



MPEDA

Newsletter

VOL. XII NO. 10 JANUARY 2025



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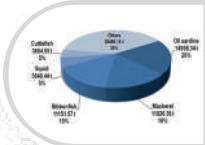
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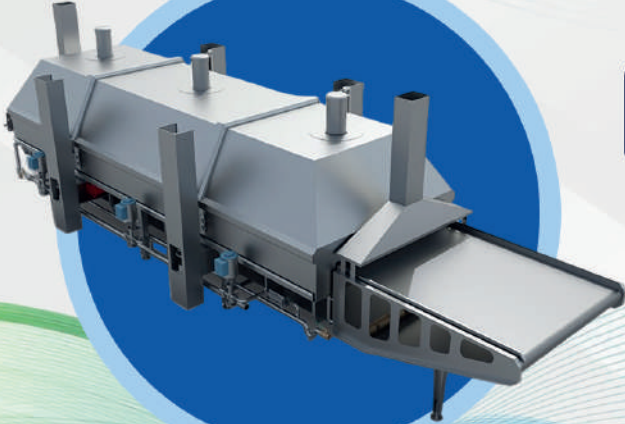
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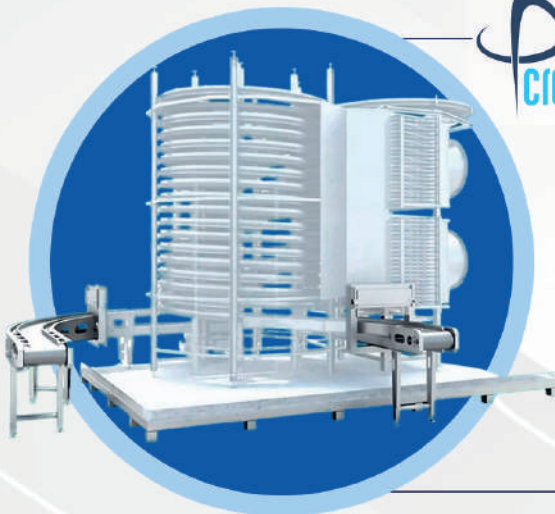
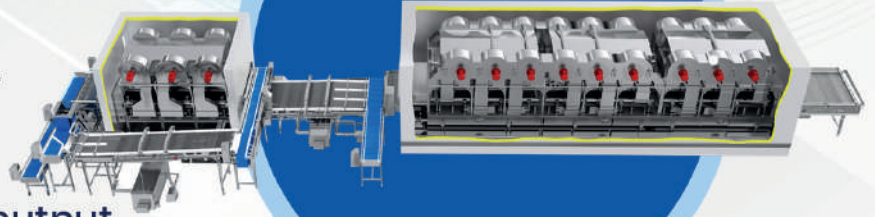
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D.V. Swamy IAS
Chairman

Dear friends,

Wishing you all a very Happy New Year!

As we step into the new year, MPEDA is poised to embrace new challenges as it continues to play a pivotal role in positioning India as a global leader in seafood exports. One of its key initiatives this year is the conceptualisation of the first edition of Seafood Expo Bharat (SEB), an annual event to demonstrate India's integrated strengths in seafood processing, cutting-edge aquaculture technology, and global export infrastructure.

Meanwhile, India's marine sector continues its steady evolution, and one key area showing great promise is irradiation technology, rapidly gaining global attention as a reliable method for enhancing seafood safety and extending shelf life. With numerous technological inventions and advancements, it is poised to become more affordable, efficient, and accessible, while also leading to better preservation of food safety and nutritional value.

Throughout December 2024, MPEDA's efforts focused on reinforcing food safety practices, improving market access, and empowering fishing communities across coastal India. As part of this initiative, MPEDA conducted a four-day training programme on seafood HACCP from 10th to 13th December in Mangalore. Additionally, the MPEDA Regional Division, Mumbai, in collaboration with the Mangrove Cell of Maharashtra, conducted a series of training and capacity-building programmes in the Sindhudurg district, including sessions on ornamental fish farming and box crab farming.

Moreover, the Department of Fisheries and Fishermen Welfare, Union Territory of Puducherry, in collaboration with MPEDA-NETFISH, organised an exposure visit for 30 members of the boat owners' association, spanning key fishing harbours and seafood processing plants across Kerala, Karnataka, Goa, and Maharashtra from 2nd to 9th December 2024. The initiative aimed to highlight best practices in hygiene and harbour management while also providing a platform for dialogue with seafood buyers to address the issue of market access for Puducherry fishers. Buyer-seller meetings were facilitated in Cochin and Mangalore, where local buyers expressed strong interest in sourcing seafood directly from Puducherry, recognising its rich fishing grounds and quality catch.

Meanwhile, MPEDA is set to participate in major international seafood fairs, such as Gulfood 2025 from 17th to 21st February, Seafood Expo North America from 16th to 18th March 2025, and Seafood Expo Global from 6th to 8th May 2025, providing an excellent opportunity to showcase India's diverse marine offerings and engage with international buyers.

Thank you.

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India's seafood in the spotlight: MPEDA at BISFE 2024

The Busan International Seafood & Fisheries Expo 2024 (BISFE-2024), held annually in Busan, South Korea, stands as the largest comprehensive fisheries trade fair in Korea and one of the top three in Asia. Serving as a vital platform, BISFE showcases seafood products, cutting-edge fishing technologies, and sustainable practices, all of which are shaping the future of the seafood industry worldwide. BISFE 2024, held from 6th to 8th November at BEXCO Exhibition Hall in Busan attracted 380 companies from 22 countries featuring 1,062 booths. This UFI (The Global Association of the Exhibition Industry) approved event, brought together a diverse mix of leaders, exporters, suppliers, and buyers in the fishery industry.

Mr. Nishi Kant Singh IFS, Deputy Chief of Mission, Embassy of India, Seoul and Mr. Praveen Kumar IES, Director, Department of Commerce, Ministry of Commerce & Industry, Govt. of India, attended the opening ceremony of BISFE 2024.



VVIPs from different countries inaugurating BISFE 2024

Indian pavilion

MPEDA's participation in BISFE 2024 aimed at enhancing India's presence in the global seafood market, particularly in South Korea, which is a growing market for high-quality seafood products. The Indian pavilion, covering an area of 108 sq. m. had a captivating display of the finest seafood India had to offer.

The grand opening of the India Pavilion was a momentous occasion, graced by the presence of esteemed dignitaries. Mr. Nishi Kant Singh IFS, Deputy Chief of Mission, Embassy of India, Seoul, South Korea, officially inaugurated the pavilion. The delegation from India was led by Mr. Praveen Kumar IES, Director, Department of Commerce, Ministry of Commerce & Industry, Govt. of India, along with Dr. Abhilash and Mr. Darshan Lal, Assistant Directors of MPEDA.

After the official inauguration of the expo, VIPs comprising officials from Korean authorities, ambassadors of various importing countries and guests headed by Mr. Park Heong-Joon, the



View of the Indian pavilion



Inauguration of the Indian pavilion

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Mayor of Busan Metropolitan City, visited the MPEDA pavilion. Mr. Praveen and Mr. Nishi Kant Singh briefed the dignitaries on the 'Exports of Indian Seafood to South Korea' and opportunities to expand the exports further. All the guests were served various continental cuisines prepared with Indian seafood.

Cooking demo

The cooking demonstration at the India pavilion became one of the major highlights of the event, offering visitors a delightful array of Indian, Korean, and fusion dishes featuring Indian seafood. Led by the highly skilled Chef Mr. Shyam Paliwal from Bombay Brau Restaurant in Haeundae, the live cooking sessions captivated attendees as they sampled freshly prepared dishes.



View of cooking demo, dishes prepared and the tasting session

Business matchmaking and collaboration

Beyond the culinary experience, BISFE 2024 proved to be a vital hub for business matchmaking and collaboration. MPEDA's designated officers provided insightful briefing on India's seafood industry, highlighting the sector's quality,

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sustainability, and the strength of its processing capabilities. The team also addressed numerous queries, further sparking interest. Details on the trade enquiries received at the show can be found in the corresponding section of this newsletter.

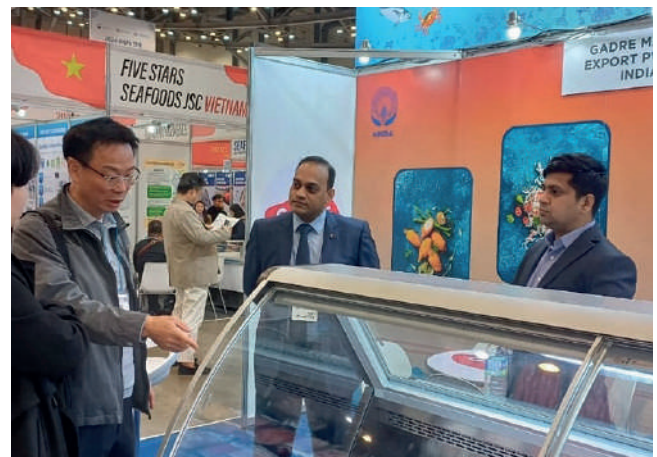


MPEDA officials briefing the visitors

The India Pavilion, showcasing the stalls of seven prominent co-exhibitors, highlighted the best of India's seafood export sector. These companies engaged in dynamic business interactions, forging new partnerships and reinforcing existing ties, further solidifying India's presence in the global seafood market. They were grateful for the valuable platform provided and are eagerly looking forward to participating in BISFE 2025.

