NETFISH
Strives to stop harmful chemicals in fish preservation

POLE-AND-LINE
Tuna fishing aims for MSC certification

CLIMATE CHANGE
Likely to shrink fish size by 30%
CPF-TURBO PROGRAM

The shrimp industry has seen major developments and tasted success over the years. And not only are we proud to be part of it, but also take pride in pioneering it. To ensure the success and profitability of the Indian Shrimp Industry, our highly determined team with committed Aquaculture specialists constantly provide the shrimp farmers with access to the latest and updated technology.

CPF-TURBO PROGRAM - Pioneering Successful and Profitable Shrimp Aquaculture
CONTENTS

Hong Kong Food Expo: A World of Tasty Opportunities

MPEDA Participates at 19th JISTE in Tokyo

Boat Owners Get Exposure to Post-harvest Handling of Tuna

NETFISH Creates Awareness to Stop Harmful Chemicals in Fish Preservation

Highlights of Marine Fish Landings in Selected Harbours of India in August

Pole-and-line Tuna Fishing in Lakshadweep Aims for Marine Stewardship Council Certification

EIC-USFDA Jointly Organises Seafood HACCP & USFDA Programme on Labelling

Mumbai Division Organises Seafood HACCP Basic Training Programme

Awareness Campaign on Diversification of Aquaculture Training Programmes and Campaigns in Aquaculture by MPEDA Field Offices

Workshop on Opportunities for Development of Sustainable Aquaculture in Gujarat

News Spectrum

Trade Enquiry

The views expressed in the scholarly articles of this publication are the views of the authors and do not constitute the views of MPEDA. The responsibility for the accuracy of information in the scholarly articles of this publication is vested with the authors themselves and neither MPEDA nor the editorial board holds responsibility for the same.
वैशिष्ट्य अनिश्चितता के
दौरान निर्यात कारोबार को
बढ़ावा देने के लिए टॉनिक।

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Dear friends,

As we take stock of marine products exports during the first quarter of the financial year, the figures give a very promising picture. It shows a year-on-year hike of 22% in value and 25% in quantity. With the year end demand started tickling; it is quite likely that the exports reach a new height this year bringing pride to the sector. The latest Administrative Review by the US Department of Commerce has brought down the country average Anti dumping duty for frozen shrimps from India to 0.84%, which will serve to stimulate the shrimp exports to US market further.

In the market promotion front, MPEDA had excellent participations in the Russian Food Fair and SEAFEX Dubai as well, where we promoted the wide array of India seafood. MPEDA will be participating in the Busan International Seafood and Fishery Expo in Korea and China Seafood and Fisheries Expo at Qingdao, a popular seafood import destination.

The registration for the next edition of India International Seafood Show is also live, and for the convenience of delegates and exhibitors, the early bird scheme is extended to 31st October 2017. The organizers expect a strong participation from exporters, buyers and various associated stakeholders as evident from the enquiries being received.

A lot of interaction sessions are being organized and ground level actions have been initiated with the help of stakeholder associations and Government Departments to streamline the traceability in shrimp farming sector and also to contain the antibiotic residue in shrimps. MPEDA is hopeful that the exercises being undertaken now will help us to put out the contamination issue aside forever in the coming years. For that to happen, cooperation and assistance of all the ones associated is requested in order to assure the customer of 100% purity.

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Hong Kong Food Expo offered a world of tasty opportunities

MPEDA participates in the Hong Kong International Food Expo

Hong Kong, the home to over 7.4 million people, has been a growing and competitive seafood market. This semi-autonomous special administrative region of China also serves as an important gateway for the distribution of some seafood products into China and the surrounding region. High levels of seafood consumption and a declining domestic fishing industry contributes to increasing seafood imports to Hong Kong. It is a mature and sophisticated market with a growing demand for gourmet foods. Most Hong Kong shoppers are priceconsci-ous, and are looking for value-for-money in their products.

Tourism and foreign investment capital contribute to the eco-nomic growth in Hong Kong. Consequently, the fast-growing economy and consumer affluence create demand for food imports.

Hong Kong was one of the top markets for Canadian agri-food and seafood products and continues to be a major buying centre as well as trans-shipment point for China and Southeast Asia. Inter-national Food Expo was held at hall 5B-G of Hong Kong Convention and Exhibition Centre from August 17-19, 2017. The show targeted buyers and sellers from around the world to source high value seafood products of live, frozen, value-added, processed, packaged and premium seafood and identifies emerging trends in the seafood sector.

The Food Expo featured over 1,500 exhibitors from 26 countries and regions, marking it the largest edition in the event’s history. The major attractions were food & beverages products, food packaging, labeling, safety & logistic, products & services, food processing products, machinery & related services and Halal food & beverage products.

A world of tasty opportunities were presented by the new pavilions representing Belarus, Canada, The Czech Republic, India, Kazakhstan, Mexico and Thailand, as well as returning pavilion from Hong Kong, the Chinese mainland, Iran, Japan, a partner country, Korea, Poland and the United States. The visitors were permitted to the stalls all the three days.

The Tasty Show
The Hong Kong Trade Develop-ment Council (HKTDC)

India Pavilion

The Indian Pavilion was inau-gurated officially by Mr. Puneet Agrawal, Consul General of India to Hong Kong on September 17th 2017. The Counsel General also visited MPEDA stall.
The MPEDA stall “5-C F29 & 31” measuring 18 sq. m. was decorated with backdrop showing our value added Seafood as well as MPEDA publications such as Indian Fishery Hand Book, product catalogue, exporters CD, etc.

Frozen Seafood samples such as Litopenaeus vannamei (headless block frozen, peeled deveined tail on, IQF of peeled deveined), Sepia (IQF & frozen block of cuttle fish) Loligo (IQF & frozen squid), frozen lobster and frozen tuna and ribbon fish were displayed in the freezer. Visitors were fascinated by our products in display. Mrs. Usha Singh, Systems Analyst and Mr. D Venugopal, Assistant Director represented MPEDA at the expo. The trade enquiries received is listed in the concerned section of this Newsletter.

Apart from MPEDA, M/s. King Fish Exports, Gujarat, and M/s. Insaf Exports, Calicut were also exhibited their products in show.

Prominent speakers from Hong Kong, Korea and Macau exchanged views on product quality control, pharmacology, commercialization trends and successful case studies.

Details of item wise export of marine products to Hong Kong is given in Table-I.

**Table-I**

<table>
<thead>
<tr>
<th>Item</th>
<th>2014-15 Quantity in MT</th>
<th>2015-16 Value in Rs. Crore</th>
<th>2016-17 US Dollar in Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen shrimp</td>
<td>928</td>
<td>1042</td>
<td>991</td>
</tr>
<tr>
<td>Frozen fish</td>
<td>70.03</td>
<td>70.73</td>
<td>69.66</td>
</tr>
<tr>
<td>Fr. cuttlefish</td>
<td>11.56</td>
<td>16.94</td>
<td>10.50</td>
</tr>
<tr>
<td>Fr. Squid</td>
<td>1.69</td>
<td>23.60</td>
<td>14.15</td>
</tr>
<tr>
<td>Dried item</td>
<td>2.75</td>
<td>3.60</td>
<td>2.14</td>
</tr>
<tr>
<td>Live items</td>
<td>321</td>
<td>205</td>
<td>240</td>
</tr>
<tr>
<td>Chilled items</td>
<td>9.17</td>
<td>6.34</td>
<td>9.30</td>
</tr>
<tr>
<td>Others</td>
<td>1.51</td>
<td>0.98</td>
<td>1.35</td>
</tr>
<tr>
<td>Dried item</td>
<td>101</td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>Live items</td>
<td>2.35</td>
<td>0.77</td>
<td>0.38</td>
</tr>
<tr>
<td>Chilled items</td>
<td>0.39</td>
<td>0.12</td>
<td>0.06</td>
</tr>
<tr>
<td>Total</td>
<td>457</td>
<td>400</td>
<td>292</td>
</tr>
<tr>
<td>Live items</td>
<td>385.00</td>
<td>331.25</td>
<td>284.68</td>
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<tr>
<td>Chilled items</td>
<td>63.27</td>
<td>50.96</td>
<td>42.89</td>
</tr>
<tr>
<td>Others</td>
<td>672</td>
<td>620</td>
<td>1024</td>
</tr>
<tr>
<td>Live items</td>
<td>27.92</td>
<td>34.18</td>
<td>50.87</td>
</tr>
<tr>
<td>Chilled items</td>
<td>4.49</td>
<td>5.23</td>
<td>7.67</td>
</tr>
<tr>
<td>Others</td>
<td>579</td>
<td>514</td>
<td>378</td>
</tr>
<tr>
<td>Live items</td>
<td>36.04</td>
<td>24.28</td>
<td>19.14</td>
</tr>
<tr>
<td>Chilled items</td>
<td>5.90</td>
<td>3.69</td>
<td>2.88</td>
</tr>
<tr>
<td>Others</td>
<td>377</td>
<td>400</td>
<td>447</td>
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<tr>
<td>Live items</td>
<td>12.15</td>
<td>15.69</td>
<td>16.67</td>
</tr>
<tr>
<td>Chilled items</td>
<td>2.00</td>
<td>2.43</td>
<td>2.51</td>
</tr>
<tr>
<td>Others</td>
<td>3865</td>
<td>3641</td>
<td>3613</td>
</tr>
<tr>
<td>Live items</td>
<td>569.35</td>
<td>506.84</td>
<td>464.54</td>
</tr>
<tr>
<td>Chilled items</td>
<td>61.98</td>
<td>77.95</td>
<td>79.00</td>
</tr>
</tbody>
</table>

Total quantity exported to Hong Kong during 2016-2017 was 3,613 MT (Value: 464.54 Cr, 70 Million U.S. dollars (USD)), out of all items, the quantity of frozen shrimp was more i.e. 991 MT (Value: 69.66 Cr, 10.5 Million USD). Frozen Shrimp has a share of 27.4 percent among all items exported to Hong Kong during 2016-2017.

A total of 132 items were exported to Hong Kong during 2016-2017. Out of 132, top ten items are dried fish maws, Dried fish maws eel, dried fishmaws ghol male, live lobster, dried fish maws ghol female, frozen peeled deveined shrimp, dried fishmaws air/flat solely, dried fishmaws kote, live mud crab, block frozen PD Vannamei shrimp.
MPEDA participates at 19th JISTE in Tokyo

The Japan International Seafood & Technology Expo (JISTE) is one of the largest Sea Food Shows in Japan. The 19th edition was held in Tokyo during August 23-25. The show organized by Seafood Show Secretariat/Exhibition Technologies Inc. had the support of the Japanese Fishery Association.

The venue of the show was Tokyo Big Sight, Ariake, Tokyo. The JISTE 2017 was inaugurated with the traditional Kagami Biraki ceremony on August 23-25, 2017. The Minister of Agriculture, Forestry & Fisheries of Japan Mr. Ken Saito, Minister of Maritime Affairs and Fisheries, Republic of Indonesia, Ms. Susi Pudjiastuti, and President, Japan Fisheries Association (Former Secretary of Ministry of Agriculture, Forestry and Fisheries) Mr. Toshiro Shirasu were present among the dignitaries.

The function was attended by the representatives of various participating organizations such as Japan Fishery Agency, Japan External Trade Organization, Japan Fishery Cooperatives, Japan Fisheries Research and Education Agency (FRA), Marine Eco label Japan, China Aquatic Products Processing & Marketing Alliance, National Fishermen’s Association Taiwan, Royal Norwegian Embassy, Embassy of the United States, Embassy of Ireland, Embassy of the Republic of Singapore, Embassy of Malaysia etc. Mr. Bhagirathi Behera, First Secretary, Embassy of India represented the country during the inauguration.

