



# MPEDA

## Newsletter

VOL. X NO. 3 JUNE 2022

**Grey Mullet Aquaculture  
- Challenges and  
the Way Ahead**

**MAIN STORY**

**Seafood Trade with Australia  
- Challenges & Opportunities**

**MPEDA at  
SEG 2022 Barcelona**

**Changing Regulations in  
Canada: Things to Know**



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## On the Platter

**Dr. K. N. Raghavan IRS**  
**Chairman**

Dear friends,

MPEDA had a successful participation in the Seafood Expo Global (SEG) 2022, which was organized for the first time in the Spanish city of Barcelona. The Indian Pavilion arranged by MPEDA was of 300 sq m area and had 14 seafood exporters as Co- exhibitors. The cooking demo organized in MPEDA stand attracted a lot of customers and visitors. Around 118 trade enquiries received are placed in the concerned section of this Newsletter. I wish to place on record our appreciation and gratitude to the Embassy of India in Spain for their support and cooperation in organizing the fruitful participation of MPEDA in this seafood trade fair.

MPEDA along with USFDA and JIFSAN organized two training programmes on Seafood HACCP during late April and also a workshop on Good Aquaculture Practices early May. Sixty trainees representing MPEDA, academia, researchers, seafood technologists attended the Seafood HACCP programmes. The 36 participants of Good Aquaculture Practices workshop included officials from MPEDA, State Fisheries Departments, researchers, academicians, hatchery operators, farmers etc. A "Train The Trainers" programme is also planned in June 2022 as a follow up event on Seafood HACCP.

MPEDA organized, in association with the Embassy of India in Berlin, a webinar on the prospects of seafood exports to German Market. Mr. Alexander Wever of M/s. AWF Consulting presented the prospects of German Market and the strategies to be adopted by India in increasing its share of seafood export to German market. A workshop on "Trade opportunities between Central provinces of Vietnam and India" was organized by Consulate General of India in Vietnam, wherein seafood exporters participated and discussed measures to improve the trade. Buyer- Seller meets for markets such as UK and Reunion are in the offing.

An awareness programme on Cyber crimes was organized on 4<sup>th</sup> May, 2022 by MPEDA for its officers in a hybrid mode, as a part of "Cyber Jagratha Diwas". It was aimed to create more insight into the modes of cyber crimes and other fraudulent acts which holds important as the society marches forward in this era of digitalization.

After a gap of over 2 years, MPEDA has restarted its Seafood HACCP training programme imparted to the seafood processing technologists. The first programme is organized at Porbandar during 17<sup>th</sup> - 20<sup>th</sup> May, 2022. Additional programmes are planned based on the requests from other regions as well.

The MPEDA Golden Jubilee Marine Quest 2022 enters its phase II by mid-June after the successful run of the curtain raiser event, in which more than 2500 students participated. This event is also a part of "Azadi Ka Amrit Mahotsav" being celebrated by the nation.

Thank You!

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# Virtual Buyer Seller meets organized by MPEDA in April 2022

### Russia

A virtual Buyer Seller Meet was organized with M/s. Uhrenholt Group, Russia on 12<sup>th</sup> April 2022. The meet had a participation of over 9 exporters. The buyer was interested in IQF vannamei shrimps and also breaded and marinated shrimp products. The meeting was moderated by Dr. T. R. Gibinkumar, Deputy Director (Market Promotion & Statistics). Mr. Anand Shanker, Second Secretary, EOI, Russia thanked the exporters and buyer for attending the meet.



Screenshot of VBSM with Russia



Uhrenholt was founded in Denmark by Frank Uhrenholt on 1 April 1978. Today, they have local offices and representatives in more than 20 countries worldwide. They are a solutions provider, more than a manufacturer, offering food solutions based purely on market needs and demands. Uhrenholt's first overseas office was established in 1998 in United Arab Emirates, and subsequently in China and Malaysia.

Uhrenholt have a long tradition and experience within the sale of food products and ingredients. Their master brands; Emborg, Mon Ami, Friendship and Amigo have unique values tailored to the end customer.

### Japan

MPEDA has organized two virtual Buyer Seller Meets with buyers from Japan on 5<sup>th</sup> and 13<sup>th</sup> of April 2022. On 5<sup>th</sup> April, VBSM with M/s. A-Line from Japan was arranged in association with Embassy of India, Tokyo, Japan. Sea caught shrimps like Black Tiger, Karikkadi, Poovalan etc were the requirements of the buyer.



Screenshot of VBSM with Japan on 5<sup>th</sup> April



Screenshot of VBSM with Japan on 13<sup>th</sup> April



## MARKETING NEWS

Nine exporters participated in the meet. Mr. Anil Kumar P., Joint Director (Marketing), MPEDA suggested the buyer to participate in business meets and trade fairs to find suppliers for their requirement. Mr. Jun Nakayama, Executive Assistant, MPEDA TPO, Tokyo offered translation assistance. The meeting ended with the concluding remarks of Dr. T. R. Gibinkumar, Deputy Director (Market Promotion & Statistics). The virtual Buyer Seller Meet with M/s.

Maruha Nichiro Cooperation, Japan was organized on 13<sup>th</sup> April 2022 in association with EOI, Japan. The buyer looked toward supply of Head Less shrimps. Dr. T. R. Gibinkumar, Deputy Director (Market Promotion & Statistics) introduced the buyers and moderated the VBSM. Ten exporters participated in the meet. Mr. Manoj Singh Negi, First Secretary (Commerce), EOI Japan, thanked the buyer and the exporters for their participation.

Maruha Nichiro Corporation (Maruha Nichiro Kabushiki-gaisha) is a Japanese seafood company, that began its operation in 1880, when its founder, Ikujiro Nakabe, started a fish sale business in Osaka. The company is the largest of its kind in Japan. Group Slogan of Maruha Nichiro Corporation is "Bringing Delicious Delight to the World". Maruha Nichiro has subsidiaries in Japan, New Zealand, Australia, the United States, across Europe, Asia and South America. It is listed on the Tokyo Stock Exchange and is a constituent of the Nikkei 225 stock index.

In 2004 Maruha Group Inc. established as a holding company. In 2014, the company structure was reorganized and the name Maruha Nichiro Corporation was adopted along with its listing in the Tokyo Stock Exchange. More information about Maruha Nichiro Corporation is available at [www.maruha-nichiro.co.jp](http://www.maruha-nichiro.co.jp).



## Webinar on 'Seafood in Germany & opportunities for Indian shrimp sector'

A webinar was organised in association with EOI, Germany on 'Seafood in Germany & opportunities for Indian shrimp sector' on 11<sup>th</sup> May, 2022. Mr. Alexander Wever, founder of AWF Consulting, took the webinar and it had a participation of over 100 exporters. Dr. T. R. Gibinkumar, Deputy Director (Market Promotion & Statistics), MPEDA, welcomed the participants to the webinar and briefed on the topic. Mr. Gaurav Sharma, First Secretary, EOI, Germany and Mr. Anil Kumar P., Joint Director (Marketing), MPEDA spoke during the introduction session.

Mr. Anil Kumar gave a brief on the export of marine products to Germany from India and pointed that India's share in Germany's total seafood imports is very negligible. He also informed that the share of shrimps in total shrimp imports by Germany is less than 8% and we need to capitalize on this opportunity to market

shrimps in Germany by creating more awareness about Indian Shrimps among the Germans. The webinar gave an overall picture on AWF Consulting, socio-economic data of Germany, food consumption and food industry in Germany, seafood consumption in Germany, supply of the German seafood market, German shrimp market and its supply, Indian shrimps on the German seafood market; the understanding of shrimps as a product; opportunities for Indian shrimp producers and exporters; importance of certifications and sustainability in seafood and the prospects of vannamei and Black Tiger shrimps in the German market.

A question- answer session followed the webinar and queries of the participants were answered by Mr. Wever. Mr. Anil Kumar moderated the Q & A session. The webinar ended with the vote of thanks by Mrs. Anju, Deputy Director (Market Promotion & Development).



# What Germans like to eat

**82%**

of Germans cook at least two to three times a week.



On the plate every day...



**76%**

fruits and vegetables



**64%**

dairy products



**26%**

sweets and nibbles



**26%**

meat and sausages



**10%** of Germans are vegetarians.  
That is twice as many as in 2020.

Many people in Germany look for labels. The most popular are:



**68%**

Regional farming



**64%**

Organic quality



**57%**

Fair trade



**56%**

Sustainable fishing



### AWF Consulting

Founded in 2008 by Alexander Wever, AWF Consulting today is an established management consultancy specializing entirely in the fishing industry. AWF Consulting support companies in the seafood industry in business management issues and companies in other sectors in questions relating to fish/seafood. This particularly includes market analysis, market research and the development of tailor-made marketing concepts.

The clients of AWF Consulting include national and international companies, from small fish shops to global food corporations and the company focus on particular importance to a practical, comprehensible approach aimed at achieving quickly realizable results. In addition, AWF Consulting represents the interests of national and international seafood organizations and companies in the German-speaking and Northern European market.

### Fish market favourites in Germany

Share in the consumption of fish, crustaceans and molluscs



Source: FZ, Statistik 2020



### Alexander Wever

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info@aw-fisch.de

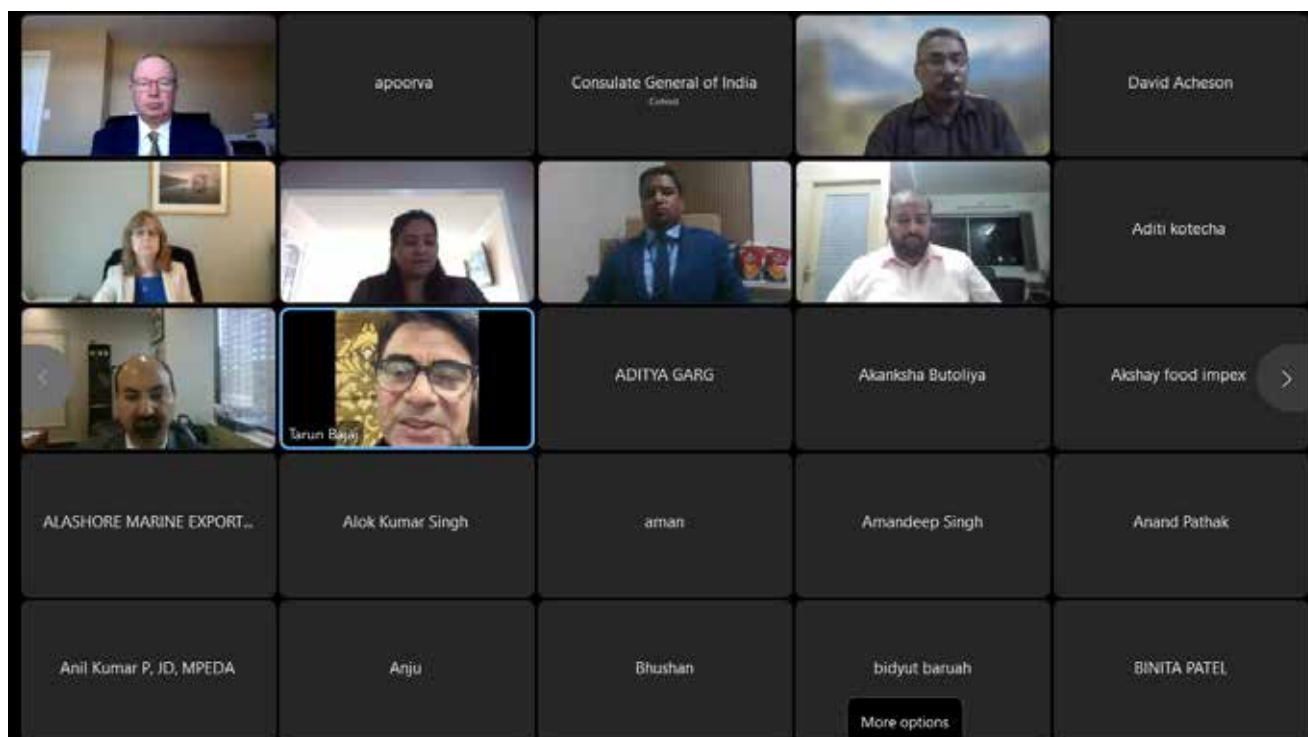
# Importing food to Canada? Ensure it is not rejected!

The Consulate General of India, Toronto organised a webinar in association with The Acheson Group (TAG) on “Canadian and US food regulation for importers”. The webinar was conducted on 22<sup>nd</sup> March 2022. The speakers of the webinar were Dr. David Acheson (President & CEO), Ranjeet Klair (Director, Food Safety) and Cameron Prince (Executive VP, Regulatory Affairs). Around 92 exporters of marine/agri products registered with MPEDA/APEDA has attended the webinar.

Dr. M. Karthikayan, Director, MPEDA has briefed about India's marine product export scenario to world and to Canada in particular. He emphasised that, it is important to understand Canadian food regulation for avoiding the rejection of seafood consignment. The major topics such as Canadian Federal Food Inspection, Safe food for Canadians Act (SFCA) and its licence, Impacts of SFCA on importers, top three food safety violation, reasons for import refusals for Indian products, import

alerts, regulatory enforcement and import violations, Regulatory approaches of USFDA were discussed. Safe Food for Canadians (SFC) Act passed in 2012, came into effect on January 2019. According to this act, to import certain foods into Canada, you must have a valid Safe Food for Canadians (SFC) licence issued by the Canadian Food Inspection Agency (CFIA) that has been entered into the Integrated Import Declaration (IID). This act came into force by replacing several Federal food acts and consolidating 14 set of regulation into a single Act. The major motives of this act is to implement preventive controls, issue license and to ensure traceability of the imported products.

Previously, importers were required to possess a CFIA-issued SFC licence for any SFCR-regulated food before presenting the shipment at the border. From March 15, 2021 onwards CFIA automatically rejected any meat, fish, dairy, eggs, processed eggs, processed fruits or vegetables, honey, maple, and fresh fruits





## MARKETING NEWS

The screenshot shows a Zoom meeting interface. At the top, there are video thumbnails for participants: V Sawant, Rangit, and David Acheson. Below this is a red banner with the 'tag THE ACHESON GROUP' logo and the title 'Import Alerts'. The main content area is white with a red border, containing a bulleted list of requirements for import alerts. To the right of the list is a small American flag. At the bottom of the slide, it says 'Your brand protection is our highest priority.' and 'www.achesongroup.com'. The Zoom interface includes a top menu bar with options like File, Edit, Share, View, Audio & Video, Participant, Meeting, and Help. On the right, there is a 'Participants (92)' list with a search bar and a list of names. At the bottom, there are controls for Unmute, Start video, Share, and other meeting functions.