Co-exhibitors in MPEDA pavilion

1. M/s. Gadre Marine Export Pvt. Ltd.
2. M/s. Ahmed Foods
3. M/s. Munnangi Seafoods
4. M/s. Ulka Seafoods Pvt. Ltd.
5. M/s. Sealine Marine
6. M/s. Hameed Marine
7. M/s. Paramadha Marine



Views of co-exhibiting exporters interacting with buyers

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Co-exhibitor stalls



Director, DoC, MPEDA officials alongside the co-exhibitors at the India pavilion

Application of Irradiation Technology in fish and fisheries products

Bhushan Patil, Assistant Director & Shreya Mayekar, Junior Technical Officer,
MPEDA Regional Division, Mumbai

Irradiation technology, a scientifically recognised method of food preservation, has gained significant traction in the seafood industry for its ability to enhance product shelf life and quality. By using controlled doses of ionizing radiation, this technology helps to reduce microbial load, prevent spoilage, and retain nutritional quality in seafood, thereby ensuring food safety while extending the product's marketable lifespan. This article explores the role of irradiation technology in fish and fisheries product's preservation and the advantages and challenges associated with it.

Introduction to irradiation technology in seafood

Food irradiation involves exposing seafood to ionizing radiation, typically gamma rays, electron beams, or X-rays. This process disrupts the DNA of bacteria, parasites, and other pathogens, inactivating them without substantially raising the temperature or altering the organoleptic qualities of the food. For highly perishable seafood like shrimp, shellfish, and various fish species, irradiation offers a non-thermal method of preservation that can maintain sensory and nutritional quality, making it a viable alternative to traditional preservation methods.

Mechanism of irradiation in seafood preservation

Radiation dose is usually expressed in terms of how much radiation energy has been absorbed by the volume (mass) of a food product. The International System of Units (SI) uses the unit Gray (Gy). One Gray is equal to 1 joule of energy absorbed per kilogram of food mass. Dose ranges useful in seafood applications may vary between 1 to 10 kGy (kilo Grays). The irradiation process

targets specific spoilage and pathogenic organisms within the seafood. Low doses (up to 1 kGy) inhibit insect infestation and slow enzymatic activity, while moderate doses (1-3 kGy) are effective for microbial inactivation, particularly for foodborne pathogens such as *Listeria monocytogenes*, *Salmonella spp.*, and *Vibrio spp.*

Benefits of irradiation in seafood processing

1. Extended shelf life: Irradiation can extend the shelf life of seafood by significantly reducing spoilage bacteria and other microorganisms. Studies reveal that irradiated seafood can have its refrigerated shelf life extended up to two weeks, an invaluable benefit for reaching distant markets (FAO, 2023).

2. Enhanced food safety: Irradiation is particularly effective in reducing pathogens and improving the microbiological safety of seafood products. According to reports by the World Health Organization (WHO) and FAO, irradiation helps eliminate pathogens without creating harmful chemical residues, thus reducing the risk of foodborne illnesses.

3. Nutritional quality preservation: Unlike thermal processing, irradiation does not significantly alter the nutritional profile of seafood. Proteins, vitamins, and omega-3 fatty acids remain stable during the irradiation process, preserving the nutritional benefits essential for health-conscious consumers.

4. Eco-Friendly alternative to chemicals: As irradiation leaves no chemical residues, it is an environmentally friendly option. This is increasingly attractive to both consumers and markets,

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particularly in regions with strict regulations on chemical preservatives.

5. Packaging of irradiated fish: Many plastic materials can be used with irradiated foods, and flexible packaging offers unique benefits. The properties of polymeric packaging materials can also be enhanced by ionizing radiation, which can also inactivate any microorganisms that the material may have encountered before coming into contact with the food. Extractives from the package shouldn't contaminate food when they come into contact with it. The food inside is not made radioactive by the packaging material's self-irradiation. Irradiated foods must be marked with the green international logo called "Radura



The Radura logo



*Irradiated products © Giorgiana M. Catunescu
(www.researchgate.net)*

symbol" to indicate that they have undergone ionizing radiation processing. The words "Treated with radiation" or "Treated by irradiation" must be at least one-third the size of the largest letter in

the product name and must be printed in the same style as the name of the product. The labelling of prepackaged irradiated foods should indicate the treatment, and in all aspects, should be by the relevant provisions of the Codex General Standard for the Labelling of Prepackaged Foods.

Current trends in Irradiation technology in seafood

At the Food Irradiation Processing Laboratory (FIPLY), Bhabha Atomic Research Centre, Mumbai, India's first pilot radiation processing facility, known as "The Food Package Irradiator," was put into service in 1967. Later, four government-run food irradiation facilities were put into service in the states of Gujarat and Maharashtra. (1) Gujarat Agro Industries Corporation Limited, Ahmedabad; (2) Irradiation Facility Center (IFC), Maharashtra State Agriculture and Marketing Board (MSAMB), Vashi; (3) Radiation Processing Plant (RPP), Vashi; and (4) Krishi Utpadan Sanrakshan Kendra (KRUSHAK), Nashik.

Fresh fruit and vegetable treatment was the main function of three of these facilities (apart from RPP and at Vashi). Twenty more plants have been developed through private entrepreneurship in the past 20 years. As a result, the nation today has 24 gamma irradiation plants that treat food and related products. One of the key factors for successful processing is determining the necessary radiation dose, which is handled by R&D operations at the Food Technology Division, BARC, Mumbai. This depends on both the commodity's nature and its intended use. First, by modifying the Prevention of Food Adulteration Act (1954) Rules, the Indian government authorised the radiation processing of onions, potatoes, and spices for the domestic market in 1994.

Recently, the Food Safety and Standards Authority of India (FSSAI) have endorsed 'Generic class-based approval of radiation processing of food' which is as per the Radiation Processing of Food

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and Allied Products Rules, 2012. This has been subsequently Gazette notified by the Government of India in 2016.

Future of irradiation technology in seafood

The future of irradiation technology in seafood and food preservation is poised for significant growth, driven by advancements in radiation equipment and a rising demand for safe, long-lasting, and high-quality food products. As more irradiation facilities are established globally, particularly in developing countries, the cost-effectiveness and efficiency of the technology will improve with innovations in gamma sources, electron beam accelerators, and X-ray systems. Precision in radiation dosages will continue to evolve, ensuring better preservation of both food safety and nutritional quality. Additionally, the integration of irradiation with other preservation methods and advancements in sustainable practices will contribute to its wider adoption.

Public awareness and acceptance of irradiated foods are expected to increase as more research confirms its safety and benefits, with clearer labelling and educational efforts helping reduce consumer hesitation. The growth of global food trade will further support the expansion of irradiation technologies, with international regulatory frameworks becoming more standardised. Ultimately, as the technology becomes more affordable, sustainable, and widely accepted, irradiation will play a critical role in the preservation of seafood and other food products, contributing to a safer, more efficient global food supply chain.

Challenges and the road ahead

Despite its numerous benefits, the widespread use of irradiation in seafood preservation faces some challenges. The high initial investment in irradiation equipment, as well as consumer perception concerns regarding the safety and acceptability of irradiated products, are key

barriers. Public awareness and education will play a crucial role in overcoming these hurdles.

Additionally, India's food irradiation infrastructure is still underdeveloped, with a limited number of plants compared to the country's vast agricultural and seafood production. To meet growing demand, there is an urgent need for more irradiation facilities, along with adequate cold storage and transportation systems to support the expansion of irradiated food products.

Conclusion

While maintaining food safety, irradiation technology offers a very efficient way to reduce post-harvest losses. It has aided in the removal of the trade quarantine barrier, allowing food to be imported from all over the world, including the United States. In India, the availability of food irradiation plants is limited compared to the quantity of produce produced, which limits the availability of radiation-treated food in the local market. There is a huge demand for additional food irradiation plants in addition to cold chain, storage, and suitable transportation facilities. Food irradiation is being established with financial assistance from the Ministry of Food Processing and Industries (MoFPI). BARC's research efforts are focused on creating Standard Operating Procedures (SOPs) that use irradiation technology to preserve and assess the quality of a variety of food commodities and related products.

Irradiation technology offers significant advantages for seafood preservation, enhancing safety, extending shelf life, and maintaining nutritional quality. As the global seafood industry grows and export markets demand higher safety standards, irradiation represents a viable method that can meet these needs. While challenges in consumer perception and infrastructure remain, continued research and public education are likely to position irradiation as a leading technology for safe, high-quality seafood preservation.

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Marine landings report - October 2024

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

MPEDA-NETFISH collects real-time data on marine landings from around 100 major fishing harbours and landing centres 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. Real-time information on incoming fishing vessels and approximate catch landed by these vessels, specific to each species, are collected and uploaded into the MPEDA catch portal daily. This report presents an overview of the trends observed in marine landings during October 2024.

1. Observations on catch landings

In October 2024, data on marine catch landings was gathered from 80 fish landing sites scattered along the coastal states of India. The cumulative catch for the month amounted to 75,049.38 tons. The pelagic finfishes dominated the catch with a substantial 66% share, accounting for 49,289.49 tons. Demersal finfishes followed at 17%, contributing 12,747.91 tons to the overall catch. Crustaceans claimed a 7% share, representing 4,882.28 tons, while molluscs contributed 11% share, with 8,129.71 tons (refer Fig. 1).

