



## Join us for the aquaculture event of the decade!



26-30 October 2020  
Shanghai, China



Food and Agriculture  
Organization of the  
United Nations



SUSTAINABLE  
DEVELOPMENT  
GOALS



中华人民共和国农业农村部  
Ministry of Agriculture and Rural Affairs of the People's Republic of China



Network of  
Aquaculture  
Centres in  
Asia-Pacific

Farmed fish and plants have been contributing for a long time to healthy diets, poverty alleviation and rural development, but it is only recently that aquaculture has grown to be the leading source of aquatic food and is expected to meet the expanding dietary demands of all people, while also meeting the food security needs of the poorest. As such, aquaculture's role in the global food system becomes increasingly relevant as the world community strives to achieve the Sustainable Development Goals.

In order to accelerate the growth and ensure the sustainability of future aquaculture, FAO and NACA with the Chinese Ministry of Agriculture and Rural Affairs invite governments, business, academia and civil society to discuss the theme "Aquaculture for Food and Sustainable Development".

Specifically, the Conference will:

- Review status, trends and emerging issues in aquaculture development;
- Identify opportunities and challenges in aquaculture and its contributions to sustainable development;
- Evaluate the progress of aquaculture development in light of previously recommended strategies and policies at regional and global level; and
- Build consensus on priorities and actions needed for advancing aquaculture as a global, sustainable and competitive food production sector.

The conference features a forward-looking agenda that addresses emerging issues and opportunities, ranging from traditional family farming to cutting-edge enterprises. Themes will cover issues such as:

- Climate and environment: Climate smart aquaculture and improved environmental performance.
- Science, innovation and investment: Research and resources for new technology, training and upscaling.
- Gender and social equity: Towards equity, inclusiveness and empowerment of rural communities.
- Health and risk management: Better management practices, contingency planning and alternatives to antimicrobials.
- Education and training: Improving skills, empowering youth and building capacity for industry.
- Partnerships, policy and governance: Working together to create an enabling environment for sustainable aquaculture.

The full programme will be available shortly from the conference website.

<https://aquaculture2020.org>

## 18th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health

The Advisory Group (AG) is a body of technical experts that meets annually to provide advice to NACA member governments on aquatic animal health management. The group is drawn from academia, the private sector and government.

The role of the AG is to review disease trends in the region, identify emerging threats and developments in global aquatic disease issues and standards, evaluate the Quarterly Aquatic Animal Disease Reporting Programme operated by NACA/FAO/OIE and regional governments, and to provide guidance on strategies to improve aquatic animal health management.

This year's meeting took place from 18-19 November at the Amari Don Muang Airport Hotel in Bangkok. Opening remarks were delivered by Dr Huang Jie, Director General of NACA, and with a progress report given by Dr Eduardo Leano, Coordinator of NACA's Aquatic Animal Health Programme. The meeting discussion included:

- Outcomes of recommendations from OIE General Session and the Aquatic Animal Health Standards Commission (Dr Ingo Ernst, AAHSC, OIE).
- Updates on FAO initiatives in Asia-Pacific in support of aquatic animal health management (Mr Weimin Miao, FAO-RAP).
- Biosecurity in Aquaculture: Progressive Management Pathway for Aquaculture Biosecurity (PMP/AB) (Dr Jie Huang, NACA).
- Updates and emerging threats on finfishes: Diagnosis, management and prevention (Dr Siow Foong Chang, SFA, Singapore).
- Updates and emerging threats on crustaceans: Diagnosis, management and prevention (Prof. Tim Flegel, Centex Shrimp, Thailand).
- Updates on other diseases (molluscs and amphibians): diagnosis, management and prevention (Dr Andy Shinn, Fish Vet Group, Thailand).
- Activities of the Fish Health Section, SEAFDEC Aquaculture Department, Philippines (Dr Eleonor Tendencia, SEAFDEC AQD).
- Update from OIE-Regional Representation in Asia and the Pacific (Dr Jing Wang, OIE-Tokyo).
- Activities of the Aquatic Animal Health Research and Development Division, Thailand (Dr Thitiporn Laoprasert, AAHRDD).
- Activities of the Australian Department of Agriculture and Water Resources (Dr Ingo Ernst, DAWR-Australia).
- Aquatic animal health activities of China (Dr Chenxu Cai, MoA-PR China).
- Activities of the Norwegian Veterinary Institute, Norway (Dr Saraya Tavoranpanich, NVI).
- A Special Session on Regional Aquatic Animal Health Management Activities of the Private Sector was held, featuring presentations by PHARMAQ (Zoetis)-Asia (Dr Kjetil Fyrand), and Fish Vet Group Asia (Dr Andy Shinn).

