

Fishing Technology Digest

A Newsletter on Fishing Technology, Gear and Methods, Vessels and Equipment



INSIDE THIS ISSUE: PAGE NO:

Responsible Fisheries and Aquaculture.....	2,3	INFOFISH, based in Malaysia, and set up with the assistance of FAO, provides Advisory Services related to Fishing Technology for the Asia-Pacific. It strives to facilitate dissemination of information on fishing technology and equipment for the industry besides research and training. It also promotes links among research institutions, administration and industry. Since 1992, INFOFISH, issued a quarterly newsletter collating global fisheries news and advancements related to	fishing technology and sustainable fish harvesting.
Fishing Technologies.....	3,4		Information on various aspects of industry also appears in INFOFISH <i>International</i> . A supplementary section on 'Industry Notes' provides information on the latest developments in the global fisheries scene. New equipments and innovations are also featured. Comments and contributions are welcome, as per requests and recommendations for inclusion in the mailing list.
Equipment and Supplies.....	4		
Workshop and Training.....	5		
The Ocean Decade.....	5,6		
National News.....	6,7,8,9		
Publication.....	9		
Event Calendar.....	10		



PTF 2023 **8th PACIFIC TUNA FORUM**
"Strengthening tuna sustainability and industry development in the 'Blue Pacific Continent' through increased innovation, partnership and participation"
6 - 7 SEPTEMBER 2023
The Stanley Hotel & Suites, Port Moresby, PAPUA NEW GUINEA

Jointly organised by: 

Co-organisers: 

Media supporter: 

For more information regarding registration, exhibition and program details visit: www.ptf.infofish.org

FAO: Illuminating Hidden Harvests report released

Illuminating Hidden Harvests is a global initiative of the Food and Agriculture Organisation of the United Nations (FAO), Duke University, and WorldFish to generate and disseminate new evidence about the importance of small-scale fisheries to inform policy and practice. A major output is the “Illuminating Hidden Harvest: The contributions of small-scale fisheries to sustainable development (IHH)” report, which assesses the current environmental, economic, gender, food security and nutrition, and governance dimensions of small-scale fisheries globally. Over

800 authors and experts worldwide contributed to the report. The IHH report was launched through a hybrid webinar on 16 March 2023 to recap key findings and tie them to recommendations of the report. In a conversation with small-scale fisheries stakeholders from government, small-scale fisheries organisations and research, the launch explored how the methods and findings can transform understanding of national small-scale fisheries and contribute to improvements in policy, legislation, statistics and monitoring as well as targeted support and recognition of small-scale fisheries. Find out the Illuminating Hidden Harvests report [here](#).

Long-awaited measures aim to reduce pressure on Indian Ocean tuna stocks

Three years in the making, this important step will help improve the sustainability of skipjack, yellowfin and bigeye tuna fisheries, including for the role they play in the livelihoods of thousands of Indian Ocean coastal communities. Recent exponential growth in FAD use has increased the risk of overfishing of tropical tunas, particularly juveniles that have not yet reproduced. FADs can also lead to the unintended catch of other species; where tunas aggregate, sharks are also present. The devices contribute to ocean pollution and habitat degradation, due to the non-biodegradable material they are made of and damages they can cause to vulnerable coastal habitats, such as coral reefs. “Both yellowfin and bigeye tuna are overfished. With these two commercially important

tropical tuna stocks in the red, this is an important step in the right direction. Reducing the number of drifting devices by 33% over the next three years will help to reduce cumulative impacts on target tuna stocks and associated marine ecosystems,” said WWF Indian Ocean Tuna Manager. The decision on drifting FADs (dFAD) introduces new transparency and reporting requirements and requires a progressive reduction in the number of allowed FADs from the current level of 300 per purse seine vessel to 250 by January 2024, and 200 by January 2026. Improved transparency, reporting and data collection will help inform science-based management advice on the use of FADs, including seasonal prohibitions. However, WWF remains concerned that more stringent measures are required in order to move toward a multi-annual rebuilding plan to restore stock and ocean health.

Source: <https://www.wwf.org/en/>, 7 February 2023.