The landings during the period comprised 225 species, encompassing both marine finfishes and shellfishes. The five dominant species of the

month were *Sardinella longiceps*, *Rastrelliger kanagurta*, *Lepturacanthus savala*, *Uroteuthis duvaucelii* and *Trichiurus lepturus* (refer Table 1).

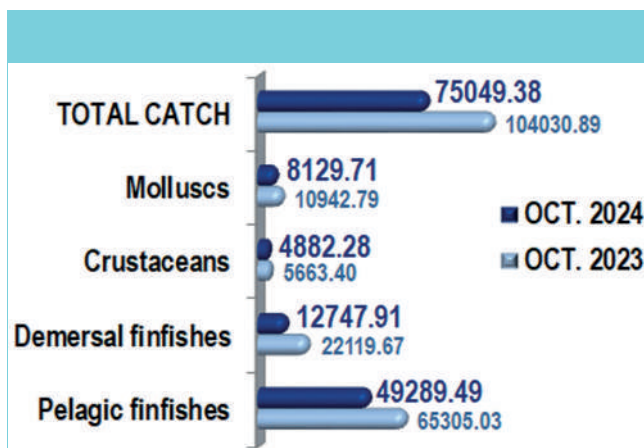


Fig. 1: Catch composition of marine landings (in tons) in October 2024

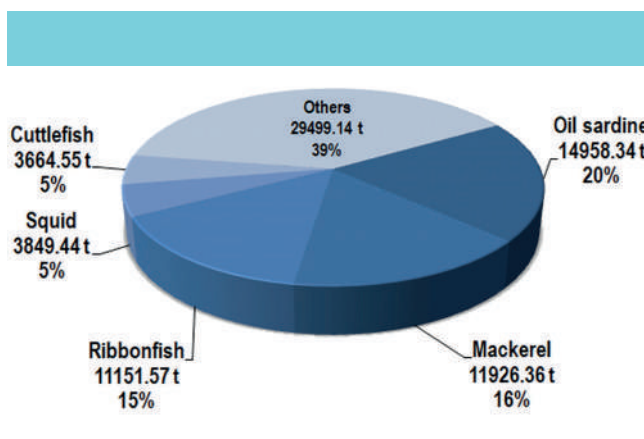


Fig. 2: Major five fishery items landed in October 2024

SI. No.	Common name	Scientific name	Quantity (tons)
1	Indian oil sardine	<i>Sardinella longiceps</i>	14,958.34
2	Indian mackerel	<i>Rastrelliger kanagurta</i>	11,926.36
3	Ribbonfish-Savalai hairtail	<i>Lepturacanthus savala</i>	8,387.49
4	Indian squid	<i>Uroteuthis duvaucelii</i>	3,754.40
5	Ribbonfish-Largehead hairtail	<i>Trichiurus lepturus</i>	2,764.07

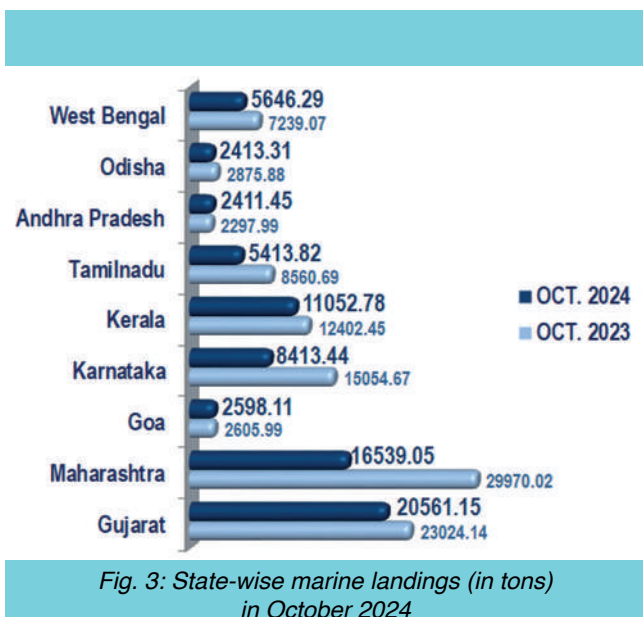
Table 1: Top five species landed during October 2024

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Analysis of the group-wise landing data showed that Oil sardine, Mackerel, Ribbon fish, Squid and Cuttlefish were the dominant items landed in the month (refer Fig. 2). These top five fishery items accounted for 61% of the total catch. Other notable landed items included Coastal shrimps & Tunas.

Oil Sardine, Mackerel & Ribbon fish dominated the pelagic finfish landings, while Croakers and Threadfin Breams were the major demersal catches. Coastal shrimps constituted over 73% of the total crustacean harvest, with *Karikkadi* shrimp (*Parapenaeopsis stylifera*) being the most abundant species, with a catch of 1,244.70 tons. Squid and Cuttlefish were the major molluscs landed during the month.

State-wise landings: The north-western state of Gujarat recorded the highest marine fish landings in October 2024, with 20,561.15 tons, accounting for more than 27% of the total catch (refer Fig. 3). Maharashtra and Kerala followed, with catch landings of 16,539.05 tons (22%) and 11,052.78 tons (15%), respectively. Karnataka had a share of 11% and Goa had 3%. Together, the western coastal states accounted for 79% of the total marine fish landings. Among the eastern coastal



states, West Bengal and Tamil Nadu were in the lead, each contributing around 8% and 7% respectively to the total catch and Odisha and Andhra Pradesh had contributed 3% each to the total catch.

Harbour-wise landings: Ratnagiri Mirkarwada harbour in Maharashtra recorded the highest fish landings in October 2024 among the 80 selected fish landing sites, with a landing of 8,778.80 tons. This was followed by Vanakbara & Veraval harbours in Gujarat, with 6,041.63 tons and 5,819.91 tons respectively. Table 2 lists the top ten harbours in terms of total catch quantity landed.

Sl. No.	Harbour	Quantity (tons)
1	Ratnagiri	8,778.80
2	Vanakbara	6,041.63
3	Veraval	5,819.91
4	Porbandar	4,178.20
5	Mangrol	3,945.85
6	Sakharinate	2,571.13
7	Karwar	2,209.65
8	Beypore	2,161.39
9	Amdalli	2,150.95
10	Thoppumpady	2,079.57

Table 2: Top ten harbours based on catch landings

2. Observations on boat arrivals

The number of fishing vessel arrivals recorded from the 80 designated fish landing sites totalled 29,757. Gujarat recorded the highest number of boat arrivals, with 7,250 nos., accounting for 24% of the total. Kerala and Maharashtra were the next in line (refer to Fig. 4).

Considering the harbour-wise boat arrivals, the Mangrol and Veraval harbours in Gujarat were in the top, with 1,931 nos. and 1,874 nos. of boat arrivals, respectively.

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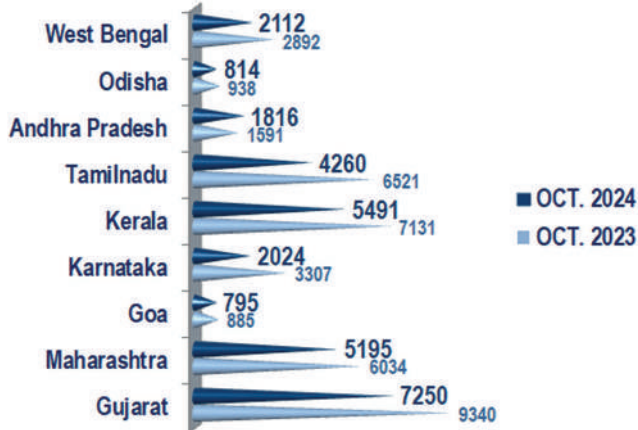


Fig. 4: State-wise boat arrivals (nos.) in October 2024

Summary

During October 2024, marine landings and boat arrivals from the 80 major fish landing sites in

India totalled 75,049.38 tons and 29,757 vessels, respectively. An increase of more than 13,000 tons in catch landings and 2600 nos. in boat arrivals was noted when compared to the previous month (September 2024).

Pelagic finfish resources continued as the major contributor to the overall catch, with *Sardinella longiceps* (Indian oil sardine) continuing as the most landed species of the month. Gujarat retained the top position among the states in terms of catch landings as well as vessel arrival.

Among the various landing sites, Ratnagiri harbour in Maharashtra attained the top position in terms of catch landings, while Mangrol harbour remained in the prime position with the most number of boat arrivals.



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Marine landings report - November 2024

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

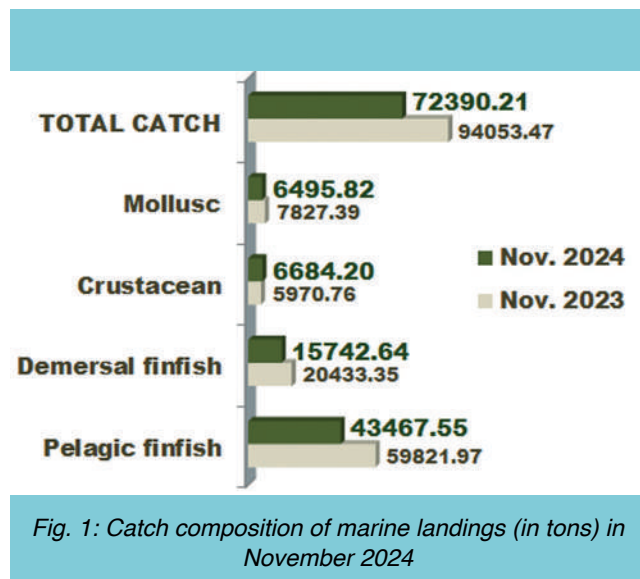
MPEDA-NETFISH collects real-time data on marine landings from around 100 major fishing harbours and landing centres in India for supporting traceability and MPEDA's catch certification system. Regular tracking of marine landings is done through the Harbour Data Collectors stationed at selected locations. Real-time information on incoming fishing vessels and approximate catch landed by these vessels, specific to each species, are collected and uploaded into the MPEDA catch portal daily. This report presents an overview of the trends observed in marine landings during November 2024.

