



AqualInnovate 2: Scaling nature-based solutions and regional synergy in Bangkok



AqualInnovate participants.

The momentum for aquaculture transformation continued in Bangkok as AqualInnovate 2 convened from 23–27 March 2026. Building on the success of the inaugural event, this second iteration brought together a fresh cohort of entrepreneurs, scientists, and industry leaders in Bangkok to accelerate nature-based solutions and climate innovation across the Asia-Pacific. Organised by NACA and FutureFish, with support from Canada's IDRC, the week served as a high-intensity bridge between scientific breakthrough and commercial viability.

A Global Stage for Regional Talent

The week opened with a series of high-impact pitch presentations by 12 startups and entrepreneurs:

- Thailand's Innovation Hub: Presentations were by Karnchana Karnchanamayoon (Siam Farm Services Co., Ltd), Patipond Tiyapunjanit (AQUAWISE), and Tuchakorn Lertwanakarn (Kasetsart University).

- Biotech & Microbiology: Scientific breakthroughs were pitched by Patai Charoonnart (BIOTEC, Thailand), Warangkhan Songsungthong (BIOTEC, Thailand), and Trinh Thanh Trung (Institute of Microbiology and Biotechnology, Vietnam).
- Regional Scaling: International perspectives were brought by Vijaya Molli (Aquavida Tech, India), Nguyen Van Nguyen (APOTEC-RIA2, Vietnam), and Jiosese Tale (Kerry Farms Fiji Ltd).
- Social & Community Enterprise: Solutions focused on impact were presented by Hector Abes (Kaizen Aquaventure Inc., Philippines), Hilarie P. Orario (De La Salle University, Philippines), and Jonathan Brenes (Yunus Thailand)

Deep Dives and Expert Coaching

The second day shifted focus toward the "AquaLead" curriculum, where industry veterans led sessions on four critical pillars:

- Nature-Based & Climate Innovation: Led by Rebecca McMillan (IDRC) and Edward Allison (WorldFish).

- Social Impact & Community Engagement: Interactive sessions led by Sizwile Khoza (SEI) and Callum Mackenzie (Yunus Thailand Foundation).
- Business Fundamentals: Operational strategies presented by Chris Aurand (Space-F).
- Investing for Impact: Insights into attracting mission-aligned capital from Patti Chu (Mana Impact) and Chris Justice (Tathva).

The afternoon featured Expert Coaching Circles, where participants rotated through small-group sessions to receive bespoke advice on their specific business models and technical challenges.

From Lab to Farm: Practical Immersion

Theory met practice on the third day during field visits to two innovative Thai aquaculture sites:

- Manit Farms: Participants explored large-scale operations and received an introduction to modern farm management and innovation adoption.
- Family farm visit: A dedicated session on seaweed cultivation and its role in sustainable coastal livelihoods.

Into the Shark Tank

The immersive experience continued at The Food School on Day 4, where the program's focus shifted from operational theory to market reality. In a high-stakes "Shark Tank" session, the innovators pitched their refined value propositions to a panel of established business leaders and investors. This exercise forced participants to defend their commercial viability and impact strategies in a professional incubator environment.

Following the pitches, the focus moved from the boardroom to the kitchen for a "Thai fish demonstration and cooking event". Moderated by Thanisorn "Orb" Chanthaphan, a renowned specialist in sustainable seafood, this session underscored the critical link between sustainable production methods and the exacting standards of the culinary industry.

The day's activities highlighted a core truth for aquaculture startups: technical innovation alone is rarely enough for market penetration. By engaging directly with culinary experts, the innovators learned that a product's success often depends on the endorsement of influential buyers, such as leading chefs, whose selection of a brand not only validates its quality but serves as the ultimate catalyst for consumer recognition and premium market positioning.

Looking Ahead: The AquaHub Vision

The workshop concluded with a "Lessons Learnt Journey," where participants drafted action plans and critical priorities for their ventures. Regional reflections from the Pacific and Thailand emphasized the need for continued cross-border collaboration.

The final session unveiled the AquaHub Vision for 2026 and Beyond. This roadmap outlines a permanent support process and a digital platform designed to ensure that the innovations sparked during the week grow into a resilient, pan-regional ecosystem for sustainable aquaculture.

Videos will be available shortly

Videos of the workshop presentations from the workshop are in preparation and will be available on the NACA website and [YouTube channel](#).