- Placed by FDA related to a concern over imported foods
  - May be a specific food from a specific manufacturer
  - May be a manufacturer
  - May be a food category (e.g., shrimp)
  - May be a whole country
- Test and hold of every shipment
- Specific requirements to remove import alert
  - Multiple negative tests
  - Correction of the problem

that were not licensed in the IID. It was originally scheduled to come into effect from July 15, 2020, but the requirement was delayed because of COVID-19 and it is applied to food shipped into Canada by both Canadian and non-resident businesses. The licence must be valid (without mistakes or typos), it should cover the activity involved in “importing food,” and any commodities intended for import. The licence must be acquired before presenting a shipment at the border; you cannot obtain an SFC licence at the border. If rejected, the licence holder may experience delays and will have related food shipments held at the border until the error is addressed and the import transaction is resubmitted.

When entering the eight-digit alpha-numeric licence number into the IID, it is critical that it will be entered into the “Registration Number” field exactly as it was issued, without any additional words or characters. If an invalid number is entered, you will be notified by a “reject message” sent through the importer or customs broker’s IID system.

It should be double checked and, if necessary, update your SFC licence profile to ensure your number is entered correctly. This can be done through My CFIA portal, and there is no fee for this service (CFIA provides

guidance on renewing or amending the information here). U.S. and other non-resident businesses who need to ship food into Canada must still select the field “Importing Food” on the licence, along with the food commodity or commodities intended for import. Do not select “Exporting Food” which applies to sending food out from Canada to another country.

CFIA also has developed a document with further direction on importing food using an SFC licence. For example, in the past an importer could simply enter a “Y” in the registration number field. This is no longer accepted, nor can the field be left blank. Additionally, the document explains ‘Reject Messages’ that may be received along with the reason for the reject and corrective action to be taken. More information on food business licences required under the SFCR is also available on the CFIA website.

This webinar was really useful for Indian seafood exporters interested in the Canadian seafood industry. It provided a comprehensive understanding of the new statute and the procedures for obtaining a SFC license. It has covered all facets of the new legislation and will help to boost our seafood exports to Canada with ease

*Contributed by: Consulate General of India, Toronto*

A close-up photograph of a Marel TargetBatcher machine. The machine is a stainless steel industrial device used for portioning food. Two fish fillets are shown resting on the machine's white, ribbed weighing platform. The background is slightly blurred, showing the control panel of the machine with buttons and a digital display.

TargetBatcher

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# MPEDA participated in the Seafood Expo Global 2022

**S**eafood Expo Global / Seafood Processing Global is the world's largest seafood trade event. More than 29,100 buyers, suppliers, media, and other seafood professionals from over 150 countries usually visit the exposition. Attendees come to meet with existing suppliers, source new products and network with other industry professionals.

MPEDA had been participating in the Seafood Expo Global for the last many years. Seafood Expo Global used to be held annually at Brussels, Belgium, and was held last time in 2019 at Brussels. The expo was not held during 2020 and 2021 due to the pandemic. The venue was shifted to Barcelona by the organizers due to congestion and lack of space availability at Brussels.

### **Seafood Expo Global / Seafood Processing Global Barcelona-2022**

Seafood Expo Global 2022 was held during April 26-28 at Fira Barcelona Gran Via Venue in Barcelona, Spain. Fira Barcelona hosts around 150 events annually and is one of the largest in Europe, with over 200,000

sq. m. floor space, 8 exhibit halls and more than 40 restaurants which are easily accessible by road, train and plane.

The Expo occupied 39,847 sq.m. of net exhibit space spread over four halls. During the current edition, 1,550 exhibitors from 76 countries exhibited. Exhibitors from China and Russia did not participate this year. An estimated 26,630 seafood buyers and suppliers from all around the globe attended the event. While the geopolitical situation in Russia and strict quarantine in China contributed to a decrease in the number of exhibitors at the event, buyers and other industry professionals visiting from all around the world surpassed 2019 figure.

Seafood Processing Global, which showcases seafood processing equipment, services, packaging and logistics for seafood processing equipment, is co-located with Seafood Expo Global. The global expo showcased the latest developments and trends in the seafood industry, highlighting health, sustainability



*A view of the India pavilion at SEG 2022, Barcelona*

## FOCUS AREA



and the commitment to climate-friendly foods, easy-to-prepare and new flavors products.

SEG also offers a competition named Seafood Excellence Global Awards, for new products and innovative product development regularly, and the winning entry is exhibited in the product showcase during the Seafood Expo Global. This prestigious awards competition recognized the best products presented at the Expo. Pescanova Spain and its Salmon Noodles were awarded Best Retail Product. GlobeXplore received the award for Best HORECA (hotel/restaurant/catering) Product for its Seaweed Spread – *Yuzu and Ginger*.

This year's edition featured a comprehensive Conference Program, offering more than 20 educational sessions presented by more than 65 leading international industry experts. The conference addressed topics analyzing the main challenges faced by the seafood industry. Other topics included business prospects, aquaculture, innovative sustainability projects and initiatives dealing with climate change and its effects on the maritime ecosystem.

Next year's edition of Seafood Expo Global / Seafood Processing Global will be during 25 – 27 April 2023 in the same venue itself.

### India's Participation in Seafood Expo Global

MPEDA took an exhibition space of 300 sq m. in the Seafood Expo Global to set up Indian Pavilion along with 14 exporting companies. The co-exhibitors in the Indian Pavilion were:

1	Gadre Marine Export Pvt. Ltd.
2	Calcutta Seafoods Private Limited
3	Seasaga Enterprises Pvt. Ltd.
4	Karunya Marine Exports Pvt. Ltd.
5	Westcoast Frozen Foods Pvt. Ltd.
6	V V Marine Products
7	Mindhola Foods LLP
8	Cap Seafoods Pvt. Ltd.
9	Abad Overseas Pvt Ltd.
10	Freeze Drying Co. Ltd.
11	Vasai Frozen Food Co.
12	Everest Seafoods Pvt. Ltd.
13	Rupsha Fish Private Limited
14	Pasupati Aquatics Private Limited

Mr. K. S. Pradeep IFS, Secretary and Mr. Anil Kumar P., Joint Director (Marketing), represented MPEDA in the Seafood Expo Global. The MPEDA stall displayed frozen and chilled seafood products collected from exporters, and also had a cooking demonstration by chefs engaged through Eol Madrid. Brochures on Indian seafood were also distributed to the visitors.

The cooking demo was highly popular, with more than 4,000 samples being tasted by the visiting business visitors. Indian seafood such as shrimps, tilapia, snapper, grouper fillets, squid, cuttlefish etc were prepared with a delicious fusion of India and Spanish dishes, and served in organic bamboo boats prepared especially for attracting the business visitors during tasting sessions. Ms. Prithika Rani M. IFS, Third Secretary, EOI Madrid, Spain also visited the show and participated in the business meetings.

Another highlight of the Indian participation in SEG was the visit by a delegation from Oman to promote investment in Oman as well as in India. The delegation was briefed about the seafood sector in India and the investment opportunities in India related to seafood production and processing sectors. The delegation was invited to visit India as a follow up.



## FOCUS AREA

A meeting with Business France, the official export promotion agency of the France through Eol, Paris at the French Pavilion was also there, to explore the possibilities of export promotion in France.

### Social Media coverage

To increase the visibility of India's participation in the SEG, Barcelona, the deputed MPEDA officials covered the event in the social media, especially on Facebook live, which had over 63000 views.

The coverage included Indian pavilion, interview with Co-exhibitors and National President, SEAI, processing equipment and on Salmon Noodles, the product adjudged as the best retail product in the Seafood Expo Global Excellence awards.

### Trade enquiries

About 118 trade enquiries received in the MPEDA booth are placed in the concerned section of this Newsletter.



*Mr. K. S. Pradeep IFS, Secretary and Mr. Anil Kumar P. Joint Director (M) represented MPEDA in SEG 2022*



*Ms. Prithika Rani M. IFS, Third Secretary, EOI Madrid, Spain, visiting Indian pavilion*



*Cooking demo and tasting of Indian Seafood at SEG 2022*



*MPEDA officials interacting with buyers at SEG 2022*

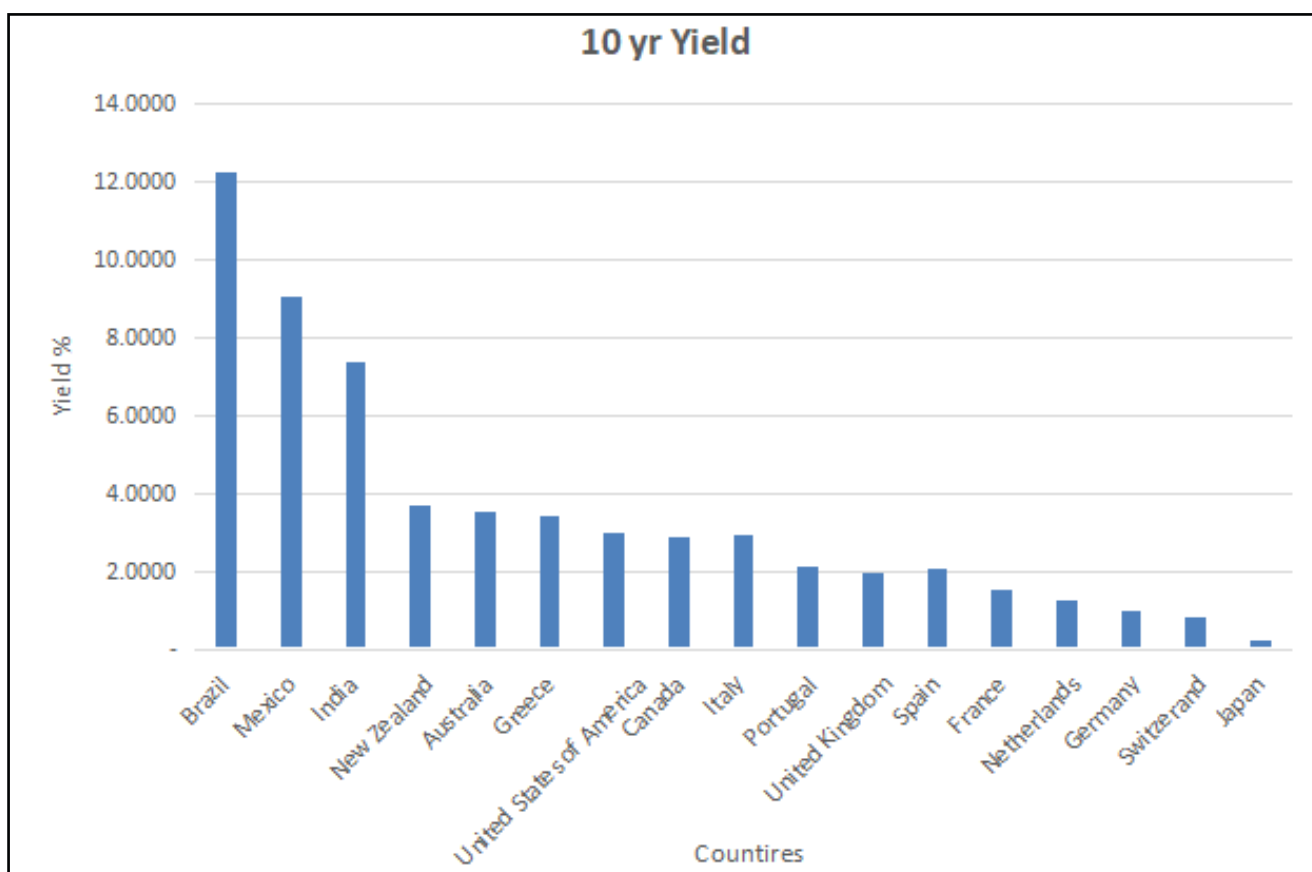


# Are we in for higher global treasury yields

*Ritesh Victor: Co-Founder & Country Head - Market Risk Advisory & TPO  
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Treasury yields have been rising across the globe as central banks start increasing the interest rates to taper the inflationary pressure. US 10 year bond touched 3%, level last seen in 2018 as Fed raised their interest rates by 50 bps to tame 40 year high at 8.5% inflation. Chances of a 75 bps rate hike have also been shifted lower by Fed Governor, Jerome Powell. But would the fast paced higher interest rate overburden the economy and slow its growth? Rapid rise in treasury yields is weighing on the riskier assets.

Not wanting to be left behind (though a first amongst Asians), Indian central bank, RBI made a surprise 40bps repo rate hike to 4.4% and increased cash reserve ratio by 50 bps to 4.5%, citing inflation worries. Seeing the 10 year treasury yields of major economies (bar graph), in a descending order has Brazil in the first place at 12.25%, with India at 7.389% at 3<sup>rd</sup> place, US just shy of 3% while UK at 2%. Least yielding has been the Japanese 10 year bond at 0.23%.



The historical performance of few 10 year yields can be seen in the chart below. India is marked in orange, US 10 year yield in blue, China in red, UK in white, France in pink, Germany in green and Japan in yellow.

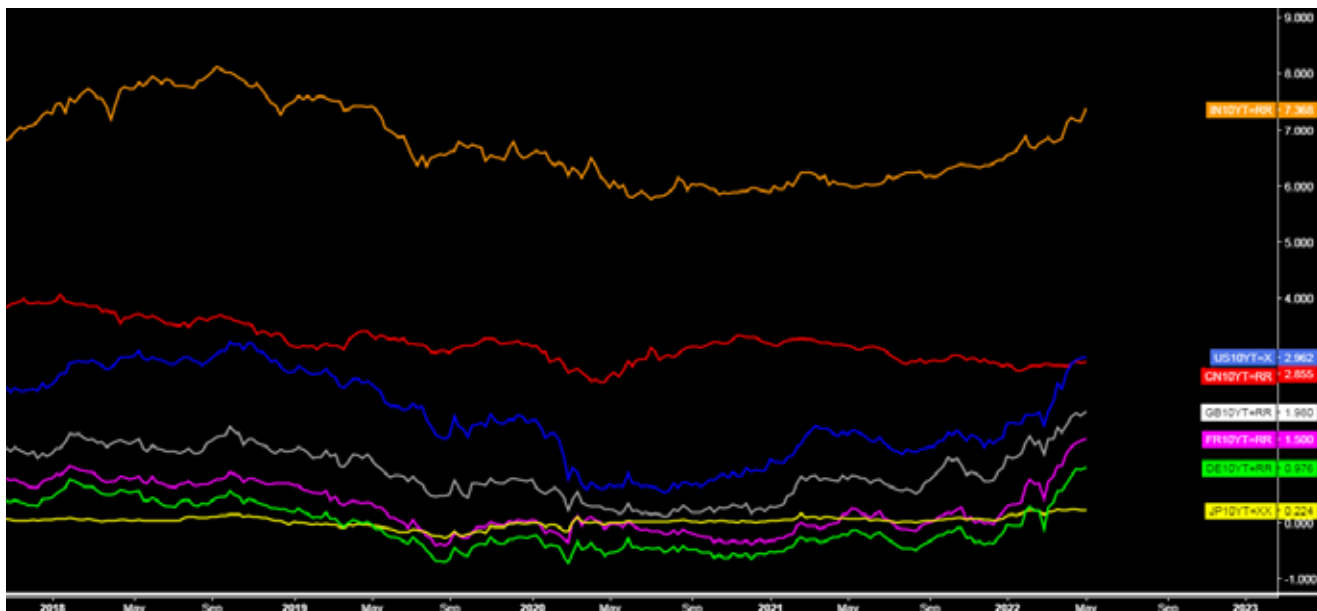
Most yields have been on a rise since the outbreak

of pandemic, but China and Japan have seen more or less stable yields. Since the pandemic, the French, British and US yields have risen more than 200%, while Indian yields rose just 18%.