1. Observations on catch landings

In November 2024, data on marine catch landings was gathered from 78 fish landing sites scattered along the coastal states of India. The cumulative catch for the month amounted to 72,390.21 tons. The pelagic finfishes dominated the catch with a substantial 60% share, accounting for 43,467.55 tons. Demersal finfishes followed at 22%, contributing 15,742.64 tons to the overall catch. Crustaceans claimed a 9% share, representing 6,684.20 tons, while molluscs contributed 9% share, with 6,495.82 tons (Fig. 1).

The landings during the period comprised 223 species, encompassing both marine finfishes and shellfishes. The five dominant species of

the month were *Rastrelliger kanagurta*, *Sardinella longiceps*, *Lepturacanthus savala*, *Nemipterus japonicus* and *Uroteuthis duvaucelii* (refer Table 1).



Analysis of the group-wise landing data showed that Mackerel, Ribbon fish, Oil sardine, Coastal shrimps, and Croakers were the dominant items landed in the month (Fig. 2). These top five fishery items accounted for 56% of the total catch. Other notable landed items included Tunas, Cuttlefish & Threadfin breams.

Mackerel, Ribbon fish & Oil Sardine dominated the pelagic finfish landings, while Croakers and Threadfin Breams were the major demersal

Sl. No.	Common name	Scientific name	Quantity (tons)
1	Indian mackerel	<i>Rastrelliger kanagurta</i>	14,370.58
2	Indian oil sardine	<i>Sardinella longiceps</i>	7,072.01
3	Ribbon fish	<i>Lepturacanthus savala</i>	6,657.44
4	Japanese threadfin bream	<i>Nemipterus japonicus</i>	3,118.25
5	Indian squid	<i>Uroteuthis duvaucelii</i>	2,412.73

Table 1: Top five species landed during November 2024

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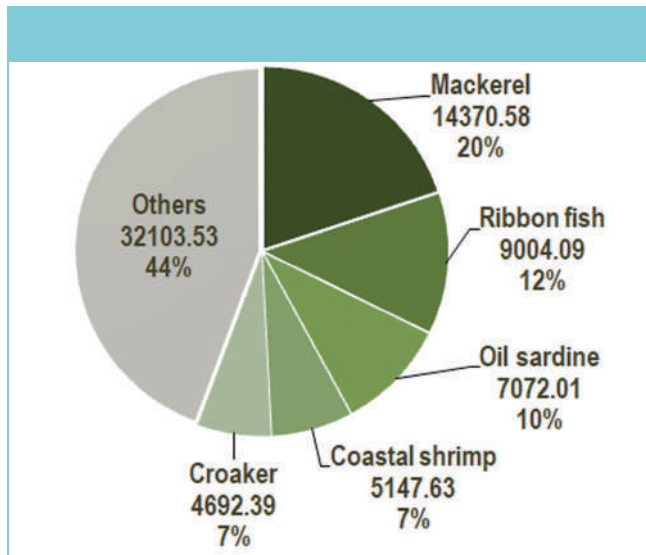


Fig. 2: Major five fishery items landed in November 2024

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 2,036.87 tons. Squid and Cuttlefish were the major molluscs landed during the month.

State-wise landings: The state of Maharashtra recorded the highest marine fish landings in November 2024, with 20,229.23 tons, accounting for more than 28% of the total catch (Fig. 3). Gujarat and Kerala followed, with catch landings of 17,371.04 tons (24%) and 9,158.95 tons (13%), respectively. Karnataka had a share of 7% and Goa had 3%. Together, the western coastal states accounted for 75% of the total marine fish landings. Among the eastern coastal states, West Bengal and Tamil Nadu were in the lead, each contributing around 10% and 6% respectively to the total catch. Odisha and Andhra Pradesh had a share of 5% & 4% respectively.

Harbour-wise landings: Ratnagiri Mirkarwada harbour in Maharashtra recorded the highest fish landings in November 2024 among the 78 selected fish landing sites, with a landing of 8,428.80 tons (12%). This was followed by Vanakbara & New Ferry Wharf harbours, with 5,166.99 tons (7%) and 4,433.73 tons (6%) respectively. Table 2

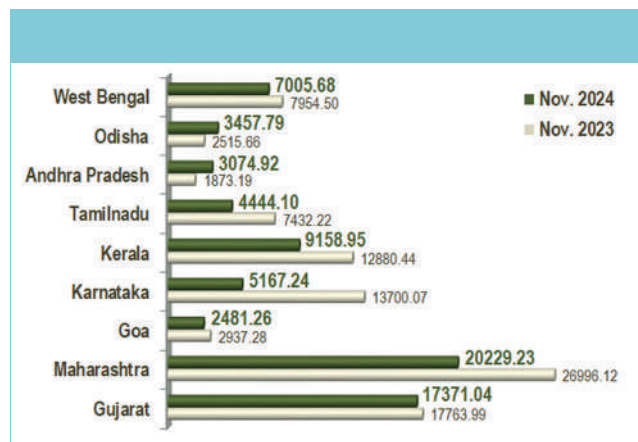


Fig. 3: State-wise Marine Landings (in tons) in November 2024

lists the top ten harbours in terms of total catch quantity landed.

Sl. No.	Harbour	Quantity (tons)
1	Ratnagiri	8428.80
2	Vanakbara	5166.99
3	New Ferry Wharf	4433.73
4	Mangrol	4119.03
5	Porbandar	4053.30
6	Veraval	3546.36
7	Petuaghat Deshapran	2559.97
8	Sakharinate	2278.05
9	Munambam	1931.02
10	Chennai	1646.98

Table 2: Top ten harbours based on catch landings

2. Observations on boat arrivals

The number of fishing vessel arrivals recorded from the 78 designated fish landing sites totalled 30,135. Gujarat recorded the highest number of boat arrivals, with 6,917 accounting for 23% of the total. Maharashtra and Kerala were the next in line (Fig. 4). Considering the harbour-wise boat arrivals, the Mangrol and Veraval harbours in Gujarat were in the top, with 1,918 and 1,591 of boat arrivals, respectively.

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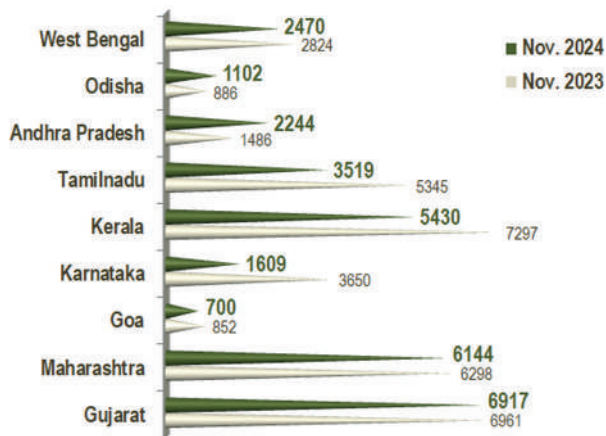


Fig. 4: State-wise boat arrivals (nos.) in November 2024

Summary

During November 2024, marine landings and boat arrivals from the 78 major fish landing sites in India

totalled to 72,390.21 tons and 30,135 vessels, respectively. A decline of over 2,600 tons in fish landings was observed compared to the previous month (October 2024). Conversely, boat arrivals increased by more than 350 vessels during the same period.

Pelagic finfish resources continued to dominate the overall catch, with Indian mackerel (*Rastrelliger kanagurta*) as the most landed species of the month. Maharashtra ranked first among the states in fish catch landings, whereas Gujarat maintained its top position in vessel arrivals.

Among the various landing sites, Ratnagiri harbour in Maharashtra continued in the top position in terms of catch landings, while Mangrol harbour remained in the prime position with the most number of boat arrivals.





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Monthly outlook forecast report

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USD INR

Throughout December, the USD INR pair consistently reached new all-time highs, setting records in 13 out of 21 trading sessions. The Indian rupee depreciated by 1.34% against the U.S. dollar during this period. This decline was primarily driven by strong demand for the U.S. dollar linked to the expiry of December currency futures contracts, maturing non-deliverable forward (NDF) positions, month-end dollar requirements, and the ongoing dollar rally fuelled by expectations of higher growth and inflation in the upcoming months. The dollar index gained nearly 3% in December, with a significant surge following the Federal Open Market Committee (FOMC) meeting. During this meeting, the Federal Reserve cut interest rates by 25 basis points but adopted a cautious approach, signalling slower rate cuts in 2025 due to anticipated increases in U.S. growth and inflation. The pressure on the rupee intensified as India's economic growth slowed to a seven-quarter low of 5.4% in the second quarter of FY 2024-25, down from 8.1% in the same period last year and 6.7% in the previous quarter. This slowdown limits the Reserve Bank of India's (RBI) flexibility amid expectations of global economic turbulence in 2025.