Translucent post-larvae disease (TPD): Disease card

Diseases of Crustaceans – Translucent Post-larvae Disease (TPD)



Figure 1. Clinical signs of *Penaeus vannamei* affected by translucent post-larvae disease (TPD) / translucent post-larvae vibriosis (TPV) / glass post-larvae disease (GPD). All the samples were at PL7 stage, and body length was about 0.6~0.9 cm. The diseased individuals (indicated by the white arrows) demonstrated syndromes of abnormal hepatopancreas and digestive tract necrosis. The hepatopancreas and digestive tract of the diseased post-larvae were pale and colorless. The bar scales are 10 mm and 2 mm in the figures and the magnified figures, respectively. Source: Qi Zhang

General Signs of Disease

Important: affected animals may show one or more of the signs below, but the infection may be present in the absence of any signs, especially during the early phase of infection.

- The diseased shrimps show pale and colorless of hepatopancreas and digestive tract (Figure 1), as well as pale and shrunken body. The affected post-larvae sink to the bottom of rearing tanks because of the decreased swimming capability caused by the disease.
- The disease progresses very quickly, a few individuals initially show clinical signs on the first day, 60% mortality accrues on the second day, and more than 90% mortality may accrue on the third day.

Disease agent

The pathogen of TPD is a *Vibrio* spp. causing TPD (*V*_{TPD}), which carries the *Vibrio* high virulent protein (VHVP)-1 and VHVP-2.

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This disease card provides an overview of translucent post-larvae disease (TPD), a highly infectious and lethal disease known (thus far) to infect *Penaeus vannamei*, *P. chinensis* and *P. japonicus* mainly in post-larvae of four to seven days age (PL2~PL7). TPD can cause morbidity of up to 60% in 24 hours after clinical signs and up to 90-100% mortality in severe cases on the second to third day.

This card details the causative agent (a *Vibrio* spp. carrying the *Vibrio* high virulent protein VHP-1 and VHVP-2), host range, geographical distribution, epidemiology, prevention and control measures, histopathology, molecular diagnostics, expert contact and references.

- [Download the disease card](#)

Strengthening the partnership: NACA welcomes new Director General of Thai DOF



Dr Thitiporn Laoprasert (right), Director General of the Thailand Department of Fisheries, and NACA DG Dr Eduardo Leão

NACA paid a courtesy visit to Dr. Thitiporn Laoprasert, the newly appointed Director General of Thailand's Department of Fisheries (DOF), to chart a course for enhanced regional cooperation. This high-level meeting served as both an official welcome for the new Director General, although she has contributed to NACA activities for many years, and a strategic session to align regional goals with Thailand's national fisheries expertise.

Decades of foundational support

During the visit, Dr. Eduardo Leano, Director General of NACA, extended his appreciation for Thailand's unwavering commitment to the organisation. For over thirty-five years, Thailand has played a pivotal role as the host nation for the NACA Secretariat, providing the essential infrastructure and administrative support that allows the network to function as a hub for aquaculture innovation across the Asia-Pacific.

Addressing modern challenges

Dr. Laoprasert outlined a forward-thinking agenda centered on driving innovation and efficiency of the aquaculture industry for regional food security. Recognising the economic pressures facing producers, she called for a collaborative push in R&D to drive down costs for producers.

Priority areas for collaboration

The discussion identified four pillars for cooperation:

- **Climate resilience:** Developing strategies to protect the aquaculture sector against the increasing unpredictability of climate change.
- **Social equity:** Actively promoting gender equality and inclusive practices within the industry workforce.
- **Nature-based solutions:** Integrating ecological health with economic output.
- **Knowledge brokering:** Expanding the "Aquaculture Innovation and Investment Hub" to streamline how new technologies reach local farmers.

Looking ahead: The AquaHub hub

The partnership is already yielding tangible results through the documentation of nature-based solutions. The Thai DOF team is currently identifying indigenous innovations that will contribute to a new [AquaHub](#) initiative, a regional aquaculture innovation and investment hub, ensuring that Thai expertise continues to shape the transformation of aquaculture throughout Asia-Pacific.