Is the high yield an indication of changing times (read volatility)?



## FOCUS AREA



### USDINR Ideas - India is leading the way

India is leading the way, globally. I meant, Indian financial markets. Notwithstanding widespread chaos (read weakness) in Asian currencies and international majors (Euro, GBP, JPY), our beloved Rupee is trading rock solid and barely moving. Despite substantial correction in the global equities, wherein most of the benchmark indices have plunged by 5% - 14%, Indian equities have hardly declined.

Look at the rebased chart 1 (starting from 1 Feb'22), comparing Indian Rupee with Asians and international majors. Another rebased chart 2 (with the same start date), equating NSE with global stock indices. The results are quite startling. Evaluating

chart 1: Dollar index (white line) has sky-rocketed 7%. Remember it is just a 3-month period. Conversely Euro (blue line) and GBP (red line) have plummeted 6.7% - 7.5% respectively. Japanese Yen (yellow line) has dropped a massive 13.2% - a clear outlier due to inflation/interest rate under-performance. Chinese Yuan (purple line), usually a stable currency, has declined 3.5% while South Korean Won (green line) has lost 4.7% in value. In this bloodbath, the Indian Rupee (orange line) has weakened a meagre 2.2%. Extremely commendable performance and "fragile" no more.

Let's check out equity indices—chart 2. US indices, S&P 500 (white line) and NASDAQ (grey line) have declined 5.7% and 10.3% respectively. European indices, Germany's DAX (light blue line) and France's CAC40 (dark blue line)

### CHART 1



## FOCUS AREA

CHART 2



have plunged 9.9% and 8% correspondingly. China's SSEC (purple line) has plummeted by 11% and Hong Kong's HSI (pink line) has dropped a massive 14.2%. During such widespread mayhem, India's Nifty (orange line) has lost just 2.7% of its value. Moreover, Japan's N225 (yellow line) and UK's FTSE100 (red line) have been resilient and has not lost any meaningful value. Will global financial markets recover or stay tight (as

India did), or will Indian financial markets weaken in line with its global peers is a billion-dollar question. Either way, it makes prudent sense to keep forex positions hedged. Strong recommendation to exporters and importers to hedge using vanilla options. USDINR options volatility (and hence option premium/cost) is moderate and low but uncertainty and fear is probably at its multi months peak.





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# Highlights of marine landings and boat arrivals in the month of April 2022

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

As part of the Catch Certification system of MPEDA, the marine fish landings occurring at selected major harbours/landing centres in India is monitored and recorded on a real-time basis by NETFISH. The Harbour Data Collectors engaged at around 100 landing sites across the country record the details of the fishing vessels arriving at the harbour/landing centre and the species-wise quantity landed by these vessels, on a daily basis. This report summarizes the species-wise, harbour-wise and state-wise fish catch and boat arrival trends observed during April 2022.

## I.Observations on fish catch landings

The marine fish landings reported from the 95 selected landing sites across the country during the month of April 2022 totalled to 56,140.27 tons. The total catch was comprised of 26,825.34 tons (48 %) of Pelagic finfishes, 16,646.39 tons (29 %) of Demersal finfishes, 7,217.96 tons (13%) of Crustaceans and 5,450.59 tons (10 %) of Molluscs (Fig.1).

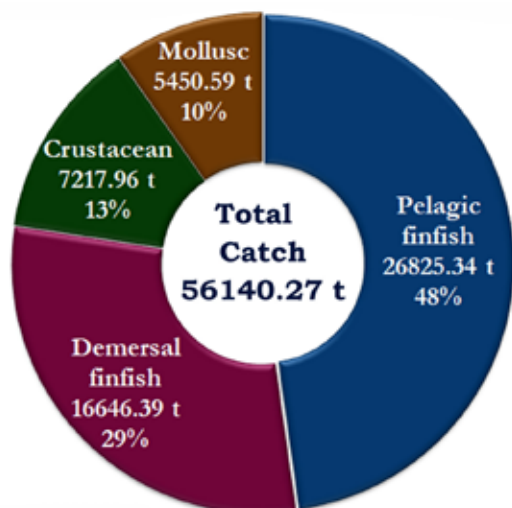


Fig.1: Catch composition of marine landings recorded in April 2022

Out of the 246 species of marine fishery items landed during the month, the major five contributors were *Rastrelliger kanagurta* (Indian mackerel), *Nemipterus japonicus* (Japanese thread fin bream), *Lepturacanthus savala* (Ribbon fish), *Stolephorus indicus* (Anchovy) and *Loligo duvauceli* (Squid) (Table1).

Table 1: Major fish species landed during April 2022

Sl. No:	Common name	Scientific name	Qty. in tons
1	Indian mackerel	<i>Rastrelliger kanagurta</i>	6248.18
2	Japanese thread fin bream	<i>Nemipterus japonicus</i>	4619.43
3	Ribbon fish	<i>Lepturacanthus savala</i>	4564.95
4	Indian anchovy	<i>Stolephorus indicus</i>	1869.46
5	Squid	<i>Loligo duvauceli</i>	1601.71

On analysing the landing by categorizing various species under their common groups, it was observed that the most landed fishery items during the month were Mackerels, Threadfin breams, Ribbon fishes, Coastal shrimps and Squids.

They together had formed 46 % of the total catch (Fig. 2).The other major items reported were Tunas and Anchovies each contributing about 3,283.19 t & 3,246.75 t respectively to the total catch.

## FOCUS AREA

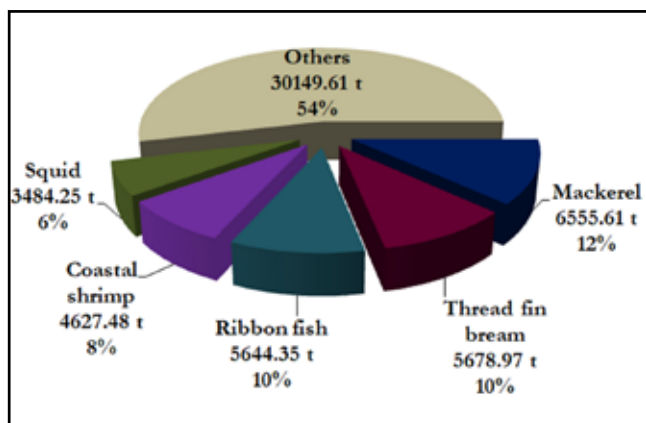


Fig. 2: Major fishery items landed during April 2022

The quantity-wise landing of Pelagic finfish, Demersal finfish, Crustacean and Molluscan resources are presented in table 2. Among Pelagic finfishes, the Mackerels and Ribbon fishes dominated the catch, and in the case of Demersal finfishes, Threadfin breams and Croakers were the most landed items. About 64% of the Crustacean catch was comprised of different species of Coastal shrimps, within which the *Karikkadi* shrimp was the dominant species with a landing of 1111.68 tons. In the case of the Molluscan resources, squids were the most landed items and then followed by cuttlefish.

**State-wise landings:** Gujarat with a total landing of 17,064.89 tons (30 %) stood as the top contributor amongst the 9 coastal states (Fig. 3). Kerala, Maharashtra and Karnataka were next in the line-up, with a contribution of 11,407.72 tons (20 %), 11,022.19 tons (19 %) and 7,824.32 tons (14 %) respectively to the total catch. The landing from East coast was very meagre during the month.

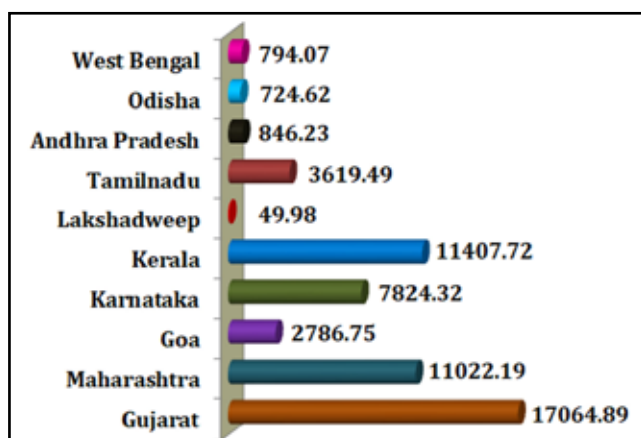


Fig.3: State - wise fish landings (in tons) during April 2022

**Harbour-wise landings:** The Porbandar harbour in Gujarat had recorded the maximum fish landings,

which was to the tune of 3,595.69 tons. It was followed by New Ferry Wharf and Veraval harbours, with a share of 3,511.51 tons and 3,473.90 tons respectively. Mangalore, Okha and Malpe harbours also had recorded a landing of more than 3000 tons.

## II.OBSERVATIONS ON BOAT ARRIVALS

A total of 34,208 nos. of fishing vessel arrivals was recorded from the 95 fish landing sites in April 2022. State - wise figures (Fig. 4) show that the highest number of boat arrivals had occurred in Kerala (29%) during the month and Gujarat (24%), Maharashtra (15 %) and Tamil Nadu (14 %) succeeding the list. Porbandar (1,858 nos.), Veraval (1,698 nos.) and Mangrol (1,578 nos.) harbours in Gujarat had topped the list in terms of highest number of boat arrivals.

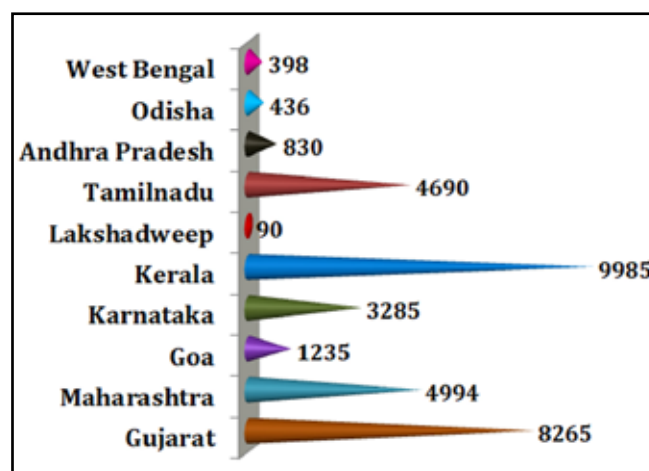


Fig. 4: State - wise boat arrivals (nos.) during April 2022

**Summary:** In April 2022, a total of 56,140.27 tons of marine landings and 34,208 nos. of boat arrivals were reported from 95 major fishing harbour/landing centres along the 9 maritime states and the Lakshadweep Island. The total catch had declined during the month, due to the fishing ban period started along the East coast. Compared to March 2022, marine landings decreased by about 15,000 tons and boat arrivals by about 8700 numbers during April 2022. The Pelagic finfish resources continued as the major contributor to the total landings and the Indian mackerel (*Rastrelliger kanagurta*) remained the most landed species in this month as well. Gujarat retained the first place among the states in terms of total catch landed whereas, Kerala continued in the first place with regard to the most number of boat arrivals recorded for the month. Among the landing sites, the Porbandar harbour has attained the first position in terms of total catch landed as well as number of boat arrivals.





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# India's seafood trade with Australia- Challenges & opportunities

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Australia has the third largest Exclusive Economic Zone in the world; however their waters are not very productive, which limits their wild capture fisheries production. Rock Lobster, Atlantic Salmon, Southern Bluefin Tuna Barramundi and Abalone dominates Australian fishery and aquaculture, but these items are exported due to their high unit value. Australians consumed around 3,35,000 tonnes of seafood products in 2019–20, so the imports are vital to fill the gap between Australia's seafood consumption and local seafood supply. Availability of imported seafood at lower prices compared to domestically manufactured products makes it a preferred food item for the Australians. Imported seafood accounted

for around 62 percent of this consumption. Seafood products imported by them not only consist of lower unit value products such as canned or frozen finfish but also include high value products such as prawns and salmons. Even though the Australian seafood exports are inevitable for the profitability of the industry, Australia is a net importer of seafood in terms on quantity and net exporter of seafood in terms of value.

### Seafood imports of Australia

In 2021, Australia imported seafood valued at USD 1.6 billion from 97 countries. Six key countries accounted for 68 percent of total Australian seafood imports. They



## MAIN STORY

are Thailand (\$297 million), Vietnam (\$280 million), China (\$219 million), New Zealand (\$175 million), Indonesia (\$115 million) and Norway (\$64 million). The percentage contribution of these countries in terms of value (USD million) in total seafood imports of Australia is given in fig.1.

The major seafood products which has demand in

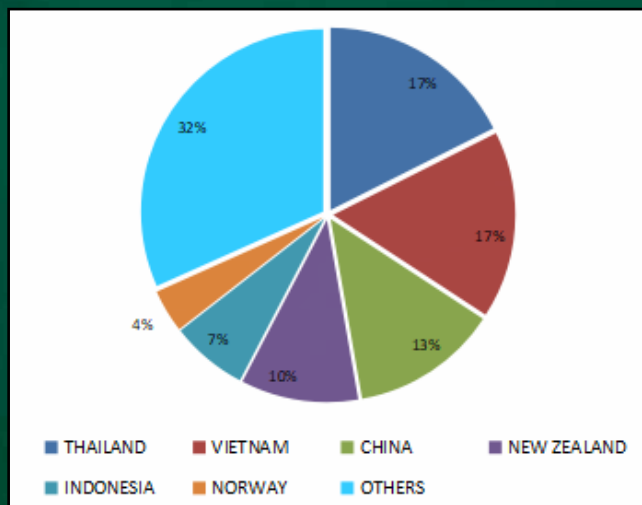


Fig. 1: Major suppliers of seafood to Australia (source: ABARES)

Australian domestic market are canned tuna, frozen fish fillets, frozen shrimps, frozen cuttlefish, value added shrimps (chapter 16), canned fish, fats & oils, frozen fillets of Salmon and canned Salmon. These items accounts for about half of the share of total Seafood imports of Australia. The percentage share of each item in terms of value (USD million) in total seafood imports is given in fig.2.