The seafood exhibition was spread over halls 7 and 8 of the Tokyo Big Sight. 822 exhibitors participated in the 19th Japan International Seafood & Technology Expo. Apart from various seafood products, machinery and accessories for seafood processing and fishery/ aquaculture industry were also exhibited in various Stalls.

About twenty countries participated in the current show. The seafood sector showcased a wide variety of seafood, mostly in value added form from different sources. The event drew a crowd of 33,858 visitors, indicating a record rise in gathering over the previous years. The ‘World Sushi Cup Japan 2017’ was held along the sidelines of the show by Sushi Skill Institute. It was an added attraction for the Show. Around 32 sushi chefs from different countries including India participated in the competition.

India Pavilion

The Indian participation in JISTE 2017 was led by the Marine Products Export Development Authority (MPEDA) with a total pavilion space of 72 sq. m. located at a prominent location. There were 6 co-exhibitors from India, viz., M/s. Gadre Marine Export Pvt Ltd, Maharashtra M/s. Ulka Seafood, Maharashtra, M/s. Forstar Frozen Foods Pvt Ltd, Maharashtra, M/s. Blue Fin Frozen Foods Pvt Ltd, Maharashtra, M/s. KNC Agro Limited, West Bengal and M/s. Avla Nettos Exports, Kerala. Among the Indian exhibitors, M/s. Gadre Marine Export P Ltd, Ratnagiri served their ready to eat seafood products to the customers and visitors. The exhibitors from India had fruitful negotiations with the Japanese buyers during the show. India’s participation in the show was coordinated by Mr P N Vinod, Assistant Director, MPEDA, HO Kochi, Mr. Ratnakar Nayak, Assistant Director, MPEDA RD, Visakhapatnam and Mr. Jun Nakayama, Executive Assistant, TPO Tokyo.

The MPEDA stall exhibited various marine products such as frozen Nobashi Shrimps, IQF HLSO EZ-PEEL Vannamei, IQF PDTO Vannamei, IQF PD Vannamei etc, Head on Shell on Sea Tiger & Black Tiger, Cuttlefish Skewers with vegetables, Squid Skewers with vegetables, Squid rings,
Cooked Lobsters, Tuna flakes, Tuna Chunks, etc. Various Indian Surimi products such as frozen Itoyori Surimi, Tachiuo Surimi, Eso Surimi, Hata Surimi, Shiroguchi Surimi, Kintokidai Surimi etc were also displayed in MPEDA Stall. Cooking demonstration of Indian seafood arranged in the MPEDA booth with the help of a locally renowned group of Indian restaurants attracted several visitors to savour Indian seafood delicacies. Items such as sesame shrimp, shrimp thadka, Malabar shrimp fry etc were served at specific timings to buyers and visitors on all the three days of the Show. It has helped in attracting more buyers and visitors to the Indian Pavilion making it a centre of business activity. MPEDA TPO, Tokyo had extended invitations to all prominent buyers ahead of the Show, which has helped the exhibiting companies from India in having good business interactions. Mr. Toshiro Shirasu, Chairman, Japan Fisheries Association visited the MPEDA stall and discussed the business response. He also tasted the Indian shrimps and appreciated the product.

Publicity literature in Japanese and English languages, brochure on participants, commercial fish charts and handbooks, exporters interactive CD directory were distributed to buyers and interested visitors. About 71 trade enquiries received at the show are separately listed in the concerned section of the Newsletter.

**Japan: The Prime Seafood Market**

Japan is one of the world's largest consumers of marine products. It is the largest fish-eating nation in the world, consuming 7.5 billion tons of fish a year, or about 10 percent of the world's catch. This is equivalent to 30 kilograms a year per person. The Japanese consume so much fish that Japan has traditionally controlled the world prices for seafood with its huge demand.

Japan is the home for $14 billion commercial fishing industry. Fish and a variety of other sea creatures are caught by local fishermen, imported and raised in aqua farms. There are around 200,000 fishing vessels in Japan. Domestically caught fish constitutes 66 percent of the total fish consumption in Japan and it relies on imports for the rest of its annual consumption of seafood. As a result, Japan is one among the major seafood markets of the world.

<table>
<thead>
<tr>
<th>Item</th>
<th>2014-15 Q. in MT</th>
<th>2015-16 Rs. in Crore</th>
<th>2016-17 $ in Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen shrimp</td>
<td>30434</td>
<td>34204</td>
<td>31284</td>
</tr>
<tr>
<td>Frozen fish</td>
<td>2116.82</td>
<td>2044.29</td>
<td>2019.74</td>
</tr>
<tr>
<td>Shrimp</td>
<td>350.72</td>
<td>315.34</td>
<td>304.95</td>
</tr>
<tr>
<td>Frozen fish</td>
<td>841</td>
<td>335</td>
<td>119</td>
</tr>
<tr>
<td>V.</td>
<td>10.11</td>
<td>10.48</td>
<td>3.71</td>
</tr>
<tr>
<td>S.</td>
<td>1.67</td>
<td>1.62</td>
<td>0.55</td>
</tr>
<tr>
<td>Fr. Cuttlefish</td>
<td>73</td>
<td>148</td>
<td>86</td>
</tr>
<tr>
<td>V.</td>
<td>1.78</td>
<td>3.90</td>
<td>3.15</td>
</tr>
<tr>
<td>S.</td>
<td>0.30</td>
<td>0.60</td>
<td>0.48</td>
</tr>
<tr>
<td>Fr. Squid</td>
<td>1225</td>
<td>1246</td>
<td>1366</td>
</tr>
<tr>
<td>V.</td>
<td>40.69</td>
<td>47.54</td>
<td>66.30</td>
</tr>
<tr>
<td>S.</td>
<td>6.73</td>
<td>7.30</td>
<td>10.00</td>
</tr>
<tr>
<td>Dried item</td>
<td>7314</td>
<td>1414</td>
<td>616</td>
</tr>
<tr>
<td>V.</td>
<td>65.99</td>
<td>14.52</td>
<td>5.26</td>
</tr>
<tr>
<td>S.</td>
<td>10.75</td>
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<tr>
<td>Live items</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>V.</td>
<td>0.68</td>
<td>0.77</td>
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<tr>
<td>S.</td>
<td>0.11</td>
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<td>0.13</td>
</tr>
<tr>
<td>Chilled items</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>V.</td>
<td>0.04</td>
<td>0.06</td>
<td>0.02</td>
</tr>
<tr>
<td>S.</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Others</td>
<td>38802.85</td>
<td>38043</td>
<td>35568</td>
</tr>
<tr>
<td>V.</td>
<td>804.16</td>
<td>489.17</td>
<td>522.32</td>
</tr>
<tr>
<td>S.</td>
<td>132.00</td>
<td>75.24</td>
<td>77.60</td>
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<td>Total</td>
<td>78772</td>
<td>75393</td>
<td>69039</td>
</tr>
<tr>
<td>V.</td>
<td>3040.26</td>
<td>2610.74</td>
<td>2621.37</td>
</tr>
<tr>
<td>S.</td>
<td>502.29</td>
<td>403.48</td>
<td>394.50</td>
</tr>
</tbody>
</table>

The Japanese quality requirements are stringent than other markets related to residues and contaminants. Besides, the end users are also concerned about the origin, taste and presentation of the product. With Tokyo hosting the Olympics in 2020, Japanese economy and trade is expected to be more positive in the coming years. The approach of Olympics is also expected to boost seafood consumption. With changed lifestyles and family
structure, more Japanese consumers now prefer ready to cook or ready to eat value added products. Food makers compete to bring out new varieties of food to the market on a daily basis. The market is also sentimental about cost.

The Japanese population is seeing significant decline, with a falling birth rate and a growing population of elderly people, which continued to have an influence on overall food consumption in 2016. Furthermore, with a growing number of small and single-person households, growth in the number of professional females, and consumers’ increasing time constraints, fish products offering a high level of convenience, such as ready meals and frozen processed are therefore increasing in demand. Japan’s population is aging faster than any other country in the world and as such, by 2020, almost 30 percent of the population will be over 65 years of age. Coupled with the fact that Japanese life expectancy is the highest in the world, there is a strong demand for healthy foods. Food products that offer health benefits, such as lowering cholesterol, or containing a high level of natural antioxidants such as omega 3, have a marketing advantage in Japan. The aging Japanese population also considers specific demands for their food choices, specifically in the sectors of health and wellness. Products are promoted as enhancing the nutritional and health value of foods, while still offering quality, taste and innovation, appeals to Japanese consumers who are looking to increase the chance of living longer and improve their health. These products will come with higher prices, likely for lower volume, but will most likely not offset the overall decline in value that is expected to occur in the Japanese food market, and fish products falls in the category. Consumers are increasingly interested in a diverse variety of foods that have superior taste, are safe and nutritious. Japanese consumers demand and will pay a premium for high-quality food products, provided they exceed expectations.
MARKETING NEWS

Jamaican delegation visits MPEDA headquarters

A three-member delegation from Jamaica visited MPEDA headquarters on 17th August 2017 as a part of their visit to India to understand about the seafood supply and value chain followed in the country.

Dr. Wintorph Marsden, Senior Veterinary Officer, Ministry of Agriculture & Fisheries, Commerce & Industry, Dr. Mishka Stennet, Veterinary Officer, Ministry of Agriculture & Fisheries, Commerce & Industry and Mr. Colin Cooper, Food Safety & Protection Specialist, Ministry of Health were the members of the delegation.

Dr. M.K. Ram Mohan, Joint Director (M) and Mr. P. Anil Kumar, Joint Director (Aqua) welcomed the delegation. Dr. Ram Mohan briefed about the MPEDA activities. The delegation also visited Munambam Harbour and a few processing units in Kochi.

Indian seafood exports to Japan

India has a long standing seafood business relationship with Japan. Despite market issues, Japan imported 69039 tons of seafood from India, worth US $394.50 million during 2016-17. Indian export earnings from the Japanese market have been showing a static or rather declining trend during the recent years, despite an increase in demand for seafood in Japan. A total of 173 Indian marine products exporters traded with Japan during 2016-17, exporting about 140 product types ranging from live, chilled, frozen, dried and freeze dried items. The details of marine products exports from India to Japanese market during the last three years is given below.

As in other major markets, shrimp is the most important marine product traded from India to Japan. Apart from L. vannamei, there is an increasing demand for Indian Black Tiger Shrimp. However, the production of Black Tiger from Indian aquaculture farms are on the decline, and special efforts are required to promote this species to augment production. India is also a major supplier of Surimi and fish meal to Japanese market. Other items that are catered to Japanese market include squid, cuttlefish, octopus, clams, lobsters, whelks, and fish fillets. With changing market preferences, Indian processors also started offering value added products such as cooked shrimp, sushi shrimp, nobashi shrimp, kneaded products, peeled deveined shrimps, peeled deveined tail on shrimps, marinated shrimps, tray pack cephalopod products, seafood mix and fish fillets. However, the percentage of value addition done in India is still relatively small compared to that in Thailand, Indonesia, Vietnam or China.

The expansion and diversification of coastal and inland aquaculture will enhance shrimp production and bring in more varieties such as Tilapia, Mud Crab, Scampi and Cobia to the export trade. Indian exporters shall actively pursue with Japanese importers to foster tie-up in exporting new varieties as value added products that suits the Japanese palette to minimize the over dependence on shrimp. Items such as boneless fish fillets, soft shell crabs, cephalopods and clams etc enjoy regular demand in Japanese market.
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Network for Fish Quality Management and Sustainable Fishing (NETFISH) has been conducting awareness activities to improve post-harvest handling of fish for maintaining its quality, in the coastal villages of Andhra Pradesh. On August 24, 2017, an exposure visit to a fish processing and exporting unit at Visakhapatnam was arranged for 10 Tuna fishing boat owners of Pudimadaka fish landing center. The programme was organized by member NGO-DFYWA. Mr. M. Shaji, Deputy Director, MPEDA Regional Division Vizag and Dr. Joice V. Thomas, Chief Executive, NETFISH too took part in the visit. The MD and Managing partner of the company expressed their support to the fishermen by offering a purchase center at Pudimadaka for semi processed fish.