A new way of measuring fish welfare in wild-capture fisheries



Photo: Institute of Marine Research, Norway

A new study from the Institute of Marine Research (IMR), shows that fish vitality is a good measure of welfare. The marine scientists found this out by combining several practical investigations. First,

the scientists recreated what the fish experience inside a fishing net, by crowding mackerel together in an aquaculture cage. The researchers tested how individual fish coped, using various tests to find out which physiological and behavioral stress responses they showed. Together, the results gave a measure of the vitality of each individual fish. The marine researchers then took their experience and methods from the cage to a commercial purse seine boat. They also examined the stress response, blood tests and general condition of individual fish from the catch. The results were clear: animal welfare in the catching process was negatively affected when large catches were crowded together to be pumped into the boat. The study provides a good indication of how animal welfare can be improved in the capture process. For example, by going after the smaller schools. If the catches are smaller, the time it takes to pump the fish on board is shorter, and then welfare would be improved. One of the most

important results for the marine scientists, however, is the new method they have developed. Being able to measure welfare through the fish's vitality is an important tool for being able to monitor, and further

improve, fish welfare during the capture process.

Read more information from [this publication](#).

SHELLMET': Japan's first eco-friendly helmet made from discarded scallop shells

Together with Professor Hiroshi Uyama from Osaka University, Koushi Chemical Industry, Japan began developing a new material based on scallop shells, SHELLMET, whose main component is calcium carbonate, and recycled plastic. With the support of Sarufutsu Villagers who have provided its excess shells, the company developed "Shellstic (Combination of words "Shell" and "plastic")", a new recycled material that is comprised of roughly 20-50% each of scallop shells and waste plastic. As recycled material contributes to a maximum 36% reduction in CO2 emissions compared to the use of 100% new plastic, 20% reduction in CO2 emissions compared to limestone-derived eco-plastics and by mixing scallop shells into the plastic, strength (bending modulus) is improved by about 33%. SHELLMET is developed on the "Biomimicry" concept which applied the mechanisms of the natural world to technological development. It incorporates a special rib structure that mimics the structure of scallop shells, which is part of the material used for helmet production. As a result, the durability of SHELLMET is improved by about 30% compared to the case without the rib



structure, even though less material is used. From material development to design, the product is designed with sustainability in mind with minimal burden on the environment. SHELLMET upcycles scallop shells that would have otherwise been discarded. The product is available in a total of five color variations: CORAL WHITE, SAND CREAM, DEEP BLACK, OCEAN BLUE, and SUNSET PINK that imagine the colors of oceans. They can be used for a variety of purposes, including disaster prevention, work, and commuting by bicycle.

Source: <https://www.prnewswire.com/>, 10 January 2023.

MoU to develop antibiotic-free aquaculture

India - based Kings Infra joined hands with Canada-based Atmoes Group for developing and promoting antibiotic-free sustainable and traceable aquaculture in the country. The two companies have signed a Memorandum of Understanding (MoU) in this regard. The deal will enable antibiotic-free aquaculture products which will enable better access and acceptability of the aquaculture products in the international market. Elimination of antibiotics from the food system has emerged as an important quality standard in all developed markets with the

concern over the health hazards posed by antibiotic-resistant bacteria becoming a reality. Going forward, zero antibiotics residue in food products, including aquaculture products, will be a primary criterion in all major markets. According to the MoU, Kings Infra will do joint technology trials for the effectiveness to customize the products and the packaging to Indian conditions. Training and technical support to farmers and dealers by way of seminars, presentations etc. will be provided by the Atomes team.

Source: <https://news8plus.com/>, 16 January 2023.

Satellite equipment to monitor fishing vessels

The Fisheries Department of Belize under the Ministry of the Blue Economy and Civil Aviation received a donation of 61 vessel monitoring system devices. These were obtained through the Central American Integration System (SICA) by way of the Organization of the Fisheries and Aquaculture Sector of the Central American Isthmus (OSPESCA) under the "Integration of the Value Chain in Fisheries and Aquaculture"



Photo: NEMO-VMS, Credit: CLS Group

project with financial support from the Republic of China. "The vessel monitoring system will be piloted in small-scale fishing vessels in Belize", the Ministry said. "The use of the satellite equipment will not only improve the safety of fishers at sea but will also help to ensure the traceability of the fishery resources, which will improve management and conservation of our fishery resources, on which more than 3200 fishers and their families depend. "NEMO-VMS" is an "all-in-one" system specially designed to monitor and protect artisanal fisheries. The Ministry also said that the use of tracking technology has been in use for decades, but primarily used in developed countries for large-scale

commercial fleets, while the use of such technology for small-scale fishing fleets is still globally in the pilot stage. Belize currently holds the Pro-Tempore Presidency for SICA from January to June 2023, with the Fisheries Department being the focal point for the OSPESCA Presidency. The Ministry said that over the next six months, the Fisheries Department will continue to ensure that key actions are implemented to ensure the improved regional management of the fisheries resources.