### Indian seafood exports to Australia

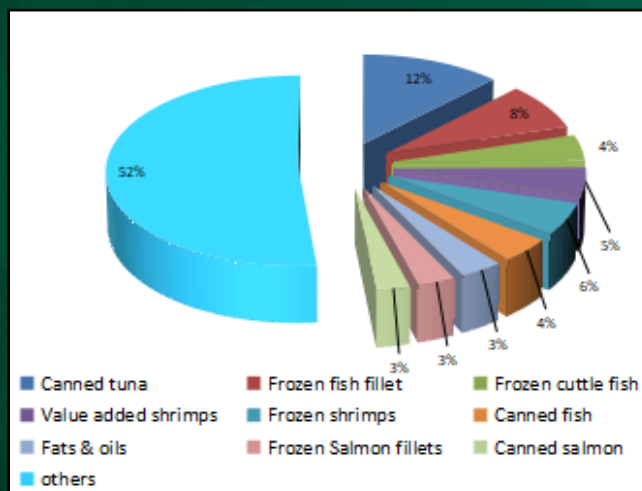


Fig. 2: Major seafood items imported by Australia (source: ABARES)

India exported seafood items worth USD 8.8 million to Australia in 2021, which is only 0.5 percent of total seafood imports of Australia. Major Seafood items imported by Australia from India are fish meal, frozen octopus, frozen cuttlefish, frozen fish, frozen crustaceans (not from HS code 030611-030617), frozen lobsters and frozen molluscs. The percentage share of each item in terms of value (USD million) is provided in fig. 3.

### Challenges and opportunity

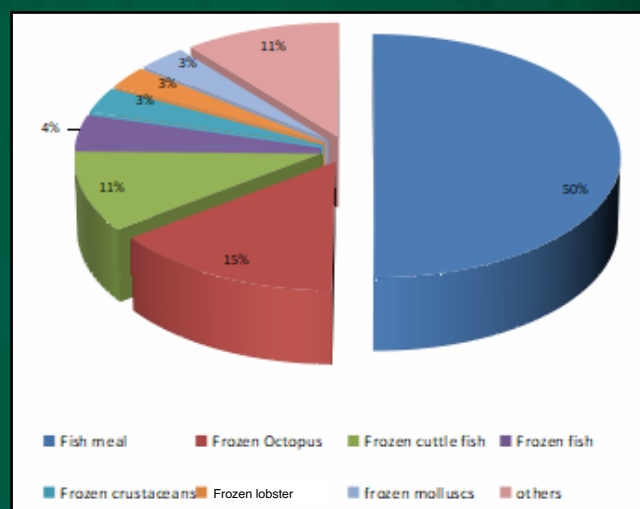


Fig. 3: Major seafood items exported to Australia from India (source: ABARES)

The stringent import restrictions implemented by Australia due to bio-security reasons act as a trade barrier in preventing the export of marine products from India. Australia banned the imports of raw frozen shrimps and marinated shrimps from India due to the detection of White Spot Syndrome Virus (WSSV) and Yellow Head Virus (YHV) in our culture systems. Creating aquatic disease free areas/zones/region can prevent the spread of viruses to an extent and will allow the exports of shrimps harvested from disease free zone. An MoU between India & Australia for exporting the raw frozen shrimp from the disease free zone of India could be explored. Presently, there are no restrictions imposed in exporting the cooked shrimps. Hence we can exploit this as an opportunity and increase the share of cooked shrimp in our export basket.

An analysis of 6 seafood items (Chapter 3,16 & 23) imported by Australia in 2021 in which India has export potential, shows that Australia has imported USD 463.54 million of these items and India's contribution is only USD 6.78 million (1.46%). There is a high demand for value added seafood products such as canned

## MAIN STORY



Fig. 4: Percentage contribution of potential seafood items exported from India to Australia (2021) (source: ABARES)

tuna, canned shrimps, prepared and preserved shrimp products etc. in Australian market.

Australia has imported USD 337.52 million worth value added seafood products (under chapter 16) in which India has potential to export. Thailand, Vietnam & China are the top suppliers of value added products to Australia capturing USD 299 million, i.e. 88.6% by share of Australian import market, in which India's contribution is only USD 0.13 million with a share of 0.03%. India has the potential to capture at least 20% of value added seafood import market of Australia worth around USD 67.5 million.

Apart from the value added seafood products, frozen cuttlefish, frozen molluscs, frozen octopus, frozen lobster, frozen tilapia, frozen fillets of tilapia, and fish meal are the other seafood items which are having demand in Australia. India can concentrate more towards the export of these items to flourish in the Australian market. The graphical representation of Percentage contribution of potential seafood items exported from India to Australia is given in fig. 4.

The Chamber of Commerce and Industry Western Australia (CCIWA) and the Seafood Exporters Association of India (SEAI) have signed a Memorandum of Understanding to pursue mutual benefits in seafood trade and investment through the sharing of ideas on strengthening the Indian Ocean blue economy. CCIWA will encourage Australia's seafood sectors' desire in collaborating with the Indian seafood industry and vice versa. This will contribute to the development of a shared vision to improve regional food security in the

Indian Ocean region. This will also aid in increasing the seafood exports from India to Western Australia in future.

### Conclusion

Present contribution of India in Australian seafood import market is negligible. India can go far beyond this in the upcoming years by resolving the prevailing bio-security issues and focussing more on other potential items having demand. Moreover, a trade agreement (Economic Cooperation Trade Agreement) was recently signed between India and Australia, which will further boost our seafood exports. The value addition of Indian seafood's must be encouraged by making exporters aware of its potential and providing them with proper training and incentives.

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# Chameleons of the aquarium





**V. K. Dey**

V. K. Dey has over three decades of experience in diverse sectors of seafood industry in 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 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.

**B***adis badis*, a native of India, Thailand and Myanmar, belongs to the Nandidae family. It is better known as the dwarf chameleon fish as it changes its colour quite often depending on mood and environment, especially during courtship and breeding. This fish have been around the hobby for years. They are very pretty like the dwarf cichlids. The males are attractive with a dull red to bluish back, usually crossed with wavy vertical lines on the body. Most of the time they are mildly colourful with series of orange and blue, with blue spots. However, when guarding a nest or group of young ones, the male becomes jet black with bright blue highlights in the fins. When frightened, they fade to a beige colour with a dark spot on the caudal peduncle. When the dominant male is feeling bold, it turns dark with black stripes running vertically down the sides.

They are almost carnivorous and feed on tubifex, white worm, shredded earth worm and other meaty foods and will not take any flake food or vegetable matter. They are peaceful, slow moving and excellent fish go well in community tanks. The adult size is about 8 cm and ideal water temperature should be 26°C with pH about 7.0. They require lots of plants and usually driftwood is used for giving shelter.

*Badis* has three sub species, *Badis badis badis* found in India, *B. badis siamensis* of Thailand and *B. badis*

*burmanicus* from Myanmar. All the subspecies are small, reaching a maximum size of 6 - 8 cm.

*Badis* is quite a simple fish to breed. The breeding pattern is almost similar to the cichlids. The male is distinguished by a slimmer appearance and more intense colouration. Males and females should be separated and conditioned for a week on live feeds to get best results during breeding. The water should be slightly acidic to neutral (ph 6.8) and the temperature 26°C. After preliminary courtship, which coincides with vigorous chasing by the male, the female will eventually be drawn into a shade to lay eggs, which will be fertilised by the male. The parents should be removed to avoid mortality of the young ones. Hatching occurs within 72 – 80 hours. The young ones will be gradually fed on infusoria, brine shrimp, daphnia and finally small white worms or chopped tubifex.

*Badis badis badis*, is native of Indian sub continent especially from the northeastern side. The maximum attainable size of the adult fish is 8 cm. The water temperature can varies between 23 – 26°C and pH a little less than 7. Males are ventrally concave and much more colourful and care young ones. They can be kept in pairs or small groups in larger tanks. Feed on live foods and some frozen worms. Need lot of plants and prefer hiding place in aquarium. All the other sub-species show almost similar characteristics and breeding behaviour.



# Grey Mullet aquaculture in India - Challenges and the way ahead

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### Introduction

The grey mullet, *Mugil cephalus* belongs to the family Mugilidae, which comprises of 20 genera and 70 species and thirteen species of these are recorded in Indian coasts. Grey mullets are relatively faster growing among the species under the family Mugilidae. Grey mullets are also one of the most economically important cultivable species alongside other mullet species. The consumer demand and the related aquaculture preference of the different mullet species varies in different regions of the world. For example, the thin lip mullet, *Liza ramada* and bluespot mullet, *Valamugil sahyi* are widely cultured in Egypt. The goldspot mullet *Liza parsia*, tade mullet *Liza tade* have high market demand in the eastern states as compared to other regions of India. Grey mullet aquaculture is generally carried out as a polyculture practice with other brackishwater fishes and mullet species. It has been an integral part of Indian traditional fish farming systems also. Reports of farming of grey mullet from Kerala, West Bengal and Tamil Nadu exist from the 1940's. This is similar to subsistence farming of grey mullet that has been practised for centuries in the countries around the Mediterranean region, South East Asia, Japan and Hawaii. No recent database exists on the aquaculture production of grey mullets from India. Reports from the 1960's show the average production of mullet species as 1761 t; with Tamil Nadu (Madras) contributing 37%; Gujarat, 31%, Maharashtra 10% as the leading states. The grey mullet continues to remain an important candidate species in our conventional sustainable brackishwater fish culture practices.

### Factors influencing geographic distribution of grey mullet aquaculture practice

The natural distribution of grey mullets on the west coast ranges from north-western state of Gujarat to

southern state of Kerala and on the east coast it ranges from Tamil Nadu in south to West Bengal in the north-east of India. The traditional pockets where grey mullets are cultured are also aligned along these areas due to the dependence on the wild mullet seed collection for stocking the aquaculture ponds. Over a period of time emergence of more organised collection methods by traders and introduction of temporary seed holding systems like hapas, tanks or small ponds, efficient live fish transportation by a network of distribution agents allowed the grow-out practice to be adopted into semi-intensive polyculture and mono-culture systems especially in the states and areas where grey mullet is a favoured food fish.

Grey mullet occupies a variety of marine, estuarine and freshwater habitats. The adults are catadromous migrating in large schools to the sea for spawning and the larvae are drifted to shallow inter-tidal environments which provide rich feeding grounds. These migratory patterns and scientific research vouch for the euryhaline nature of grey mullet. Hence, grey mullets are easily adaptable to culture systems in different habitats; freshwater, brackishwater or marine. Interestingly over 60% of the global grey mullet aquaculture production is from the fresh water environments. The primary factors favouring grey mullet aquaculture in a region is driven primarily by the consumer preference, seed availability and its prevalence as a traditional culture practice among local farmers.

### Feeds and feeding practices to support optimal growth of grey mullet

Grey mullets are benthic feeders exhibiting omnivorous illiophagic feeding habit. They feed on detritus, benthic micro-algae, filamentous algae, diatoms, periphyton small invertebrates and macrophytes. The benthic detrital feeding nature of mullet helps to maintain a





Fig. 1: Broodstock of grey mullet *Mugil cephalus* in holding tanks at fish hatchery, MES, ICAR-CIBA

healthy pond bottom. Grey mullets feed on periphyton hence these substrates can be utilised to reduce the feed inputs and enhance growth of the animals. This species can be easily adopted to formulated feeds. Studies conducted at CIBA on the grey mullet indicated that the fish requires 27% protein with 9 % lipid for better growth performance and food conversion ratio (FCR). The existing information on the nutrient requirement shows some variation and the crude protein requirement was in the range 30-40% and the crude lipid concentration was 5-10 %. Our experience also revealed that the performance of the fish during the nursery phase was better with high protein feed; CIBA has developed nursery and grow out feeds for this species and named it as Cephalus NurseryPlus and Cephalus GrowoutPlus.

The feeding rate is depending on the body weight; to start with, the formulated feed is fed at 10% during the nursery phase and it is gradually reduced as the fish grows and finally it is fed at the rate of 2-3% in the grow out phase. Growth rates up to 600 g are reported after one year of culture when stocked at initial weight of from 10-15 g. Hatchery produced grey mullets under

optimal conditions have been reported to grow up to 1.9 kg in two years when fed nutrient specific feed.

Resolving the challenges in hatchery seed production Although grey mullet is one of the most desirable species for brackishwater finfish culture, its farming remains limited by constraints with respect to inadequate availability of seed for stocking in pond systems. By far, farmers are largely dependent on wild seed collection for stocking culture systems. The seeds are available from November to February along the east coast and June- July along at west coast at Rs 6-10/unit.

The constraints faced by researchers for developing commercial hatchery production are related to its short annual reproductive period and captivity-related multiple reproductive dysfunctions. Unlike many commercially important brackishwater species that have a protracted reproductive period and are multiple spawners, grey mullet is a group synchronous spawner and usually one clutch of oocytes mature annually. This maturation of oocytes is linked to specific temperature and photoperiod regime, hence the annual reproductive

## AQUACULTURE SCENE

period of the species is often short. Grey mullets also exhibit high levels of dopaminergic inhibition, which affects the maturity percentage and the success in final oocyte maturation. The captivity-related multiple reproductive dysfunctions observed in grey mullet are also evident in the low percentage of spermiating males and asynchrony in male and female maturation. At ICAR-CIBA some of these key issues related to artificial propagation of mullet are being resolved through exogenous hormone therapy, high quality broodstock feed- Cephalus BroodPlus and broodstock management which has now ensured enhanced captive maturation, expansion of existing narrow reproductive period and synchronisation of maturation.

Being a high value herbivorous species, grey mullet can contribute significantly to the brackishwater aquaculture development. Considering the economic significance of the grey mullet, the major constraints affecting aquaculture development of the species has to be addressed scientifically, especially with respect to seed production. This challenge is a global one. Ever since the pioneering work of Tang (1964), many researchers focussed their efforts on developing

technologies towards its captive reproduction and larval rearing especially in Taiwan, Hawaii (USA), Israel, Egypt, United Arab Emirates, Italy and a few countries like Hawaii, Italy, Tunisia and Israel are producing grey mullet fry on an experimental / semi-commercial scale. In India research on induced breeding of grey mullet from wild and captive populations were also initiated in tandem with global efforts (Mohanty, 1971; Sebastian and Nair, 1973; Chaudhuri *et al.*, 1977; Rajyalakshmi *et al.*, 1991; Krishnan *et al.*, 1996; Abraham *et al.*, 1999). Yet, it is only in the recent years that hatchery-based seed production could be successfully carried out at fish hatchery, Muttukadu experimental station, ICAR-CIBA. Efforts to scale up the seed production and expansion of its reproductive period are being targeted for which species-specific state of art facilities for breeding and larval rearing is required. Due to the variations in reproductive periods at different locations, hatchery production on a partnership mode will benefit in mullet seed production in different months of the year. Training and sensitisation of officials of fisheries departments and government hatcheries on different aspects of grey mullet reproduction have been one initiative in this direction.