The visit thus paved a platform to the exporters and primary producers for developing a business linkage among them. The visit helped to understand the problems in handling of Tuna at potential fish landing centers. The fishermen got a firsthand experience on the standards maintained in the processing plants while handling Tuna. They are now keen to implement such standards at their work place.

The fishermen got a firsthand experience on the standards maintained in the processing plants while handling Tuna.
### Special Package for MPEDA Publications

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Publications</th>
<th>Special Package</th>
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</thead>
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<tr>
<td>1</td>
<td>Exporters Directory- Digital CD</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Product Catalogue</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Ornamental Fish - Publications</strong></td>
<td><strong>Rs.300 only for a set of 12 MPEDA priced publications as a part of stock clearance</strong></td>
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<td>3</td>
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<td>International Transport of Live Fish in the Ornamental Aquatic Industry – Serial 2</td>
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<td>6</td>
<td>Live Food Culture for the Ornamental Aquatic Industry – Serial 3</td>
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<td>8</td>
<td>Living Jewels - A Handbook on Fresh Water Ornamental Fish</td>
<td><strong>Offer lasts till stocks are available</strong></td>
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<td></td>
<td><strong>Aquaculture - Publications</strong></td>
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<td>9</td>
<td>Diseases in Brackishwater Aquaculture</td>
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<td>Diseases of Cultured Shrimps &amp; Prawns in India</td>
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<td>11</td>
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<td>12</td>
<td>Hatchery Seed Production &amp; Farming of Cobia-Initiative</td>
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<td>Water Quality in the Ornamental Aquatic Industry – Serial 1</td>
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<td>Live Food Culture for the Ornamental Aquatic Industry – Serial 3</td>
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<td>Bio-Security in the Ornamental Aquatic Industry – Serial 4</td>
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<td>16</td>
<td>Hatchery Seed Production &amp; Farming of Cobia - Initiative</td>
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NETFISH creates awareness to stop harmful chemicals in fish preservation

There were widespread complaints on adulteration of fish being sold in local markets with toxic chemicals. Network for Fish Quality Management & Sustainable Fishing (NETFISH) launched an initiative in Paradeep, to ensure safety and hygiene at fish handling and distribution centres.

The campaign tried to create awareness among fishermen, sellers and consumers on how these chemicals affect the human body.

On August 28, 2017 an awareness meeting and rally on “Harmful effect of illegal chemical in fishery product, its prevention and control” was organized in Paradeep harbour with a view to stop the practice of adding harmful chemicals like Formalin for preserving raw fish. SCO along with officials of Paradeep Harbour Management Society, Fisheries Dept. officials and member NGO took part in the event and gave proper awareness to the participants including 50 boat crews and boat owners, on harmful impacts of illegal chemicals in consumers.

SCO also requested all the participants to come out with a solution on how to prevent and control the use of illegal chemicals in fishery products. All the participants had the opinion that a rapid test kit is required to identify the presence of harmful chemicals in the fishery product at the auction time itself. Also, they all agreed to avoid the use of illegal chemicals in fishery product in the harbour.

A view of the awareness programme in Paradeep against harmful chemicals in fish preservation
ETFISH-MPEDA in association with College of Fisheries, ICAR-Krishi Vigyan Kendra and Department of Fisheries organized the “National Fish Farmers’ Day 2017” at College of Fisheries, Mangalore on July 10, 2017. Mr. Pramod Madhwaraj, Minister for Fisheries, Sports and Youth Affairs, Govt. of Karnataka inaugurated the programme by releasing Amur Carps into aquarium. Dr. M.N. Venugopal, Dean, College of Fisheries, Mangalore presided over the function. Mr. V K Shetty, Managing Director was the chief guest. Dr Shivakumar Magada, Professor and Head, ICAR-KVK presented a concept explaining the purpose of celebrating fish farmers’ day.

Dr. E.G. Jayraj, Professor and Head, Department of Aquaculture welcomed the gathering and Mr. Mahesh Kumar, Deputy Director, Department of Fisheries proposed vote of thanks. Mr. Vijayakumar Yaragal, Deputy Director, MPEDA and Mr. Asok Kumar, Deputy Director, MPEDA were present on the occasion.

Around 120 farmers from different parts of Karnataka attended the event to whom, “Aquakit” containing fish seed, feed, pH paper were given. Integrated farmers were given Swarnadhara breed of backyard chicks developed by Karnataka Veterinary, Animal and Fisheries Sciences University (KVAFSU), Bidar. The progressive farmers presented their success stories in the event. Mr. Kumar V. Naidu, a successful agripreneur from Shimoga explained about integrated fish farming. Mr. Naresh Hanbal shared his experience in integrated Farming Systems (IFS) in Malnad area. Both of them showed video clips and slides explaining successful implementation of many innovative ideas.

Mr. Sunny D’Souja from Mangalore gave a talk on Bio-Floc Technology (BFT). He is doing shrimp farming in one acre in Haleyangadi, 20 km away from Mangalore. Using BFT he has harvested 17 tons of shrimps per acre in 4 months, saving cost on energy and feeds. Mr. Renold D’Souja, an alumnus of College of Fisheries, Mangalore and successful ornapreneur explained scopes in ornamental fish production and marketing. Dr. Shivakumar Magada gave a talk on success stories of IFS from Mandya, Shimoga and Chikkamagalur districts of Karnataka. Later Dr. Jayaraj summarized all the presentations. There was an open house interaction towards the end.
Information on boat arrivals and fish landings at the major fishing harbours along the east and west coasts of India is recorded by NETFISH as part of MPEDA’s catch certification system. NETFISH monitors the marine fish capture along Indian coast by recording the boat arrivals and fish landings at 47 major harbours and landing centres (Table 1) from the 9 maritime states in the country. The data collected are processed to arrive at species-wise, state-wise, region-wise and harbour-wise evaluation of landings. This report highlights the marine fish landings at major harbours of India during August 2017.

**Table 1. List of harbours and landing centres selected for collecting the data**

<table>
<thead>
<tr>
<th>Sl. No</th>
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<th>Fishing harbour</th>
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<tr>
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</tr>
<tr>
<td>2</td>
<td>Kerala</td>
<td>Puthiyappa</td>
</tr>
<tr>
<td>3</td>
<td>Kerala</td>
<td>Thoppumpady</td>
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<tr>
<td>4</td>
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<td>Munambam</td>
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<td>5</td>
<td>Kerala</td>
<td>Sakthikulangara</td>
</tr>
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<td>6</td>
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<td>Thottapally</td>
</tr>
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<td>7</td>
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<td>Kayamkulam</td>
</tr>
<tr>
<td>8</td>
<td>Kerala</td>
<td>Vizhinjam</td>
</tr>
<tr>
<td>9</td>
<td>Karnataka</td>
<td>Mangalore</td>
</tr>
<tr>
<td>10</td>
<td>Karnataka</td>
<td>Malpe</td>
</tr>
<tr>
<td>11</td>
<td>Karnataka</td>
<td>Gangoli</td>
</tr>
<tr>
<td>12</td>
<td>Maharashtra</td>
<td>Harne</td>
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<td>13</td>
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<td>16</td>
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<td>Tamil Nadu</td>
<td>Chennai</td>
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<td>37</td>
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<td>Nagapattinam</td>
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<td>39</td>
<td>Tamil Nadu</td>
<td>Tuticorin</td>
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<td>40</td>
<td>Tamil Nadu</td>
<td>Cuddalore</td>
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<td>41</td>
<td>Tamil Nadu</td>
<td>Mandamam</td>
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<td>42</td>
<td>Tamil Nadu</td>
<td>Chinnamuttom</td>
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<td>43</td>
<td>Colachel</td>
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<td>44</td>
<td>Puducherry</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Karaikal</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Goa</td>
<td>Cutbona</td>
</tr>
<tr>
<td>47</td>
<td>Malim</td>
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</tbody>
</table>

The total fish catch recorded during August 2017 from 47 selected harbours and landing centres along the nine maritime states of India was 77121.23 tons, which were comprised of 32387.86 tons (42%) of pelagic finfish resources, 15951.06 tons (21%) of demersal finfishes and 28782.31 tons (37%) of shellfishes (Fig 1).
Shrimp Hatchery - Shrimp Farming - Fish Hatchery - Fish Farming

"Through technology, innovation and our strong commitment to product quality and service, we aim to help Aqua farmers to accomplish their goal of good production with maximum return on investment"

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Among the 113 fish varieties recorded in the month, the top five contributors were Ribbon fish, Squid, Cuttlefish, Japanese Threadfin bream and Indian Mackerel, which together constituted 49 percent of the total catch (Fig 2). Ribbon fish with a quantity of 11458.60 tons was the fish item which contributed the maximum to total catch (15%).

The next position was occupied by Squid with 10221.66 tons (13%) and then by Cuttlefish with 5823.62 tons (8%). Apart from the five main fishery items mentioned above, the other important contributors to the landing were Karikkadi shrimp, Indian oil sardine and Croaker, with a share of more than 3000 tons each.

The Yellowfin sea bream was the fish variety which recorded the least quantity (0.33 ton) during the month.

The category-wise quantity of various fishery items recorded in August is given in Table 2. Among pelagic finfish resources the Ribbon fish recorded the highest landing which was followed by Indian Mackerel and Indian oil sardine (3320.71 tons).

In the case of demersal finfishes, the maximum contribution was from Japanese threadfin bream and then from Croakers (3098.26 tons) and Bull’s eyes (1797.13 tons). The shellfish landings formed 37% of the total catch, in which 23% was molluscs and 14% crustaceans. Squid and Cuttlefish landings were to the tune of 10221.66 tons and 5823.62 tons respectively. Among crustaceans, the Karikkadi shrimp recorded the highest landings with a contribution of 3543.51 tons.

On assessing the landing data region-wise, it was found that the South West coast, comprising 16 of the selected harbours in Kerala, Karnataka and Goa, recorded the maximum quantity of 39012.47 tons (51 %) and the North West region, comprising Maharashtra and Gujarat coasts and with seven of the selected landing sites, contributed 18767.42 tons (24%) to the total landing (Fig 3.). The 14 harbours in the South East region, ie. in Tamil Nadu and Andhra Pradesh, contributed 9726.82 tons (13%).

### Table 2. Category-wise Landings of various fish species during August 2017

<table>
<thead>
<tr>
<th>Fish item</th>
<th>Qty in tons</th>
<th>% of Total Catch</th>
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</thead>
<tbody>
<tr>
<td>Pelagic finfish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>11458.60</td>
<td>14.86</td>
</tr>
<tr>
<td>Indian mackerel</td>
<td>4751.32</td>
<td>6.16</td>
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<tr>
<td>Indian oil sardine</td>
<td>3320.71</td>
<td>4.31</td>
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<tr>
<td>Hilsa</td>
<td>2183.90</td>
<td>2.83</td>
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<tr>
<td>Tunas</td>
<td>1702.01</td>
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<td>Anchovies</td>
<td>1489.07</td>
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<td>Snapper</td>
<td>1440.64</td>
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<td>Bombay duck</td>
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<tr>
<td>Seer fish</td>
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<tr>
<td>Trevallies</td>
<td>683.74</td>
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<td>Scads</td>
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<td>Horse mackerel</td>
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<td>Herrings</td>
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<td>Dolphin fish</td>
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<td>Lesser sardines</td>
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<td>Mullet</td>
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<td>Queen fishes</td>
<td>52.94</td>
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<tr>
<td>Sail fish</td>
<td>37.02</td>
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<td>Indian ilisha</td>
<td>36.60</td>
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<tr>
<td>White sardine</td>
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<td>Cobia</td>
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<tr>
<td>Marlins</td>
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<td>Sea bass</td>
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<tr>
<td>Indian salmon</td>
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<td>0.03</td>
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<td>Oriental bonito</td>
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<td>Indian thread fish</td>
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<td>Spot tail needle fish</td>
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<tr>
<td><strong>Total Pelagic</strong></td>
<td><strong>32387.86</strong></td>
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**FOCUS AREA**

**REGION-WISE LANDINGS**

---

**Fig. 2. Major items landed during August 2017**
FOCUS AREA

recorded eight percent of the total catch which was least among the four regions. The North East region consisting of 10 of the selected landings sites in Odisha and West Bengal recorded a quantity of 13129.35 tons.