In response to the economic slowdown, the RBI kept its key interest rate unchanged at 6.5% during its December meeting but reduced the cash reserve ratio (CRR) by 50 basis points to 4%, marking the first reduction in over four years. This move is expected to inject approximately 1.16 trillion (\$13.72 billion) into the banking system, effectively easing monetary conditions. Additionally, the rupee's overvaluation compared to other Asian currencies contributed to its depreciation as other Asian currencies weakened more significantly than the Indian rupee. Since

September 24, the average depreciation of Asian currencies is as follows: Chinese Yuan (2.81%), Korean Won (10%), Singapore Dollar (4.84%), Malaysian Ringgit (3.38%), Indonesian Rupiah (4.29%), and Indian Rupee by just 2.18%. Looking ahead, three critical factors could influence the rupee's trajectory: geopolitical developments, particularly as U.S. President-elect Donald Trump assumes office in January; the upcoming Union Budget; and the Monetary Policy Committee's decisions in February.

In December 2024, the Indian rupee depreciated by 1.34% against the U.S. dollar, reaching an all-time low of 85.8075. This decline was driven by strong demand for the dollar due to the expiry of currency futures contracts, maturing non-deliverable forward positions, and month-end dollar requirements. Additionally, the ongoing dollar rally, fuelled by expectations of higher U.S. growth and inflation, and the rupee's overvaluation compared to other Asian currencies, contributed to its weakness.

As per the daily frame chart, the USD INR pair's strong uptrend remains intact, having broken above the previously identified ascending trend channel. However, the 14-day Relative Strength Index (RSI) stands at 82.96, suggesting overbought conditions and the possibility of consolidation before further appreciation. The first resistance level is at the all-time high of 85.82, with sustained trading above this potentially leading to the psychological mark of 86.00. On the downside, initial support is around 85.50-85.55, the previous low.

In light of market volatility, effective risk management is crucial. Exporters are advised to maintain a 50% hedge position by selling USD/INR, while importers should actively hedge

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at every small dip. Keeping unhedged exposures can adversely affect business profitability during such volatile times.

EUR USD

The EUR USD pair hit a weekly high of 1.0629 early in the month but ended the first week flat near 1.0570. Initial Euro gains, supported by political stability in France and ECB rate cuts, were overshadowed by a stronger US Dollar driven by the Federal Reserve's hawkish outlook and robust US economic data. The ECB lowered rates for the fourth time this year, citing lower inflation but revised GDP growth forecasts downward to 0.7% for 2024 and 1.1% for 2025, reflecting the Eurozone's economic struggles. Flash PMIs showed slower private sector contraction, though Germany and France underperformed. Inflation eased to 2.2%, but persistent challenges in services inflation and political uncertainty in key Eurozone nations weighed on the Euro. Meanwhile, the Federal Reserve's reduced rate cut expectations for 2025 bolstered the Dollar. EUR USD stabilised around 1.0400 but remains under pressure amid divergent central bank policies and mixed economic signals. The EUR USD remains cautious, with the Euro under pressure from ECB rate cuts and economic struggles. Political instability and inflation concerns in the Eurozone add to uncertainty, while a strong US Dollar, supported by the Fed's hawkish stance, limits gains.

The EUR USD pair experienced a steady decline this month, opening at 1.0564 and finding initial support near 1.0500. Persistent dollar strength,

driven by a Trump victory and divergent interest rate expectations between the Eurozone and the U.S., pushed the pair to a low of 1.0342. The 1.0300–1.0400 range provided strong support, limiting further losses despite the inability to breach 1.0500 resistance. Immediate resistance is seen at 1.0450-1.0500, with a broader zone at 1.0600-1.0700. On the downside, 1.0200 remains a critical support level; a break below this could target the 1.0000-1.0100 range. Traders should monitor Eurozone economic data and remain cautious amid ongoing geopolitical and macroeconomic uncertainties. Key support and resistance levels will likely dictate the pair's direction in the short term, offering potential trading opportunities.



GBP USD

The GBP USD pair saw a brief recovery early in the month, climbing above 1.2750 before falling to a weekly low of 1.2617. Despite dovish remarks from Bank of England (BoE) Governor Andrew Bailey, who hinted at possible rate cuts in 2025, the Pound regained momentum, reaching a three-week high above 1.2750. Inflation surprised with a rise to 2.3% in October, while GDP shrank by 0.1%, highlighting economic challenges. Later in the week, persistent USD demand, driven by geopolitical tensions and elevated Treasury yields, pushed the pair lower, hitting 1.2470 before recovering to 1.2500. The BoE held rates steady at 4.75%, but a split vote raised concerns about faster rate cuts. UK Retail Sales disappointed, reflecting weak consumer activity. With GDP stagnation and slower growth revisions, the UK economy faces hurdles, complicating Prime Minister Keir

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Starmer's goal of leading G7 growth. The pair remains on track for a weekly loss. The GBP USD remains cautious amid economic uncertainty, with potential BoE rate cuts in 2025 weighing on the Pound. Persistent USD strength, driven by safe-haven demand and elevated Treasury yields, may keep the pair under downward pressure.

The GBP USD pair faced continued downside this month, losing over 200 pips from its high of 1.2811 and hitting a seven-month low of 1.2474 before settling near the lows. The 1.2500 zone provided robust support on the daily chart, halting further declines. The MACD indicator shows a mixed trend, with the MACD line moving toward significant negative levels, hinting at potential additional losses. Immediate support is located at 1.2500, with the next level at 1.2400 if breached. On the upside, resistance is seen at 1.2750, with a breakout possibly targeting the 1.2800 level. Traders should stay vigilant, as economic data and market developments could heavily influence the pair's trajectory in the coming weeks. Key support and resistance levels remain critical for identifying potential trading opportunities.



USD JPY

The USD JPY stabilised near 150 on the first week of the month after Japan's real wages remained flat in October, marking an improvement from declines in prior months. Despite modest gains, the Yen struggled due to mixed economic signals and market uncertainty over a potential Bank of Japan rate hike. While Governor Kazuo Ueda suggested a possible hike as the economy aligns

with forecasts, board member Toyoaki Nakamura raised doubts about wage growth sustainability, leading to a divided market view on timing. Inflation rose to a three-month high of 2.9% in November, with core inflation exceeding expectations. However, the BoJ left rates unchanged in December, citing global uncertainties and the need for more wage data. The Yen faced additional pressure from a strong US dollar, supported by the Federal Reserve's policy outlook. Japan's economic data painted a mixed picture, with rising retail sales, shrinking industrial production, and steady unemployment. The USD JPY hinges on Bank of Japan's rate hike timing, with inflation and wage growth as key factors. Persistent US dollar strength and mixed Japanese economic data may keep the Yen under pressure in the near term.

The USD JPY pair maintained a bullish trend this month, starting near the 150 level, which transitioned from strong resistance to key support in recent months. The pair surged to a five-month high of 158.08, fuelled by dollar strength following Trump's election victory and the Bank of Japan's confirmation of its December rate hike plans. Currently trading above 157, this area acts as a short-term resistance. Immediate support lies within the 155-156 range, a former resistance zone turned strong support, with 150 as the next significant support below. On the upside, the 157-158 range serves as a critical psychological barrier; a sustained breakout could pave the way for a rally toward the 160 level. Traders should monitor U.S. political developments and BoJ monetary policy updates, as these factors will likely shape the pair's trajectory in the coming weeks.



GCF-ECRICC-assisted training programmes

MPEDA Regional Division, Mumbai, in collaboration with the Mangrove Cell of Maharashtra, conducted a series of training and capacity-building programmes in the Sindhudurg district to benefit coastal communities. These initiatives were sponsored under the Green Climate Fund (GCF) project on Enhancing Climate Resilience of India's Coastal Communities (ECRICC) and were inaugurated by Mr. Rohit Sawant, District Coordinator of GCF-ECRICC. The programmes were coordinated by the staff of the UNDP project in Malvan, alongside officials from the MPEDA Regional Division, Mumbai including Mr. Mangesh Gawde, Field Supervisor, Ms. Shreya Mayekar, Junior Technical Officer and Ms. Shalaka Salunkhe, Clerk.

1. One-day capacity building programme on Box Crab Farming

A capacity-building programme on box crab farming was held on 19th December 2024 in Malvan, Sindhudurg district. The training saw participation from 15 members of three self-help groups formed under the GCF-ECRICC project.

The sessions were led by Ms. Shalaka Salunkhe and Mr. Mangesh Gawde. In the afternoon, participants visited a box crab rearing unit at Khot Juve set up by an SHG under the guidance of Mr. Kedar Palav, Livelihood Specialist, Mangrove Foundation providing valuable hands-on experience.



Ms. Shalaka Salunkhe delivering a session



Mr. Mangesh Gawde addressing the trainees



View of field visit



Participants with the trainers

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2. Capacity building programmes on ornamental fish farming

Two capacity-building programmes on ornamental fish farming were held in Sindhudurg district on 20th and 21st December 2024, at Kelus village in Vengurla taluka and Padel village in Devgad taluka, respectively. The sessions saw participation from 8 SHG members in Kelus

and 22 trainees in Padel.

The participants were introduced to ornamental fisheries, fish breeding techniques farming methods, and employment opportunities in the ornamental fish industry by Ms. Shalaka Salunkhe and Mr. Mangesh Gawde. A field visit was organised during the afternoon session.



Participants at Kelus



Participants at Padel



View of field visit

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3. Training in fish value addition

Two hands-on training programmes on fish value addition were successfully conducted in Sindhudurg district. The first programme was held on 23rd December 2024 at Wayangani village in Vengurla taluka, with 16 participants in attendance. The second programme took place on 24th December 2024 at Padel village in Devgad taluka and was attended by 21 trainees.