Fig. 2: Hatchery produced fingerlings of grey mullet





Fig. 3: A haul of grey mullet from monoculture pond

### Nursery and grow-out aquaculture of grey mullet

Hatchery produced or wild-collected small mullet fry (15-25 mm) are not suitable for stocking in culture ponds and often result in poor production. Therefore, a pre-stocking nursery rearing step is desirable to obtain advanced fingerlings (100–120 mm) that are suitable for grow-out culture. Nursery rearing of grey mullet fry can be conducted in brackishwater tide-fed ponds for production of advanced fingerlings. Among different seed rearing methods such as use of fertilization/feeding/compost application/periphyton systems when tested alone or in combinations, the best performances were obtained in the combined fertilization-feeding and fertilization-periphyton rearing systems.

In pond culture trials of grey mullets, after treatment of pond bottom with lime, water was filled and fertilized with cattle manure, urea and single super phosphate (SSP) at 500, 30 and 30 kg/ha, respectively. After 7 days of fertilization, ponds were stocked with *M. cephalus* fry (0.55 g/ 36.0 mm) at 15000 no./ha.

Formulated feed prepared from locally available ingredients (mustard cake, rice bran, wheat flour, fishmeal etc.) was provided as supplementary feed @ 20 to 5% of body weight. Ponds were fertilized fortnightly with the above-mentioned fertilization materials at the same dose. Liming was done at fortnightly intervals with lime stone powder at 250 kg/ha. After 150 days of rearing, grey mullet attained average body weight (ABW) of 96 g. Further, higher density rearing of

mullet was carried out in ponds after bottom treatment and water intake according to the method mentioned earlier. Fertilisation was done with mustard cake, urea and SSP at 200, 20 and 20 kg/ha, respectively.

After 6 days of fertilization, bamboo poles are erected vertically in the pond to cover 10% of pond surface area as substrate for periphyton growth. After 10 days of bamboo pole fixing, pond was stocked with *M. Cephalus* advanced fry (3.36 g) @ 30000 no./ha. During rearing, all the ponds were fertilized fortnightly with mustard cake at 100 kg/ha. Agricultural lime was applied at 100 kg/ha one day before fertilization. Grey mullet fingerlings attained ABW of 28g in 120 days of rearing. Monoculture of grey mullet depends on availability of suitable seeds as stocking materials.

Various on-station and out-station trials have proven that monoculture of grey mullet can be an economically viable farming option provided that ponds are stocked with seeds reared initially in nursery. The pond for monoculture is prepared first, following eradication of unwanted organisms and application of manures and fertilizers. Advanced fingerlings of >50 g size are stocked at 10000 no. /ha. Fish are fed with supplementary feed. In an 8-month culture, fish attained 500-800 g with total production of 3-5 ton/ ha.

Similarly, polyculture trial can be carried out using combination of fish species at 8000-15,000 no./ha along with tiger shrimp seeds at 15,000-30,000 no./ha and following standard pond preparation procedures.

## AQUACULTURE SCENE

The stocking density varies with the quantum of seed availability. Natural pond productivity is maintained by fertilization. In addition, supplementary feed prepared from locally available ingredients can be used at 2-5% body weight daily. This kind of system can yield a total production of 2-3 ton/ha in 6-10 months.

The preferred species among fishes are: mullets- *M. cephalus*, *Liza tade* (tade grey mullet), *L. parsia* (goldspot mullet), milkfish- *Chanos chanos*, pearlspot- *Etroplus suratensis* and tiger shrimp- *Penaeus monodon*.

In an out-station trial, 3 ponds (1 ha each) were stocked with *M. cephalus* (40-50 g size) as the major species at 10000 no./ha, *L. tade* (10 g size) at 2000 no./ha, pearlspot (10 g size) at 1000 no./ha and *P. monodon* at 4500 no./ha. Supplementary feeding was provided with floating feed. After 150 days, shrimp with 45g ABW was harvested and fishes were harvested after 300 days. It resulted in 3.5 ton/ ha production with a net returns of Rs. 2 lakh/ ha.

### Way ahead

With the high emphasis on fish meal replacement in fish feeds and consequent increase in production costs for carnivorous fish species, the traditionally farmed grey mullet remains the most promising option among the available herbivorous species for brackishwater aquafarmers of our country. ICAR-CIBA continues its efforts for upscaling hatchery based seed production to support efficient aquaculture practices.

Strategies involving exogenous hormone therapies and environmental manipulation are being attempted to widen the narrow annual reproductive period of the species. Besides the problems of inadequate availability of quality seed for farming, many aquafarmers especially those who adopt species like grey mullet for the first time face challenges during harvest and marketing.

Farmers adopting partial harvesting as in many traditional farming systems are able to efficiently sell their produce at Rs 300-500/kg. First time farmers at new geographic areas find it a challenge to sell large biomass of their produce at prevailing market rates. This problem is true for many species and needs to be addressed through more efficient interventions like introduction of marketing networks and alternative post-harvest options.

Species like grey mullet have high export potential as its roe is a high value product in countries like Italy, France, Taiwan, Spain, the Mediterranean region, United States, where it sold as in form of a premium product the "*Botarga cavier*". Prices are in the range of 100-150 Euros per 100-150 g sac to 200 euros/ kg depending upon the markets and the product quality. The challenges faced at different levels of production and post-harvest needs to be addressed for diversified species like grey mullet to harness its true aquaculture potential.

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# “Antibiotic issues, BMPs and diversification in aquaculture”

## SRD VIZAG



Mr. R. Prasad Naik, AD, MPEDA SRD Vizag, welcomes the participants to the training programme at Amma Dhaba, Srikakulam district, Andhra Pradesh



Mr. Ch. Balakrishna, Scientist, KVK Amudalavalasa, delivering a lecture



Mr. P. Ramu, Field Manager, NaCSA Srikakulam delivers a lecture



Mr. P.V. Srinivas, Joint Director, Department of Fisheries, Srikakulam taking class



# “Sustainable aquaculture through species diversification & BMPs in aquaculture”



Mr. V. Chiranjeevu, senior aqua farmer, Seethanagaram, Srikakulam felicitated by Mr. Prasad Naik, AD, MPEDA SRD Vizag during the farmers meet conducted at Naupada village, Srikakulam district, Andhra Pradesh



Mr. Ch. Balakrishna, Scientist, KVK, Amudalavalasa, delivering a lecture



Mr. Y. Satyanarayana, Assistant Director, Department of Fisheries addressing the farmers







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# MPEDA organizes Seafood HACCP Training in association with USFDA and JIFSAN

**M**PEDA in association with the United States Food and Drug Administration (USFDA) and Joint Institute for Food Safety and Applied Nutrition (JIFSAN) organized 2 batches of Association of Food and Drug Officials (AFDO) segment 2 seafood HACCP training programmes at Kochi, Kerala. The 1<sup>st</sup> Batch of the 2 - day training programme was inaugurated on 21<sup>st</sup> April 2022 by Dr. K N Raghavan IRS, Chairman, MPEDA. Dr. Pankaja Panda, Food Safety Coordinator, USFDA India office delivered the key note address.

Felicitations were offered by Dr. M Karthikeyan, Director, MPEDA, Mr. K. S. Pradeep IRS, Secretary, MPEDA and Dr. Brett Koonse, Aquaculture and Seafood Safety Expert, JIFSAN. Mr. Anilkumar P., Joint Director (Marketing), MPEDA welcomed the gathering.

The 2<sup>nd</sup> batch of training programme was inaugurated on 25<sup>th</sup> April 2022 by Dr. M Karthikeyan, Director, MPEDA. Dr. Sarah McMullen, Country Director, USFDA India office delivered the key note address. Dr. Pankaja Panda, Food Safety Coordinator, USFDA India and Dr. Brett Koonse, Aquaculture and Seafood Safety Expert, JIFSAN offered felicitations.

Dr. Ram Mohan M.K., Joint Director (Quality Control), MPEDA welcomed the gathering. Mr. V. Vinod, Deputy Director (Quality Control), MPEDA proposed Vote of Thanks during both the occasions. The Seafood HACCP course, a two part course that includes self paced Seafood HACCP segment 1 Internet Training Course and segment 2 live and on-demand training taught by Seafood HACCP Alliance instructors.

The primary purpose of the AFDO/Alliance HACCP Training is to assist the implementation of HACCP programs in commercial and regulatory organizations. The Basic HACCP course teaches the seven principles of HACCP and empowers processors to develop HACCP plans specific for each seafood product they handle or produce.

The segment 1 of Seafood HACCP Alliance Internet training course is an alternative way for individuals from the seafood industry and regulatory community



*Dr. K.N. Raghavan IRS, Chairman, MPEDA inaugurates the 1<sup>st</sup> Batch Seafood HACCP training programme*



*A view of the dais (L-R): Dr. M. Karthikeyan, Director, MPEDA, Dr. Brett Koonse, Aquaculture and Seafood Safety Expert, JIFSAN, Mr. K.S. Pradeep IFS, Secretary, MPEDA and Dr. K. N. Raghavan, Chairman, MPEDA*



*Mr. Anilkumar P., Joint Director (Marketing), MPEDA during the welcome address*



*Mr. V. Vinod, Deputy Director (Quality Control) proposing the vote of thanks*



## QUALITY FRONT



*Dr. M. Karthikeyan, Director, MPEDA along with Dr. Sarah McMullen, Country Director, USFDA India inaugurates 2<sup>nd</sup> Batch Seafood HACCP training programme, in presence of Dr. Brett Koonse, Aquaculture and Seafood Safety Expert, JIFSAN*



*Dr. M. Karthikeyan, Director, MPEDA delivers inaugural address*



*A view of the dais (L-R): Dr. Sarah McMullen, Country Director, USFDA India, Dr. M. Karthikeyan, Director, MPEDA, Dr. Brett Koonse, Aquaculture and Seafood Safety Expert, JIFSAN, Dr. Ram Mohan M.K., Joint Director (QC), MPEDA, Dr. Pankaja Panda, Food Safety Coordinator, USFDA India*



*Faculty members*

to get training on the application of HACCP principles to seafood products when they need it. Those who completed the segment 1 seafood HACCP Alliance Internet training course only are eligible to attend the two days Segment 2 course. Together, the two Segments provide participants with the information needed to develop their firm's Seafood HACCP plan. Those who complete both segments are eligible for a "Certificate of Course Completion" from the Association of Food and Drug Officials (AFDO).

This certificate provides evidence that the individual meets the training requirement of the US FDA Seafood HACCP regulation. The training sessions were handled by experienced trainers from JIFSAN namely Dr. Brett Koonse, Ms. Doris T Hicks, Ms. Christina A M DeWitt and Ms. Alexandra C M de Oliveira. 60 participants including MPEDA officials, seafood industry, academia, scientists, Post graduate students & Research scholars were trained on 'Seafood HACCP' in these 2 training programmes, in which the participants were made to carry out hands on exercises on preparation of HACCP worksheets & plan forms for a given scenario.

The participant groups presented their HACCP worksheets to other groups & trainers, which were critically evaluated. The participants who completed the both Segments are now eligible for "Certificate of Course Completion" from the Association of Food and Drug Officials (AFDO). The individuals who complete this course meet the training requirement of the FDA Seafood HACCP regulation and can do the following:

- Develop a HACCP Plan for seafood products as required by the FDA regulation.
- Reassess or modify a HACCP Plan as necessary and/or required by the FDA regulation.
- Review HACCP Plan records as required by the FDA regulation.





## QUALITY FRONT



*1<sup>st</sup> batch of Seafood HACCP trainees with Chairman, MPEDA, faculty and others*



*2<sup>nd</sup> batch of the trainees with faculty and others*





## MPEDA-NETFISH organizes awareness programme on "Responsible fishing and quality management"



*Dr. Girija Behere, State Coordinator, NETFISH speaks to the participants*



*Fishers attending the awareness programme on "Responsible fishing and quality management"*

**N**ETFISH-MPEDA Maharashtra (North) along with Christian Koli Charitable Trust conducted Awareness lecture on 23<sup>rd</sup> April 2022 at Arnala Beach, Palghar, Maharashtra. Dr. Girija Behere, SCO delivered a lecture on "Responsible fishing and quality management". Nearly 3000 fishers attended the lecture.

# MPEDA observes 'Cyber Jagrutha Diwas'

With the growing roll out of e-Governance and online applications and tech-savvy generation of citizens, cyber crime has become one of the fastest growing areas of crime. More and more criminals are exploiting the speed, convenience and anonymity that modern technologies offer in order to commit a diverse range of criminal activities. Ministry of Home Affairs has launched the Indian Cyber Crime Coordination Center (I4C) to strengthen the Law Enforcement Agencies (LEAs) and improve coordination among LEAs with other agencies. The MHA has also launched the Cyber Crime Reporting Portal (NCRP) to facilitate online reporting of cyber crime incidents.

One of the key actions of preventing cyber crimes is to generate sustained awareness among public, especially among the vulnerable sections and groups on "Cyber Hygiene". As requested by the Ministry of Home Affairs, Department of Commerce has instructed all organizations to observe "Cyber Jagrukta Diwas" on first Wednesday of every month. The main purpose of this initiative is to create awareness for prevention of cyber crimes through workshops, seminars, interactive



*Dr. M. Karthikeyan, Director, MPEDA during the introductory speech*



*Mr. Binoy Joseph, Assistant Sub Inspector, Cyber Crime Investigation cell, Kochi City makes the presentation*



*Mrs. Usha Singh, Systems Analyst, MPEDA proposes the vote of thanks*

sessions etc. every month on the same day and at the same time. MPEDA observed "Cyber Jagrukta Diwas" at the Golden Jubilee Hall, MPEDA Head office on 4<sup>th</sup> May 2022. Mr. Binoy Joseph (Assistant Sub Inspector, Cyber Crime Investigation cell, Kochi City) made a presentation on various cyber crimes and safety measures to be practiced. All the employees from MPEDA Head Office, field offices, QC laboratories and societies joined the meeting through VC.