In the South West and North East coasts pelagic finfish landing was more than the other 2 categories whereas in South East & North West the landings were dominated by shellfish resources (Fig. 4). Demersal finfish landing was the lowest in all the four regions.

Table 2. Category-wise Landings of various fish species during August 2017

<table>
<thead>
<tr>
<th>Category</th>
<th>North East</th>
<th>South East</th>
<th>North West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demersal finfish</td>
<td>5371.76</td>
<td>3098.26</td>
<td>1183.39</td>
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<tr>
<td>Croakers</td>
<td>1797.13</td>
<td>1641.57</td>
<td>23.64</td>
</tr>
<tr>
<td>Bull's eyes</td>
<td>1821.98</td>
<td>1761.38</td>
<td>21.03</td>
</tr>
<tr>
<td>Pomfrets</td>
<td>122.20</td>
<td>44.16</td>
<td>21.68</td>
</tr>
<tr>
<td>Lizard fish</td>
<td>1219.82</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Reef cods</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
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<tr>
<td>Cat fish</td>
<td>71.06</td>
<td>23.64</td>
<td>21.68</td>
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<tr>
<td>Sole fish</td>
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<td>21.68</td>
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<tr>
<td>Eel</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
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<tr>
<td>Pony fishes</td>
<td>101.88</td>
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<tr>
<td>Rays</td>
<td>101.88</td>
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<td>21.68</td>
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<tr>
<td>Goat fishes</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
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<tr>
<td>Moon fish</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Emperor bream</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Black tip shark</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
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<tr>
<td>Whip fin silver biddy</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
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<tr>
<td>Tiger perch</td>
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<td>Ghol</td>
<td>101.88</td>
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<tr>
<td>Parrot fish</td>
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<tr>
<td>Spine foot</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Indian drift fish</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Long spine sea-bream</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Indian halibut</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Guitar fish</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
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<tr>
<td>White snapper</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Filefish</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Spotted butter fish</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Yellow fin sea bream</td>
<td>101.88</td>
<td>23.64</td>
<td>21.68</td>
</tr>
<tr>
<td>Total</td>
<td>5371.76</td>
<td>3098.26</td>
<td>1183.39</td>
</tr>
</tbody>
</table>

Table 2. Category-wise Landings of various fish species during August 2017

<table>
<thead>
<tr>
<th>Category</th>
<th>North East</th>
<th>South East</th>
<th>North West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shellfish</td>
<td>5371.76</td>
<td>3098.26</td>
<td>1183.39</td>
</tr>
<tr>
<td>Crustaceans</td>
<td>5371.76</td>
<td>3098.26</td>
<td>1183.39</td>
</tr>
<tr>
<td>Penaeid shrimps</td>
<td>9585.76</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Sea crab</td>
<td>822.62</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Mud crab</td>
<td>101.88</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Non-penaeid shrimps</td>
<td>85.58</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Lobsters</td>
<td>48.61</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Total Crustaceans</td>
<td>10644.44</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Total</td>
<td>10644.44</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Molluscs</td>
<td>10644.44</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Squid</td>
<td>10221.66</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Cuttlefish</td>
<td>5823.62</td>
<td>1797.13</td>
<td>5371.76</td>
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<tr>
<td>Octopus</td>
<td>2091.99</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Whelk</td>
<td>0.60</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Total Molluscs</td>
<td>18137.87</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Total Shellfish</td>
<td>28782.31</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>1797.13</td>
<td>5371.76</td>
</tr>
</tbody>
</table>

Fig. 3. Region-wise landings recorded during August 2017

Fig. 4. Comparison of category-wise contribution (in tons) to the total landings of each region
The five major species which had contributed predominantly to the landings in each region are given in Table 3.

### STATE-WISE LANDINGS

Maximum marine fish landing during the period was recorded from Kerala, which was to the tune of 22875.72 tons, forming around 30 percent of the total catch (Fig. 5).

Karnataka in the second position recorded 15420.58 tons (20%) and Maharashtra with 13034.70 tons was positioned in third place. The west coast states together formed around 75 percent of the total catch.

In East coast, the highest landing was reported from West Bengal which was to the tune of 10191.53 tons (13%). The state which recorded least marine landing during the month was Goa where only 716.18 tons of fish was recorded.

The major five fishery items which had contributed significantly to the landings in each state during August are given in Table 4.

### HARBOUR-WISE LANDINGS

Of the 47 harbours from where data was collected during the month, 23 belonged to West coast and 24 to East coast and the harbour-wise landings along both the coasts are presented in figures 6 & 7.

Among these harbours, the Beyapore harbour in Kerala registered the maximum landing of 9420.73 tons (12%) and followed by Sassoon Dock harbour in Maharashtra and Malpe harbour in Karnataka with nearly similar quantity of 7598 tons (10%).

Along East coast, the harbour which recorded the highest landing was Deshpran harbour in West Bengal where 3391.80 tons (4%) was landed.

Among the 47 harbours, 19 recorded a landing of more than 1000 tons, of which 13 are in West coast. The least quantity landed was at Malim harbour in Goa (65.67 tons).

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity in tons</th>
<th>% of total landings of the region</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japanese thread fin bream</td>
<td>5149.70</td>
<td>13.20</td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>4989.57</td>
<td>12.56</td>
</tr>
<tr>
<td>Cuttlefish</td>
<td>4231.71</td>
<td>10.85</td>
</tr>
<tr>
<td>Squid</td>
<td>4103.85</td>
<td>10.52</td>
</tr>
<tr>
<td>Indian mackerel</td>
<td>3161.16</td>
<td>8.10</td>
</tr>
<tr>
<td>North West</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>5672.45</td>
<td>30.22</td>
</tr>
<tr>
<td>Squid</td>
<td>5415.74</td>
<td>28.86</td>
</tr>
<tr>
<td>Croaker</td>
<td>891.94</td>
<td>4.75</td>
</tr>
<tr>
<td>Karikkadi shrimp</td>
<td>780.46</td>
<td>4.16</td>
</tr>
<tr>
<td>Brown shrimp</td>
<td>717.38</td>
<td>3.82</td>
</tr>
<tr>
<td>South East</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuttlefish</td>
<td>692.94</td>
<td>11.15</td>
</tr>
<tr>
<td>Tuna</td>
<td>602.56</td>
<td>9.70</td>
</tr>
<tr>
<td>Squid</td>
<td>445.81</td>
<td>7.18</td>
</tr>
<tr>
<td>Brown shrimp</td>
<td>329.23</td>
<td>5.30</td>
</tr>
<tr>
<td>White prawn</td>
<td>294.85</td>
<td>4.75</td>
</tr>
<tr>
<td>North East</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hilsa</td>
<td>2179.01</td>
<td>16.60</td>
</tr>
<tr>
<td>Croaker</td>
<td>1795.95</td>
<td>13.68</td>
</tr>
<tr>
<td>Indian mackerel</td>
<td>1165.23</td>
<td>8.88</td>
</tr>
<tr>
<td>Bombay duck</td>
<td>794.44</td>
<td>6.05</td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>633.48</td>
<td>4.82</td>
</tr>
</tbody>
</table>

Table 3. Major items landed in each region during August 2017

![Figure 5. State-wise fish landings (in tons) during August 2017](image)

![Figure 6. Landings (in tons) at harbours along west coast during August 2017](image)
Table 4. Major items landed in various states during August 2017

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity in tons</th>
<th>% of total landings of the state</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kerala</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>2763.43</td>
<td>12.08</td>
</tr>
<tr>
<td>Cuttlefish</td>
<td>2691.85</td>
<td>11.77</td>
</tr>
<tr>
<td>Squid</td>
<td>2642.44</td>
<td>11.55</td>
</tr>
<tr>
<td>Japanese threadfin bream</td>
<td>2384.18</td>
<td>10.42</td>
</tr>
<tr>
<td>Karikkadi shrimp</td>
<td>2021.08</td>
<td>8.84</td>
</tr>
<tr>
<td><strong>Karnataka</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japanese thread fin bream</td>
<td>2763.02</td>
<td>17.92</td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>2135.54</td>
<td>13.85</td>
</tr>
<tr>
<td>Indian oil sardine</td>
<td>1723.76</td>
<td>11.18</td>
</tr>
<tr>
<td>Indian mackerel</td>
<td>1715.72</td>
<td>11.13</td>
</tr>
<tr>
<td>Cuttlefish</td>
<td>1539.86</td>
<td>9.99</td>
</tr>
<tr>
<td><strong>Goa</strong></td>
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<td></td>
</tr>
<tr>
<td>Indian mackerel</td>
<td>383.50</td>
<td>53.55</td>
</tr>
<tr>
<td>Tuna</td>
<td>158.85</td>
<td>22.18</td>
</tr>
<tr>
<td>Indian oil sardine</td>
<td>60.10</td>
<td>8.39</td>
</tr>
<tr>
<td>Horse mackerel</td>
<td>22.09</td>
<td>3.08</td>
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<tr>
<td>Brown shrimp</td>
<td>21.00</td>
<td>2.93</td>
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<tr>
<td><strong>Maharashtra</strong></td>
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<tr>
<td>Squid</td>
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<tr>
<td>Ribbon fish</td>
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<tr>
<td>Karikkadi shrimp</td>
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<tr>
<td>Brown shrimp</td>
<td>714.89</td>
<td>5.48</td>
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<td>Croaker</td>
<td>611.54</td>
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<tr>
<td><strong>Gujarat</strong></td>
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<tr>
<td>Ribbon fish</td>
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<td>Squid</td>
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<tr>
<td>Cuttlefish</td>
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<tr>
<td>Croaker</td>
<td>280.40</td>
<td>4.89</td>
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<td>Cat fish</td>
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<td><strong>Tamil Nadu</strong></td>
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<td>Cuttlefish</td>
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<td>Squid</td>
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<td>Indian scad</td>
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<tr>
<td>Tuna</td>
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<td>4.50</td>
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<td>Indian mackerel</td>
<td>177.95</td>
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<tr>
<td><strong>Andhra Pradesh</strong></td>
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<tr>
<td>Tuna</td>
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<td>19.78</td>
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<tr>
<td>Brown shrimp</td>
<td>262.90</td>
<td>12.43</td>
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<tr>
<td>White prawn</td>
<td>248.46</td>
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<tr>
<td>Ribbon fish</td>
<td>116.75</td>
<td>5.52</td>
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<tr>
<td>Tiger prawn</td>
<td>94.93</td>
<td>4.49</td>
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<tr>
<td><strong>Odisha</strong></td>
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<tr>
<td>Croaker</td>
<td>827.35</td>
<td>28.16</td>
</tr>
<tr>
<td>Karikkadi shrimp</td>
<td>210.54</td>
<td>7.17</td>
</tr>
<tr>
<td>Ribbon fish</td>
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<td>5.93</td>
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<tr>
<td>Tuna</td>
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<tr>
<td>Hilsa</td>
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<td>4.69</td>
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<tr>
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<tr>
<td>Hilsa</td>
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<td>20.03</td>
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<tr>
<td>Indian mackerel</td>
<td>1075.66</td>
<td>10.55</td>
</tr>
<tr>
<td>Croaker</td>
<td>968.61</td>
<td>9.50</td>
</tr>
<tr>
<td>Bombay duck</td>
<td>715.08</td>
<td>7.02</td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>459.14</td>
<td>4.51</td>
</tr>
<tr>
<td>Croaker</td>
<td>968.61</td>
<td>9.50</td>
</tr>
<tr>
<td>Bombay duck</td>
<td>715.08</td>
<td>7.02</td>
</tr>
<tr>
<td>Ribbon fish</td>
<td>459.14</td>
<td>4.51</td>
</tr>
</tbody>
</table>
In August, a total of 26881 boat arrivals were recorded from the selected harbours, among which the harbours which had recorded more than 1000 boat landings are given in table 5. Deshapran harbour in West Bengal recorded the maximum boat arrivals with 1708 boats and it was trailed by Sankarpur harbour with 1544 boat arrivals. Around 80 percent of the fishing vessels which landed their catch at the harbours belonged to the category of Trawlers and the remaining landings were by Purse seiners, Ring seiners, Gill netters and traditional crafts.