Source: <https://www.seafood.media/>, 30 January 2023.

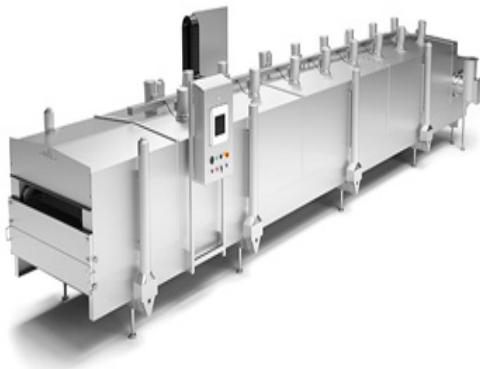


Photo: Freshline DM tunnel freezer

Benefits:

- Easily switch between IQF and non-IQF products
- Consistent, high quality IQF results
- Increase production capacity
- Lower your capital costs
- Extend manufacturing time
- Change throughput without affecting efficiency
- Save space in your factory
- Reduce cleaning time

Technical Specifications:

Conveyor belt width	29.5" / 49"
Overall freezer dimension	Length 26' 7" / 36' 5" / 46' 5" Width 4' 4" / 5' 11" Height 5' 8" Closed / 8' 4" Open
Freezing area dimensions	Length 19' 8" / 29' 6" / 39' 4" Width 4' / 5' 7"
Electrical requirement	380-480 VAC, 3 Phase
Product clearance height	5.9"
Loading table length	2' 6"
Freezers can be manufactured longer in ~10' increments of freezing length	

For more information, please contact:

Air Products and Chemicals, Inc.
 Corporate Headquarters, 7201 Hamilton Boulevard
 Allentown, PA 18195-1501, Phone: 800-654-4567
 Fax: 800-272-4449, e-mail: info@airproducts.com

IYAFA 2022 closing ceremony for Asia

“Towards a new era of support for small-scale fisheries and aquaculture”



Convened in Bangkok, Thailand, on 28 February 2023, the closing ceremony of the International Year of Artisanal Fisheries and Aquaculture (IYAFA) 2022 for Asia brought together representatives from governments, small-scale aquatic food producers, academia, and several non- and inter-governmental organisations, who had been actively campaigning for IYAFA 2022 for the past one year. The closing ceremony was jointly organised by the Food and Agriculture Organisation of the United Nations (FAO), Too Big To Ignore (TBTI) and INFOFISH; and hosted by the Department of Fisheries Thailand. The event was inaugurated by Mr. Chalermchai Suwannarak, the Director-General of the Department of Fisheries, Thailand. This was followed by speeches from the Southeast Asian Fisheries Development Center (SEAFDEC); Network of Aquaculture Centres in Asia-Pacific (NACA); International Collective in Support of Fishworkers (ICSF); Ocean University of Sri Lanka;

Sri Lanka Forum for Small Scale Fisheries (SLFSSF), INFOFISH and TBTI Global Foundation, TBTI Japan, Philippines and Bangladesh. The ceremony was further enlivened with the presentation of a video by China Blue, with the title “Bring fish to the table, bring fisher home”. The closing remarks were delivered by Simon Funge-Smith, Senior Fishery Officer, FAO Regional Office for Asia and the Pacific. He underlined that 2024 will be the 10-year anniversary of the adoption of the FAO Voluntary Guidelines on Small-Scale Fisheries, and the 2022 FAO Voluntary Guidelines on Responsible Governance of Tenure. The implementation of these FAO Guidelines will address many vital issues and contribute towards the achievement of the Sustainable Development Goals.

Source: INFOFISH International, Issue No. 2/2023.