Mr. Binoy Joseph, who has more than 23 years of experience in IT & Cyber Security portfolios for Kerala Police, has played a major role in the formation of Cyber-crime Investigation cell in Kochi, Cyber Dome Kochi Unit and Cyber Police Station of Kochi Police Commissionerate. He explained about internet banking, social media etiquette, financial frauds, phishing threats, profile hijacking, cyber crime reporting, cyber safety resources for students, teachers and parents, women safety App NIRBHAYA etc. and the measures to be taken to prevent cyber crimes successfully. A question answer followed the presentation during which the doubts of the participants were cleared. Earlier, in his introductory speech, Dr. M. Karthikeyan, Director, MPEDA briefed about "Cyber Jagrukta Diwas". The meeting was coordinated by Mrs. Usha Singh, Systems Analyst, MPEDA.





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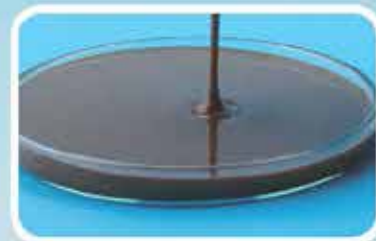
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## Kashmir's popular rainbow trout will soon be available in Hyderabad



**E**ver heard of a fish variety that could cost you about Rs 2000 per kg? Well! Rainbow Trout does cost that much and is still in high demand, in Hyderabad also.

The popularity of the Rainbow trout is so much that in lakes and streams in Kashmir, where the fish is found in abundance, one is allowed to angle for it after payment of a fee of Rs 1000 per day. And none is allowed to catch more than six fish. That sums up the popularity of Rainbow Trout. But one need not import the fish from Kashmir or from abroad now.

A Hyderabad-based entrepreneur Aditya Rithvik Narra has succeeded in mimicking conditions conducive for

Rainbow Trout fish to grow in Telangana. Very soon, he is likely to get a yield of one tonne of Rainbow Trout per day. The oily fish from the salmon family, is much sought after by food connoisseurs and health aficionados as it is a good source of protein, good fat and vitamins.

“Our first harvest will be in November. The lifecycle of Rainbow Trout from egg stage to being about 1.5 kg in weight is about one year. We are already into six months of rearing the fish,” says Rithvik, MD of Smart Green Aquaculture, which set up the rainbow trout culture centre in Kandukur of Rangareddy district. The project will see an investment of about Rs 25 crore in phases.



## NEWS SPECTRUM

The unit will produce about one tonne trout on a daily basis. The produce will be sold in domestic and export markets. The price per kg ranges can hit up to 2,000 a kg. A 100-gram of trout gives 141 calories, 20 gram protein and six gram fat. It is also a good source of sodium, potassium, vitamin (C, D, B6), calcium, cobalamin and magnesium, he said why it is among the high priced fishes.

“Rainbow trout is currently being imported and there is a huge demand abroad as well as in domestic market. In fact a few companies have already confirmed to source the fish from us,” discloses Rithvik.

He spent over six years on research on Recirculating Aquaculture Systems (RAS) in India and abroad before taking up the pilot project. In his unit, multiple stainless steel tanks are used and water is recirculated. Following its success, the company began its commercial operations. Specially made chillers are used to keep the water cool.

“The temperature has to be maintained between 5-15 degree centigrade at all times. We have power generators as backup. But in Telangana, there is no

worry about the power situation thanks to the 24/7 power provided by the Telangana Government. Trout has specific water quality requirements. We have chosen a site that has this ideal water quality. The water is sanitised by a UV filter before it is added to the RAS system,” he said on why the company chose Kandukur. Smart Green Aquaculture is now importing rainbow trout eggs from the US. “We import the eggs and hatch them. Some of the produced fingerlings are sold to other farmers. The remaining are used by the company for eggs. Now, the hatchery and nursery are operational. We also supply feed to farmers,” said Rithvik.

The company has 36 hatchery trays, nursery in 20 tanks and 48 grow out units. The produce will be chemical free and will have traceability from eggs arrival to harvest. Rainbow trout will be the primary breed and others like tilapia, eel, sea bass, desi koi and others will be included. The company also offers turnkey solutions including consulting, design, supply of eggs and feed and others. It offers to buy back fish from them. The unit is generating employment to about 50 people.

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# Updated Artemia replacement launched in India

**A** new generation of formulated feeds for shrimp post-larvae, said to be an effective alternative to the use of Artemia, has recently been launched in India. Called EZ Artemia Ultra, it is the third generation of a diet that was originally developed as a synthetic substitute for Artemia, but according to its manufacturer – Zeigler Bros – the new “formulation exceeds the attractability, digestibility and nutritional value of Artemia nauplii.”

Zeigler launched the new diet with Priyanka Enterprises at the end of March in Golden Bay Resorts Koovathur, Tamil Nadu. The launch of the third generation of EZ Artemia was attended by over 50 participants, representing 32 big hatcheries from the Chennai coastal region.

According to Zeigler, the diet contains highly digestible microparticles which have been “microencapsulated to protect sensitive pigments, fatty acids, enzymes, vitamins and other nutrients” in an easy-to-consume matrix.

Over the past few years Zeigler R&D claims to have “improved the formulation to incorporate new powerful ingredients while removing terrestrial proteins”.

“A second area of advancement was on the manufacturing process, enabling the incorporation of more nutrients into each microcapsule, improving digestibility, making the capsules more buoyant while maintaining water stability. The third area of focus was in demonstrating performance improvement. Product development efforts focused on feeding of EZ Artemia as the sole diet for PL 2-12, assuring maximum performance and improved larval fitness and gut health as demonstrated by higher survivals and growth,” the company said in a press release.

The launch was hosted by Balaraman Radakrishnan, newly appointed general manager of Priyanka Enterprises.

Mark Rowel Napulan, sales manager of Zeigler Bros in Asia, led the event with a presentation emphasising the importance of increased biosecurity and understanding potential pathogen carriers to produce clean post-larvae.

He pointed to the need to balance the risk between using live and fresh feeds versus post-larvae productivity.

“After three years of continued research and development work at our Z-ARC (Zeigler Aquaculture Research Center) in Florida, I am very excited to present to you the key distinct features of this improved product. This diet now comes with much improved buoyancy making the particles remain suspended in water column for indefinite period with good aeration, maximizing productivity from flat as well as parabolic larval systems. We have incorporated our special blends of Rescue probiotics into the micro-capsules to promote gut health and help protect shrimp against pathogenic vibrio. In the liquid fraction, we have incorporated our Remediate water quality probiotic blend designed for waste digestion and toxic gas control for a healthier tank environment. The formulation includes V-Pak, Zeigler’s immune enhancement feed additive for stress and disease tolerance,” he said.

According to Napulan, some hatchery managers have found that continued feeding of EZ Artemia Ultra after discontinuation of feeding of Artemia nauplii helped reduce cannibalism and resulted in significantly higher survival rates

He added that – as a partial Artemia replacement – laboratory and field studies have demonstrated improved lipid deposition, growth and survival compared to control tanks fed with 100 percent Artemia nauplii. In addition, production costs were reduced, and profits were increased.

According to Zeigler, EZ Artemia Ultra has also been demonstrated to successfully replace 100 percent of the Artemia, “eliminating the need for the additional capital and labour expense associated with Artemia hatching systems”.

“Complete replacement of artemia significantly reduces the risk of Vibrio and microsporidian contamination, while improving the gut health of the larvae and the environmental health of the larval rearing tank,” the company claims.

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# A breakthrough for pangasius welfare in India

A new project is looking into improving slaughtering techniques in India's pangasius farming sector. The project is a collaborative effort involving Fish Welfare Initiative (FWI) and Sage, a cafe and store chain in Hyderabad, which is FWI's first corporate partner. Improvements in welfare have included greater pond preparation, more feed management and reducing stocking densities. Most recently the team at FWI visited Sage to follow up on their progress and trial a higher-welfare stunning and slaughtering process. "Although slaughter is often challenging and almost invariably involves some suffering, we believe our work with Sage is a critical step towards implementing pre-slaughter stunning in a country where, to our knowledge, it has never been practiced before for fish," explains Jennifer Kirsch, director of international programs at FWI.

Fish are sentient beings capable of feeling pain and distress. By itself, this necessitates an improvement of slaughter practices to reduce induced distress and pain for a large number of individuals. While slaughter only makes up a comparatively small part of fishes' lives (ie, a few minutes to one hour), the inflicted pain can be particularly intense. On most Indian fish farms (as in many other countries), during capture, fish are usually crowded in nets for several hours before asphyxiating in air or on ice.

"Some forms of electrical stunning have also been criticised as being ineffective at rendering all fish unconscious, due to differences in their size and physiology, and is believed to negatively affect flesh quality. Considering the small number of fish and the ability to handle them individually, percussive stunning, in our best judgment, appeared to be most promising," Kirsch explains. "After extensive research and conversations with experts, we recommended a three-step stunning and killing process to ensure minimal suffering for the fish involved. Three of our team members went to Sage to oversee the process," she adds. First, fish were percussively stunned by hitting them on the head with a metal pole. The effectiveness

of this method was judged by checking the fish's unconsciousness through assessing the eye-roll reflex. Percussive stunning ensured that all fish were desensitised (ie couldn't feel pain) before continuing the killing process. "After the successful stunning, fish were spiked with a needle in the middle of their brain to achieve brain death and the resulting inability to process painful stimuli. In theory, percussive stunning is sufficient when fish are killed before regaining consciousness. We used the spiking as a secondary measure to prevent the fish regaining consciousness and the ability to feel pain at any point," explains Kirsch. While the fish were still unconscious, their gills and main artery were cut to let them bleed out. Stunning pangasius percussively involves hitting them with a single strong blow on their head (1). Afterward, spiking their brain (2) can be done painlessly and leads to immediate brain death.

The steps following the stunning were easier to implement, and fish were successfully spiked and bled out before regaining consciousness," says Kirsch. "To our knowledge, this has been the first attempt to stun finfish before slaughter in India. While the process was not yet perfect, some fish were spared unnecessary, prolonged suffering during this killing process. We think that this stunning method could be used by small-scale fish farmers across India to ensure high animal welfare and related benefits like better product quality. Nevertheless, for large commercial applicability of percussive stunning, the effective blow to cause instant unconsciousness will require some kind of automation and standardisation. This can only be achieved by further collaboration between researchers and farmers, alongside proper training to decrease the likelihood of doing more harm than good to the fish," she adds. "We are grateful to SAGE for pioneering this space to get closer to a pain-free killing process for their fish. We will continue to work together to refine the stunning process, both with Sage and our other partners in India," Kirsch concludes.

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7	Mr. Mauro Regnoli MEDUSA Cesare Regnoli & Figlio SRL Societa Unipersonale Sede Via San Vitale 42/2 – 40125, Bologna Tel: +39 051 222483, +39 0426 372118 Fax: +39 051 269938, +39 0426 372120 Email: mauro@regnoli.it <i>Shrimp/ Metapenaeus affinis</i>	8	Mr. Nick Meyrick GEM Seafoods Tel: + 44 (0) 7740 744078 + 44 (0) 1892 231647 Fax: + 44 (0) 1253 776344 Email: nick@gemseafood.co.uk <i>Shrimp</i>
9	Mr. Tommy Cadden Fastnet Fish Ireland Westport Industrial Park Newport Rd, Westport Co. Mayo, Ireland Tel: 00 353 98 53206 00 353 87 6488594 Fax: 00 353 98 28261 Email: thomascadden2010@gmail.com <i>Shrimp</i>	10	Mr. Raimond Ozols Juhatuse Liige Smartcustom OU Kalameister Tel: +372 5065053 Email: ozols.raimond@gmail.com <i>Shrimp</i>
11	Mr. Mohamed Mostafa CEO, Bosphorus Seafood 17 El Mansour Mohamed St., Zamalek, Cairo, Egypt Tel: +202-27356550 Fax: +201000889972 Email: mohamed.mostafa@albesfore.com <i>Shrimp</i>	12	Mr. Mon Fito Baochuan Shengda Global Sourcing Chain Tel: + 34 619 782 263 Email: mon@baochuanshengda.com <i>Shrimp</i>



## TRADE ENQUIRY

13	Mr. Levan Nodia Operation Manager Georgian Food Corporation 1 Kavtaradze Str., Tbilisi Tel: (+995) 511 13 56 91 Email: l.nodia@gfc.com.ge <i>Shrimp</i>	14	Mr. Zhanna Torgashova International Manager HT Products GmbH Waldofer Str.102 69123, Heidelberg Tel: + 49 6221 8259790, +49 6221 8259792 + 49 178 5863626 Fax: +49 6221 8259791 Email: z.torgashova@htproducts.de <i>Vannamei shrimp</i>
15	Mr. Marcin Wyszowski Director of Purchasing Department, Kuchnie Swiata S.A., 01-708, Warszawa, Stodowiec St.10/10, NIP 118-00-39-859 Tel: +48 22 785 95 29, +48 513 088 542 Email: marcin.wyszowski@kuchnieswiata.com.pl <i>Shrimp</i>	16	Mr. Mohammed Amir Al Muhana General Manager Pearl Sea Trading Company Limited Dammam, Kindgom of Saudi Arabia Tel: + 966567505825 Fax: +966138338896 Email: pearlsea2019@gmail.com; almuhannacl@gmail.com <i>Shrimp</i>
17	Mr. Igor Sternal Group Purchasing Manager Head of Procurement Mowi CE Mowi Poland S.A., Duninowo 39 76-270 Ustka Poland Tel: +48 502 502 876 Email: igor.sternal@mowi.com <i>Shrimp</i>	18	Mr. Olivier Fertil Armor Plats Cuisines SAS Carrefour Industrial du Porzo 14, rue Antonin Careme – 56700 Kervignac, France Tel: 02 97 85 52 52 Fax: 02 97 85 19 90 Email: ofertil@lescuisinesdarmor.com <i>Shrimp</i>
19	Mr. Lasha Mindadze Head of Direction 5, Udzo Turn, 0190 Tbillisi Georgia Tel: +995 595 959 196, +995 32 266 20 20 Fax: +995 32 266 20 20 Email: l.mindadze@kanti.ge <i>Shrimp</i>	20	Mr. Jack Schmidt Senior Purchase Manager B&S Rijksstraatweg 7, 3316 EE Dordrecht The Netherlands Tel: +31(0)65 068 2420, +31(0)78 653 4163 Email: jschmidt@bs-egg.com <i>Shrimp</i>
21	Mr. Dirk De Pandelaere CEO Shore nv Ankerstraat 2, BE-8400 Oostende Tel: +32 (0) 59 32 28 68 +32 (0) 475 71 87 86 Email: dirk.depandelaere.eu <i>Shrimp</i>	22	Mr. Angus Pile Director Industrieweg 20a, 3144 CH Maassluis The Netherlands Tel: +31 105 30 01 18 +31 611 62 30 06 Email: angus@forte-foods.com <i>Shrimp</i>