In August 2017, a total of 77121.23 tons of marine fishery resources were landed in 47 major fishing harbours of India wherein pelagic finfish contributed more quantity than shellfish stocks and demersal finfish. Considering the total catch, the Ribbon fish recorded as the major fishery resource in terms of quantity landed. Landings from the South West coast states together formed 51 percent of the total catch, and the state of Kerala recorded the highest catch among the nine maritime states. More than 1000 tons of fish landings were reported from 19 of the selected harbours and the Beyapore harbour recorded the highest landing. Total boat arrivals recorded during the month was 26881.
Pole-and-line fishery is one of the few existing sustainable fishery practices in the Indian Ocean Islands and a major source of livelihood for thousands of fishermen in Lakshadweep Islands in India. More than 50 percent of the total fish landings in Lakshadweep are skipjack tuna (Katsuwonus pelamis), with most of the rest made up of yellowfin (Thunnus albacares) and smaller quantities of kawakawa (Euthynnus affinis) and other small tunas. Oceanic skipjack tuna is one of the major species caught using live baitfish collected from coral lagoons.

Reports indicate that the introduction of Fish Attracting Devices (FAD) have improved tuna fishery with a spike in yellowfin tuna landing. As yellowfin tuna is not used for 'Masmin' production, it is mostly consumed locally and supplied to markets in Kerala. Excessive landing of yellowfin tuna during 2016-17 caused the decline of fresh tuna price to as low as Rs. 30/per kg in Lakshadweep.

Tuna resources from the islands have not been exploited to its full potential due to limited market access, lack of storage and processing facility for fresh tuna in the islands. As a result, export quality tuna cannot be provided to the exporters. With the recent initiative of the Hon'ble Member of Parliament, Lakshadweep and MPEDA, one company based in Kochi, has initiated sourcing skipjack tuna from Lakshadweep for export.

Apart from sourcing tuna for export, the company also initiated efforts for capacity building of fishermen in handling, preservation and transportation of yellowfin tuna for the production of ‘Sash-mi’ grade tuna by inviting Japanese experts. These experts visited Agatti and Kavaratti Islands during February 10 – 15, 2017 and conducted informal awareness meetings with fishermen.

Lakshadweep Administration has initiated eco-labelling programme for pole-and-line tuna fishing in Lakshadweep.

The technical experts demonstrated techniques like spiking, bleeding, immobilizing, de-gutting and icing for the production of “Sashmi” grade tuna production. On board demonstration was also conducted.
PRODUCTS LIST

- BIWET - I
  Phosphate free Moisture retainer & texture enhancer for Cephalopods

- ACUATIC - K
  Whitening & Brightness enhancer for Cephalopods

- ARTIC - L
  Glazing agent for Cephalopods & Shrimps

- ARTIC - P
  Glazing agent for Cephalopods & Fish

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Dealers & Distributors of Seafood Processing Aid

6C, J. P. Towers, 7/2 Nungambakkam High Road, Nungambakkam, Chennai - 600 034, India.
Email: seaeyesindia@gmail.com

For queries / Customer Care : M. Balakrishnan
Mobl: +91 93800 41050, Ph: +91 44 25992315, Email: sales.seaeyes@gmail.com,
Cochin Branch Office : Ph: +91 484 4968899
Two more export processing units have expressed their keen interest to source tuna from Lakshadweep for export. To promote sustainable fishing and better market access for the skipjack tuna in Lakshadweep, captured using pole-and-line, World Wide Fund for Nature – India (WWF-India) in association with Fisheries Department and Department of Science & Technology of Lakshadweep Administration has initiated an eco-labelling programme for pole-and-line tuna fishing in Lakshadweep.

The pole-and-line tuna fisheries practiced in Lakshadweep could be a strong contender to attain a global eco-label like Marine Stewardship Council (MSC) Certification that aids in maintaining the fishery sustainably and provides additional long term benefits to fishermen in terms of newer markets and price premiums. In this connection, a preliminary scoping study was conducted by WWF-India in association with Lakshadweep Administration during 2015, followed by MSC pre-assessment and Fishery Improvement Plan to assess the potential of the fishery to gain MSC certification.

A series of fishermen awareness programmes are being conducted in the Islands to educate fishermen about the benefit of eco-labelling.

The recently established office of MPEDA at Lakshadweep also supports the effort of WWF in getting MSC certification for pole-and-line tuna fishery in Lakshadweep. Department of Fisheries and Department of Science & Technology under the Union Territory of Lakshadweep administration are keen to bring out a tuna fishery management plan with active support from CMFRI. Tuna products from Lakshadweep may fetch higher value when it comes under the Chain of Custody of the MSC certified tuna fishery in Lakshadweep.

Hands-on trainings in fabrication of square mesh cod ends

Five special training programmes on “Conversion of rhomboid mesh into square mesh cod ends” were conducted during July 17 - 21, 2017 in Sassoon dock, Harne, Karla (Ratnagiri) and Sarjekot, Malvan by which net makers were trained to convert diamond mesh webbings into square mesh cod ends.

Mr. H.V. Pungera, Senior Technical Assistant of CIFT, Veraval provided the technical guidance in these training programmes which was attended by 113 fishers in total. Using 40 mm mesh size webbing with 24 x 3 ply twine of thickness 2.5 mm, two cod ends of 4 meters length were fabricated in the training programmes. Member NGOs- Manav Vikas Sewabhavi Sanstha, Thane, Kalarang Sanskrutik Samajik Sanstha, Raigad, Nagarik Bahu Uddeshiy Seva Pratishthan, Sindhudurg actively involved in the arrangements of these programmes. Harbour Data Collectors of Sassoon dock fishing harbour, Harne port and Mirkarwada fishing harbour too supported for the smooth conduct of the trainings.

Mr. Rajkumar Naik, Deputy Director, MPEDA RO Mumbai attended the inauguration session of the first training programme. State Coordinator, NETFISH gave a talk on the importance of learning square mesh fabrication technology and implementation of square mesh cod ends in trawl nets to reduce juvenile fishing. Chairman and Secretary of The Sassoon dock net makers’ Association had appreciated the work of NETFISH towards conservation of fishery resources.

In Gujarat too, hands on training on conversion of diamond mesh to square mesh nets were organized at Veraval and Mangrol on July 11 & 13 respectively. Boat owners of various boat associations attended the training. Scientists and Technical staff from CIFT, Veraval demonstrated on how to convert diamond mesh net to square mesh cod end and then each group of fishermen were made to prepare the square mesh cod end by themselves. A documentary film on square mesh was also shown to the trainees.
training programme on Seafood HACCP was jointly organised by EIC-USFDA from September 11-12, 2017 and USFDA programme on labelling on September 13, 2017 at EIA, PTH lab, Mumbai. The main objective of this training programme was to empower the officials from EIC/EIA, MPEDA and technologists of the seafood processing establishments with seafood HACCP and related regulations.

The programme was inaugurred by Mr. Sanu Jacob, Joint Director, EIA, Mumbai. In his address he emphasized the importance of the safety of Seafood products exported from the country.

Mr. Subray Pavar, Technical Officer (QC), MPEDA Head Office, Kochi and Mr. Kishorkumar Vaniya, Technical Officer (QC), MPEDA, RD Mumbai had attended the training programme. About 38 participants working in different seafood processing establishments including EIC/EIA and MPEDA have participated. The 2-day training programme covered the topics such as seafood HACCP regulation, current Good Manufacturing Practices, sanitation control procedures, principles of HACCP, preparation of flow chart, conducting hazard analysis and development of HACCP Plan form. The participants were divided in to 10 groups and work sessions were conducted on hazard analysis and HACCP Plan for various seafood products. The findings were presented by the representative of each group. Participation certificates were distributed to the successful participants. Participants along with Joint Director, EIA Mumbai and USFDA trainers.

The training programme was handled by Ms. Natalie Mickelsen, FDA Consumer Safety Officer, FDA India Office, USFDA, Mr. Eric Milstead, FDA Consumer Safety Officer, FDA India Office, USFDA, Mr. Christopher Priddy, FDA, Assistant Country Director, FDA India Office, USFDA, Mr. M. Sasi, Deputy Director EIA Mumbai and Mr. Jones Varkey, Assistant Director EIA Mumbai, Export Inspection Council.

Apart from joint EIA USFDA Seafood HACCP training programme, half a day labelling of food products programme was conducted on 13th September 2017 by Mr. Christopher Priddy, FDA, Assistant Country Director, FDA India Office. In his presentation he narrated labeling of food allergens, nutrition information, exemption and special labeling provisions, nutrition facts label, amount of food in the package, mandatory labeling, voluntary labeling and ingredient list etc.
Mumbai division organises seafood HACCP basic training programme

MPEDA Regional Division, Mumbai organized a 4-day Seafood HACCP basic training programme during August 16-19, 2017 at Hotel Devi’s Residency, Sanpada, Navi Mumbai. The purpose of the training programme was to empower the technologists of the seafood processing establishments of Maharashtra region with seafood HACCP and related regulations.

Mr. Rajakumar Naik, Deputy Director, MPEDA RD, Mumbai welcomed the gathering. He narrated the role and effective implementation of HACCP in seafood processing establishments. The training programme was inaugurated by Dr. Sanu Jacob, Joint Director, EIA, Mumbai by lighting the traditional lamp. In his inaugural address, he has emphasized on the importance of safety of seafood products exported from the country.

Dr. L.N. Murthy, Sr. Scientist, CIFT, Vashi, Navi Mumbai who was the guest of the programme highlighted the present scenario of the Indian Seafood export and hazards related to seafood industry including heavy metals etc.

Mr. S.S. Shaji, Deputy Director, MPEDA RD, Kolkata emphasized the importance of implementation of HACCP in seafood industry and significance of training programme and advised the participants to be interactive in the various theoretical and work sessions of the four days training programme.

The training sessions were handled by Mr. S.S. Shaji, Deputy Director, Mr. V. Vinod, Assistant Director and Mr. Kishorkumar, Technical Officer, MPEDA. Topics such as current Good Manufacturing Practices, Sanitation Standard Operating Procedures, principles of HACCP, development of HACCP plan form, U.S. seafood regulations, EU directives and national regulations/standards, traceability were presented and discussed.

The different products Plan Form were presented by the representative of each group and finally an assessment was conducted by way of conducting test and those who have scored maximum number of marks were appreciated by the faculty. The training programme was concluded on August 19, 2017 during which Mr. P.T. Sreejith, Assistant Director, RO Mumbai offered vote of thanks.