Turning Guidance into Action Insights from the FAO Expert Workshop on Sustainable Aquaculture

NACA recently participated in the FAO Expert Workshop, “Turning guidance into action: regional insights for implementing the Guidelines for Sustainable Aquaculture,” held from 24-25 February 2026, in Rome, Italy. As a partner of the Food and Agriculture Organization of the United Nations (FAO), we are pleased to share the outcomes of this event and highlight the path forward for our sector.

A Vision for the Future of Aquaculture

The Guidelines for Sustainable Aquaculture (GSA) represent a major milestone in promoting best practices. Developed through consultations between FAO and its Members, they contain a set of shared and agreed principles, practices and recommendations designed to promote a sustainable aquaculture sector worldwide.

The vision underpinning the GSA is an aquaculture sector that contributes significantly to a world free from hunger and leads to the equitable improvement of the living standards of all actors in its value chains, including the poorest.

To achieve this, the main body of the GSA provides concrete recommendations across four critical areas for the economic, social and environmental sustainability of aquaculture:

- Governance and planning.
- Sustainable resource use, ecosystem and farm management.
- Social responsibility, decent work and gender equality.
- Value chains, market access and trade.

Moving from “What” to “How”

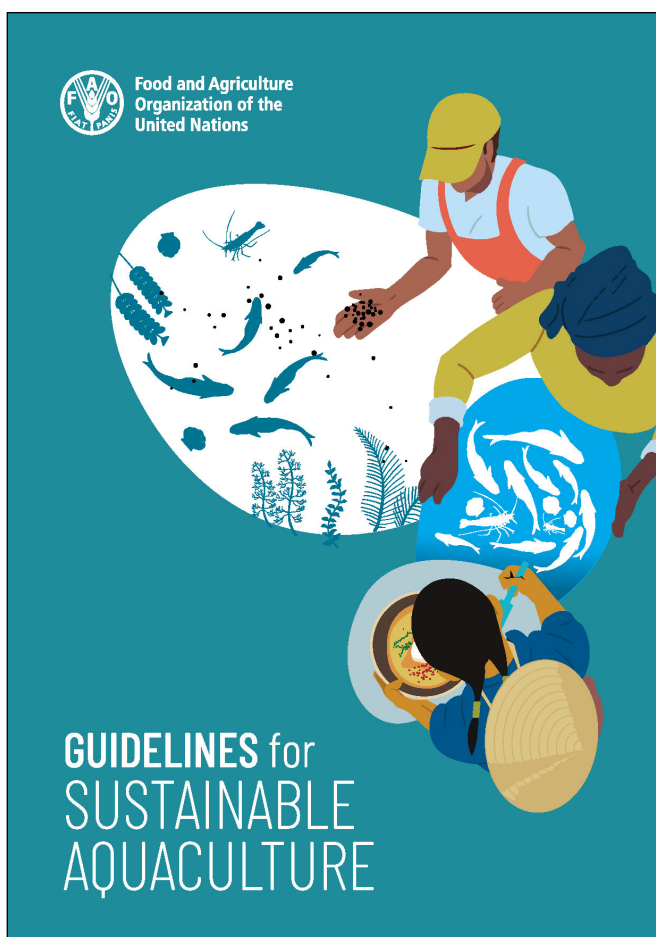
While the GSA clearly articulate what needs to be done to make aquaculture sustainable, the critical next step is supporting stakeholders in understanding how to put these recommendations into practice. This was the driving force behind the Rome workshop.

Building on the momentum of five EU-funded Regional Workshops held across the globe in 2025, the expert gathering aimed to translate regional insights into practical, country-adaptable implementation guidance.

Creating an Enabling Environment

Implementing the GSA requires robust institutional support, coordinated efforts, and effective resource mobilization. The GSA emphasises four main areas to create a favorable environment for policy change:

- Funding and Financing: Expanding access to public and private investments, blended finance, and insurance schemes to support infrastructure and small-scale farmers.



- Research and Innovation: Investing in advanced technologies for climate-resilient systems and incorporating traditional knowledge to improve efficiency and reduce environmental impacts.
- Communication: Utilising effective tools to support informed decision-making and build credibility among stakeholders.
- Capacity Building: Strengthening the skills of all stakeholders through inclusive, long-term participatory interventions, educational opportunities, and financial literacy training.