With regards to disease reporting, discussions were held on:

- SHIV: Status and updates including change of name to DIV1 (Dr Liu Hong, GAC, China).
- QAAD Reporting: Status and updates (Dr Eduardo Leano, NACA).
- New OIE Disease List and revisions to the QAAD List for 2018 (Dr Ingo Ernst, AAHSC, OIE).



*Participating experts in the 18th Advisory Group meeting.*

## New Director General of the Department of Fisheries, Thailand



*Khun Mesak Pakdeekong (centre) commenced duties as the new Director General of the Department of Fisheries on 1 October 2019, accompanied here during a courtesy visit by Dr Huang Jie, Director General of NACA (left) and Dr Chumnarn Pongsri, former Deputy Director General of DOF and now Advisor, right.*

### Thailand holds National Sea Bass Fair

The Thailand Department of Fisheries organised a Seabass Fair from 25-26 December, in their office complex at Kasetsart University, in front of the Bangkok Aquarium. The fair was held to promote public awareness of Thai seabass products, produced according to good manufacturing practices.

Due to recent low price seabass prices against a strong Baht and trend of increasing imports from neighbouring countries, the Department of Fisheries and other agencies and stakeholder organisations such as the Ministry of Commerce departments of Internal Trade and International Trade Promotion, the Thai Frozen Food Association and Thai Union Group Public Company Limited had met to discuss solutions, of which the Seabass Fair was one, with several additional promotional events planned.

The Seabass Fair showcased high quality, domestically produced seabass and seabass products produced following Good Aquaculture Practices (GAP) standards developed by the Department of Fisheries. Products included fresh whole and large-sized fish, fillets and belly cuts, and processed products and meals. The fair also included demonstrations by celebrity chefs and cooking competitions.

### Tuskfish CMS 2.0 is available

NACA is pleased to announce that the first production release of Tuskfish CMS 2 is available. Tuskfish 2 is a rewrite of Tuskfish CMS to adopt a strict model-view-viewmodel (+ controller) architecture with a front end controller and a static router to allow custom URL schemes. Tuskfish is the software that underpins the NACA website.

Additional changes since the beta release include:

- Added a GPS track content type - upload a .kml or .kmz file to automatically generate a Google Map with a route of your travel, or a polygon (requires a Google Maps API key, but could be adapted to support other mapping services with minimal effort).
- Added the ability to dynamically assign themes, templates and layout files, reducing the need to clone entire template sets (just create alternative layout or template files), to improve flexibility in presentation.
- Optional two-factor authentication via Yubikey hardware security tokens has been updated to support Yubicloud protocol V2 (V1 is officially deprecated).

PHP 7.2 or higher is required. Documentation (installation, user and developer manuals) will follow soon. Please note that Tuskfish 1 will not be developed further (forks are welcome); however, it remains a fast and reliable system, and it is somewhat easier to configure due to its simpler architecture.

Tuskfish 2 is open source software distributed under the GNU General Public License Version 2. Download it from:

<https://github.com/crushdepth/tuskfish2/releases/>

## Regional consultations on strengthening aquaculture governance and demographic changes in fishing communities



*Participants in the aquaculture governance and demographic change consultations.*

Two consultations were held back to back in Thailand from 5-7 November, namely the *Consultation on Strengthening Governance of Aquaculture for Sustainable Development in Asia-Pacific* and the *Consultation on Demographic Changes in Fishing Communities in Asia*. The consultations were held at the Centara Grand Hotel at Ladprao, Bangkok. The consultations were attended by 29 participants from 15 countries in the Asia-Pacific region. The consultations were jointly organised by FAO and NACA.

### **Aquaculture governance**

The rapid development of aquaculture in Asia is only a recent phenomenon of the past a few decades, and the industry is relatively new, with governance of the sector still evolving in many Asian countries in terms of both development of a legislative framework and enforcement of same. Good governance is fundamental and crucially important to tackle many of the issues that impair sustainable development of aquaculture, such as negative environmental impacts, low efficiency of resource utilisation, disease and food safety.

With the increasing world population and improving living standard as the result of overall economic growth, it is estimated that an additional 30 million tonnes of food fish has to be produced by 2030 to meet the increasing consumption demand. With most wild fish stocks fully or over exploited, aquaculture growth will be the major means of meeting

increasing demand for food fish. However, it will be very difficult to achieve sustainable growth of aquaculture without improving the governance.