The new landmark UN Agreement for the conservation and sustainable use of marine biodiversity in high seas

After nearly two decades of negotiation, United Nations Member States [agreed on a text](#) for an international legally binding instrument under the United Nations Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, the “high seas”. The agreement covers a range of issues, including marine genetic resources, environmental impact assessments, area-based management tools, and capacity building and technology transfer. The

[Intergovernmental Oceanographic Commission of UNESCO \(IOC/UNESCO\)](#) has actively participated in the work of the Preparatory Committee established in 2015 by the UN General Assembly to consider recommendations for the creation of a high seas legally-binding instrument. IOC/UNESCO has not missed a single session of the intergovernmental conference, which was established in 2017 by the UN General Assembly to agree on the text for this landmark agreement, with its delegations informing negotiators about the status of ocean research as well as the Commission’s mandate and potential role that it could play in facilitating international research, coordinating ocean observations, sharing

relevant ocean data and information, and building of technical capacity through the transfer of marine technology. The IOC/UNESCO possesses recognised technical expertise in multiple areas of direct relevance to the new Agreement, including coordination of international ocean science processes, making observations, collecting, processing, and exchange of ocean data and information relevant to stakeholders (governments, scientific experts, etc.), assessment of

national and regional capacities in ocean science (for example, through the [Global Ocean Science Report](#)), to the collection of information on capacity development opportunities provided by Member States, and the design/implementation of the tailored capacity development initiatives and regional collaborative approaches in ocean science.

Source: <https://ioc.unesco.org/>, 21 March 2023.

Cambodia: Celebrates traditional methods at annual fishing ceremony



Running into a thigh-deep muddy lake, villagers in eastern Cambodia used bamboo baskets and nets to scoop up their catch for an annual fishing ceremony where only traditional tools are used. Sporting straw hats and cotton checkered scarves to shield themselves from the blazing sun, hundreds of children and adults cheered as they netted freshwater catfish and snakefish in Boeung Kroam lake, about 250km from the capital Phnom Penh. The annual ceremony, back after a two-year COVID-19 pandemic hiatus, is held after the rice harvest and participants are only allowed to use traditional tools such as woven baskets and nets, Tbong Khmum province governor Cheam Chan Sophorn

explained. Fish stocks have declined in recent years due to hydropower dams built upstream in Cambodia and neighbouring Laos and illegal fishing methods have also taken their toll. "It is a message to our villagers and especially fishermen not to use illegal equipment so that fish will be around for hundreds of years to come for our younger generations," he told AFP in the middle of the muddy lake. Cambodia which boasts the mighty Mekong River and its many tributaries is heavily reliant on fish as a major source of protein for its population. Cambodians eat an estimated 63kg of fish per person a year, according to the Southeast Asian Fisheries Development Centre and about 40 per cent of the population depend on fishing for their livelihoods. Fish stocks have declined in recent years due to hydropower dams built upstream in Cambodia and neighbouring Laos. The increase in illegal fishing methods such as huge trawling nets and the use of car batteries to electrocute fish has also had an impact. But there's no shortage of fish back at the lake. "This year we are so happy. There are big fish," villager Suon Keng, 42, told AFP as he grilled snakehead fish over a fire pit by the lake.

Source: <https://www.channelnewsasia.com/>, 18 February 2023.

Fiji: Women in Fisheries Forum 2023 - Call for action to empower women’s voices and agencies



Ms Atelaite Rokosuka, Acting Permanent Secretary for Fisheries and Forestry, Ministry of Fisheries, Fiji inaugurated the National Women in Fisheries Forum

on 13-14 March 2023 in Suva, Fiji. The forum was organized by Women in Fisheries Network (WiFN), Fiji and Pacific Community (SPC) and funded by with

the FAO Sub Regional Office for the Pacific Islands. 75 women representatives across Fiji participated in the forum. “The impacts of the pandemic on women fishers and their lives, and the persistent inequalities with regards to engagement in community-based resource management and decision making, resulted in WiFN’s call for action to empower women’s voices and agencies, said Ms Rokosuka in her opening message.” “Enablers for positive change have been seen in emerging technologies, marketing opportunities, increased gender analysis findings and recommendations, and the self-driven organisation of women fisherfolk to collectively work together to overcome barriers.” “The forum aims to discuss these enablers and identify strategies to address the

challenges faced by women fishers. Your presence here is crucial in contributing to the exchange of ideas and experiences towards achieving gender equality in our fisheries spaces”, added by Ms Rokosuka. “Through forums like this you are able to provide a platform for exchange and learning, enabling the voices of women in the industry to be heard as advocates for change. At the end of the two days forum, you should be able to learn from each other’s experiences and build partnerships for the future collaborations. Ultimately this will lead to improved livelihoods for women and their communities, as we as better conservation outcomes for our oceans and marine resources,” Ms Rokosuka concluded.

