per the weekly chart frame of the pair, 20-week EMA seems to move downwards towards 50-week EMA, hinting towards a possibility of bearish cross-over in future. This suggests the pair is facing downwards pressure suggesting continuation of the downtrend in the pair. The RSI indicator confirming the bearishness of the pair. The level of 128.50 acts as a major support level for the pair, protecting the downside. If the pair breaches this level, the next support will be at 200-week EMA around 127.89. However, if the pair attempts to recover, the 20-week EMA acts as a short- term resistance, protecting the upside.

Drones and Sensors in Aquaculture

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Introduction

The fastest-growing food business in the world is aquaculture, or aquafarming. This growth is explained by the rising need for protein and the expanding human population. Even though aquaculture has been practiced for 4,000 years, it is still a relatively new and developing sector. It faces a number of hurdles, including disease management, low-impact production, feeds and nutrition. But modern technology has offered some assistance in the growth of production trends. Aqua automation refers to the use of automated systems and technology in aquatic environments, particularly for aquaculture. Automation in aquaculture can involve various technologies such as automated feeding systems, monitoring systems for water quality and environmental conditions, automated harvesting systems, and even robotic systems for tasks like cleaning tanks or sorting and grading fish. Drones and Sensory Systems play a major role in the automation systems.

Drones

Drones can do tasks performed by humans, much like robots. Keeping an eye on offshore fish farms requires specialized labor and carries some risks for humans. Drones, on the other hand, are able to take the place of costly human involvement in fish farms by repeatedly diving underwater to examine nets and assess their health. Drones can also provide farmers with risk-free live video streaming so they can assess the condition of water species. Drones provide the required data, but big data analysis technology can identify patterns and notify farmers about maintenance concerns. Environmental and fish stock analysis can assist in identifying hazards before they cause harm to an entire farm.

Underwater Drones

Flying drones are revolutionizing land-based businesses, with realtors taking aerial photos of for-sale houses, and retailers exploring drone-based delivery systems. Aquaculturists may soon witness a similar transformation when underwater drones provide them with eyes beneath the waves, enabling them to check water quality and inexpensively repair malfunctioning equipment. These underwater drones will test dissolved oxygen levels and other physical and chemical data instead of delivering products. Additionally, cameras will be installed in them to detect net tears before they become too serious. Additionally, the drone can serve as a gateway to connect the underwater cameras like sonar camera and stereo camera to the cloud AI services to perform additional fish surveillance such as fish count and fish length estimation using the underwater camera.

Role of Drones in Culture Systems

- Drones are able to monitor fish farms on land and in sea, especially offshore aquaculture sites. Many works, including the checking of holes and damages in cages, can be carried out by drones.
- More importantly, drones can collect novel information, which is difficult to be obtained by humans. This information can be used to generate algorithms for further developing technologies to improve the efficiency of aquaculture production.
- Drones in combination with artificial intelligence (AI) and cloud computing will cut costs and improve operations for the aquaculture industry.
- The drone collects aquaculture data in a simpler and faster way, which could be analyzed to perform big data analytics that can help optimize farm production and management.

Sensors

Sensors can be used in collecting water parameters, including dissolved oxygen (DO), pH, salinity, turbidity and pollutant concentration. In the aquaculture industry, biosensors have been developed and applied to analyse DO, water salinity and temperature. Using underwater sensors connected to the internet, the hunger status of cultured fish in cages, ponds and rivers can be monitored, and thus feeding can be conducted accordingly. Sensors in water in combination with cloud management and mobile connectivity will maintain the ideal environment for fish and supply optimal feeding for growth and feed conversion for the aquaculture industry. In the future, it is essential to develop real-time sensors to measure the stress level of individual fish and to detect pathogens in water. These sensors should be easily inserted into live fish or put in water and be able to deliver strong signals, which could be detected by devices on land, boats or satellites.

Sensors for sustainable fish farming

In recent years, advancements in different Information and Communication Technologies (ICT) along with the development of low-cost small sensors have increased the feasibility of monitoring numerous parameters concurrently through wireless sensor networks (WSN). The technological advancements in sensors have opened several opportunities in fish farming. The aforementioned drones and robots demand advanced sensors not only for capturing videos, but also for underwater navigation, water pH data collection and collection of several data including oxygen level, salinity, pollutants and turbidity. Depending on the type of fish, farmers must maintain the right pH, water temperature and oxygen levels. Biosensors can help to farm in an analysis of such parameters. In addition, today's advanced sensors can help monitor heart rate and metabolism. With the help of this data, farmers can easily create an ideal environment for their aquaculture and get better yields.

WSN is composed of many self-organized sensors deployed in a monitoring region that measure, collect, transmit, and process information in real time. The information measured is then displayed on a computer or conveyed in the form of a message to farmers for the real-time update. This real-time remote monitoring technology allows the streamlining of the information accumulation process, which conceivably minimizes human lapses and time delays. The main issue in applying these technologies to precision aquaculture is the different environment where the underwater wireless sensor networks (UWSN) and the remotely operated underwater vehicle (ROV) would have to be deployed. Wireless communication between underwater devices is complex. On the other hand, the need of a waterproof isolation for the sensors to ensure long-term monitoring hinders the manufacturing of underwater sensors.

Water quality Monitoring using Sensors

Temperature: The methods for measuring temperature that follow mostly fall into two groups: electric devices and non-electric devices. Since thermocouples rely on the Seebeck effect, they require electrical instruments to be in contact with the object being detected. Usually consisting of copper, nickel, iron, platinum, rhodium, and their alloys, they are comprised of two interconnected metal conductors. On the other hand, materials' temperature-dependent thermal expansion is utilized by non-electronic devices. It is feasible to discern between solids' thermal expansion, gases, and liquids in glass thermometers. Transistors and diodes are examples of semiconductors that can be utilized for temperature sensing. With an accuracy of more than 1ºC, they are helpful for measuring temperatures between -55 and 150ºC. The following alternative for temperature sensing is the use of a capacitance thermometer.

Salinity: The concentration of certain ions in water is correlated with its salinity. Another name for it is electrical conductivity (EC). The most popular approach to test electrical conductivity (EC) is the conductive method, which is based on water resistivity. The other alternative is the inductive method. The conductivity is computed using two or more electrodes. But when it comes to aquaculture monitoring, the primary problem with this technology is that it requires the electrodes to remain in touch with the water, which can lead to sedimentation, corrosion, and biofouling. Two coils are the foundation of the inductive approach. A magnetic field is produced by the first coil, which is powered by an alternating current. The intensity of the magnetic field is modified by the medium. In the secondary coil, the magnetic field induces an electric field that is correlated to the water salinity.

Dissolved Oxygen: The amount of oxygen in the water is gauged by the amount of dissolved oxygen. The monitoring of dissolved oxygen is essential for aquaculture. Depending the type of fish, a minimum oxygen concentration is needed for proper fish growth. To test dissolved oxygen, there are two primary methods. Based on titration, the Winkler test is the standard procedure. It's an intricate process that needs reagent additions and can't be applied to a sensor. It can be utilized, nevertheless, for sensor calibration. The two types of sensors developed are optical and electrochemical. The interface between water and the sensing element may be impeded by biofouling and sedimentation. For this reason, it will be necessary to search for a region of the light spectrum in the UV light that allows measuring the absorbance of light and correlates it with the dissolved oxygen.

Turbidity: Transparency in water is measured by turbidity, and the presence of suspended solids (SS) is associated with decreased turbidity. Turbidity has a complex influence on fish, and an increase in it can lead to issues for aquaculture fish. Numerous methods are available for measuring turbidity. Certain methods, such the Imhoff cone, gravimetric methodology, or the use of a Secchi disk, are not appropriate for use with automatic processes. Sensors that measure either refraction, absorption, or both using an optical beam. Alternatively, an acoustic beam could be used. These choices each have drawbacks in this particular situation. One should stay away from optical approaches. But compared to optical approaches, acoustic methods use more energy and are typically more costly. Therefore, in terms of the energy consumption and price the best option is to use the sensor based on optical absorbed and/or scattered light; moreover, their accuracy and working rate fits with the need on aquaculture facilities.