Mr. Rohit Sawant, District Coordinator of GCF-ECRICC inaugurated the programme, which was also attended by Mr. Shrikrishna Parit, Forester

(Devgad), Mr. Murari Palekar, President of the Mangrove Co-Management Committee (MCMC), and Mr. Ramdas Ghuge, Secretary of MCMC and Forest Department representative.

Ms. Shreya Mayekar conducted hands-on training sessions, while Mr. Mangesh Gawde took a session on packaging, marketing strategies, and practical sales techniques for domestic markets. Demonstrations included the preparation of prawn pickle, jawla chutney, breaded and battered butterfly prawn, prawn popcorn, fish patties, and fish balls.



Participants at Wayangani



Participants at Padel



Value-added products prepared by trainees

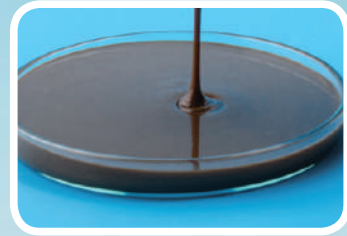
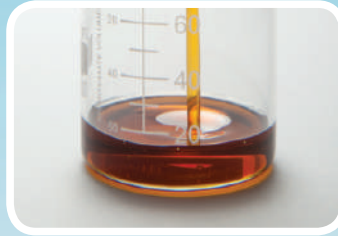
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Exposure visit of Puducherry boat owners: Exploring fisheries infrastructure and trade opportunities

The Department of Fisheries and Fishermen Welfare, Union Territory of Puducherry, in collaboration with MPEDA-NETFISH, organised an exposure visit for 30 members of the boat owners' association. Dr. M.P. Arulmoorthy, State Coordinator, MPEDA-NETFISH Tamil Nadu North, and Mr. P. Simon Leo, Sub-Inspector of Fisheries, Department of Fisheries and Fishermen Welfare, Puducherry accompanied the boat owners. The visit spanned key fishing harbours and seafood processing plants across Kerala, Karnataka, Goa, and Maharashtra from 2nd to 9th December 2024. A buyer – boat owners' meeting was also facilitated during

this visit. This initiative aimed to enhance awareness about fish landing and handling practices, hygiene standards, and processing methods while fostering business dialogues with fish traders to address the shortage of buyers for their daily catch.

The team visited the harbours of Thoppumpady, Munambam, Mangalore, Malpe, Ratnagiri, and New Ferry Wharf and interacted with the fishers and discussed harbour management, hygiene standards, and quality management techniques. The team also visited the processing plant of M/s. Abad Overseas in Munambam, Kerala.



Visiting Munambam fishing harbour

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Visit to Mangalore and Malpe fishing harbours



Visit to Ratnagiri and New Ferry Wharf fishing harbours in Maharashtra



Visit to the processing unit of M/s. Abad Fisheries, Munambam

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Buyer–Boat Owner Meetings

MPEDA Regional Division, Kochi, and NETFISH organised a buyer–seller meeting near Cochin Fisheries Harbour, led by Mrs. Sangeetha N.R., State Coordinator, MPEDA–NETFISH, Kerala, with support from Dr. M.P. Arulmoorthy, State Coordinator, MPEDA–NETFISH, Tamil Nadu, and Mr. P. Simon Leo, Sub-Inspector of Fisheries, Department of Fisheries and Fishermen Welfare. Ten buyers from the Thoppumpady area participated, where Puducherry boat owners, represented by Mr. Jayaraj, highlighted challenges such as limited market access and pricing disparities, despite having a good fishing

ground with commercially important species such as seer fish, cuttlefish, squid, red shrimp, pomfret etc. The buyers expressed interest in sourcing from Puducherry and agreed to visit the fishing harbour.

A similar session was held at Mangalore Harbour, led by Dr. Ansar Ali, MPEDA Deputy Director and Mr. Narayana K.A., NETFISH Coordinator, MPEDA Sub Regional Division, Mangalore.

Boat owners shared challenges in selling their daily catch, and Mangalore buyers showed readiness to build long-term procurement partnerships.



Buyer – boat owner's meeting at Mangalore



Buyer – boat owner's meeting at Thoppumpady

Dr. Arulmoorthy M.P., State Coordinator, MPEDA–NETFISH Tamil Nadu North Region coordinated the entire program. NETFISH State Coordinators from Kerala, Karnataka, Goa, and Maharashtra ensured smooth execution of the visit. The program was supported financially by the Department of Fisheries and Fishermen Welfare, Puducherry. The exposure visit proved to be a valuable learning experience, equipping Puducherry boat owners with practical knowledge on seafood quality, harbour operations, processing methods, and marketing strategies.

RAINBOW IN A BOWL

TROPHEUS DUBOISI



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.



AQUACULTURE SCENE

Tropheus duboisi Cichlid, popularly known as White Spotted Cichlid, is a graceful cichlid who lives in the rocky coastal part of the African Lake Tanganyika. It is currently listed in the Red Book of the Union for Conservation of Nature with the status of status vulnerable. It has received its name White Spotted Cichlid due to its unusual colour, which is different in young and adult individuals. It is a graceful fish with a large head and a disproportionately small body. Its length does not exceed 12 cm. In nature they swim among the rocks and hide in caves. It feeds on algae and small invertebrates that live on the surface of stones. Under natural conditions, they prefer to live alone and occasionally might see them in pairs. These fish are endemic to Lake Tanganyika; they no longer live anywhere in the world. In young individuals, the colouring of the torso is very spectacular – jet black with white and blue polka spots. As it matures, it loses its spots and develops a blue head with a vertical yellow band (or white if from Burundi). Because of these differences, fish of different ages seem to be separate species. The Maswa variety is perhaps the most popular in the hobby because its yellow band is particularly wide. Males and females have identical colouration however, there are a few subtle differences between sexes that may help you differentiate them. Males tend to have a turned-up nose while females tend to have a greater slope and rounded nose. Generally, males will also grow at a faster rate and display their adult colours sooner. Males' colouration is also often bolder than females' because they like to show it off when courting females. Adult males will have a deeper body, while females appear to be slimmer. These characteristics may help to determine gender. They are fantastic fish, and it is fascinating to observe how the star-like colouring of juveniles gradually changes to stripes in adult fish.

They are strictly herbivorous and spend most of their time scraping algae from the rocks in both an aquarium as well as in the wild. Males are quite

territorial and are aggressive in their attempts to coax females to spawn. They should not be kept in 1:1 ratio and ideally one male to three or four females, but bear in mind that the only correct way to keep this species in captivity is in a group of ten or more individuals. The most difficult challenge to breed them is bringing the females into spawning condition. Once a female has spawned and is brooding her young, she should be removed so as to prevent undue harassment by the dominant male. Incubation lasts from 24-28 days and seems to be temperature dependent. The young one is robust and of a fairly large size. Mouthbrooding females usually do not fast during incubation and will in fact eat with their tank mates, although perhaps not as aggressively.

Due to the territorial nature of these species, a colony should be established, and new individuals should not be added to an existing colony, as they disrupt the pecking order. A tank of no smaller than 75 gallons is recommended for a colony of these species because of their aggressive nature, and they should be kept in quantities of ten or more. Plenty of caves and other hiding places should be provided to give females sufficient room to hide. Even though they are much like their Malawi counterpart, the Mbuna, they are not as easy to keep and definitely not for the beginner.

They are strict about having their water conditions, temperature 25-27°C, with pH 7.8-9.0 and hardness 10-20 KH. Lettuce and spinach are highly recommended and one of these should be at least added to the diet daily. Spirulina-based feed and shrimp mix are recommended as the major constituent of their diet. Soft and easily digested foods, such as brine shrimp and insect larvae, should be avoided at all costs. If *Tropheus Duboisi* Cichlid is kept in a typical aquarium, then they should not be kept with very small or slow fish, which they can eat or injure. They can be kept together with *Petrochromis*, *Julidochromis*, *Lamprologus*, *Spathodus*, *Eretmodus*, *Tanganicodus* and Mbuna Cichlids found in Lake Tanganyika. In order to reduce the

AQUACULTURE SCENES

aggression of males, small agile fish are kept in the aquarium; for example, it can be a fast-moving neon iris. The male will chase after them but will not be able to catch up.

Their reproduction in captivity is not very difficult. Usually, a group of fry is launched into the aquarium, and males are planted as they grow older. Males are generally determined by aggressive behaviour. Fish become sexually mature at the age of 10-14 months. As a stimulant for spawning, frequent water changes may be done. Before spawning, the male digs a hole in the ground. The female throws several eggs in

this hole, on the bottom wall of the aquarium or a flat stone and then picks them up in her mouth. Then she swims to the male and takes his milt into her mouth. The female does this several times until the number of eggs reaches about 30 pieces. Then the female hides in a previously chosen shelter with eggs till hatching. The female subsequently takes hatched fry in the mouth for three to four weeks, sometimes releasing them for feeding. The female does not leave them, even when they begin to swim on their own and protect the offspring until the fry is older.