Source: Ministry of Fisheries, Fiji, 13 March 2023.

Malaysia: AEON Malaysia wins praise for new Animal Health and Welfare Policy

AEON won praise for publishing a comprehensive new animal health and welfare policy that protects the “Five Freedoms” of animals in the company’s supply chain, from egg-laying hens to cows, chickens and fish. The Company believes that animal welfare is deeply related to the relationship human beings have with animals and agrees that it is every retailer’s duty to ensure all animals are treated humanely, responsibly, and with respect. The policy, drafted with the support of international NGO Lever Foundation, will require animal protein suppliers to end the use of cages and crates, limit stocking densities, provide suitable environments as well as meet additional standards set by animal welfare experts. AEON is working closely with its suppliers to ensure the new standards and guidelines are met within the next

12 – 18 months. AEON noted that the new animal health and welfare policy is an essential step towards protecting farm animals in its supply chain, thus meeting the growing expectations of customers who demand higher standards of animal welfare. “We applaud AEON Malaysia for this new holistic set of standards that will further improve the welfare of egg-laying hens, chickens, cows, fish and other animals in the company’s supply chain,” said by Sustainability Program Manager at Lever Foundation, which worked closely with AEON on drafting the policy. “Many food companies in Malaysia are upgrading their animal welfare policies in response to increased consumer interest in more humane, sustainable and safe products, and with its new policy, AEON has established itself as a leader in this area.”

Source: <https://www.businesstoday.com.my/>, 30 January 2023.

The Philippines: Fisherfolks join 3 day training on new fishing vessels

Fisherfolk cooperatives and associations in MIMAROPA, Eastern Visayas, and Zamboanga Peninsula have participated in a three-day training conducted by the Department of Agriculture - Bureau of Fisheries and Aquatic Resources (DA-BFAR) aimed at helping them boost their fish catch. The DA-BFAR held the training during 21-24 March at Sual Fish Port in Sual, Pangasinan to equip the fisherfolk groups with technical skills and knowledge on using

the steel-hulled purse seine (PS) fishing vessels which will soon be turned over to them by the Bureau. Three fishing vessels will be given to the said groups by the DA-BFAR as part of its “Capacitating Municipal Fisherfolk Program,” which seeks to upgrade the fishing capacity and efficiency of municipal fisherfolk by providing them with units of 62-footer steel-hulled and fiberglass-reinforced plastic (FRP) fishing boats and hands-on training. Beneficiaries will be given full responsibility to operate and manage the fishing vessels, as well as its gears and hauling machinery. These vessels will sail in major fishing grounds for



The banner features a blue background with a globe icon on the left. The text is in white and blue. It lists benefits and key subscribers of the program.

INFOFISH Associate Membership Program

- * Know the fishery industry updates regularly
- * Promote and position your products/equipments/supplies
- * Key subscribers: Seafood Processors, Equipment Manufacturers and Suppliers, Aquaculture companies, Animal Health companies, Printing and Packaging companies etc.,

For details please contact us: info@infofish.org; Tel: (603) 8066 8112.

tuna, scads, sardines, and other small pelagics. DA-BFAR national director Atty. Demosthenes R. Escoto expressed optimism that the Bureau's program and initiative will contribute to the attainment of sufficient food supply and ensure sustainable management of fishery and aquatic resources. Through modern machinery and equipment under our Capacitating Municipal Fisherfolk Program, we are hoping that fish production will increase in our municipal waters),”

Atty. Escoto said. Last December, an organised fisherfolk cooperative in La Union also received a newly-built 21-meter steel-hulled ringnet fishing boat from the DA-BFAR. Other fisherfolk groups are also expected to receive fishing vessels and hands-on training from the Bureau.

Source: <https://www.bfar.da.gov.ph/>, 27 March 2023.

Singapore: e-commerce food guidelines introduced

The country introduced an industry standard to guide sales of food products including seafood, “Singapore Standard (SS) 687:2022” (Guidelines for food e-commerce) on online platforms to ensure food safety. The Standard was launched at the Singapore Manufacturing Federation’s Singapore Innovation and Productivity Institute (SIPI) Food Tech 2023 to provide guidance to e-commerce players on their roles and responsibilities related to food safety

and providing information to consumers. This was jointly developed by a multi-stakeholder Working Group comprising Food Industry Asia (FIA) and the Singapore Food Agency (SFA), in partnership with the Singapore Manufacturing Federation (SMF) and various industry players such as local food e-commerce platforms, food delivery platforms, and supermarket retailers. The Working Group was appointed by the Singapore Standards Council (SSC), overseen by Enterprise Singapore (EnterpriseSG).