The 35th Session of Asia-Pacific Fishery Commission has identified the lack of effective governance as a major threat to sustainable aquaculture growth for greater contribution to achievement of the Sustainable Development Goals on ending poverty and hunger and achieving food security and improved nutrition. The commission recommended to FAO that it is timely needed to conduct a regional assessment on existing laws and regulations governing aquaculture and their enforcement in the region and a regional consultation on strengthening the governance of aquaculture.

The consultation and related country review studies were therefore proposed by FAO and jointly implemented by FAO and NACA in collaboration with member governments. The objectives of the consultation were to:

- Share the results of country studies on aquaculture governance in respective countries.
- Identify gaps, issues and challenges in aquaculture governance.
- Recommend strategies and actions to improve and strengthen aquaculture governance.

The consultation featured technical presentations from seven countries, namely Cambodia, China, India, Indonesia, Malaysia, Thailand and Vietnam. Audio recordings of the presentations are available for download or streaming from the NACA website at:

<https://enaca.org/?id=1072>

### Demographic changes in fishing communities

During the recently held 7th Global Symposium on Gender in Aquaculture and Fisheries, a presentation from Japan focused on the decreasing number of fishers and fish workers in fishing communities, both men and women, as well as the ageing population in these communities. The presentation also showed that the rate of ageing in fishing communities is higher than that of the national average. This presentation brought to the fore one of the least studied subject in fisheries, ie. the demographic changes in fishing communities and the implications these may have on the future of fishing, fisheries, the fishing industry, and social development of fishing communities.

In ASEAN Member States, it is projected that by 2035, the percentage of the population over 60 years old will be 21 percent in Brunei Darussalam; 12 percent in Cambodia; 15 percent in Indonesia; 9 percent in Lao PDR; 16 percent in Malaysia; 15 percent in Myanmar; 11 percent in the Philippines; 34 percent in Singapore; 30 percent in Thailand; and 20 percent in Vietnam. Cambodia will have a young and growing population whereas Thailand will have an ageing population. A few case studies were therefore carried out to look at demographic changes in small-scale fishing communities in Cambodia and Thailand in 2019 to understand potential implications on fisheries sustainability, migration patterns, climate change adaptation, and livelihoods diversification. The studies explored the general question: How are demographic changes affecting fishing communities? Specifically the studies tried to answer the following questions:

- What are the changes in demography (ageing, migration) in fishing communities?

- How are fishers adjusting their livelihoods with the changes in fishery resources as well as labour availability? Are they diversifying to other livelihoods?
- What are the consequences of these adaptation strategies? Are there any gender differences in the impact of such adaptation strategies?
- What are challenges faced and policy and program support needed for fishing communities for sustainable small-scale fisheries?

The objectives of the meeting were to:

- Share the results from a literature review and demographic studies in Thailand and Cambodia, and demographic situations in other countries in the region.
- Identify the opportunities and threats in fishing communities under rapid demographic changes.
- Recommend strategies and actions to prepare fishing communities to adjust to the demographic changes.

The consultation featured presentations from eight countries, namely Bangladesh, Cambodia, India, Indonesia, Myanmar, Philippines, Sri Lanka and Thailand.



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NACA is a network composed of 19 member governments in the Asia-Pacific Region.



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## INFOFISH World Shrimp Conference and Exposition

Shrimp 2019 was held in Bangkok, Thailand from 12-14 November, jointly organised by INFOFISH, the Thai Department of Fisheries, NACA and the Thai Shrimp Association. The conference provided a forum for publicising shrimp farming technology, production standards, harvesting, and processing products, as well as related trade and investment. Over 200 participants attended from all regions of the world.

The theme of the conference was "Modelling for Sustainability". A special opening address was given by His Excellency, The Hon. Semi Koroilavesau, Minister for Fisheries, Fiji, who spoke about the need to address climate change, IUU fishing, and the potential for aquaculture to offset pressure on wild fisheries, food security and import substitution. Ms Shirlene Maria Anthonysamy, Director

of INFOFISH, and Mr Thaworn Jirasophonrak, Deputy DG of the Thai DOF, gave opening remarks.

Mr Robins McIntosh, Executive Vice President, Charoen Pokphand Foods Public Company Ltd gave a keynote address "Modelling the Shrimp Industry Towards Sustainability", in which he discussed the establishment of sustainable practices that both reduced costs and improved the reliability of shrimp farming.

NACA staff Dr Yuan Derun, Coordinator of Sustainable Farming Systems and Training programmes, spoke on Ecological approaches to better sustainability of shrimp culture in China. Dr Eduardo Leano Coordinator NACA's Aquatic Animal Health Programme spoke on Biosecurity in shrimp aquaculture.