Conclusion

We have discussed the various analytical technologies and sensors used within aquaculture to detect and monitor various water parameters affecting aquaculture cultivations. Sensors and Drones can help detect underwater pollution and alert farmers before the environment harms aquaculture. This way, fish farmers can be known to rectify the situation. While the current technology demands slight human intervention, in the future, most of the decisions will be carried out autonomously. The demand for sustainability has increased over the years. They can help to reduce overexploited fish species through data collection and can be used when implementing sustainable harvesting practices. But these automation systems in Aquaculture practices are in budding stage and some are practiced in super intensive culture systems.

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MPEDA's TED Talk: Workshop on Turtle Excluder Device

The U.S. Department of State has banned the import of wild-caught shrimp from India since 2019, citing non-compliance with NOAA USA specifications for Turtle Excluder Devices (TED) and the lack of TED implementation in the country's Mechanised Trawlers. The ban on Indian wild-caught shrimp imports by the USA, along with a subsequent 42% drop in export prices in other markets, has significantly impacted the earnings of fishers and stakeholders in allied sectors, resulting in an estimated annual export loss of approximately ₹4,500 crore.

MPEDA, in collaboration with Central Institute of Fisheries Technology (ICAR-CIFT) and with consultation from National Oceanic and Atmospheric Administration (NOAA), USA has modified the TED. Field trials were conducted in CIFT research vessels as well as in commercial fishing vessels in Kerala, Tamil Nadu and Andhra Pradesh, to overcomethe issue.

From 19th to 25th February 2024, MPEDA conducted a workshop in association with the US NOAA workshop and a field demonstration at ICAR-CIFT, Kochi to impart capacity building training on fabrication of Turtle Excluder Device (TED) and to finalize the TED design suitable for Indian waters for implementation in all maritime states.

The opening session of the workshop was inaugurated by Mr. D.V. Swamy IAS, Chairman, MPEDA. Mr. Jeff Gearhart, Chief, Gear and Vessel Support Branch and Mr. Kendall M. Falana, Gear Specialist from US NOAA, Mr. Jared R., Milton, Section 609 Program Manager, US Department of State and officials from US Consulate, Chennai were present during the programme.

The one-week workshop was attended by the members from CIFT, FSI, CIFNET, MPEDA-NETFISH, gear technicians from net manufacturing companies, net menders and nodal officers from each maritime state. The workshop activities were observed by Ms. Neetu Kumari Prasad IAS, Joint Secretary, Dept of Fisheries, GoI.

During the workshop, US NOAA officials explained the technical aspects of the fabrication of TED and its requirements, such as gird specifications, net dimensions, twine size, flap opening and angle position for fixing the TED in nets to the core team members and the stakeholders.

Based on the performance of the modified TED in the field trials, a TED design tailored for the Indian shrimp trawlers has been finalised. The stakeholders who attended the workshop are now equipped to disseminate knowledge on the fabrication of TED and conduct field demonstrations across all maritime states, ensuring effective TED implementation.

A summing-up meeting was arranged to interact between US NOAA officials and stakeholders to clarify the apprehension on the catch loss and fuel consumption while using the TED.

MPEDA in association with Department of Fisheries, Govt. of India is in the process of identifying the fishing harbour and fishermen association for conducting the field trials by utilizing the trained net menders, nodal officers from State fisheries department, and boat owners of all maritime states for implementing TED in all Indian shrimp trawlers. After the implementation of TED in the country, Indian authorities will invite the US Department of State to conduct field inspections and verification to certify India under Section 609 of US Public Law 101-162 for resuming the export of Indian wild caught shrimps to USA.

Workshop on "Development & Implementation of Turtle Excluder Device (TED) in India" organised at Mumbai

MPEDA, in association with NETFISH and ICAR-Central Institute of Fisheries Technology, organised a workshop on the development and implementation of the Turtle Excluder Device (TED) in response to the US Department of State's non-certification of India for exporting wild-caught shrimps to the USA. The workshop was organised on 23rd January 2024 and aimed to sensitize stakeholders and develop appropriate methodologies for developing and implementing TED. The event was organized by MPEDA Regional Division, Mumbai, and included representatives from various stakeholders, including ICAR-CIFT, ICAR-CIFE, ICAR-CMFRI, Export Inspection Agency, Fishery Survey of India, Seafood Exporters Association of India, Mangrove Foundation of Maharashtra, and boat owners' representatives from maritime states and UTs in the West Coast.

The inaugural function was followed by the technical session. Mr. Sakthivel A., Assistant Director, MPEDA gave a presentation on the US ban and MPEDA initiatives. Videos and observations from the US-NOAA dive evaluation program were also presented. Dr. Madhu V. R., Principal Scientist at ICAR-CIFT, presented the design and specifications of the TED, demonstrating its prototype. The workshop also included a Q&A session with Mr. Anilkumar P., Joint Director (Marketing), MPEDA, and Dr. Madhu V. R., Principal scientist, ICAR-CIFT. A total of 60 stakeholders participated in the workshop.

View of the inaugural Session of the workshop

Demonstration of CIFT designed TED

Speakers (L to R): Mr. Anilkumar P., Dr. Joice V. Thomas, Mr. N. B. Patil, Dr. T. R. Gibinkumar, Mr. Sakthivel A. and Dr. Madhu V. R.

Participants with the dignitaries and officials

MPEDA meets seafood exporters of Maharashtra

MPEDA Regional Division, Mumbai organised a meeting with 29 seafood exporters from the Maharashtra region at Hotel Royal Tulip in Navi Mumbai on 23rd January 2024. The meeting was chaired by Mr. Anilkumar P., Joint Director (Marketing), MPEDA, and included Mr. Narendra B. Patil, President of the Seafood Exporters Association of India (Maharashtra Region). The implementation of Turtle Excluder Devices (TED), market issues, the new financial assistance scheme for seafood value addition, and the reduction in BIP checks at EU ports from 50% to 10% were discussed during the meeting.

Mr. Anilkumar in his address, emphasized the importance of Turtle Excluder Devices (TEDs) in sustainable fishing practices, and discussed ongoing Free Trade Agreement (FTA) negotiations with the UK, Canada, EU, and South Korea, outlining MPEDA's strategy in market and business promotion. The meeting concluded with vote of thanks by Mr. Subray Pavar, Assistant Director, MPEDA RD, Mumbai.

From left: Mr. Narendra B. Patil, Mr. Anilkumar P. and Dr. T. R. Gibinkumar

View of the exporters

MPEDA participated in the Indian Ocean Regional Decade Conference 2024

Background

The United Nations General Assembly, in its 72nd session, proclaimed the UN Decade of Ocean Science for Sustainable Development 2021-2030 (referred to as 'the Ocean Decade'). The Ocean Decade aims to achieve the seven outcomes of a clean ocean viz.,

1. A clean ocean where sources of pollution are identified and removed.
2. A healthy and resilient ocean where marine ecosystems are mapped and protected.
3. A predictable ocean where society has the capacity to understand current and future ocean conditions.
4. A safe ocean where people are protected from ocean hazards.
5. A sustainably harvested ocean ensuring the longevity of the world's food supply.
6. A transparent ocean with open access to marine data, information and technologies.
7. An inspiring and engaging ocean where society understands and values the ocean.

For these outcomes to become a reality, the Intergovernmental Oceanographic Commission (IOC) UNESCO, which is overseeing the Ocean Decade implementation, developed the governance and coordination framework for the decade to address the ten challenges.

Ten ocean decade challenges

- To Understand and beat marine pollution.
- Protect and restore ecosystems and biodiversity.
- Sustainably feed the global population.
- Develop a sustainable and equitable ocean economy.
- Unlock ocean-based solutions to climate change.
- Increase community resilience to ocean hazards.
- Expand the global ocean observing system.
- Create a digital representation of the ocean.
- Skills, knowledge and technology for all.
- Change humanity's relationship with the ocean.