Source: INFOFISH Trade News, No 4/2023.

Maldives: Maldives and UN envoys emphasizes links between ocean and climate change

The Maldives and the United Nations (UN) have emphasised the inextricable link between the ocean and climate change. The discussions took place during a courtesy call by the UN Secretary General's (SG's) Special Envoy for the Ocean Peter Thomson, on the President's Special Envoy for Climate Change Sabra Ibrahim Noordeen. During the meeting held at the President’s Office, the two envoys spoke on the recent multilateral progress on ocean conservation and biodiversity, including the Global Treaty on Plastic Pollution, the High Seas Treaty and the Global

Biodiversity Framework. The UNSG's Special Envoy for the Ocean is in the Maldives to attend the Conference on Sustainable Ocean Management in the Maldives and the Indian Ocean. The Conference is organised by the Ocean Policy Research Institute (OPRI) of Sasakawa Peace Foundation in partnership with Women and Democracy, a local non-governmental organisation (NGO).The conference explored the progress of the Maldives towards a sustainable ocean and blue economy and the challenges and future prospects for the country and the East Indian Ocean. However, HE Peter Thomson, UN Secretary General’s Special Envoy for the Ocean paid a courtesy call on Minister of Fisheries, Marine Resources and Agriculture Dr Hussain Rasheed Hassan earlier on 9 March 2023.

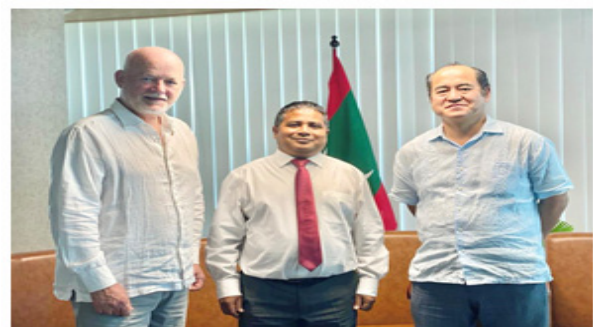


Photo: UN Secretary General's Special Envoy for the Ocean Peter Thomson, on the President's Special Envoy for Climate Change Sabra Ibrahim Noordeen. (Middle in the left photo) and UNSG's Special Envoy for the Ocean Peter Thomson with the Minister of Fisheries, Marine Resources and Agriculture, Maldives, Dr Hussain Rasheed Hassan. (Middle in the right photo).

Source: <https://psmnews.mv/en/118075>, 13 March 2023.

Thailand: Fisheries department debuts new breed of gender-fluid clownfish

The new breed, called “Gold x Thunder Maroon”, is a hermaphrodite, said department director-general Chalermchai Suwannarak. Males of the species can turn into females, but females cannot change into males, he explained. The male can start breeding at six months, while the female has to wait until she reaches 18 months of age, Chalermchai added. The new breed is a cross between Gold Nugget Maroon and Thunder Maroon clownfish, and the latter can only be bred in captivity, he added. “The project started in 2020 by studying purebred Gold Nugget Maroon and Thunder Maroon clownfish. Then, we cross bred them to produce a unique pattern that is passed on to the next generation,” he explained. The new species can be distinguished by its maroon-spotted white sides. The fish can grow to an average of 17 centimetres and can live up to 15 years. The department is studying the cost of breeding a large volume to determine whether it can be a viable option for local fish breeders. “We

hope that the [new] clownfish can be a new attraction for fish enthusiasts,” Chalermchai said. He warned, however, that clownfish should not be kept in the same aquarium as hunter fish. The cross-bred fish must never be released into natural water sources as it could affect their ecology, he added.



Source: <https://thethaiger.com/>, 2 February 2023.