Developing Practical Tools for Implementation

Translating the GSA from voluntary guidelines into national policies requires practical, on-the-ground resources. To address this, the workshop focused on three core areas to support member states:

The Decision-Support Tool: A major focus of the group work was identifying and preparing elements for a new decision-support tool. This tool will provide a roadmap and a monitoring and evaluation methodology with measurable indicators to help countries adapt the GSA to their specific contexts.

Communication and Outreach: Effective communication is essential for building consensus and countering misinformation about the sector. Participants reviewed the new GSA Communication Handbook and Toolkit, discussing actionable ways to use and share these resources within their own regional networks.

Regional Case Studies: To ensure future implementation is grounded in real-world realities, the workshop gathered expert guidance on developing GSA case studies. These studies will showcase successful approaches and transferable lessons from diverse regions, highlighting what sustainable aquaculture looks like in practice.

The Way Forward

While the GSA are voluntary, they serve as a critical reference for policy and decision-making. NACA encourages policymakers, private enterprises, and community stakeholders to implement and integrate the GSA into their governance frameworks.

The guidelines provide a clear and actionable roadmap. By adapting these principles to our diverse regional and national contexts, we can maximize the sector's contributions to global food security and nutrition, poverty reduction and environmental conservation, ensuring a resilient, equitable and sustainable future for all.

You can download the Guidelines on Sustainable Aquaculture from FAO, along with a fact sheet, policy brief, and communications toolkit at the links below:

- [Guidelines for Sustainable Aquaculture](#)
- [The Guidelines for Sustainable Aquaculture at a glance \(fact sheet\)](#)
- [Translating the Guidelines for Sustainable Aquaculture into Action \(policy brief\)](#)
- [Guidelines for Sustainable Aquaculture: Communications handbook and toolkit](#)

Advancing global collaboration for sustainable aquaculture in Fuzhou, China



Participants in the FAO Roundtable on the Global Sustainable Aquaculture Advancement Partnership.

NACA joined international leaders in Fuzhou, China, in March 2026 for two major back-to-back events focused on advancing sustainable aquaculture. Convened by the Food and Agriculture Organization of the United Nations (FAO), the meetings brought together policymakers, researchers, industry stakeholders and development institutions to strengthen collaboration and accelerate implementation of global sustainability frameworks.

The FAO Roundtable on the Global Sustainable Aquaculture Advancement Partnership (GSAAP) and the First FAO-China Fisheries Association (CFA) Joint International Conference on Sustainable Aquaculture underscored the urgency of coordinated action as the sector continues to expand rapidly while facing mounting environmental and structural challenges.

FAO Roundtable on Upgrading the Global Sustainable Aquaculture Advancement Partnership (GSAAP)

The FAO Roundtable on GSAAP, held 17 March, focused on strengthening the partnership as a key mechanism for implementing the [FAO Guidelines for Sustainable Aquaculture](#) and advancing the [Blue Transformation](#) agenda.

With global aquaculture production continuing to grow, participants highlighted the need to address persistent constraints, including environmental impacts, disease risks, governance gaps and limited access to technical expertise. Discussions emphasised that scaling sustainable aquaculture will require stronger alignment between policy, science, investment and capacity development.

The roundtable opened with a technical matchmaking session, where countries presented priority needs and GSAAP partners identified opportunities to provide targeted support. This practical exchange demonstrated the Partnership's role in mobilizing expertise and connecting demand with available resources.

In the afternoon, the GSAAP Annual Meeting convened in a roundtable format to examine the Partnership's future direction. Participants engaged in focused discussions on strategic priorities, institutional strengthening and approaches to scaling impact beyond pilot initiatives.

The meeting concluded with agreement on key priority areas for collaboration and a renewed commitment to strengthening GSAAP as a global platform for coordinated action. Participants also underscored the importance of delivering measurable outcomes through stronger partnerships and more effective implementation mechanisms.

First FAO-CFA Joint International Conference on Sustainable Aquaculture, 18–20 March 2026

Building on the momentum of the Roundtable, the First FAO-CFA Joint International Conference on Sustainable Aquaculture brought together a global audience to examine practical solutions for advancing sustainability across the sector.

With aquaculture now accounting for more than half of global aquatic animal production, and Asia contributing the vast majority, participants stressed the sector's central role in food security, nutrition and livelihoods, alongside the increasing pressure to improve sustainability and resilience.