As part of the Ocean Decade framework, INCOIS proposed 'Decade Collaborative Centre for Indian Ocean Region (DCC-IOR)' that has been endorsed by IOC. India on its part has constituted through Ministry of Earth Sciences (MoES), the National Decade Coordination Committee (NDCC) to address Ocean Decade Actions at the national level. NDCC will be providing the scientific coordination and planning, identifying collaboration opportunities, awareness raising and stakeholder engagement apart from interacting with the Decade Coordination Unit at IOC. The DCC-IOR, as its part of commitment, organised the 'Indian Ocean Regional Decade Conference 2024: Bridging Billions to Barcelona', an Official Prelude to the Ocean Decade Conference-2024' with the following objectives.

Objectives

1. To involve and engage stakeholders of the Indian Ocean Region in Ocean Decade activities.
2. To provide a platform for deliberating on the future priorities for the Ocean Decade Challenges that are emerging via the Vision 2030 process with focus on the IOR and feed regional inputs to the 2024 Ocean Decade Conference in Barcelona in April 2024.
3. To interact and network among the IOR stakeholders including the national decade coordination committees of the region.
4. To provide a platform to voice the concerns and expectations of the stakeholders from ECOPS, academicians, industries, social scientists, NGOs and other ocean stakeholders.

MPEDA participated in the Indian Ocean Regional Decade Conference 2024 held at Indian National Centre for Ocean Information Services (INCOIS), Hyderabad. Dr. T. R. Gibinkumar, Deputy Director, Regional Division, Mumbai represented MPEDA and participated as a Panel Member in Ocean Decade Challenge 3 (Sustainably feed the global population) held on 2nd February 2024.

The conference was organized by Decade Collaborative Centre for the Indian Ocean Region (DCC-IOR) under the ambit of UN Ocean Decade (2021-30). The event with technical support of Intergovernmental Oceanographic Commission (IOC), UNESCO was sponsored by the Ministry of Earth Sciences, Government of India.

MPEDA participated in the Ocean Decade Challenge 3 session on sustainable feeding for the global population on 2nd February 2024, held at the International Training Centre for Operational Oceanography (ITCOO) named Atal Bhavan. The session was chaired by Dr. Erik Olsen from the Institute of Marine Research Norway. Dr. Sachinandan Edward, Scientist ICAR-CMFRI, Mr. Dennis Otieno, Kenya Marine and Fisheries Research Institute, Ms. Ashwini Sathnur, United Nations World Food Programme and Dr. S. Velvizhi, M S Swaminathan Research Foundation had made the presentations. Dr. S. S. C. Shenoi, MoES Chair

Professor and Former Director, INCOIS along with Dr. Naina Islam, Institute of Marine Sciences, University of Chittagong, Bangladesh also attended the panel discussion. Dr. Sourav Maity, Research Scientist, Vidyasagar University was the rapporteur and the session coordinator was Mr. Nagaraja Kumar M. from INCOIS.

Vision 2030 White Papers review process

The Vision 2030 White Papers have been developed by 10 working groups of the Ocean Decade Vision 2030 process. This was a milestone initiative within the United Nations Decade of Ocean Science for Sustainable Development that aims to identify a strategic ambition for each of the Ocean Decade Challenges.

The deliberations on the session were aimed to gather feedback and input from a wide range of stakeholders that will be used to revise the Vision 2030 White Papers. The consolidated versions of the documents will be presented and discussed during the 2024 Ocean Decade Conference scheduled from 10th to 12th April 2024 at Barcelona Spain.

Panel members with the collaborators

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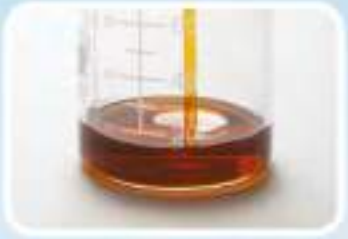
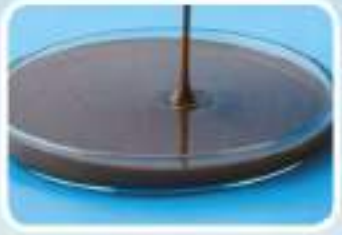

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Workshop on Energy Efficient Cold Chain Technologies

Energy Management Center (EMC), Kerala along with Bureau of Energy Efficiency (BEE) and Federation of Indian Chambers of Commerce & Industry (FICCI) organized a one-day workshop on Energy Efficient Cold Chain Technologies on 7th March 2024 at Hotel PGS Vedanta, Kochi.

The workshop aimed to promote energy efficiency in cold energy within Kerala, enhancing the responsiveness of industries and major consumers to energy conservation measures. This effort would lead to reduced manufacturing and processing costs, as well as increased demand for energy-efficient products, fostering adoption by industries to mitigate energy consumption and carbon emissions.

Mr. Anilkumar P., Joint Director (Marketing), MPEDA, Govt. of India inaugurated the event. In his inaugural speech, he emphasized the importance of energy conservation technology in the new era, urging for increased awareness for the effective implementation of energy-saving measures and the role of digital technologies. Moreover, he also highlighted that consumers in the international market are conscious about the carbon footprint and sustainability. Hence, we need to gear up our production system to reduce our carbon footprint on an urgent basis. Mr. Vinod Kumar, Assistant District Industries Officer (ADIO), District Industries Centre, Ernakulam, Mr. B.V. Sureshbabu, Registrar, EMC, Mr. Tom Thomas, District Vice President, Kerala State Small Industries Association (KSSIA), Mr. M.N. Girish, Senior Director, Energy Conservation, FICCI and Mr. Johnson Daniel, Energy Efficiency Department Head, EMC were among the speakers at the workshop.

Mr. Anilkumar P., Joint Director (M), MPEDA inaugurating the event

View of workshop

MPEDA registered Seafood exporters from Maharashtra honoured

Three major seafood exporters registered under MPEDA from the state of Maharashtra were honoured during the exporter's award ceremony held on 8th February 2024 at Hotel Tip Top International at Wakad, Maharashtra. Mr. Uday Samant, Hon'ble Minister for Industries, Government of Maharashtra distributed the awards to the winners. The award was under the 'Marine Products sector' category.

- M/s. Naik Oceanic Exports Pvt. Ltd. clinched the Export Award, in Gold Category for the financial years 2018-19 & 2019-20.
- M/s. Gadre Marine Export Pvt. Ltd. received the Export Award under Gold Category for the financial years 2018-19 & 2019-20, 2020-21 & 2021-22.
- M/s. Jeelani Marine Products held the Export Awards under Gold Category for the financial years 2018-19 & 2019-20.

M/s. Naik Oceanic Exports Pvt. Ltd. receiving the award

M/s. Gadre Marine Export Pvt. Ltd. receiving the award

M/s. Jeelani Marine Products receiving the award

MPEDA signed MoU with Government of Maharashtra

Directorate of Industries, Government of Maharashtra is working on several initiatives for the benefit of Micro, Small and Medium Enterprises (MSMEs), Start-ups, Self Help Groups (SHGs), Farmer Producer Organizations (FPOs), One District One Products (ODOPs) and the marine product export sectors. The Marine products Export Development Authority (MPEDA) entered a Memorandum of Understanding (MoU) with the Directorate of Industries, Government of Maharashtra on 8th February 2024 during the State Export Award function held at Wakad, Pune, Maharashtra.

The MoU aims to enhance collaboration and business opportunities for MSMEs, SHGs, FPOs, and ODOPs, while promoting their marine products globally. The Directorate of Industries will raise resources, while MPEDA will provide technical support. Dr. T. R. Gibinkumar, Deputy Director, MPEDA Regional Division, Mumbai signed the MoU on behalf of MPEDA.