Vietnam: PM approved VND 7000 billion for sustainable aquaculture development

The National Aquaculture Development Program (2021-2030), approved by the Prime Minister, aims to develop aquaculture effectively and sustainably. Climate adaptive aquaculture will improve the productivity, quality and value of Vietnamese aquaculture products and meet the domestic and export market requirements. In which, VND 1 000 billion is allocated to priority aquaculture development projects; VND 6 000 billion to invest, upgrade and complete infrastructure. The purpose of the project is to ensure that by 2030, aquaculture production will reach 7 million tons/year. According to the Program, by 2025, the total aquaculture production will reach 5.6 million tons/year, the export

value will reach 7.8 billion USD/year, and the growth rate of aquaculture value will reach an average of 4%/year. The sector aims to build a chain of production, processing and consumption, to ensure stable output for over 50% of aquaculture products. At the same time, investing and upgrading essential infrastructure to meet production requirements for more than 50 concentrated aquaculture areas and concentrated seed production areas will also be prioritized. Hopefully, when these projects come into practice, they will bring efficiency, create favorable conditions for farmers as well as improve the position and quality of Vietnamese seafood.

Source: Vietnam Association of Seafood Exporters and Producers, February 2023.

PUBLICATION



Tilapia health: quo vadis? Guest Editors: Devin Bartley, Michael Philips, Kevin Fitzsimmons, Richard Arthur, Melba G. Bondad-Reantaso. This supplement was supported by a grant from Food and Agriculture Organization of the United Nations. Volume 15, Issue S1. Pages 1-212. 5 March 2023. This publication is the outcome of an International Technical Seminar on “Tilapia health: quo vadis” held during 1-3 December 2021 organized by FAO and in partnership with INFOFISH.

The publication can be downloaded complimentary from <https://doi.org/10.1111/raq.12789>.

APRIL

12-14, VIETSHRIMP Aquaculture International Fair
Can Tho City, Vietnam. <https://vietshrimp.net/>

18-21, LATIN AMERICA & CARIBBEAN
AQUACULTURE – LACQUA23
Panama City, Panama. [https://was.org/meeting/
code/LacQua23](https://was.org/meeting/code/LacQua23)

25-27, Seafood Expo Global (SEG) Barcelona, Spain.
[https:// www.seafoodexpo.com/global/](https://www.seafoodexpo.com/global/)

MAY

11-14, International Indonesia Seafood & Meat Expo
(IISM)
Jakarta, Indonesia. <https://iism-expo.com//>

Blue Food Innovation Summit 2023
23-24, London, UK.
www.bluefoodinnovation.com

JUNE

29 – June 1, WORLD AQUACULTURE 2023
Darwin, Australia. [https://was.org/meeting/code/
WA2023](https://was.org/meeting/code/WA2023)

JULY

Aqua Farm, Aquaculture Conference Australia
2023
10-12 July 2023, Melbourne Convention and
Exhibition Centre, Australia.
www.aquacultureconference.com.au

AUGUST

TARS 2023
16-17, Bali, Indonesia
www.tarsaquaculture.com

Taiwan International Ocean and Fisheries
Industry Show, 31 August-2 September 2023
<https://www.taiwanfisheryshow.com/en/>

SEPTEMBER

World Seafood Congress 2023 (WSC 2023)
25-27, Peniche, Portugal.
<https://www.wsc2023.com/>

The Fishing Technology Digest for Asia-Pacific Region



INTERGOVERNMENTAL ORGANISATION FOR MARKETING INFORMATION AND
TECHNICAL ADVISORY SERVICES FOR FISHERY PRODUCTS IN THE ASIA-PACIFIC
REGION.

Here is how INFOFISH helps:

- providing technical advisory services on all phases of harvesting, handling, processing of fish, aquaculture and marketing of fishery products
- offering marketing links to and from the largest fish producing area in the world
- assisting the day-to-day fish trade by identifying new marketing opportunities for companies in the Asia-Pacific Region and new sources for supply importers
- offering technical and sales support services through informative publications
 - i) INFOFISH Trade News
 - ii) INFOFISH *International*
 - iii) Special studies
- offering training and consultancy services
- organising conferences, seminar & workshops

The next issue of **INFOFISH Fishing Technology Digest** will be distributed in **July, 2023**. Please forward any information you may wish to have disseminated through this digest to:
The Editor, INFOFISH Fishing Technology Digest, P.O. Box 10899, 50728, Kuala Lumpur, Malaysia. Tel: 603-80668112, Fax: 603-80603697, Email: info@infofish.org/sujit@infofish.org
Editor: Mr Sujit Krishna Das - INFOFISH, Malaysia.