Over three days, the conference featured keynote presentations, technical sessions and panel discussions covering key thematic areas, including sustainable feed systems, seed supply chains, aquatic animal health and innovation. Discussions focused on translating policy commitments into practical action, supported by investment, technology transfer and stronger institutional frameworks.

Regional perspectives and country case studies, including experiences from major aquaculture-producing nations, provided insight into both progress and ongoing challenges. Participants highlighted the importance of integrated approaches that connect research, industry and policy to enable scalable and inclusive solutions.

The conference concluded with a field visit to a local aquaculture facility, offering participants direct exposure to emerging technologies and operational practices supporting sustainable production.

Sustaining Momentum Through Partnership

Together, the two events reinforced the importance of global and regional cooperation in shaping the future of aquaculture. The back-to-back format enabled participants to link strategic discussions on partnership development with technical exchanges on implementation and innovation.

For NACA, engagement in these meetings reaffirmed its role in facilitating regional collaboration and knowledge exchange across Asia-Pacific. The outcomes highlighted a shared commitment among stakeholders to move from dialogue to action, with stronger partnerships positioned as a key driver of sustainable aquaculture transformation.

Reported Aquatic Animal Diseases in the Asia-Pacific Region during the Third and Fourth Quarters of 2025

Reports received in 2025 only came from Australia, Chinese Taipei, Hong Kong SAR, India, Indonesia, Malaysia, Myanmar, the Philippines and Saudi Arabia. Listed below are the reported aquatic animal diseases covering the third and fourth quarters of 2025 (with first and second quarter reports from Chinese Taipei). The original and updated reports can be accessed at the [Quarterly Aquatic Animal Disease Report](#) page.

Finfish Diseases

- **Viral encephalopathy and retinopathy (VER):** Australia in farmed seabass (*Lates calcarifer*) and giant grouper (*Epinephelus lanceolatus*); Chinese Taipei in hybrid

grouper (*E. fuscoguttatus* x *E. lanceolatus*) and *L. calcarifer*; Indonesia in *L. calcarifer*, humpback grouper (*Cromileptes altivelis*), tiger grouper (*E. fuscoguttatus*), and hybrid grouper; and, the Philippines in roundscad (*Decapterus macrosoma*), pompano larvae (*Trachinotus blochii*), siganid (*Siganus guttatus*), milkfish (*Chanos chanos*), *L. calcarifer* larvae, and herring (*Sardinella lemura*).

- **Infection with Koi herpesvirus (KHV):** Chinese Taipei in Amur carp (*Cyprinus rubrofasciatus*); Indonesia in common carp and Koi carp (*Cyprinus carpio*); and, Malaysia in *C. carpio*.

- **Infection with Megalocytivirus pagrus 1** (incl. RSIV, ISKNV and TRBIV): Chinese Taipei in *L. calcarifer* and largemouth bass (*Micropterus salmoides*) (reported in the first two quarters of 2025); Hong Kong SAR in *E. lanceolatus*; and, Indonesia in hybrid grouper tilapia and pompano (*T. blochii*) (RSIV).
- **Infection with Tilapia lake virus (TiLV)**: Indonesia in tilapia (*Oreochromis niloticus*) and gourami (*Osphronemus gourami*); Indonesia in tilapia (*O. niloticus*); and, Malaysia in tilapia (*Oreochromis* spp.).
- **Grouper iridoviral disease (GIV)**: Chinese Taipei in orange-spotted grouper (*E. coioides*), *E. lanceolatus*, and hybrid grouper.
- **Enteric septicaemia of catfish**: Indonesia in *Pangasius* sp. and catfish.
- **Infection with infectious myonecrosis virus**: Indonesia in *P. vannamei*; and, Malaysia in *P. monodon*.
- **Infection with infectious myonecrosis virus (IMNV)**: Indonesia in *P. vannamei*.
- **Acute Hepatopancreatic necrosis disease (AHPND)**: The Philippines in *P. vannamei* (grow-out) and *P. monodon* (PI and grow-out).
- **Hepatopancreatic Microsporidiosis caused by *Enterocytozoon hepatopenaei* (HPM-EHP)**: Chinese Taipei in *P. vannamei* (reported in the first two quarters of 2025); India and Indonesia in *P. vannamei*; Malaysia in *P. vannamei* and *P. monodon*; and, the Philippines in *P. vannamei* (grow-out) and *P. monodon* (PL and grow-out).