Dr. T. R. Gibinkumar, Deputy Director, MPEDA receiving the signed MoU from Mr. Uday Samant, Hon., Minister for Industries Government of Maharashtra

The roles and responsibilities of MPEDA include:

1. Organize workshops and seminars to engage a wide range of participants from the marine products sector, promoting knowledge sharing and participation.
2. Assist MSMEs in Maharashtra with international market insights, helping them effectively target export markets and promote local marine-produce globally.
3. Conduct skill-enhancement programs for entrepreneurs, enhancing production, packaging and marketing strategies for improved competitiveness.
4. Identify potential export markets and facilitate trade negotiations to boost global promotion for marine produce.
5. Support Maharashtra-based MSMEs in international trade fairs, providing platforms for showcase and networking of marine produce.
6. Offer market intelligence and research reports to empower MSMEs in making informed business decisions.
7. Provide guidance on quality control, streamline access to testing labs, and aid in obtaining certifications related to marine produce.
8. Supply market intelligence on global trends, consumer preferences, and emerging export opportunities.
9. Help MSMEs understand the implications of trade agreements and negotiate favorable terms. This includes facilitating discussions with foreign trade partners and government bodies.
10. Provide guidance to MSMEs in Maharashtra with export documentation, including customs clearance, shipping, and labeling requirements, ensuring smoother export processes.

Capacity building programme organised by MPEDA

Veraval

MPEDA Regional Division, Veraval conducted five capacity building training programmes for workers coming under SC category working in seafood processing plants of M/s. Deepmala Fisheries and M/s. Keshodwala on 10th October 2023, 26th – 27th December 2023, 3rd January 2024 and 6th February 2024. The training was imparted on the topics GMP, SSOP, Organoleptic parameters etc. Hygiene and sanitation procedures were explained to them by Mr. Jignesh Visavadia, NETFISH SCO and Mrs. Meera Mori as faculty.

Total 145 SC workers participated in the training programmes. Training kits and certificates were distributed to all the participants on completion of the training programme.




View of training programme

Vijayawada

MPEDA Regional Division, Vijayawada, organized three one-day capacity building training programs for processing and pre-processing workers from the SC category. The sessions, held on 30th January and 2nd February 2024 at M/s. Royale Marine Impex Pvt. Ltd. in Bapatla district, and on January 31st 2024 at M/s. Abad Overseas Pvt. Ltd. The training covered a range of topics including hygienic handling practices, fish quality management, microbial infection protection, processing techniques, grading, icing, cold chain maintenance, Best Management Practices, product traceability etc. A total of 90 trainees, with 30 participants from processing plants were engaged in the comprehensive training program. A biosecurity kit containing thermal wear, gum boot, apron, hand gloves, head caps and a bag was also distributed.

View of participants at M/s. Abad Overseas Pvt. Ltd.

View of participants at M/s. Royale Marine Impex Pvt. Ltd.

Mumbai

MPEDA Regional Division, Mumbai organized three capacity building training programmes for ST fishers and fish workers during February 2024 on importance of Bio-security and personal hygiene in aquaculture and capture fisheries sector. Details of the programmes are as follows:

1. Two trainings at Randha of Akole Taluk in Ahmednagar district from 21st to 22nd February 2024.
2. A training at Satpati, Palghar district on 23rd February 2024.

Total of 90 participants attended the training in three days. Ice/Fish storage boxes were distributed to the 30 participants who attended training at Palghar and water testing kits along with life jackets were distributed to the beneficiaries in Ahmednagar district.

View of participants of training in Palghar

View of participants of training in Ahmednagar

Harbour based training programmes at Vasco

MPEDA-NETFISH, South Maharashtra and Goa conducted a harbour-based training programmes at Vasco fishing jetty for crew members of purse seine fishing vessels, on 18th January, 2024. 22 participants took part in the training programs. The crew was briefed on personal hygiene, hand washing techniques, sanitation, rubber gloves, pre-cooling, plastic waste's impact on marine environment, marine mammals and sea turtle conservation, and the significance of square mesh codends.

Aid materials including rubber gloves, brushes for deck cleaning, liquid soap dispensers and sachets along with leaflets on pollution in fishing harbours, on board handling of fish, square mesh codends for sustainable fishing, fish handling at landing centres, were distributed during the programme.

View of the training programme

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NIFPHATT develop seafood based millet delights

Dr. Shine Kumar C.S., Director, NIFPHATT, Kochi

National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT), which had a history of more than seven decades, under the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Govt. of India is always at the forefront for redefining culinary experiences and has developed a healthy range of fish snacks with the goodness of millets as part of the International Year of Millets.

The United Nations General Assembly declared 2023 as the International Year of Millets. Millets provide several health benefits and are rich in nutrients, high in dietary fibre, are gluten-free, contain antioxidants, contribute to heart health, control blood sugar level, beneficial for weight management, easy to digest and are versatile. Millets, celebrated for their high protein, essential fatty acids, fibre, and essential minerals, play a crucial role in contributing to overall well-being. When paired with fish, a rich source of omega-3 fatty acids and vital nutrients, these become a good source of nutrition.

Different types of millets were screened and experimented to find out and develop quality, convenient and shelf stable suitable combinations of millet-based fishery products by the National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT). The products developed include pearl millet-based frozen fish cutlets, sorghum-based ready to fry fish wafers, sorghum-based frozen shrimp rolls, and ready to eat ragi-based fish cookies. These products received good acceptance during sensory evaluation.

Millet infused fishery products developed by NIFPHATT are an innovative and sustainable approach to address the challenges of food security & nutrition. The products combine benefits of millets, which are drought-resistant and nutrient-rich grains, with fish, a valuable source of protein and essential fatty acids. This concept aligns with the growing demand for alternative protein sources and the need to diversify diets while minimizing the environmental impact of food production. The easily assimilable high-quality protein and omega-3 fatty acids from fish with nutri-cereals rich in dietary fibre, vitamins, minerals and antioxidants presents a perfect combo for health. The Omega-3 fatty acids in fish contribute to heart and brain health, promoting cardiovascular well-being and supporting cognitive function. The higher fibre content, lower triglycerides and increased insulin sensitivity of millet maintains blood sugar level and heart health.

The introduction of pearl millet-based fish cutlets, sorghum-based fish wafers, sorghum-based shrimp rolls and ragi-based fish cookies under NIFPHATT's initiative marks a pioneering step towards nutritious and sustainable culinary options. It goes beyond offering mere flavours; it presents a myriad of health benefits to consumers.

A nutshell of the health and nutritional benefits of these high-end new millet-based fisheries products exclusively developed by NIFPHATT viz., CutletZ Plus (pearl millet-based fish cutlets), WaferZ Plus (sorghum-based fish wafers), RollZ Plus (sorghum-based shrimp rolls), and CookiZ Plus (ragi-based fish cookies) are highlighted below:

CutletZ Plus

Frozen Fish CutletZ Plus which is ready to fry is prepared with a combination of fish (48%) and pearl millet (15%). It is rich in protein 12.9 g and dietary fibre 6.9 g per 100 g. It has no added sugars, and there is no trans fat. This product has a shelf life of eight months.

CutletZ Plus– Ready to fry frozen fish cutlets with pearl millets

WaferZ Plus

Ready to fry Fish WaferZ Plus is incorporated with fish (55%) and sorghum millet (15%). It has 15.4 g protein and dietary fiber of 7.1 g per 100 g. It has no added sugars and has no trans fat. This product has a shelf life of six months. Sorghum based fish wafers will be enjoyed by those who seek taste and nutrition together.

WaferZ Plus – Ready to fry fish wafers with sorghum millets

RollZ Plus

Frozen Shrimp RollZ Plus is a ready to fry item prepared with a combination of shrimp (48%) and Sorghum millet (15%). It has 7.8 g protein, 7.4 g dietary fibre per 100 g and no trans fat. This product has a shelf life of eight months. NIFPHATT's Rollz Plus, which is Sorghum-based shrimp roll, is a delightful and advanced culinary creation that combines the earthy flavours of sorghum with the subtle taste of shrimp. This unique dish includes the versatility of sorghum grain and the delectable qualities of shrimp.

RollZ Plus – Ready to fry shrimp rolls with sorghum millets

CookiZ Plus

Ready to eat millet-based fish CookiZ Plus is incorporated with fish (15%) and ragi millet (15%). It has 9.1 g protein and dietary fibre of 7.2 g per 100 g. This product has a shelf life of one month. Ragi-based fish cookies offer a unique culinary delight by combining the nutrient-rich ragi with the goodness of fish.