The purpose of the training programme was to empower the technologists of the seafood processing establishments of Maharashtra region with seafood HACCP and related regulations.
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**Awareness campaign on diversification of aquaculture**

MPEDA Sub Regional Division, Karwar has conducted, an awareness campaign on aquaculture diversification in Chirahatti Village, Athani taluk, Belagavi district on 8th August 2017. Around 20 agricultural farmers were attended who cultivate sugarcane as main crop. During the campaign the participants were explained by Mr. Sanjeevarakeri, Assistant Director of fisheries, Chikodi on outline of fisheries development in India with special reference to Karnataka state in Kannada version and the role of MPEDA and its promotional activities in coastal and inland area for development of shrimp aquaculture.

The Krishna river flows in Taluks of Chikodi and Athani of Belagavi district and by using these river water the farmers do sugarcane as main cash crop by exploring borewell as well as drawing pipelines from the river Krishna. Some of these sugarcane fields become low saline soil which is not suitable for any agricultural crop. Since these farmers are interested to convert those lands for aquaculture, the campaign was organised. Since L. vannamei is one of the candidate species can tolerate and grow normally in low saline which may be cultured in these low saline soil and make use of these land for aquaculture.

**Training programmes and campaigns in aquaculture by MPEDA field offices**

MPEDA Regional Division, Valsad organised a 5-day SC/ST training programme from July 31, 2017 to August 4, 2017 at Sajod village, Ankleshwar taluka, Bharuch district and a 5-day training programme from August 8-12, 2017 at Rajiv Gandhi Hall, Jilla Panchyat, Valsad on “Eco-friendly and sustainable shrimp farming.” The programme at Sajod village and Jilla Panchyat, Valsad was attended by 20 and 61 beneficiaries respectively.

The training programme at Sajod village was inaugurated by Mr. Rakesh Patel, Social worker/Teacher. Technical sessions were handled by Mr. U K Pandya, Assistant Director (Aq), Mr. Razak Ali, Assistant Director (AE), Mrs. M A Patil, Junior Technical Officer (Aqua), Mr. Bhavin M G, Field Supervisor, MPEDA and Mr. K B Tandel, Guest lecturer.

Topics such as introduction to shrimp farming, role of MPEDA, site selection, farm construction, eco-friendly and sustainable shrimp farming, pond preparation, identification and life cycle of shrimp, land leasing policy, procedure for submission of application to collector/Department of Fisheries for allotment of Govt. land for the development of shrimp farming, seed selection, packing, transportation, acclimatization, stocking, use of pro-biotic, abuse of antibiotics in aquaculture,
harvesting, post harvest management, marketing, HACCP in aquaculture, feed management, daily monitoring, farm management, water quality management, diseases prevention and control, L. vannamei culture, bio security measures, Aquaculture Authority Guideline and how to apply for license, etc. were presented and discussed.

On August 3, 2017, a field visit was organized to shrimp farm of Mrs. Shila A. Sabuwala, at Ambheta Pardi village to provide an opportunity to the trainees to familiarize with farm construction and management, Bio Security Measures, Good Management Practices (GMPs), use of field equipments for testing of various water quality parameters, Vannamei shrimp culture methods, etc. Mr. G. Rathinaraj, Joint Director (Aqua), MPEDA distributed the certificates to successful trainees and delivered the valedictory address on the last day of the programme.

The training programme at Jilla Panchyat, Valsad was inaugurated by Mr. G. Rathinaraj, Joint Director, MPEDA. He explained the purpose of conducting the training and role of MPEDA for development of shrimp farming. Technical sessions were handled by Mr. G. Rathinaraj, Joint Director, Mr. Razak Ali, Assistant Director, Mr. U.K. Pandya, Assistant Director, Mrs. Mangala Patil, Junior Technical Officer and Mr. Bhavin M. Gheravara, Field Supervisor, MPEDA.

On August 10, 2017, a field visit was organized to shrimp farm of Mr. Rameshbhai D. Tandel at Hingraj village to provide an opportunity to the trainees to familiarize with farm activities. Certificates were distributed to the participants on the last day of the programme.

Topics such as eco-friendly and sustainable shrimp farming, identification and life cycle of shrimp, seed selection, packing, transportation, acclimatization, stocking, water quality management, harvesting and post harvest management, marketing and HACCP in aquaculture, abuse of antibiotics in aquaculture, diseases prevention and control, L. vannamei culture, bio security measures, development of scientific shrimp farming in Gujarat and future scope, etc. were presented and discussed.

On August 10, 2017, a field visit was organized to shrimp farm of Mr. Rameshbhai D. Tandel at Hingraj village to provide an opportunity to the trainees to familiarize with farm activities. Certificates were distributed to the participants on the last day of the programme.

Sub Regional Division, Bhimavaram

MPEDA, Sub Regional Division, Bhimavaram organized a 3-day training programme from August 16 to 18, 2017 on “Better management practices and diversification in aquaculture” at Juttiga village, Penumentra Mandal, West Godavari district.

Mrs. P. Nagalakshmi, Sarapanch, Juttiga village inaugurated the training programme. The main objective was to educate the farmers on better management practices and diversification in aquaculture.

The programme was attended by 25 participants. Technical sessions were handled by Dr. P. Sreenivasulu, Assistant Director, Mr. K. Ramanjaneyulu, Junior Technical Officer, Mr. L.K. Patnaik, Field Supervisor and Mr. M. Chakravarthy, Chief Manager, Bank of Borada, Mallipudi Branch. Topics such as BMPs and diversification of aquaculture, schemes and services of Bank for aqua farmers, etc. were presented and discussed. Certificates and stipend were distributed to the trainees on the last day of the programme.
Workshop on opportunities for development of sustainable aquaculture in Gujarat

MPEDA Regional Division, Valsad with the collaboration with MPEDA RD, Veraval and SRD, Porbandar conducted a Workshop on ‘Opportunities for the development of sustainable aquaculture in Gujarat’ on 9th September 2017 at Sea Food Exporters Association Hall, GIDC, Veraval, Gir Somnath district. The workshop was conducted for the benefit of exporters of Gujarat state to motivate them in aquaculture development. Totally 57 no. participants from Gir Somnath and Porbandar districts attended the workshop. The objective of the workshop was to discuss the available potential areas for sustainable aquaculture development in Gujarat.

Mr. G. Rathinaraj, Joint Director (Aqua), MPEDA welcomed the gathering and briefed the importance of sustainable aquaculture, limitation of sea catch, potential area for aquaculture development in Gujarat. He suggested the exporters to involve in the aquaculture development as huge area is available in Gujarat state as a result they can export the sea food in a sustainable manner.

Mr. Piyush Fofandi, President of Seafood Exporters Association, Gujarat inaugurated the workshop. In his inaugural address, he explained and suggested the Exporter to take up the aquaculture development in the state of Gujarat. He also requested the exporters to approach the Government of Gujarat in an organized way for solving the land allotment issues at all levels by coordinating with MPEDA.

Mr. R.A. Gupta, Deputy Director, MPEDA SRD, Veraval, addressed the exporters and shared his experience about the Gujarat aquaculture development and briefed various techniques adopted in shrimp culture, including the Biofloc technology for intensive production.

Mr. Shaktivel, Assistant Director, MPEDA SRD, Porbandar, briefed about the potential and scope of shrimp culture in high saline area in Kutch region. He told that there was good demand in Japan for shrimp, cultured in high saline water.


During the workshop exporters raised their doubts about the land availability and the procedure for application for Govt. land allotment on lease. Mr. G. Rathinaraj requested the details of applications pending with the Govt. so that necessary follow up could be made at various level.

The workshop was concluded with the vote of thanks proposed by Mr. Vinod Kumar, Assistant Director, MPEDA RD, Veraval.
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Climate Change Likely to Shrink Fish Size by 30%

Fish are expected to shrink in size by 20-30 percent as a result of rising ocean temperatures due to climate change across the globe, claims a study.

The findings showed that as fish grow into adulthood, their demand for oxygen increases because their body mass becomes larger. However, the surface area of the gills - where oxygen is obtained - does not grow at the same pace as the rest of the body. This explains why fish are expected to shrink "gill-oxygen limitation theory."

"Fish, as cold-blooded animals, cannot regulate their own body temperatures. When their waters get warmer, their metabolism accelerates and they need more oxygen to sustain their body functions," said William Cheung, Associate Professor from the University of British Columbia in Canada. "There is a point where the gills cannot supply enough oxygen for a larger body, so the fish just stops growing larger," he added.

Warmer waters increase fish's need for oxygen but climate change will result in less oxygen in the oceans. This means that gills have less oxygen to supply to a body that already grows faster than them.

This forces fish to stop growing at a smaller size to be able to fulfill their needs with the little oxygen available to them, the researchers said, in the paper published in the journal Global Change Biology.

Some species like tuna, which are fast moving and require more energy and oxygen, may shrink even more when temperatures increase. Smaller fish will have an impact on fisheries production as well as the interaction between organisms in the ecosystems, the researchers said.

New species of fresh water edible fish discovered in pampa, Kerala

A new species of edible freshwater fish has been discovered in Pampa River running through Pathanamthitta district of Kerala. Named as Labeo filiferus, it belongs to Labeo genus. The two researchers, Mathews Plamoottil, Assistant Professor, Government College, Chavara, Kollam, and Primoz Zupancic from the Dinaric Research Institute, Slovenia, Europe, have reported the discovery in the latest issue of research journal Bioscience Discovery.

The fishes in the Labeo genus are widely distributed in the inland water bodies of India, Pakistan, Nepal, Bangla desh, Sri Lanka,
Burma, Malaysia, tropical Africa and Syria. They are medium-sized elongate fishes with rounded abdomen, swollen snout, fingered lips and a straight lateral line. At present 31 species of Labeo are discovered in India. Among these species, L. rohita, commonly known as Rohu, extensively used in aquaculture. The only other Labeo species reported from Kerala is L. dussumieri.

According to the researchers, L. filiferus was found to be distinct from the other species of the genus in its features including black coloured body and fins, prominent barbels, smaller eyes, longer snout and elongated dorsal and anal fins. The eyes are brilliantly coloured with orange tinge.

The specimens were 20 to 40 cm long and weighed four to five kg. The researchers expect more species of the Labeo genus to be discovered in the near future from the aquatic bodies in north and central Kerala.

Desi shrimps set to be the next big fish in the market

When a contagious viral disease struck the Indian shrimp industry in the 1990s, taking native species like Asian tiger shrimps (Peneaus monodon) off the market, an exotic species from Latin America, the Pacific white shrimp (Peneaus vannamei) came to the rescue of the ailing industry.

Now, scientists are working to revive an indigenous species—the Indian white shrimp (Peneaus indicus) that can challenge the foreign species dominating the country’s shrimp exports. Scientists from ICAR Central Institute of Brackishwater Aquaculture (CIBA) in Chennai are promoting the native species among shrimp farmers under the Make in India programme.

CIBA Director K.K.Vijayan said a project proposal had been submitted to the Centre to initiate a selective breeding programme for the native species. The project includes allotment of Rs. 25,000 hectare for farming and additional production of Rs 1.5 lakh tons of native species. Popularisation of the native species among farmers is important, as it has the potential to be an alternative to the exotic Pacific white shrimp. It will also decrease the dependence on other countries for brood stock besides increasing profitability," he said.

The Pacific white shrimp has dominated the Indian market since the late 2000s, when it was introduced to resurrect the industry struggling to stay afloat after the virus-affected Asian tiger shrimp species vanished. By 2014, 70 percent of the total seafood exports of Rs 30,000 crore were shrimps. In the next two years, the foreign species accounted for nearly 90 percent of the Rs 24,500-crore shrimp export business. Despite good production, the foreign species may have run its course as it is prone to diseases, both existing and new.