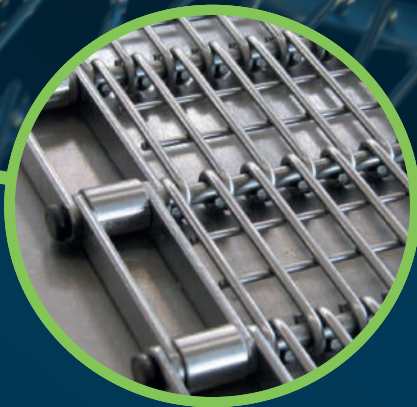
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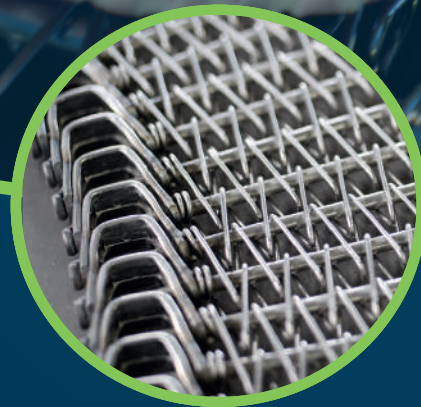
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From Pond to Profit: Farmers endorse shrimp handling centres

To enhance the standards of shrimp exports from India, the Marine Products Export Development Authority introduced the establishment of "Shrimp Handling Facilities in farms for improved food safety". It aims to improve the quality of raw material by adopting hygienic and the best handling practices in the farms.

M/s. Hariom Aquaculture Pvt. Ltd. in Gujarat has established a Shrimp Handling Centre in 2022, which has helped the farm to achieve significant quality improvement in the shrimps harvested. The list of benefits observed in the SHC is given below.

- **Organised Harvesting practices:** It facilitates the structured timely harvesting, reducing the stress of the shrimps and physical damage. Even during emergency harvests the quality of the shrimp is maintained by best handling techniques.
- **Quality Maintenance:** The handling of shrimps is carried out in insulated tanks under temperature-controlled conditions to maintain product freshness and minimise dehydration.

- **Enhanced Market Assessment:** The structured operations and best hygiene practices gives quality assurance to processors and international buyers, boosting farmer's market credibility.
- **Increased buyer attraction:** The superior quality, cleanliness and best handling practices at the Shrimp handling centres have increased the interest from buyers, who express willingness to take quality assured high grade and contamination free shrimps.
- **Demonstration of Best practices:** The unit visibly shows the adoption of scientific and hygiene practices, emphasizing buyers trust and encouraging others to adopt similar standards.

The Shrimp handling facility established by M/s. Hariom Aquaculture Pvt. Ltd., Gujarat demonstrated that post-harvest infrastructure at the farms can significantly improve the quality, safety and market value of Indian shrimp.



MPEDA's training and awareness campaigns

Visakhapatnam

MPEDA equips aquaculture technicians with Good Aquaculture Management Practices (GAMPs) and essential know-how for sustainable and responsible aquaculture. Towards this, MPEDA Sub Regional Division, Visakhapatnam hosted a four-day training session from 4th to 7th December 2024 at ICAR -CMFRI, Regional Centre, Visakhapatnam, Andhra Pradesh.

The training programme was inaugurated by Dr. M. Karthikeyan, Director, MPEDA. Mr. Vijaya Kumar Yaragal, Joint Director, MPEDA Regional Division, Vijayawada welcomed the gathering. The inaugural session saw active participation from officials of MPEDA Head Office, Coastal Aquaculture Authority (CAA), Central Institute of Fisheries Technology (CIFT), Central Marine Fisheries Research Institute (CMFRI), Department of Fisheries, Andhra Pradesh and the National President of All India Shrimp Hatcheries Association (AISHA).

The technical sessions were handled by Mr. P. Shankar Rao, Director, CAA, Dr. Biji, Senior Scientist, CIFT, Dr. Amaraneni Ravi, Dr. B.

Srikanth, and Dr. D.V.S.N. Raju, senior personnel with aquaculture sector, Mr. S.V. Hari Narayana Rao, Shrimp Consultant Dr. Ahmed Basha, Principal Scientist, CIFT, Visakhapatnam, Dr. P.V. Nageswara Rao, Hatchery Consultant, Dr. M. Sekar, Senior Scientist, CMFRI-Vizag, and Mr. P. Bala Akhila, MFSc student, College of Fisheries Science, Muthukur.

On 6th December, trainees embarked on a field visit to M/s. Danica Aqua Exports Pvt. Ltd., Konada, where MPEDA, NaCSA, and CAA officials explained the shrimp processing and production workflows. The group later toured a shrimp farm in Vizianagaram, receiving practical exposure to aquaculture operations.

A post-evaluation test was conducted for the 30 technicians and certificates were distributed during the valedictory function by Mr. Sudhansu Das, Deputy Director, Export Inspection Agency, Visakhapatnam and Dr. Jayasree Loka, Principal Scientist, CMFRI, Visakhapatnam.

The valedictory session concluded with a vote of thanks delivered by Mr. R. Prasadnaik, Assistant Director, SRD Visakhapatnam.



View of faculties and trainees



View of training programme

Kolkata

MPEDA Regional Division, Kolkata organised two training programmes on “Eco-friendly sustainable aquaculture” from 9th to 11th September and from 26th to 27th December 2024 at Bamanagar, Kakdwip, South 24 Parganas district, West Bengal. 20 farmers from SC category attended

the training.

The technical sessions were handled by officials of MPEDA RD, Kolkata including Mr. Dhirit Ekka, Deputy Director, Mr. K. Ramanjaneyulu, JTO, Mr. Anirban Maity, Field Technical Officer and Mr. Rejaul Karim, Field Manager, NaCSA.



Views of the training programme

AQUACULTURE SCENE

Nagapattinam

MPEDA Sub Regional Division, Nagapattinam organised two basic training programmes for hatchery and farm technicians from 25th to 28th November 2024 and from 16th to 19th December 2024 at Chinnakalapet, Puducherry. Around 49 technicians attended from various hatcheries and farms located in Tamil Nadu and Puducherry Union Territory.

The training program was inaugurated by officials from AISHA-India and the Tamil Nadu region, including Dr. Joshi K. Shankar (Secretary), Mr. G. Calraj (President), Dr. P. E. Cheran (Secretary), and Dr. K. Jagadeesan (Treasurer). Mr. Naresh Vishnu Tambada, Deputy

Director, MPEDA SRD, Nagapattinam, welcomed the dignitaries.

The technical sessions were handled by Mr. Arulmoorthy from MPEDA-NETFISH, Chennai; Dr. P. Sankara Rao, Director, CAA, Chennai; Dr. P. E. Cheran, Managing Director, Allwin Aquatech; Dr. M. Srinivasan, CEO, Bharath Rhino Biotech; Dr. S. Vinu from Amazing Biotech Pvt. Ltd.; and Dr. G. K. Dinakaran from RGCA. The trainees visited the PCR lab and hatchery for gaining practical exposure.

The program concluded with a valedictory address by Dr. Kandan, Joint Director (Training), MPEDA, and the certificates were presented by AISHA dignitaries.



Views of the training programme



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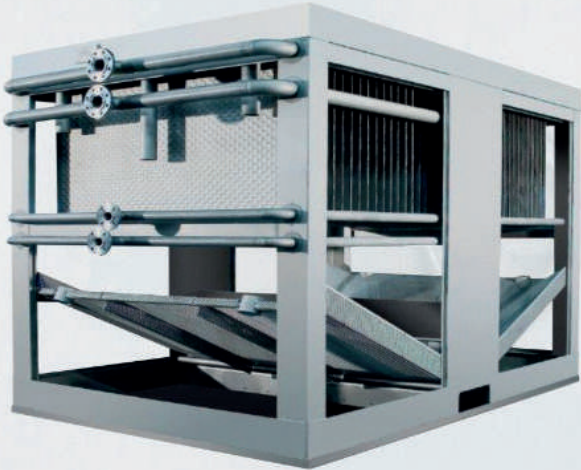
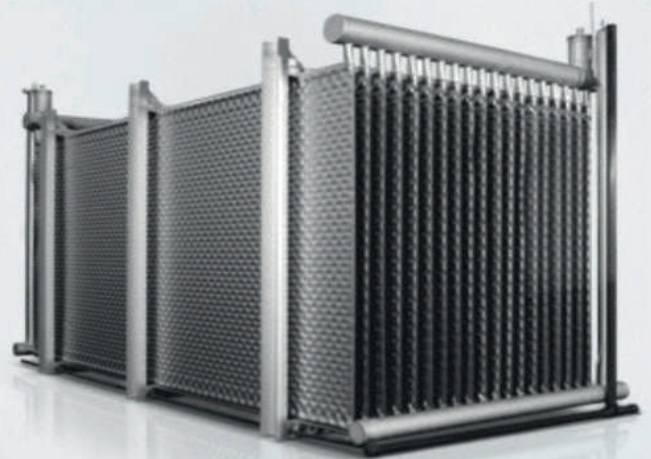


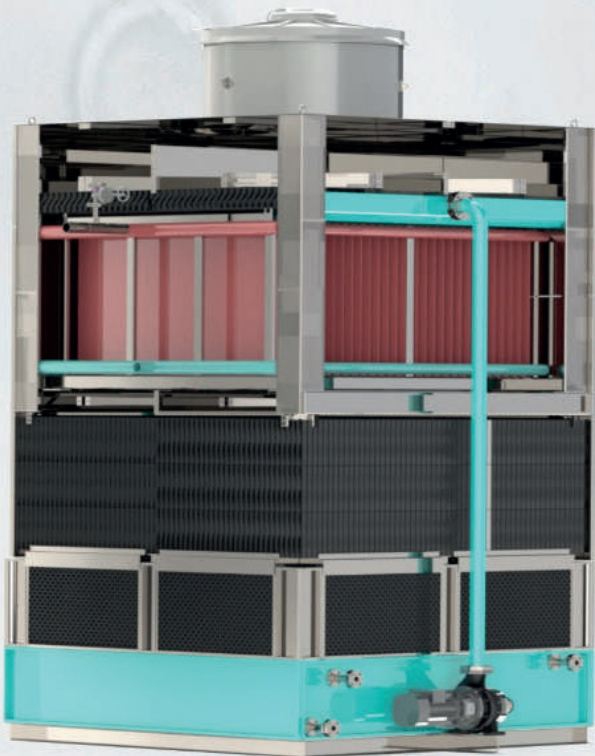
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AQUACULTURE SCENE