CookiZ Plus – Ready to eat fish cookies with finger millets

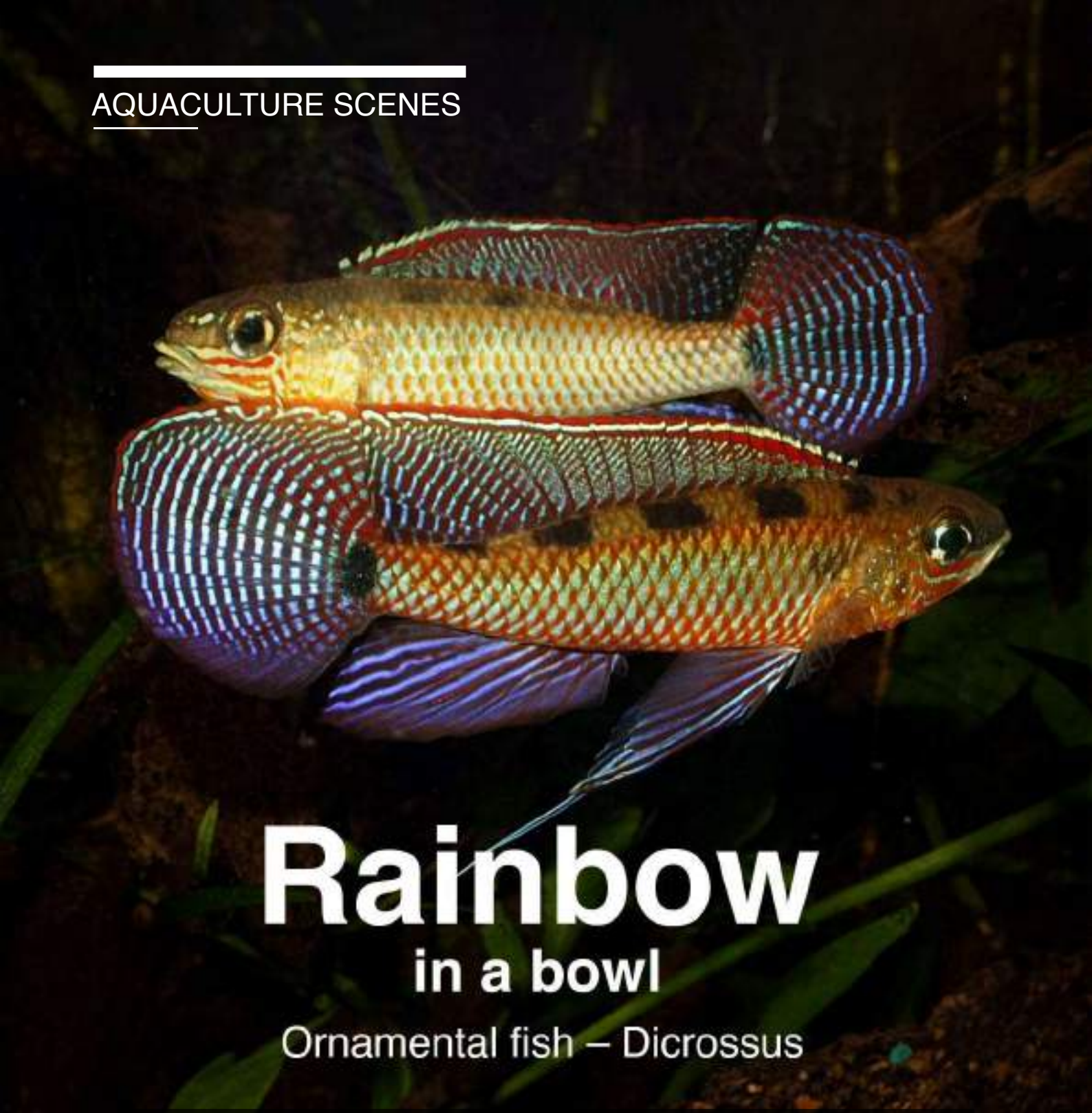
These products will create economic opportunities for farmers, fishermen and entrepreneurs leading to increased rural livelihoods and support small-scale businesses.

To know the consumer acceptability of the newly developed millet-based fishery products, NIFPHATT had showcased these products in the World Food India 2023 Exhibition, Pragati Maidan, New Delhi, Global Fisheries Conference India 2023, Science City, Gujarat and Millet & Fish Festival 2023, Ernakulam, Kerala. Samples of all the four new millet-based fishery products were exhibited during these events.

NIFPHATT is planning to test market these products through the institute's outlets soon. Training will be provided for fisherfolks and other stakeholders for preparing these new millet based fishery products for human consumption.

Millet- based fishery products being introduced to Mr. Parshottam Rupala, Hon'ble Union Minister for Fisheries, Animal Husbandry and Dairying and Dr. L. Murugan, Hon'ble Union Minister of State of Fisheries, Animal Husbandry and Dairying, at NIFPHATT Stall in World Food India 2023

Dr. L. Murugan, Hon'ble Union Minister of State of Fisheries, Animal Husbandry and Dairying, and Ms. Neetu Kumari Prasad, Joint Secretary, Dept. of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Govt. of India at NIFPHATT stall familiarizing with the millet-based fishery products during Global Fisheries Conference India 2023



Rainbow in a bowl

Ornamental fish – Dicrossus

V.K. Dey

V.K. Dey has over three decades of experience in diverse sectors of the seafood industry in the Asia-Pacific region. He was the Deputy Director of MPEDA and then associated with INFOFISH, Malaysia. As part of INFOFISH, he was involved in several studies related to the seafood industry in the Asia-Pacific region and beyond, including setting up of Aqua-technology Park for ornamental fish. MPEDA has published Living Jewels, a collection of his articles on ornamental fish.

Dicrossus, a small genus of dwarf cichlids having several dark spots on the side of their body, popularly known as checkerboard cichlids, is native to the rivers in the Amazon and Orinoco basins in South America. Two species, Dicrossus *maculatus* and *D. filamentosus* have been known initially in the hobby for many years and a third one, *D. gladicauda* was introduced in 2008, later two more species have been added. Now there are five recognized species, *D. filamentosus, D. foirni, D. gladicauda, D. maculatus* and *D. warzeli* in the hobby.

D. filamentosus inhabit in the vast rivers of the Amazon, the entire upper western catchment of the Rio Orinoco and the central and upper Rio Negro region of Brazil. They are found in small forest streams, where the bottom is covered with leaf litter and a tangle of branches and roots, where aquatic plants are rare, apart from the areas near the banks. The pH in their natural environment falls in the range of 4.5 to 5, and the general hardness is below 1 dH. Two rows of square black spots, like a checkerboard, that run along the centre of the flank and below the dorsal fin is the characteristic pattern on the body. Depending on the mood of the fish, the lower row of spots may expand, forming a stripe that runs from the tip of the snout to the base of the caudal fin, while the row above it below the dorsal fin, may disappear. Their body is slender, elongated, and copper-coloured; the snout is blunt with a small mouth. The males have a lyrate caudal fin with filaments at the top and bottom. They are also more colourful than the females and attain a length of about 9 cm, while the females grow up to 6 cm, lack the blue and red spots on their body and fins, and their caudal fin is rounded. When the pair is ready to spawn, the ventral fins of the female become a solid red, while those of the male become red and blue striped.

In the aquarium, they should be provided with numerous hiding places with muted or not too bright lighting. Filtration is also important with good aeration and a frequent water change is necessary, as they are very sensitive to poor water quality. The chemical parameter of the water is the obstacle to breed them and it is much easier to breed captive-reared specimens as those that come directly from the wild require less hardness and a pH below 5. But in most cases, water with a pH of 6 to 6.5, hardness of 1 to 3 dH and a temperature of 26° to 29°C would be ideal enough to breed them. They lay eggs on leaves or directly on the substrate. The spawning is initiated by the female, who leads the male to a previously cleaned site. If everything goes well, the eggs, ivory or pale amber in colour are laid on a hard surface such as a stone. The female then undertakes the responsibility of caring for the eggs while the male defends the territory. Interestingly, after egg deposition the ventral fins of the female lose their red coloration, which is only regained after a few weeks when her offspring are fully independent. The male is best separated from the female. After about five to eight days the young become free-swimming and can be fed with freshly hatched Artemia, microworms, and powdered dry foods.