## TRADE ENQUIRY

23	Mr. Esteban Avendano Herrera Latin America Sales Representative Sort-Rite International, Inc 825 W Jefferson Ave, Harligen TX 8550 USA Tel: (956) 423-2427 Fax: (956) 423-2543 Email: estebanah110@hotmail.com <i>Shrimp</i>	24	Mr. Oleg Shatkovski Director Commercial Carrer de la Placa, 62 Premia de Mar (Barcelona) Tel: +34 629 311 619 +34 936 386 905 Email: oleg@catalonia-realty.com <i>Shrimp</i>
25	Mr. John Hutchinson National Seafood Manager Xpress Fish 351 South Boulevard Hesse Road Hull East Yorkshire HU3 4DY UK Tel: +44 (0) 7741 663646 +44 (0) 1482 633550 Email: john@xpressfish.net <i>Shrimp</i>	26	Mr. Francisco Gomez Varona Purchasing Manager, PESCIRO, Servicios Portuarios de Bouzas, Travesi'a de Bouzas n 22, 36208 Vigo, Espana Tel: +34 986436625 Mob: +34 618713898 Email: dircompras@pesciro.com Web: www.pesciro.com <i>Shrimp</i>
27	Mr. Emilio Cano, Director, Galenia HK Limited, No.5, 17/F Strand50.50 Bonham Strand, Sheung Wan, Hong Kong Mob: +84 932705609 Email: emilo@galenia.com.hk Web:www.galeniamaris.com <i>Shrimp</i>	28	Huseyin Direktor, SUNPEX TRADING LTD Business Development Coordinator, Kucuk Esnaf Sanayi Sitesi (BRT Arkası), Hasan Alcicioglu Sokak No:30 Hamitkoy Lefkosa, Nicosia 3300 E-mail: huseyin.direktor@sunpextrading.com <i>Shrimp</i>
FISH			
1	Mr. Michael Lu Procurement YCL Trading INC 839 40th Street Brooklyn Newyork 11232 USA Tel: +1(917) 833 -0307 +1(718) 633 -7816 Email: michael.lu@ycltrading.com <i>White Pomfret</i>	2	Mr. Giovanni Rocca Compratore Esselunga Super Market Chain Esselunga S.p.A. - Strada Provinciale per Recetto, 580-28061, Biandrate (NO) Italia Tel: 03211809425 Fax: 03211809440 E-mail: Giovanni.rocca@esselunga.it <i>Yellowfin Tuna, Fresh Sword Fish</i>
3	Mr. Mirian Tsirekidze Deputy Commercial Director Agrohub, Marshal Gelovani's Ave #22 Tel: +995 558 9989 99 +995 577 787 877 032 2 44 07 07 E-mail: m.tsirekidze@agrohub.ge L.ushkhvani@agrohub.ge <i>Fresh Exotic Fish</i>	4	Mr. Policarpo J. Olivas Director Comercial Amarpesca, Action Quality Foods SL, Calle Altamira 32- Bajo Izq Valencia- Espana Tel: +34 649 566 367, +34 961496497, +34 655737739 Email: POL@amarpesca.com, info@amarp- esca.com <i>Red snapper</i>



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5	<p>Mr. Mano Haran Director BTM International UK Ltd. 80 Goodhall Street, Park Royal London NW10 6TS Tel: +44 (0) 20 8961 1555 +44 (0) 20 8961 5522 +44 (0) 20 8961 7799 +44 (0) 20 7958 042 719 +44 (0) 77 8210 9987 E-mail: info@btmint.com ; bala@btmint.com <i>Tuna, Mackerel, King Fish, Trevally, Dry Fish, Bombay Duck, Anchovy, Queen Fish (big) Emperor</i></p>	6	<p>Ms. Marina Cavoan Buyer Gruppo Yu International Seafood Via Paolo Veronese, 242 Torino Tel: 011 19906419 Email: gruppoyu@gmail.com <i>Tuna</i></p>
7	<p>Mr. Bachir Cherif Habib Gerant Zone Industrielle N°01-Senia 31100 Oran-Algeria Tel: +213 41 51 52 69 /71 +213 550 46 17 88 E-mail: habib@sarlbef.com <i>Tuna</i></p>	8	<p>Mr. Gunsu Gozegir Seaart Seafood iTOB OSB Ekrem Demirtas Cad No. 57 Menderes/iZmir/TURKIYE Tel: +90 532 764 70 97 Email: gunsugozegir@seaart.com .tr <i>Croaker</i></p>
9	<p>Mr. Khaled Chaabouni President &amp; CEO 35/F, Central Plaza, 18 Harbour Road, Wanchai Hong Kong Tel: (852) 5615-8245 Fax: (852) 3972-8371 Email: leoprogressint@leo-progress.com <i>Chilled Pomfrets</i></p>	10	<p>Mr. Minh Nguyen General Manager NGHI Son Foods Group 5th Floor, Bach Viet Building 65 Tran Quoc Hoan Ward 4, Tan Binh Dist. Ho Chi Minh City VIETNAM Tel: +8428 399 77395 +84 932 349 858 E-mail: minh@nghisonfoodsgroup.com <i>Yellowfin Tuna</i></p>
11	<p>Mr. Saqib Kamal Director Kamal &amp; Sons UK Ltd. 2 Vine Street, Aston Birmingham B6 5TS Tel: 0121 328 3814 07813 129224 E-mail: kamal2son@hotmail.com <i>Barracuda</i></p>	12	<p>Dr. Lionel Deutia, General Manager, POISSONNERIE LA CONFIANCE, Yaounde- Cameroon Email-poissonnerielaconfiance237@gmail.com Mob: +32 468075238 <i>Rohu, Pompano, Grey Mullet, Barracuda</i></p>
13	<p>Mr. Marco Andresen West Fish GmbH FreiladestraBe 1 27572 Bremerhaven Tel: +49 471 97207-82 +49 159 01850375 Fax: +49 471 97207-16 Email: marco.andresen@westfish.de <i>Frozen fish, Fresh fish &amp; Fish fillets</i></p>	14	<p>Mr. Keiichi Imamoto Managing Director Taiga Resorts India Pvt. Ltd., B-8/4 Vasant Vihar Tel: 011 4050 1983 Mob: 9811473338 Email: sales@taigaindia.com, imamotoin- dia@yahoo.co.jp <i>Tuna</i></p>

## TRADE ENQUIRY

CEPHALOPODS			
1	<p>Mr. Joan Pau Soto International Trade Manager B&amp;M Foods, S.L C/ Santa Marta 37, bajos 4 08340 Vilassar de Mar (BCN) Spain Tel: +34 938 825 960 +34 609 281 054 +34 633 636 559 E-mail: jps@bonesandmeats.com <i>Squid</i></p>	2	<p>Mr. Lakis Charalambous Import Manager Charalambous Food Stuff Suppliers Ltd. 40 Viotechniki Konion Ave Konia Industrial Area, Konia 8300, Paphos, Cyprus Tel: +357 26941290 +357 99534734 +357 26932746 Fax: +357 26941286 E-mail: lakisch@dacfoods.com <i>Squid</i></p>
3	<p>Mr. Luis Beaus Mundifres S.A. C/ Longitudinal 8, n° 115 Mercabarna 08040 Barcelona Spain Tel: +34 93 336 78 06 +34 606 376 340 E-mail: luis@mundifres.es <i>Squid</i></p>	4	<p>Mr. ALEJANDRO MASDEU Mariscos Barcelona Les Moreres, 77 Prat de Llobregat 08820 Mob: 622784522 <i>Squid</i></p>
5	<p>SAMLY 169, Avenue Louis Roche-92230 Tel- 0147997230 E-mail- samlyfrance@gmail.com <i>Squid, Cuttlefish</i></p>	6	<p>Mr. Ibrahim Aufa, Marketing Officer, IML, Jl, Bulungan No.9, Kramat pela, Kebayoran Baru, Jakarta Sela- tan, Indonesia Mob: +6281354362857 Email: iaufa89@gmail.com, contact@indomi- nalestari.com <i>Squid</i></p>
7	<p>Mr. Inigo Martin Garcia – Abril CEO &amp; Founder Buba Camaron Tinglado General de Empaque Almacen 28, Puerto Pesquero 36202 Vigo (Pontevedra) Tel: +34 699 312 524 E-mail: inigo@bubacamaron.com <i>Octopus</i></p>	8	<p>Mr. Fahd Lazrak Cool Logisitic Fishgo C/ Valero Numero 24 Pol. Ind. Paimones II 11379 /Los Barrios, Cadiz Spain Tel: +34 642 755 343 +34 956 752 797 E-mail: commercial2@coollogistic.com <i>Bigger Octopus, Cuttlefish</i></p>
9	<p>Mr. Yoo Young-Sun International Sales Dept/Export Manager Sh Suhyup National Federation of Fisheries Cooperatives #703,58,Ogeum-Ro, Songpa-Gu, Seoul, 05510, Korea Tel: 82-2-2240-5616 82-10-4728-0521 Fax: 82-2-2240-5666 E-mail: nacham100@suhyup.co.kr <i>Cuttlefish, Squid</i></p>	10	<p>Mr.Jose Fajardo Segura, Poligono Industrial Camporosso C/Toledo I. – C.P. 02520 Chinchilla de Monteragon (AB) Mob: 967213116 <i>Squid</i></p>



# TRADE ENQUIRY

MIXED ITEMS / OTHER			
1	Mr. Bhumini Jagota Jagota Brothers Bangkok Email: bhumini_j@jagota.com Mud Crab Live, Tiger Prawns – Frozen/Fresh, River Prawns – Frozen/Fresh, Frozen Whelk, Frozen Oysters, Pomfret, Fresh Tuna, Fish (Fresh), Squid, Frozen <i>Barramundi Fillet</i>	2	Mr. Carnuta Lulian Administrator Select Food, Str. Constantin Bobescu nr. 95 Tel: +4 0786 351 119 E-mail: office@select-food.ro foodselect@yahoo.ro <i>All Products</i>
3	Mr. M Kaan Kocali Attorney of Law Kocali Law Office Ataturk Blv. Ata Apt. No. 231/9 Kavaklidere – ANKARA/TURKEY Tel: +0312 468 81 32 -33 Fax: 0312 468 83 62 E-mail: mkkocali@kocalihukuk.com; mkkocali@turk.net <i>Farmed Mussels</i>	4	Mr. Jazeel Fazy Managing Director First Global Seafood Gemma House, 39 Lilestone Street London, England, NW8 8SS Tel: +44 (0) 2035 383 384 +44 (0) 750 8181 814 E-mail: jazeel@firstglobalfood.com <i>Dry Products</i>
5	Mr. David Uscola Rivera Oficinas Centrales Elmar Forzen Food, S.L.U. Avda, Garcia Barbn 109, 4° 36201 Vigo Espana Tel: +34 986 29 25 50 +34 697 661 713 E-mail: drivera@elmar.es <i>Frozen Products</i>	6	Mr. Jose Undurraga Commercial Manager Sudmaris Tel: +56 9 6468 3057 +56 9 3401 0610 E-mail: bbellolio@sudmaris.com jose.undurraga@sudmaris.com <i>Green Mussel</i>
7	Mr. Santiago Zapata Valencia Negociador Nacional Pescado Pollo Huevos Grupo Exito Carrera 48 No.32 B Sur 139 Envigado, Colombia Tel: +574 339 63 97 +311 627 24 22 E-mail: santiago.zapatavalencia@group-exito.com <i>Fish, Cephalopod</i>	8	Mr. Luis Morais Azorfisk, Unipessoal Lda Rua da Lapinha 20, 9600-115 Rabo de Peixe Tel: +351 296249375 +351 966571434 Fax: +351 296249376 E-mail: azorfisk@azorfisk.pt <i>Tuna, Sword Fish, Squids</i>
9	Ms. Cynthia Margarita Perez Galvan Comprador de protein SuKarne Km 13.5 Carretera a Tijuana Poblado La Rosita Mexicali, Baja California Tel: +52 667 759 2600 E-mail: cperezg@sukarne.com Tilapia Fillets, Other Fish Fillets, affordable seafood, <i>Reef cod</i>	10	Ms. Martina Ittico Piemonte S.r.l.s Sede Legale: Corso Massimo d'Azeglio 60-10125 Torino Tel: +39 351 5945000 3441223406, 3460342358 E-mail: itticopiemonte@hotmail.com <i>Squid, Tuna</i>

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11	<p>Ms. Vanessa Seblin Brand Manager BrandActiv, IBL Ltd. IBL Complex No.2, Fiche Terre Republic of Mauritius Tel: +230 206 9500 +230 5940 1017 +230 5940 3901 Fax: +230 206 9516 Email: vseblin@brandactiv.mu; PLam@brandactiv.mu <i>Innovative shrimp products, cuttlefish, fish etc.</i></p>	12	<p>Mr. Oleg Volkov Sales Director Caviar d Eden Spain Tel: +34 613 190 900 +371 2836 8866 +371 2002 4820 E-mail: oleg@caviardeden.com <i>Caviar /fish roe</i></p>
13	<p>Mr. Tino Philip Managing Director Tony's Delight Eruope B.V. Import &amp; Export Katwijkerbroek 32 2223 XP, Katwijk (ZH) Netherlands Tel: +31702230042 +31634333132 Email: info@tonysdelighteu.com tino@tonysdelighteu.com <i>Anchovies, Squid, Yellowfin Tuna, Sail Fish, Indian Mackerel, Threadfin Bream, Sardines, Red Snapper, Trevally curry cut, Blue Swimming Crab</i></p>	14	<p>Ms. Mettina Koops Purchaser Kibystraat 1, 8263 CJ Kampen The Netherlands Tel: +31 (0) 38 332 9082 E-mail: mettina@asiaexpressfood.nl <i>Fish, Crab, Cephalopod, Shrimp</i></p>
15	<p>Mr. Freddy Darnell Sales Manager Unique Seafood Pelagic Ltd. 2nd Floor, Grabex Business Centre Murray Road, Orpington BR5 3QY, United Kingdom Tel: +44 (0) 7753 638 185 +44 (0) 203 260 3580 Email: freddydarnell@uniquesseafood.co.uk <i>Breaded &amp; battered Shrimp, fish &amp; Squid</i></p>	16	<p>ITTICA LUCIANI s.r.l., Via Pedemontana, 2- Fossacesai (CH)-IT Tel- 0872 60145 Tuna, Octopus C.f.e P.IVA 02607130693 Email: amministrazione@itticaluciani.com; itticalucianisrl@legalmail.it <i>Lobster</i></p>
17	<p>Mr. Mia-Manan Hameed Fortfield International Suite 110, Elder House Elder Gate, Milton – Keynes, Buckinghamshire United Kingdom Tel: +353 85 1422141 E-mail: mia@fortfieldint.com <i>Shrimp, Cuttlefish</i></p>	18	<p>JLF Foods Ltd., 11891 Hammersmith Way, Richmond, BC V7A 5E5 Tel: 778-297-2106 Fax: 778-297-2105 Email: info@jlffoods.com <i>Shrimp, Cuttlefish</i></p>