Revival of the native species not only provides a diversification in aquaculture but also prevents the industry from suffering losses due to frequent disease outbreaks affecting the now popular Pacific white shrimps, said principal investigator of the programme Akshaya Panigrahi.

The demonstration of the native species has been done on farms in the coastal states of Odisha, West Bengal, Andhra Pradesh, Tamil Nadu, Kerala and Gujarat. "The result of these trials showed immense potential of the native shrimp. The Indian white shrimp production of up to 3 to 6 tons per ha has been achieved in four months,” said Panigrahi.

The non-genetically improved cultured Indian white shrimp is found to
have a growth and productivity on a par with the Pacific white shrimp. “Since Indian white shrimp is a native species, there is no fear of alien pathogens affecting it. And in five years, a genetically improved variety of the native species will prove to be better than the exotic species in Indian conditions,” he said. Apart from farming demonstrations across the country, scientists have also been conducting genetic characterisation of the species. “Genetic characterisation is an important step for selective breeding of a species to genetically modify it," said Panigrahi. A national workshop on Indian white shrimp farming was also conducted earlier this month among stakeholders where memorandums of understanding were signed to promote white shrimp aquaculture.

- www.timesofindia.indiatimes.com

The US, the largest importer of Indian shrimps, has reduced the anti-dumping duty on the perishable item to 0.84 percent for Indian exporters. The U.S. Commerce Department has announced the review of the anti-dumping duty for the period February 1, 2015, to January 31, 2016.

While the rate for Falcon Marine, the largest seafood exporter in the country, has been set at 0%, for Liberty Group it is 0.84%. Both Falcon Marine and Liberty Group were mandatory respondents to the review. The duty finalised is lower than the previous review rates. The final duty for 2014-15 was 2.20%.

“Because the duty has been lowered, a lot of major exporters will get refunds, which will be a big boost for exports,” said Rajen Padhi, Director General of the Utkal Chamber of Commerce and Industry, and a seafood consultant. The reduction in the rates has come as a relief when uncertainties in seafood trades were visible. This year the United States International Trade Commission (USITC) voted to extend the anti-dumping orders on imports of frozen warm water shrimp for five more years.

The American Shrimp Processors Association has named India, along with Indonesia, Thailand, Vietnam, Mexico, China, and Malaysia, as seven of the 13 countries with which the US ran a significant shrimp trade deficit in 2016. The US imported 188,617 tons of Indian seafood in 2016-17. Export to the US registered growth rates of 22.72%, 33%, and 29.82% in terms of quantity, rupee value, and dollar value, respectively.

“The duty rate is changing from year to year. The lower rate essentially means there is no dumping in the US and the reduction in the duty helps in boosting trade,” said a trade source.

- www.business-standard.com
India continues to be topper in shrimp exports to U.S.

The U.S. continues to import more shrimp, and India leads the way, the latest data from the National Oceanic and Atmospheric Administration (NOAA) reveal. No less than 34 different countries sent 61,024 metric tons of shrimp to the U.S. in July 2017, a 15.8 percent increase over U.S. shrimp imports in July 2016 and a 14.2% increase over June 2017, according to NOAA’s numbers. At the seven-month point of the year, U.S. shrimp imports are at 347,115 t, a 9.6% increase over the first seven months of 2016.

Argentina, China, Ecuador, Mexico, Peru and Vietnam sent more shrimp to U.S. in July 2017 than they did in June 2017, but India was the top supplier with 20,500 t, a 47.5% increase over it delivered in July 2016. The imports from India nearly doubled the 10,600 t of shrimp contributed to the U.S. by second-place Indonesia in July 2017, which represented an 18.3% decline year-over-year. India led all U.S. shrimp suppliers in 2016 with 153,956t but is now on pace to shatter that figure by 56.4% based on its first seven months.

-www.undercurrentnews.com
ICAR-CIFT signs with cochin shipyard for deep sea fishing vessel construction under Neel kranti mission

In association with the Central Sector Scheme on Blue Revolution and Make in India, ICAR - Central Institute of Fisheries Technology (ICAR-CIFT), Cochin and Cochin Shipyard Limited (CSL) has joined hands for a collaborative programme, for the design and construction of commercial fishing vessels adhering to international standards. An agreement in this connection was signed on August 29, 2017 with the aim of creating benchmarks and standards for deep sea commercial fishing vessels besides enabling end-to-end solutions to the fisheries sector of India. This collaboration focuses on empowerment of local boatyards by raising the standards of boat construction. During the first phase of the programme, ICAR-CIFT and CSL will address the needs of the fisheries sector of Tamil Nadu and render support in the design and construction of deep sea Tuna Long Liner cum Gill Netter under the Blue Revolution scheme of Union Government. This collaborative programme is expected to address the present challenges and issues faced by the commercial fishing boat industry in India. Presently, it is observed that in some areas, amateur boat building yards take up the construction of the fishing vessels, without following any international standards, and by using raw materials that are not of marine grade. This mainly happens, as there are no specific agencies to monitor the construction of the deep sea going vessels. The possibilities of corrosion and under-water bio-fouling of fishing vessels are higher than any other sea going crafts. Hence marine grade steel plates and good quality fiberglass reinforced plastic raw material are essential to withstand corrosion and high impact of seas. The new initiative by ICAR-CIFT and CSL will also take adequate measurements to ensure that these ships and boats are constructed using marine grade raw materials, certified equipments and by qualified and skilled technicians. The programme activities will be taken up by the Fishing Technology Division at ICAR-CIFT.
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China announces first mariculture solar installation

A Chinese company claimed that they installed the first solar panels on a seawater aquaculture facility. Fangchenggang Xi Jiang Energy Co. in Guangxi Province has added 80 megawatts’ worth of panels on the roofs of shrimp sheds in Guangxi province. The rollout of solar panels on aquaculture facilities has been promoted with much vigor in recent years in China as a means for the country to meet its renewable energy targets, while also adding to the profitability of fish farming. However, promoters of such projects have long shied away from seawater installations, given the corrosion damage to solar panels caused by salt water. The Tongwei Group, a producer of feed and seafood, has been an exception. In recent years, it has been a key promoter of solar-aquaculture projects – something it promotes as a “win-win” strategy to cushion fish farmers from market fluctuations and often-thin margins.

India to outperform in shrimp exports in 2017: UN Report

A mid growing uncertainties in the seafood trade, exporters from India have now a reason to cheer as the country is expected to be the standout performer in 2017 along with Chile. Indian exports are set to surge by 41 percent more due to bumper harvesting of Vannamei shrimp.

"Of the world’s major seafood exporters, India and Chile are expected to be the standout performers in 2017. In India’s case, bumper harvests of aquacultured Vannamei shrimp is the main factor behind expectations of a $2.3 billion increase in Indian seafood exports in 2017," said a report by Globefish, which is a unit within the Food and Agriculture Organisation (FAO) of the United Nations. The report on seafood demand analysed the market situation until June 2017.

The report will provide respite to Indian exporters at a time when the European Union (EU), the third largest market, is contemplating a complete ban on Indian shrimp imports over quality issues. For Chile, a combination of a recovery in salmon harvest volumes and the high price level for salmon products will equate to a projected rise of $1.6 billion, marking a rise of 30 percent, in export value, it added.

Exports from Ecuador primarily include shrimp and tuna, while Peru exports fishmeal and fish oil. Norway is primarily known for the export of salmon, ground fish and small pelagics. Given that exports from these three countries are also expected to swell this year, a substantial increase in the overall yearly exports is logical.

On the imports side, both developed and developing markets are expected to perform well in 2017. Significant import growth for the South East Asian emerging markets in particular, comprising the United States, EU and Japan will all see a boost in seafood demand due to improving economic conditions, said the report.

Driven by robust demand growth worldwide, a substantial proportion of global production will be exported. The value of world trade in fish and fishery products is expected to increase by a projected 5.8 percent to $150.9 billion in 2017.

As per an earlier report of FAO, India had emerged as the largest exporter of shrimps in the world by exporting 438,500 tons in 2016, marking a 14.5 percent increase over the last year. The top five shrimp exporters to the international market in 2016 were India, Vietnam, Ecuador, Indonesia and Thailand.

- www.seafoodsource.com

- www.business-standard.com
ICAR-CIBA organises hands-on training in cage fabrication

Skill Development Programme on Crafting Low Volume Cages and Farming of Brackish-water Fishes in Cages Brackish-water creeks and estuaries can be efficiently utilized by installing suitable cages for farming of fishes which is the prudent strategy for doubling fish farmers’ income and augmenting fish production. To achieve that, the art and science of crafting low volume cages suitable for brackish-waters and farming techniques of fishes need to be inculcated to the coastal fisher families and other interested farmers and entrepreneurs.

The ICAR-Central Institute of Brackish-water Aquaculture (ICAR-CIBA) has conducted a skill development programme for the fisher youths and aquaculture graduates on “Crafting low volume cages and farming of brackish-water fishes in cages” during July 11-14, 2017. The resource persons from the National Institute of Ocean Technology (NIOT), Govt. of India, Chennai who are pioneer in sea cage farming were invited to provide hands-on training on cage fabrication and deployment in brackishwaters at Vennangupattu village, Kancheepuram district, Tamil Nadu, where CIBA is demonstrating cage farming of brackish-water fin fishes in collaboration with NIOT.

The skills of cage designing, material sourcing, net making, fabrication and positioning of cages at an appropriate location were inculcated adopting ‘seeing is believing’ and ‘learning by doing’ methods. The site selection criteria for cage farming in brackish-water open waters, viz., water depth, flow, physico-chemical parameters, continuous water availability, climatic and natural extreme events profile of the site and socio-cultural factors of the communities were taught to the trainees.

The brackish-water fish species suitable for cage farming, seed availability, optimum seed size, seed transportation, acclimatization, stocking density for different cages and sampling procedures were demonstrated to the trainees. Further, the fish health monitoring protocols and disease preventive measures were also taught to them.

The trainees were trained to calculate the economics of cage farming, economic viability of different cage farming systems, preparation of bankable projects. The social harmony with the local communities is the key for the viability and success of cage farming, therefore, skills on community handling were imparted using role-play techniques.

Mobilising fisher families who have access and traditional right on the brackish-water resource is the better-fit model for cage farming. An interaction session was arranged with the members of A. P. J. Abdul Kalam Fish Producers Group, Vennangupattu village who are presently involved in this cage farming intervention by CIBA.

Nineteen trainees participated in the training and certificates were distributed as proof of the skill imparted. The trainees felt that the training was all-inclusive, totally practical and provided them the skill required for taking up cage farming as a profession in coastal backwaters.
Seabass farming in brackish-water cages

Farming of brackish-water fishes in locally crafted cages suitable for estuaries, creeks, backwaters and lagoons is an emerging innovative and viable technology for the production of valuable finfish such as seabass. The technology is efficient in utilizing the vast stretches of brackish-water resources along the coastal India for increased fish production, employment creation and income generation, falls under the vision of Indian Govt. under the blue revolution. In this direction, the ICAR-Central Institute of Brackish-water Aquaculture (ICAR-CIBA), Chennai which is the nodal research institution for the development of brackish-water aquaculture in collaboration with the National Institute of Ocean Technology (NIOT), Chennai has successfully demonstrated cage farming of Asian seabass fish (Lates calcarifer) in the Buckingham canal waters at Vennangupattu coastal village in Kancheepuram District of Tamil Nadu. CIBA mobilised the fisher youths from the villages. Skill development training has been provided as part of Attracting and Retaining Youth in Agriculture (ARYA) initiative of ICAR-CIBA partnering with NIOT on cage designing, fabrication, installation, nursery rearing and farming of fishes in cages. Subsequently facilitated them to form a self help group which they named as Dr. A.P.J Abdul Kalam Fish Producers Self Help Group, to take up the cage farming in the backwaters in Kancheepuram district of Tamil Nadu.