D. foirni, originates from the middle and upper Rio Negro exclusively in left-bank tributaries of the main river upstream of its confluence with the Rio Branco. The name, foirni is based on the acronym FOIRN for the Federação das Organizações Indígenas do Rio Negro, a non-govermental organisation that looks after the interests of indigenous peoples in Brazil.

D. gladicauda is so-named due to the filamentous extension on the upper lobe of the caudal fin. This feature also helps to distinguish them from D. filamentosus and D. maculatus. In filamentosus, the fin extensions are present on both caudal lobes while D. maculatus does not possess any extensions at all. Differences in caudal fin morphology also help distinguish it from other two species.

D. maculatus popularly known as spade-tailed checkerboard cichlid is the native of the Rio Tapajós, Rio Maués, and surrounding areas of the Brazilian Amazon basin. Males attain a length of 5.3 cm while females are a little larger and attain a length of 6 cm. Temperature is between 26 to 30°C with very acidic pH ranging from 3.4 to 5.4 and hardness very soft with less than 1 dH is their requirement. Females have less vivid colouration, males present some striking blue sheen on the side of their heads and gill plates. They are a challenge to breed and require extremely acidic water for the eggs to hatch. High quality water is also absolutely vital, especially at such low pH. They are not commonly available in the trade and are mistaken for the more common and popular *D filamentosus*.

D. warzeli, is thought to be endemic to the Rio Tapajós drainage, was discovered and is named after Frank Warzel, the renowned German expert on pike cichlids. They are found exclusively in clear water streams with very soft, acidic water (no measurable hardness, pH regularly less than 5.0, usually less than 4.0) and sandy bottoms with areas of leaf litter.

Dicrossus filamentosus

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Guarding Aquatic Health: MPEDA's awareness programs on illegal use of banned antibiotic in aquaculture

Mumbai

MPEDA Regional Division, Mumbai in collaboration with the Department of Fisheries, Government of Maharashtra, conducted seven awareness programs to address the critical issue of unauthorised use of banned antibiotics in aquaculture. Spanning across districts like Bhandara, Raigad, and Pune, these initiatives collectively engaged 488 participants, amplifying education and fostering responsible aquaculture practices for a healthier aquatic ecosystem.

The details of the awareness programmes are as follows.

1. Four awareness programmes at Bhandara district from 17th to 20th January 2024, with 331 participants.
2. One programme in Raigad district on 4th January 2024 with 32 farmers.
3. Two programmes at M/s. Tamboli Fish Seed Farm for GIFT at Patas in Pune district on 3rd February 2024 with a participation of 125 attendees. This programme was supported by RGCA.

View of awareness campaign programme in Bhandara

Awareness campaign in Raigad

Participants at M/s. Tamboli Fish Seed Farm for GIFT at Patas in Pune

Kolkata

MPEDA Regional Division, Kolkata organized a one day awareness programme against illegal use of banned antibiotics in aquaculture at Silampur, Contai-I, Contai-II of East Medinipur on 13th February 2024. The programme was attended by 60 participants. The campaign was aimed to create awareness among farmers on the risks related to the use of prohibited antibiotics in aquaculture and to encourage sustainable practices to safeguard consumer health and the environment, to ensure sustainability of the aquaculture sector.

View of awareness programmes

MPEDA Regional Division Mumbai joins Maharashtra's Antibiotic Task Force drive

The office of Assistant Commissioner of Fisheries, Ratnagiri, Department of Fisheries, Government of Maharashtra in collaboration with MPEDA Regional Division, Mumbai conducted a meeting of the Antibiotic Task Force Committee at Ratnagiri on 20th February 2024. The committee consisted of officials from Department of Fisheries, Ratnagiri, Govt. of Maharashtra including Mr. Abhaysinh Shinde Inamdar, Assistant Commissioner of Fisheries, Mr. Anand Palav, Fisheries Development Officer, Mrs. Utkarsha Keer, Assistant Fisheries Development Officer, Mr. Atul Raosaheb Sathe, Field Supervisor, MPEDA RD, Mumbai, Mr. R. N. Mhatre, Tahsildar, Ratnagiri, Mr. Sopan Wade, Drug Inspector, Ratnagiri, Food and Drug Administration, Govt. of Maharashtra and Mr. Nilesh Shantaram Kamble, Head Constable, City Police, Ratnagiri.

The committee visited four approved L. vannamei farming sites in Ratnagiri district, including M/s. ADG Shrimp Farm and farms of Mrs. Aditi Amit Gurav, Mr. Vijay Khedekar, and Mr. Sadanand Mayekar, Kelbai Aquafarm. The team advised shrimp farmers to obtain and maintain a Certificate of Analysis from suppliers of aquaculture inputs, such as probiotics, minerals, and feed. They also instructed farmers not to use banned antibiotics in their farms.

View of the visit by the committee

Training programme on "Eco-Friendly Sustainable Aquaculture"

MPEDA Regional Division, Kolkata organized a five day training programme during 5-9 February 2024 on "Eco-friendly sustainable aquaculture" for beneficiaries coming under SC category at Mohanpur, North 24 Parganas district. The training attended by 20 participants covered topics such as pond preparation, seed selection and feed management techniques, PMMSY schemes, Better Management Practices (BMPs), quality, safety, and sustainability of seafood products for international markets etc.

The technical sessions were handled by MPEDA officials including Mr. Dhirit Ekka, Deputy Director, Mr. K. Ramanjaneyulu, Junior Technical Officer, Mr. Pradip Maity, Field Manager, NaCSA and Mr. Shantanu Mahato, Fishery Extension Officer, Minakhan block, Department of Fisheries, Govt. of West Bengal. A field visit was also included in the training.

Training session

View of field visit

MPEDA's SHAPHARI Certification scheme gains traction among Gujarat shrimp farmers

MPEDA has introduced the "Shaphari" certification scheme for the production of antibiotic residue-free shrimps for export supply. The scheme aims to enhance consumer confidence, meet international standards, and promote hassle-free exports. "Shaphari" process certification applies to shrimp hatcheries and aqua farms that conform to the "Shaphari" guidelines. The term "Shaphari" is a Sanskrit word meaning 'Superior quality fish suitable for consumption for even an Ascetic'.

MPEDA Sub Regional Division, Valsad has been spearheading the implementation of the Shaphari scheme in Gujarat, and has 4 shrimp farms covering 237.50 certified. These farms underwent two stages of audits i.e. GAP audit and certification audit. M/s. Mayank Aquaculture Pvt. Ltd., Surat was the first Shaphari certified shrimp in the country, which got certified on 1st September 2022. This has motivated other shrimp farmers of the state to come forward to join the scheme. Three more farms, covering 187.50 ha, have also completed audits and received their "Shaphari" certification.

The certificates were distributed on 22nd February 2024 to the following aquaculture farms situated in Navsari district.

1. M/s. Shree Sai Krupa Aquaculture Pvt. Ltd. at Parujan (37.50 ha)
2. M/s. Hariom Aquaculture Pvt. Ltd. at Machhad (50 ha)
3. M/s. Shree Datt Aquaculture Farms Pvt. Ltd. at Mendhar Bhat (100 ha)

Handing over of "Shaphari"Certificate to (from Left) M/s. Hariom Aquaculture Pvt. Ltd., M/s. Shree Sai Krupa Aquaculture Pvt. Ltd., M/s. Shree Datt Aquaculture Pvt. Ltd.

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Seafood HACCP basic training programme conducted by MEPDA

MPEDA has conducted a four-day training program on seafood HACCP (Basic) for technologists, online quality controllers, and production managers from 20 seafood processing establishments in Maharashtra and South Gujarat from 9th to 12th January 2024.