Details of SPF *P. vannamei* brooders imported & quarantined at AQF during December 2024

Sl. No.	Name of the importer	State	Country of origin/ supplier	Date of receipt of the lot at AQF	Broodstock imported (nos)		
					Male	Female	Total
1	Sree Dattareya Hatcheries	AndhraPradesh	SIS, Florida	04.12.24	300	300	600
2	Shree Kanak Matsya Hatcheries	Odisha	SIS, Florida	06.12.24	300	300	600
3	Regal Bio Marine Hatchery	Tamil Nadu	SIS, Florida	06.12.24	250	250	500
4	Srinivasa Hatcheries	Andhra Pradetsh	SyAqua Americas Inc, Florida	07.12.24	400	400	800
5	Venture Shrimp Hatchery	Tamil Nadu	SIS, Florida	07.12.24	300	300	600
6	Sree Kamadhenu Aquatech Pvt. Ltd - Prakasam	Andhra Pradesh	SyAqua Americas Inc, Florida	07.12.24	250	250	500
7	Sri Mahalakshmi Hatcheries - Nellore	Andhra Pradesh	SyAqua Americas Inc, Florida	07.12.24	250	250	500
8	Sri Mahalakshmi Hatcheries - Vizag	Andhra Pradesh	SIS, Florida	08.12.24	400	400	800
9	Sreevalli Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	09.12.24	300	300	600
10	Sri Mahalakshmi Hatcheries – Vizag	Andhra Pradesh	SyAqua Americas Inc, Florida	10.12.24	300	300	600
11	Aquatic Farms Ltd	Odisha	SIS, Florida	11.12.24	200	200	400
12	Sea Way Hatchery Pvt. Ltd	Tamil Nadu	SyAqua Americas Inc, Florida	12.12.24	200	200	400
13	BKMN Aqua	Andhra Pradesh	SyAqua Americas Inc, Florida	12.12.24	300	300	600
14	Lotus Sea Farms - Unit II	Tamil Nadu	SIS, Florida	13.12.24	300	300	600
15	Prince Aqua Pvt. Ltd	Andhra Pradesh	SyAqua Americas Inc, Florida	14.12.24	300	300	600

AQUACULTURE SCENE

Details of SPF *P. vannamei* brooders imported & quarantined at AQF during December 2024

Sl. No.	Name of the importer	State	Country of origin/supplier	Date of receipt of the lot at AQF	Broodstock imported (nos)		
					Male	Female	Total
16	Sri Srinivasa Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	14.12.24	300	300	600
17	Gayathri Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	14.12.24	300	300	600
18	Apex Frozen Foods Ltd	Andhra Pradesh	SyAqua Americas Inc, Florida	14.12.24	300	300	600
19	Hybrid EBI Hatcheries Pvt. Ltd	Tamil Nadu	SyAqua Americas Inc, Florida	16.12.24	300	300	600
20	Vaisakhi Bio-Marine Pvt. Ltd - Unit I	Tamil Nadu	SyAqua Americas Inc, Florida	16.12.24	300	300	600
21	Ravi Hatcheries LLP	Andhra Pradesh	American Penaeid, Florida	16.12.24	200	200	400
22	Jay Jay Aqua Farms	Tamil Nadu	American Penaeid, Florida	16.12.24	200	200	400
23	Aquatic Farms Ltd	Odisha	SIS, Florida	18.12.24	300	300	600
24	BMR Exports - Kancheepuram	Tamil Nadu	SIS, Florida	20.12.24	400	400	800
25	Samudra Hatcheries Pvt. Ltd	Andhra Pradesh	SIS, Florida	21.12.24	270	270	540
26	Varun Shrimp Hatchery Pvt. Ltd	Andhra Pradesh	SyAqua Americas Inc, Florida	21.12.24	300	300	600
27	Empire Marine Harvest	Tamil Nadu	SyAqua Americas Inc, Florida	21.12.24	300	300	600
28	CPF (India) Pvt. Ltd - Mukkam	Andhra Pradesh	Kona Bay, Hawaii	21.12.24	330	330	660
29	Avanti Feeds - Unit I	Andhra Pradesh	SyAqua Americas Inc, Florida	23.12.24	300	300	600

AQUACULTURE SCENE

Details of SPF *P. vannamei* brooders imported & quarantined at AQF during December 2024

Sl. No.	Name of the importer	State	Country of origin/supplier	Date of receipt of the lot at AQF	Broodstock imported (nos)		
					Male	Female	Total
30	Fedora Sea Foods Pvt. Ltd	Andhra Pradesh	SyAqua Americas Inc, Florida	23.12.24	300	300	600
31	Saran Saai Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	23.12.24	300	300	600
32	Golden Prawns Pvt. Ltd	Andhra Pradesh	SyAqua Americas Inc, Florida	25.12.24	300	300	600
33	Bindu Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	25.12.24	300	300	600
34	Sree Gayathri Hatchery	Andhra Pradesh	SyAqua Americas Inc, Florida	25.12.24	200	200	400
35	Sree Veerabhadhraa Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	25.12.24	200	200	400
36	Sapthagiri Hatcheries	Andhra Pradesh	SIS, Florida	25.12.24	500	500	1000
37	Sun Glow Marine	Tamil Nadu	SyAqua Americas Inc, Florida	26.12.24	300	300	600
38	Ravi Hatcheries Pondicherry	Tamil Nadu	SyAqua Americas Inc, Florida	26.12.24	300	300	600
39	Alpha Hatchery	Andhra Pradesh	SyAqua Americas Inc, Florida	30.12.24	300	300	600
40	Rocman Shrimp Hatchery	Tamil Nadu	SyAqua Americas Inc, Florida	30.12.24	250	250	500
41	Tropical Shrimp Hatchery	Tamil Nadu	SyAqua Americas Inc, Florida	30.12.24	250	250	500
	TOTAL				11950	11950	23900

AQUACULTURE SCENE

Details of SPF *P. monodon* brooders imported & quarantined at AQF during December 2024


Sl. No.	Name of the importer	State	Country of origin/supplier	Date of receipt of the lot at AQF	Broodstock imported (nos)		
					Male	Female	Total
1	Unibio (India) Hatcheries Pvt. Ltd	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	03.12.24	72	70	142
2	Unibio (India) Hatcheries Pvt. Ltd	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	03.12.24	72	70	142
3	Unibio (India) Hatcheries Pvt. Ltd	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	05.12.24	120	120	240
4	Mas Aqua Techniks Pvt. Ltd - Plant II	Andhra Pradesh	Aquaculture De La Mahajambal; Madagascar	10.12.24	120	120	240
5	BMR Shrimp Hatcheries	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	12.12.24	120	120	240
6	Golden Marine Harvest - Unit VI	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	16.12.24	240	240	480
7	Mas Aqua Techniks Pvt. Ltd - Plant II	Andhra Pradesh	Aquaculture De La Mahajambal; Madagascar	16.12.24	240	248	488
8	Unibio (India) Hatcheries Pvt. Ltd	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	16.12.24	140	120	260
9	BMR Shrimp Hatcheries	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	16.12.24	115	116	231
10	Unibio (India) Hatcheries Pvt. Ltd	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	19.12.24	120	120	240
11	Vaishnavi Aquatech	Andhra Pradesh	Moana Technologies LLC; Hawaii	22.12.24	472	386	858
12	BMR Shrimp Hatcheries	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	24.12.24	120	120	240
13	Vaisakhi Bio-Resources Pvt. Ltd - Unit III	Andhra Pradesh	Aquaculture De La Mahajambal; Madagascar	30.12.24	120	120	240

AQUACULTURE SCENE

Details of SPF *P. monodon* brooders imported & quarantined at AQF during December 2024

Sl. No.	Name of the importer	State	Country of origin/ supplier	Date of receipt of the lot at AQF	Broodstock imported (nos)		
					Male	Female	Total
14	Vaisakhi Bio-Resources Pvt. Ltd - Unit III	Andhra Pradesh	Aquaculture De La Mahajambal; Madagascar	30.12.24	295	300	595
15	Mas Aqua Techniks Pvt. Ltd - Plant II	Andhra Pradesh	Aquaculture De La Mahajambal; Madagascar	30.12.24	240	240	480
16	BMR Shrimp Hatcheries	Tamil Nadu	Aquaculture De La Mahajambal; Madagascar	30.12.24	240	240	480
TOTAL					2846	2750	5596






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5	Camimex Foods 969 Ly Thoung Kiet, ward 6, Ca Mau city Vietnam Ph: +84-2906-296-969 Email: hhnhan@camimex.com.vn <i>Fish, Squid</i>	6	Sea Young International Co. R/M No 618, Wonyang Plaza, 105 wonyang-ro Seo-gu, Busan Republic of Korea Ph: +82-10-9344-6395 Email: aamrissai@gmail.com <i>All seafood</i>
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