A novel three tier model comprising nursery rearing, pre-grow out and grow out cages were taken up in a phased manner. Asian seabass fish was chosen as culture species due to its growth potential, availability of seed and feed and higher market value. The farming cycle began with stocking of fish fry (1cm size) initially in the nursery cages, they were grown to fingerlings size in 45-60 days (7-8 cm size), transferred from nurseries to pre-grow out cage and then 90-100g juveniles from pre-grow out were transferred to grow out cages for further rearing. The stocking density adopted was 12 kg per/m³. The fishes were fed with CIBA’s formulated indigenous
feed (Seebass Plus @ Rs. 80/kg)) respectively at 10-8%, 4-6% and 2-4% of their body weight in nursery, pre-grow-out and grow out stages. The average Feed Conversion Ratio (FCR) realised was 1.85:1 (1.85 kg feed to produce 1 kg fish). The juveniles were grown to a marketable size of 900 g - 1.25 kg in 6 months. A productivity of 460 kg was realised in two partial harvests in one cycle. Two cycles of production can be taken in a year. The production cost was worked out to be Rs.190 per kg of fish and sale price was Rs.380 per kg with a B:C ratio of 2.0.

The fish producers were linked to Tamil Nadu Fisheries Development Corporation, a state government body which procures fishes from producers giving farm gate price and sale to the consumers through its outlets.

A harvest cum interaction meet was organised at the farming site at Vennangupattu village, on August 4, 2017. About 120 fishers including fisherwomen and school children in the neighbourhood participated in the event and witnessed the harvest. Dr. K K Vijayan, Director, ICAR-CIBA handed over the revenue generated from the sale of fish produced to the group during the meeting.

He expressed that the three-tier cage farming has proved to be a successful model and opined that the group members can divide themselves in to three units to look after one component each and one unit can sell their produce to the other unit for further rearing so that everyone can get income in 3-4 months. Revenue due to the women members of the group who have reared the fish fry to fingerlings size (stage-1) which is a critical task was handed over to them during the event. Localised designing of cages for the brackish-waters has been done by NIOT team led by Dr. R Kirubagaran, Head, Marine Biotechnology Division, NIOT, Chennai and coordinator from NIOT side.

Fisheries being the state subject, state fisheries department extended the full support and Mrs. Chandra, Joint Director of Fisheries, Tamil Nadu witnessed the harvest was of the view that CIBA has provided a viable technology for the state fisheries department which will be taken up for popularization to other coastal districts of the state. Similarly, Mr. Ajay Anand, Joint Director of Fisheries, Pondicherry Union Territory has informed that their department has already initiated a work plan with CIBA to take up cage farming in the backwaters of Pondicherry Union Territory. This concept adopted a logical technology

“A HARVEST CUM INTERACTION MEET WAS ORGANISED AT THE FARMING SITE AT VENNANGUPATTU VILLAGE, ON AUGUST 4, 2017. ABOUT 120 FISHERS INCLUDING FISHERWOMEN AND SCHOOL CHILDREN IN THE NEIGHBOURHOOD PARTICIPATED IN THE EVENT.”

“I CAR - CIBA
TRADE ENQUIRY

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<th>Website</th>
<th>Products</th>
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1-13-13 Tsukiji Chuoku
Tokyo 104-0045 Japan
Tel: 03-3542-0460
Fax: 03-3542-0340
Mob: 080-5431-0411
E-mail: nishu@fuji-co.co.jp
Shrimp, lobster, Surimi, Fish, Cuttlefish, Squid

26. Yosuke Nishu
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Mob: 090-6560-5644
E-mail: nishu.jp@tls-hk.com
Shrimp, Surimi, Octopus, Cuttlefish, Squid

27. Tatsuya Watanabe
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Processed eel

28. Samaresh Dhar
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Tel: 81-3-3861-3831
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E-mail: samaresh.dhar@indo-japanmarketing.com
Web: www.indo-japanmarketing.com
Octopus, Shrimp head (for making sauce)

29. Toshihide Hikichi
Executive Officer
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Tokyo 107-0052, Japan
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All kinds of seafood

30. Shuji Ayabe
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Fax: 81-3-5643-2071
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E-mail: ayabe-shu@awi.co.jp
Web: www.saveur.co.jp
Shrimp, Seafood mix

31. Takahiro Nishimura
Assistant Manager
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Oki Products
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Osaka 554-0012
Tel: 06-6461-0987
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E-mail: takahiro_nishimura@okiproducts.co.jp
Shrimp, marine products

32. Hideo Kuzukawa
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Tokyo Branch 2-11-10 Tsukiji Chuoku
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Tel: 81-3-5565-5290
Fax: 81-3-5565-5294
Mob: 090-1030-1536
E-mail: kuzukawa@saihoku-f.co.jp
Web: www.saihoku-f.co.jp
Live/ Fresh/ Chilled fish, Kuruma prawn

33. Toshio Numamoto
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All kinds of seafood

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SHRIMP

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   Fax: 86 5925535082
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   Web: www.btclighting.com

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   Fax: 852 2755 6320
   Mob: 852 9466 8934
   E-mail: eddy@markglory.com
   HOSL BT Shrimp IQF

FISH

1. Jeevan L Pinto
   Al Zoba Co. W L L
   Al Raas Salmiya 24757, Kuwait
   PO Box 36666
   Ph: 965 25712123
   Fax: 965 25740900
   Mob: 965 97361133
   E-mail: jeevan@alzoba.com
   Web: www.alzoba.com
   Sardine, Mackeral

2. Given Wong
   Granho Company Limited
   Rm605, Siu wai Industrial Centre,
   29-33 Wing Hong Street, Lai Chi Kok,
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   Tel: 852 2110 3026
   Fax: 852 2110 3027
   Mob: 852 6701 5790
   E-mail: gwong@granho.com
   Web: www.granho.com
   Grouper

CEPHALOPOD

1. Giles Wong
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   Sheung wan, Hong Kong
   Tel: 852 2394 11011
   Fax: 86 0750-3898105
   Mob: 852 9490 4200
   E-mail: giles@frozenking.com
   Cuttlefish, (small-20) Octopus

MIXED ITEMS / OTHER

1. Jae Jung Kil
   Lotte International
   302, Yeongdong-daero,
   Gangnam-gu, Seoul, 06177 Korea
   Ph: 82-2-3459-9608
   Fax: 82-2-6234-1618
   Mob: 82-10-6574-2400
   E-mail: jungkil.jae@lotte.net
   Shrimp, Squid

2. Anthony Wong
   Hong Kong Logistics Association
   Ig1, HKPC Building, 78 Tat Chee Avenue,
   Kowloon, Hong Kong
   Tel: 852 2777 9656
   Fax: 852 3421 2477
   Mob: 852 9861 1133
   E-mail: anthony.wong@hkla.org.hk
   Web: www.hkla.org.hk
   Shrimp, Ribbon fish, Fresh crab, Octopus

3. Munawar Shaikh
   SK-Import Export Co. Ltd.
   12/200 Van Cao St,
   Dang Giang W, Ngo Quyen Dis,
   Haiphong 180000, Vietnam
   Tel: 84 1215 138 335
   Mob: 84 313 729 926
   E-mail: mannui@sk-importexport.com
   Web: www.sk-importexport.com
   Dried items, Ribbon fish

4. Kenzo Lai
   Home Tech Industries
   Unit 3601 - 03A, 36/F, 148 Electric Road
   North Point, Hong Kong
   Tel: 852 3678 2728
   Fax: 852 3104 0410
   E-mail: Kenzo.lai@hometech-industries.com.hk
   Web: www.admea.com
   Shrimp, Sushmi shrimp, Crab meat, Tuna

5. Mahmoud El Nahas
   Misr Import & Export co.
   41 Abd El-Khalek Tharwat
   St. - Cairo - Egypt
   Ph: 23909175
   Fax: 23915189
   Mob: 01201109992
   E-mail: info@misrimportexport.com,
          impex@misrimportexport.com,
   Web: www.misrimportexport.com
   Shrimp small size, Tuna

6. Eva Wong K W
   Precise International (H.K.) Ltd.
   Flat 1, 6/F, Blk 4, Golden Dragon Ind
   Center, 182-190 Tai Lin Pai Rd, Kwai
   Chung, NT Hong Kong
   Ph: 852 2951-0886
   Fax: 852 2423 9498
   Mob: 852 9179-8509
   E-mail: precise@precise.hk
   Web: www.precise.hk
   Shrimp, Fish

Received at HKTDC International Food Expo, Hong Kong
Received at HKTDC International Food Expo, Hong Kong

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   Web: www.foltin-globe.hu
   Shrimp, Pangasius, Tuna

8. **Yusuke Onuma**
   S Ishimitsu & Co. Ltd.
   Omori Bellport B-7F 6-26-2, Minamiooi, Shinagawa-Ku, Tokyo 140-0013, Japan
   Tel: 81 03 6367 9044
   Fax: 81 03 6367 9021
   Mob: 81 080 1518-8815
   E-mail: y-oonuma@ishimitsu.co.jp
   Wild crab frozen, Shrimp (small)

9. **Mr. Rajkumar**
   Kuhong International Ltd.
   FTB 6/F Minden Hse 13-15 Minden Avenue Tsim Sha Tsui Kowloon Hong Kong
   Ph: 852 2369 2300
   Fax: 852 3105 4599
   Mob: 852 9751 3886
   E-mail: rajkumar31@hotmail.com
   All kinds of seafood products

10. **Glory Seo**
    OTTO
    Young Heung Groceries Co. Ltd.
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    Tel: 82-2-429-8888
    Fax: 82-2-429-3030
    Mob: 82-10-7311-1888
    E-mail: yhotto@gmail.com
    Web: www.yhotto.co.kr
    Surumi, Cuttlefish, Shrimp, Octopus

11. **Tetsuya Okuda**
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    Tel: 81-76-429-0029
    Fax: 81-76-413-6017
    Mob: 90-7742-0667
    E-mail: info@kobujime.jp
    Web: www.kobujime.jp
    All kinds of seafood

12. **Piero Kwong**
    Nisoon International Trading Co. Ltd.
    9/F, Willie Building, 222 Des Voeux Road, Central, Hong Kong
    Ph: 852 2850 7568;
    Fax: 852 2850 7508
    Mob: 852 9576 0189
    E-mail: pierokwong@frozenfood.com.hk
    Web: www.nisoon.com.hk
    Frozen seafood, U1 Squid

13. **Howard Yoa**
    Dragon King International Ltd.
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    Fax: 852 2887 0935
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    Live fish, Mud crab, Lobster

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eHalal.Com
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    Web: www.eHalal.com
    Shrimp, Fish and other seafood

15. **Amen Koo**
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    Room 2105-06, Level 21 Landmark North, 39 Lung Sum Avenue, Sheung Shui, New Territories, Hong Kong
    Tel: 852-2116-1988
    Fax: 852-2116-2619
    Mob: 852-6689 8123
    E-mail: amenkoo6688@hotmail.com
    Lobster raw/cook

16. **M Chang**
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    Web: www.wplz.TK
    Cooked shrimp, Squid

17. **Billy Kan**
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    E-mail: billykan@asiapacific.com
    PD (Vannamei), Cuttlefish

18. **Waseem Arshad Mir**
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    2/F Blk I Ko Po Tsuen Yuk Yuk Garden Stage 3 Kam Tin Yuen Long NT Hong Kong
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    All kinds of seafood

19. **Vijay K S Agnihotri**
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    Fax: 852 2333 4413
    Mob: 852 3746 9239
    E-mail: info@lotusproductshk.com
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    Shrimp, Cuttlefish, Squid

20. **Har Gang**
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    Dried product

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