The four-day training program, organized through MPEDA Regional Division, Mumbai featured theory and practical sessions on seafood HACCP based on USFDA's seafood HACCP Standard Curriculum, covering GMP, SSOP, and the 7 principles. The sessions were handled by MPEDA officials including Mr. Vinod V., Deputy Director (QC), Mr. Subray Pavar, and Mr. Kishorkumar Vaniya, Assistant Directors. Dr. T. R. Gibinkumar, Deputy Director, MPEDA RD Mumbai, provided a comprehensive overview of national and key market regulations for processing and exporting fish and fishery products, as well as preventive measures for rejections due to antibiotics and pathogens. Following the sessions, an evaluation was conducted, and digital certificates were distributed to successful participants.

Inauguration of event by Mr. Rustam Irani, National Vice President SEAI

Distribution of digital certificates to participants

Participants with MPEDA officials and other dignitaries

QUALITY FRONT

Chennai

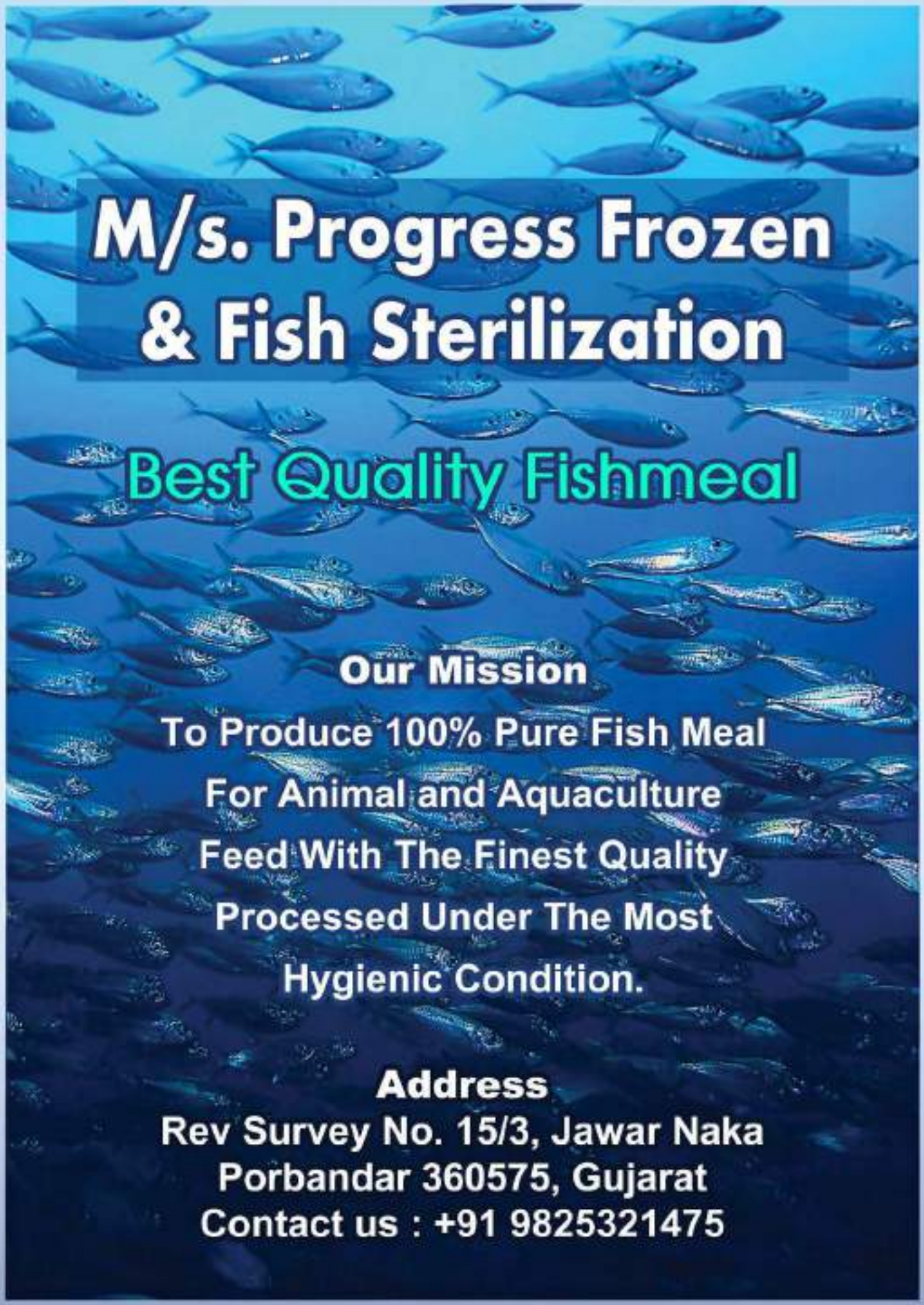
MPEDA through its Regional Division in Chennai organised a 4 days training program on Seafood HACCP for the technologists of seafood processing establishments from 13th to 16th February 2024. The training was attended by 25 technologists from seafood processing units of Tamil Nadu and Andhra Pradesh.

Dr. Ansar Ali A., Deputy Director, MPEDA RD Chennai, Mrs. Preetha Pradeep and Dr. K.B. Biji, Technical Officers handled the classes. The program was concluded by distributing the certificates to the trainees who have successfully completed the training.

Views of training programme

Digital certificate distribution

Participants with MPEDA officials and other dignitaries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5	Adamallys L.L.C Azhar gulamhusein Dubai Ph: +971 502520263 Email: azar@adamallys-llc.com Web: www.adamallysgroup.com *Shrimp*	6	Ethmar For Import And Export Ms. Merna Adel Egypt Ph: +20 1050051881 Email: Info.ethmarfoods@gmail.com Info.ethmarseafood@gamil.com *Shrimp*
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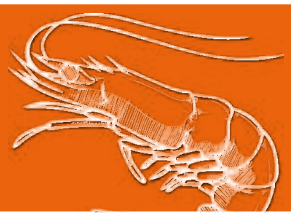
9	Royal Cavear UAE Email: sales@royalcavearuae.com Web: www.royalcovearuae.com *Shrimp*		

FISH

1	Contro Resources Faycal Bohtey Morocco Email: Faycal.bohtey@controresources.com *Tuna*	2	Umamis Germany Ph: +49 1712222036 *Tuna*
3	Ablo Thawfeeq Germany Ph: +49 171 2222036 Email: ablo@umamiglobal.com Web: www.umamiglobal.com *Skipjack Tuna*	4	AMAQ GROUP Jibin Oman Ph: +968 92252480 Email: mail@amaqgroup.com *Sardine*

TRADE ENQUIRY

5	Ablo Thawfeeq Germany Ph: +49 171 2222036 Email: ablo@umamiglobal.com Web: www.umamiglobal.com *Skipjack Tuna*	6	AMAQ GROUP Jibin Oman Ph: +968 92252480 Email: mail@amaqgroup.com *Sardine*
7	Atayeb Food Trading Establishment Ranjith UAE Ph: +966 56 07 63055 Email: sales@atayeb.com *Fish*	8	GCC Foodstuff Trading LLC Khareem Shaik UAE Ph: +971 50 4485313 Email: khareem@gccft.com *Frozen Skipjack Tuna*
9	Blue Marine Mohamed Zaheer Sait UAE Ph: +971 5 666 8 4401 Email: zaheer@bluemarine.ae *Fish, Tuna*	10	Chartak Fidani Shaukat khujakulov Uzbekistan Ph: +998-90-970-06-04 Email: millux@rawbler.ru *Fish*
11	ESS-FOOD Ruwan Janaka UAE Ph: +971 55 557 8245 Email: ruja@ess-food.com Web: www.ess-food.com *Milkfish, Tuna*	12	Dharmik Chile limitada Suresh K Melwani Chile Ph: +56 987230898 Email: dharamikchile@gmail.com *Frozen & Canned Fish*
13	Youssif F.aboundawood Saudi Arabia Ph: +966 50 300 86 40 Email: yousseffikry@yfaboudawood.com *Fish, Parrotfish, Groupers*		