Molluscan diseases

- **Infection with *Perkinsus olseni***: Australia in farmed broodstock of green lip abalone (*Haliotis laevis*).

Amphibian diseases

- **Infection with *Batrachochytrium dendrobatidis***: Australia in wild white lipped tree frog (*Litoria caerulea*).

Other diseases

- India reported Infection with *Tilapia parvovirus* in *O. niloticus*.

Prepared by: Eduardo Leaño, Director General and Senior Programme Officer (Health and Biosecurity)

Crustacean diseases

- **Infection with white spot syndrome virus (WSSV)**: Chinese Taipei, India, and Malaysia in whiteleg shrimp (*Penaeus vannamei*); Indonesia in *P. vannamei* and black tiger shrimp (*P. monodon*); and, the Philippines in *P. vannamei* and *P. monodon* (PL and grow-out), freshwater prawn (*Macrobrachium rosenbergii*), and mudcrab (*Scylla serrata* and *S. olivacea*).
- **Infection with Infectious hypodermal and haematopoietic necrosis virus (IHHNV)**: Australia in farmed postlarvae of in *P. monodon*; and, the Philippines in *P. monodon* (grow-out) and *P. vannamei* (PL, grow-out and broodstock).

Scholarships for Master's Degree in Aquaculture and Fisheries, China 2026

The Freshwater Fisheries Research Center (FFRC), NACA's Regional Lead Centre in China, has opened applications for its 2026 Master's Degree Program at Wuxi Fisheries College, Nanjing Agricultural University.


This two-year program is fully funded by the Chinese Government Scholarship and offers comprehensive support to allow students to focus entirely on their studies:

- Full tuition waiver and accommodation
- Living stipend for the entire duration of stay in China
- International airfare covering two round-trip tickets (for enrolment/graduation and home leave/internship)

The program aims to build capacity in aquaculture and fisheries across the region. The application deadline is **6 June 2026**.

For specific admission requirements, curriculum details, and application procedures [download the enrollment guide](#) or visit the NACA website at:

- <https://enaca.org/?id=1479>



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Report of the 24th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health



Network of
Aquaculture
Centres in
Asia-Pacific

This report summarises the proceedings of the 24th meeting of the Regional Advisory Group on Aquatic Animal Health, held 24-25 November 2025 by video conference. Originally attended by only AG members, co-opted members and few observers, the meeting was again participated by NACA member country representatives, as in the last five years. NACA member countries and territories represented include Australia, Bangladesh, Cambodia, Hong Kong SAR China, India, Malaysia, Maldives, Myanmar, the Philippines, Thailand, and Vietnam

The role of the group is to review trends in disease and emerging threats in the region, identify developments in global disease issues and standards, to evaluate the Quarterly Aquatic Animal Disease Reporting Program and to provide guidance on regional strategies to improve aquatic animal health management.

The meeting discussed:

- Progress on NACA's Asia Regional Aquatic Animal Health Programme.
- Updates from the WOHAN Aquatic Animal Health Standards Commission.
- Updates from the SEAFDEC Aquaculture Department.
- Aquaculture Biosecurity:
- The hidden highways of death: Critical biosecurity insights for shrimp production.
- Use of environmental DNA (eDNA).
- Advancing the biosurveillance of emerging aquatic pathogens in Singapore with eDNA.
- eDNA for disease detection and to support surveillance program of crayfish plague.
- Updates on Regional Disease Reporting and Disease List.
- Regional aquatic animal disease reporting.

- Proposal for new regional aquatic animal disease reporting system.
- Translucent post-larva disease (TPD): Disease card and endorsement for listing in the regional aquatic animal disease reporting system.

The Advisory Group was established by the Governing Council of the Network of Aquaculture Centres in Asia-Pacific (NACA) in 2001 to provide advice to NACA members in the Asia-Pacific region on aquatic animal health management

Members of the Advisory Group presented include invited aquatic animal disease experts in the region, representatives of the World Organisation for Animal Health (WOAH) and the Food and Agricultural Organization of the United Nations (FAO), collaborating regional organisations such as SEAFDEC Aquaculture Department (SEAFDEC AQD) and WOHAN-Regional Representation in Asia and the Pacific (WOHAN-RRAP), and the private sector.

- [Download the report from the NACA website.](#)

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NACA is a network composed of 20 member governments in the Asia-Pacific Region.



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