## TRADE ENQUIRY

19	<p>Mr. Francesco Busuttil Managing Director FB Imports Ltd. 5/6, Cantrija Complex Triq it-Targa, Il-Maghtab Limits of Naxxar, NXR 6613 Malta Tel: +356 2744 5555, +356 7982 4488 Fax: +356 7987 8573 Email: francescobusuttil@fbimports.com alandonnelly@fbimports.com <i>Cooked Shrimp, Pangasius, Tilapia</i></p>	20	<p>Mr. Juan Sebastian Jaramillo Director General Calle 22 a# 22-42, Bogota Sector la 14, barrio la calavera Tumaco Tel: (+57) 320 270 8432 Email: juan.jaramillo@mipez.co <i>Shrimp, Tilapia, Cephalopods</i></p>
21	<p>Mr. Kakhaberi (kakha) Dzotsenidze Founding Director #60, Z Gamsakhurdias At. 4600 Kutaisi, Georgia Tel: +995 599 07 19 07 Email: kdzotsenidze@gmail.com <i>Shrimps and more types of seafood</i></p>	22	<p>Mr. Cesar A Gordon Olave Gerente General Gordon Fish Arturo Prat 160, Placilla Oriente Valparaise – Chile Tel: +56 9 9821 4905 Tel: +56 32 2291295 Email: cesar@gordon.cl <i>Shrimp, Squid</i></p>
23	<p>Mr. Herve Barba Directeur General Groupe Barba ZAC LA Meridienne Rue Konrad Adenauer 34220 Villeneuve-LES-Beziers Tel: +33 (0) 6 16 67 32 03 +33 (0) 67 43 43 13 Email: herve.barba@groupebarba.com <i>Tuna, Squid, Swordfish</i></p>	24	<p>Mr. Ming Liu Manager Friviko Nurnberg Richtweg 75, D-90530 Wendelstein Germany Tel: +49 (0) 9129-14286-0 Fax: +49 (0) 9129-14286-66 Email: liu@friviko.com <i>Little Octopus, Shrimps, Sepia</i></p>
25	<p>Mr. Zaur Alisenov Head of Purchasing Department RR Food LLC Tel: + 994 12505 58 51 + 994 12505 5852 + 994 50 236 00 22 + 994 50 211 02 32 Fax: +994 50 500 2879 Email: alisenov.z@rrfood.az; farxad-jafarov@mail.ru <i>Shrimp/fish</i></p>	26	<p>Mr. Tim Egberink Eckernforder Strabe 313, D-24119 Kronshagen/Kiel Tel: + 49(0)25 65/40 67 62 + 49(0) 431/5458407 + 49(0) 170 / 638 1851 Fax: +49(0)431/5458409, +49(0)25 65/40 67 64 Email: tim.egberink@all-fish.de <i>Shrimp/Squid</i></p>
27	<p>Mr. Gilberto Lodi Lodi s.r.l Via G Bertazzolo, 1 46037, Governolo di Roncoferraro (MN) Tel: 0376 663110, 0376 669012 Fax: 0376 663615 Email: gilbertolodi@lodifish.com info@lodifish.com <i>Shrimp, Cuttlefish, Indian Squid, Octopus</i></p>	28	<p>Mr. Nam-Heon Jung (Brian) Purchasing &amp; Sales Fresh &amp; Frozen Seafood/Assistant Manager Dongwon Industries 68, Mabang-ro, Seocho-gu Seoul, 06775, Korea Tel: + 82-2-589-3764 Fax: +82-2-589-3899 Email: jungnh2@dongwon.com <i>Shrimp, Tuna</i></p>

## TRADE ENQUIRY

29	Mr. Tuong, Nguyen Tuan Vice Director Denti Company Ltd. G1121 11th fl., The Manor Officetel 91 Nguyen, Huu Canh, Ward 22 Binh Thanh Dist., HCM, Vietnam Tel: +84 28 6258 3440 +84 91 391 9263 Fax: +84 28 6258 3447 Email: tuong-nt@dentfoods.com.vn <i>Shrimps, Octopus</i>	30	Mr. Dafnis Fotis Okeanos 5, G. Papandreou Str. 18233 AG, I, Rentis, Greece Tel: + 0030 210 4915419 Fax: + 0030 210 4821453 Email: fdafnis@okeanos-frozen.gr <i>Shrimp, Squid</i>
31	Mr. Ed Gravestock Sales Manager Fresco Fisheries Cedar House, Sopers Road, Cuffley, Herts, EN6 4RY Unit 3, Loverock Trading Estate 119 Loverock Road, Reading RG30, DZ Tel: +44 (0) 1992 893 111 +44 (0) 7903 289 690 Fax: +44 (0) 1992 892 202 Email: ed@frescofisheries.com <i>Shrimp, fin fish</i>	32	Mr. Vipin Sharma CEO Alvares Sharma Calle Angel, 1, P1, 1 46450 Benifaio Valencia, Spain Tel: (+34) 617 863 377 Email: vipin.sharma@alvarezsharma.com <i>Sea caught Shrimp, Cephalopods</i>
33	Mr. Mateusz Mazur Strategic Buyer My Food z Ograniczona odpowiedzialnoscia sp.k 80-755, Gdansk Ul. Szafarnia 6/32 Tel: +48 609 000 383 Fax: +48 58 526 11 85 Email: mm@my-food.pl <i>Shrimps, Octopus</i>	34	Mr. Truong Quoc Binh Deputy General Director Thai Hoa Foods Joint Stock Company Lot M, An Nghiep Industrial Zone Chau Thanh District, Soc Trang Province Tel: 0983 014 015, 0981 977 981 Email: binh@thaihoafoods.vn binhtruongquoc@gmail.com <i>Shrimp, Tuna</i>
35	Mr. Ugur Aciktepe Europe Sales Manager Roda International C/Sao Paulo, 14-1° of 2 35008 – Las Palmas de G.C. Islas Canarias – Espana Tel: +34 928 220662 Fax: +34 605 658 057 Email: ugur@rodaint.com <i>Shrimps, Cephalopods, Fish</i>	36	Mr. Aurelio De Castro Burkardt Gerente Comercial Perecederos Supertiendas y Droguerías Olimpica SA Calle 53 No. 46 – 192 Local 3 -01 Centro Commercial Portal del Prado Barranquilla- Colombia Tel: 3710116 315 8513737 E-mail: adecastro@olimpica.com.co <i>Red snapper, Lobster, Seabass</i>
37	Mr. Carlos Brown Blasco Delegado Commercial Tasman Sea Rambla Angel Guimera 31-08328, Al ella (Barcelona) Tel: +615 660 670 +93 540 80 08 Fax: 93 540 81 68 Email: carlosbrown@tasmansea.es <i>Shrimp, Squid</i>	38	Xavier Olive Olive GUSTUS C/ De la barca n 1 08970 Sant Joan Despi Barcelona, Spain Tel: (00.34) 609319497 Email- export@gustus.es <i>Tuna, Octopus</i>



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39	Mr. Khaldoun Amro General Manager Anwar Mecca Meat, Fish and Foodstuff Trading Amman – Jordan Al-Moqableen Aisha Timoreiya St. P.O. Box 711078 Tel: +962 6 4201220 +962 79 5551888 Fax: +962 6 4201229 Email: khaldoun.amro@anwarmecca.com <i>Shrimp, Fish</i>		
Miscellaneous			
1	Poissonnerie 15 Boulevard de la villette 75010 Paris Tel: +33 6 67 52 45 51 +33 6 70 24 24 38 E-mail: sanshuizhao@gmail.com	2	Mr. Alessandro Pucci Pucci Food Family Via Madonna di Mare 88811-Ciro Marina (KR)-Italia Tel: +39 371 3381186 E-mail: commerciale@surgecafood.com
3	Sebastian Tudor Managing Director The Fish Sanctuary E-mail: sebstaintudor@sanctuarulpestilor.ro	4	Mr. Steven Dahlblom Global Marine Manager Encompass Fishmeal by Scoular 250 Marquette Ave # 1050 Minneapolis, MN 55401 Tel: +1(612) 851-3777 +1(612) 803-6485 Email: sdahlblom@scoular.com
5	Mr. Alex Alam CEO & Strategic Sourcing Manager Amags Global Placa de la universitat 3,6, 08007, Barcelona Spain Tel: +34 654 747 355 Email: alex@amagsglobal.com	6	Mr. Julian C G Rezende Project Manager Specialist Nasdaq Commodities Kerenslyst Alle 53, 6th Floor P.O. Box 443, 0279 Oslo, Norway Tel: +47 6710 8511, + 47 92 86 4374 Email: Julian.Rezende@nasdaq.com
7	Mr. Aleksei Dobrosman Sales Manager Joe Str. 9, Fl. 6 Office 85, Tallinn, 10151 Estonia Tel: +372 506 625 4, +49 2552 9334 0 Fax: +49 2552 9334 20 Email: aleksei.dobrosman@mcairlaids.com info@mcairlaids.com	8	Mr. Bogachan Kosan Export Manager Optimum Su Ve Tarim Urunleri Sanayi Caddesi My Via 414, B Blok No. 411 Kazim Dirik Mahallesi Bornova Izmir Tel: +90 537 760 62 88 Email: bogachan.kosan@optimumseafood.com

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9	Mr. Shankaran Pareathumby Directeur Soulfish Europe 27 rue Henry le Chatelier 66100 Perpignan, France Tel: +33(0)7 72 13 10 10 E-mail: soulfisheurope@gmail.com	10	Mr. Luis Clemente Administrador Omnifish, SA Edificio da Capa Zona Portuaria de Peniche 2520-630 Peniche Portugal Tel: +351 262 785 018 +351 917 735 848 Fax: +351 262 782 149 E-mail: clemente@omnifish.pt
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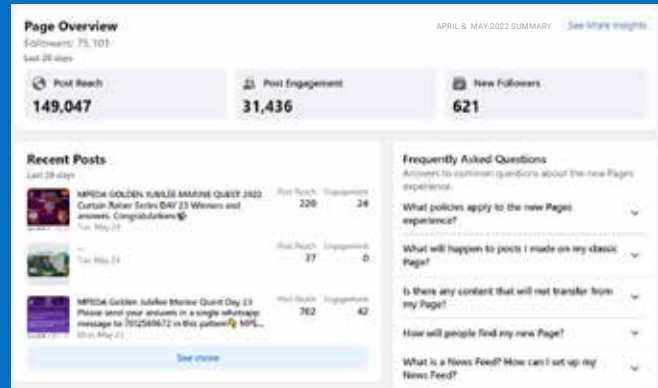
# facebook

**FOLLOWERS- 75,102**

**POSTS - 31**

**VIDEOS - 2**

**LIKES - 75,102**



### MAY 2022 SUMMARY

Tweets <b>43</b>	Tweet impressions <b>32K</b>
Profile visits <b>8,524</b>	Mentions <b>48</b>
New followers <b>243</b>	

### APR 2022 SUMMARY

Tweets <b>41</b>	Tweet impressions <b>26.6K</b>
Profile visits <b>6,924</b>	Mentions <b>171</b>
New followers <b>222</b>	

# twitter

**FOLLOWERS - 6,461**

**POSTS - 31**

**VIDEOS - 2**

**LIKES - 6,461**

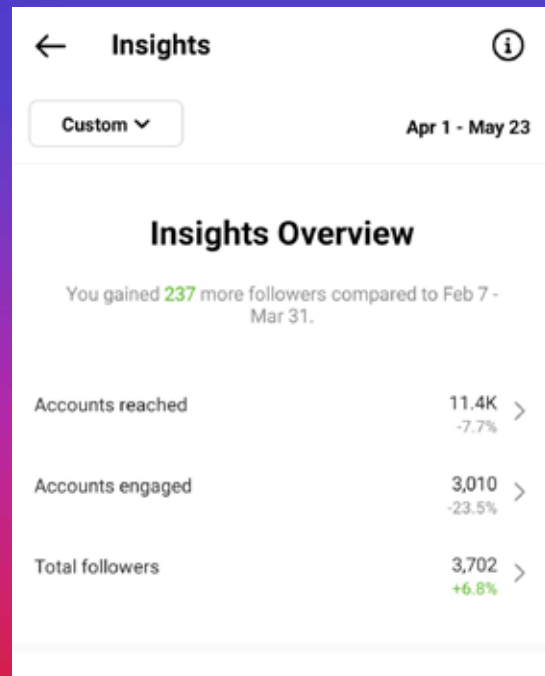
# Instagram

**FOLLOWERS - 3,705**

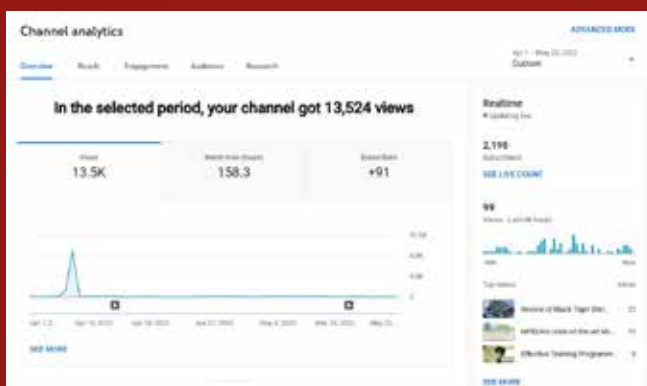
**POSTS - 31**

**VIDEOS - 2**

**LIKES - 3,705**



# YOUTUBE



**FOLLOWERS - 2,198**

**POSTS: 2**

**LIKES - 2,198**

**VIDEOS - 2**



## Advertisement Tariff in MPEDA Newsletter Rate Per Insertion

Back Cover	(Colour)	Rs. 15,000/-	US\$ 250/-
Inside Cover	"	Rs. 10,000/-	US\$ 200/-
Inside Full Page	"	Rs. 8,000/-	US\$ 150/-
Inside Half Page	"	Rs. 4,000/-	US\$ 75/-

\*GST @ 5% is extra

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Ten Percent concession for contract advertisement for one year (12 issues) or more.

Matter for advertisement should be provided by the advertiser in JPEG or PDF format in CMYK mode.

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