MIXED ITEMS / OTHERS

1	United Food Co Rami Jabsheh Jordan Ph: +962 79 5521732 Email: info@united-food.com *Pomfret, Shrimp, Squid*	2	Albatross Exim (M) SDN. BHD Wim Yang Schoemaker Malaysia Ph: +60 03-8726 0988 Email: wimyang@albatross-exim.com *King fish, Scampi, Mud Crab*
3	Monda Food UAE Ph: +971 55 819 4786, 55 751 9596 Email:freshshrimpsuae@gmail.com *Shrimp, Fish*	4	Mohammad Zeidan Est Mohammad Zeidar Jordan Email: Moh.zeidar.est@gmail.com *Vannamei Shrimp, Squid, Pomfret*

TRADE ENQUIRY

5	SRI AMBIKAS PTE LTD. Srini Singapore Ph: +65 8795 9789 Email: srini@sriambikas.com *Fish Maws, Shrimp*	6	Bait AL-Sahil Trading LLC Omer Moriwala Oman Ph: +968 9922 5096 Email: bait.alsahi@yahoo.com *Frozen Seafood*
7	Jasheed & Maleh Seafood UAE Ph: +971 0563878480 Email: account@jasheednmaleh.com *Shrimp, Squid*	8	Yaramiri Group M.Reza Yaramiri Ph: +971 555 988 459 Email: m.r@yaramiri.com *Seafood*
9	Agronova Frais Import Reunion Email: clara.tullus@frais-import.com *Lobster, Shrimp*	10	Remal Shathi Al Dafa Trade Oman Email: yunusysin@gmail.com *Squid, Cuttlefish, Shrimp, Octopus*
11	PRAN-RFL GROUP Sameen Chowdhury Bangladesh Ph: +880 1704 158 747 Email: sameen@prangroup.com Web: www.pranfoods.net *Carps, Cuttlefish*	12	Farzana Tajudeen Yusuff UAE Ph: +971 50 211 4472 Email: tajudeen@farzana.com Web: www.farzana.com *All Seafood*
13	Pecom Global Gorkem Cetin Turkey Email: Gorkem.cetin@pecomglobal.com *All Seafood*	14	KOI Restaurant Umer Khan Dubai Ph: +971 0567978906 *Fresh & Frozen Seafood items*
15	Matsuda Sangyo Trading India Pvt. Ltd. Yusuke Taki Mumbai, India Ph: +91-7777-49726, +91 22 6993 1635 Email: Taki-y@matsuda-sangyo.com *All Seafood*	16	Persad's Damion Suresh persad Trinidaa & Tobago Ph: +1868 360-0741 Email: DP@PWDTT.COm *Fish & Shrimp Seed*
17	Terra Foods Thailand Thailand Email: sales_terrafoods@gmail.com Web: www.terrafoods.com *Tuna, Raw seafood material*	18	Ti group LLC Armenia Ph: +374 33555242 Email: import@tigroup.com *Seafood*
19	Eagle Wings Enterprises Tan Abraham Saji India Ph: +91 79949 56940 Email: sale.eaglewings@gmail.com *Seafood*	20	Yaramiri Group M.Reza Yaramiri Ph: +971 555 988 459 Email: m.r@yaramiri.com *Seafood*

TRADE ENQUIRY

21	Roshan Foods Pvt. Ltd. A.H Mohamed babu Kochi, India Ph: +91 484 2327575 Email: info@roshanfoods.com Web: www.roshanfoods.com *Shrimp, Cuttlefish, Fish*	22	WHIBA HOLDING Sharafedeen alkawan UAE Ph:+218 91 565 9696, +337 82 84 1512 Email: s.alkwan@whibaholding.com Web: Whibaholding.com *Seafood*
23	POODAK General Trading LLC Arjun Varyani UAE Ph: +71 55 1897290 Email; Arjunvaryani2002@yahoo.com *Seafood*	24	Sama Advanced Adel Al Salehi Yemen Ph : +967 777 660 251 Email: adel@samaadvanced.com *Tuna, Frozen Food*
25	Price Foods Jacob Vargese UK Ph: +44 7912104109 Email: Info.uk@price-food.com Web: www.prince-foods.com *King Fish, Shrimp*	26	AL-QEMMA LIMITED CO. Khalaf Al Shammari Kuwait Ph: +965 24827574 Email: whitepeakco@yahoo.com whitepeakco@hotmail.com *Frozen Fish, Shrimp*
27	Premier Glenn Gomez Saudi Arbia Ph: +966 54 611 3157 Email: glenn@rowadmarketing.com Web: www.rowadmarketing.com *Reef Fish, Shrimp*	28	Sharjah Asset managament Rashid Al Hammadi UAE Ph: +971 6 597 2222 +971 50 919 1776 Email: rashid.alhammadi@sam.ae *Shrimp, Pomfret*
29	PECOM GLOBAL Gorkem Cetin Turkiye Ph: +90 555 694 8070 Email: gorkem.cetin@pecomglobal.com Web: www.pecomglobal.com *Seafood*		

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SHRIMP

1	Acqua International hahih Zamam, Ex. Director 58, Bagmara Main Road Ground Floor, Khulna – 91000, Bangladesh Ph.: +880 2477724875 Mob: +880 176 6681273 Mob (EU): +358 408014477 Email: zaman@acqua-int.com info@acqua-int.com Web: www.acqua-int.com *Shrimp*	2	Erik Sunde Director Njumbi Road, 34 Lavington P.O. Box No 541, 00606 Sarit Centre, Nairobi, Kenya Ph: +254 722 518 366, +47 900 26 805 : +254 721 863 471 Email: sunde.erik@outlook.com *Shrimp*

TRADE ENQUIRY

3	Oleg laiko Mob: +37127060599 Email: info@thefish.lv *Shrimp*	4	Iryna Bowvyk Ph.: +380730117828 Email: office@vostok *Shrimp*
5	Klara Rozmari G Klaric, Co-owner Str. 1432 No. 46, 1000 Skopje Republic of N. Macedonia Ph.: +389 70 38 08 08 Email: r-info@klara.mk *Shrimp*		

MIXED ITEMS / OTHERS

1	TK – Scampi, Dominik Balzer, Managing Director Lagerstraβe 17, Schlachthof – Tor 1 20357 Hamburg, Germany Ph.: +49 (0) 40 2270 909 Mob: +49 (0) 162 2534 338 Email: d.balzer@tk-scampi.de *Shrimp, Tuna*	2	Sara Food Service Rontgenstraβe 21, 48599 Granau, Z Toma Ph.: +49 2562 8198 400 Mob: +49 151 184 223 83 Email: info@tomandic.de Web: www.tomandic.com *Shrimp, Fish*
3	Lamargo Marija Seratlic, Sales Agent Planina 3, 4000 Kranj, Slovenia Ph.: +381648287326 Email: marija.seratlic@lamargo.eu Web: www.lamargo.eu *Shrimp, Fish*	4	Margenuss GmbH Fernando Cevallos Frankfruit am Main, Germany Ph.: +49 (0) 163 4435587 Email: info@margenuss.de Web: www.margenuss.de *Shrimp, Tuna*
5	Next Ocean Mario Mohr Email: sales@nextocean.eu Web: www.nextocean.eu *Shrimp, Grouper, Tuna*		

Retired MPEDA Officials

Mr. P. N. Vinod
Deputy Director (Aqua),
MPEDA Head Office, Kochi

Mr. Prafulla Kumar Sahoo
Caretaker, MPEDA RD,
Bhubaneswar

Mr. Sankarbhai Mangalbhai Tandel
Field Assistant,
MPEDA SRD, Valsad

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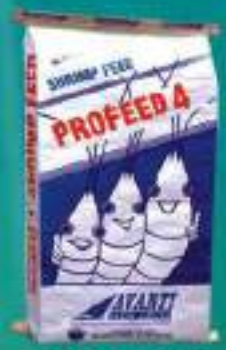

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