



Fish Health Section

Asian Fisheries Society

Message from the Chair

Dear FHS Colleagues,

Greetings and Happy New Year 2020!

Our new decade is off with significant challenges and opportunities. Aquatic animal diseases are considered as one of the most significant risks to sustainable aquaculture production as highlighted in a recent paper entitled “Vulnerabilities in aquatic animal health production”. The opportunities to meet these challenges with innovative solutions cannot be underestimated. I am excited to see how we respond by exploring new strategies to deliver services to our communities in coming years.

In this Edition, you'll see good news around our activities for reducing disease risks in aquaculture systems. These include the Asia-Pacific Laboratory Proficiency Testing Program for 33 laboratories from 12 Asia-Pacific countries to strengthen laboratory diagnostic capabilities for aquatic animal diseases of significance across the region, the 18th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health (NACA AGM 18) to update aquatic animal health management and other related issues in the region, and the First Meeting of the Ad Hoc Steering Committee of the OIE Regional Collaboration Framework on Aquatic Animal Health in Asia-Pacific to strengthen collaboration and sharing resources in the region. To develop capacity in the field of Aquatic Animal Epidemiology, an ICAR-NACA School on Aquatic Animal Epidemiology and Disease Surveillance was organised in March 2019, the 2nd International Conference in Aquatic Animal Epidemiology (AquaEpi II) was held in Hua Hin, Thailand in November 2019 and the AquaEpi III will be held in 2022.

FHS-AFS also congratulates Dr Huang Jie, who is appointed as Director General of NACA (2019-2024). The appointment our colleague (Dr Jie served as ExCo FHS-AFS 2011-2017) presenting opportunities for the Society to play more important roles in supporting the sustainable development of aquaculture through reducing the impact of aquatic animal diseases.

In this Edition, you'll also see the First Announcement of DAA11 to be held in Kuching, Malaysia from 29 September to 2 October 2020. Thanks to our Vice-Chairperson, Dr. Kua Beng Chu, and her NOC team who has done fantastic job of preparing the DAA11. The website of DAA11 <https://www.daa11.org/> is up and running, and the registration and abstract submission is now open. I'm excited about DAA11 and the challenges and opportunities it'll present. I look forward to seeing you all in Kuching, Malaysia!

On behalf of the ExCo and members, we thank our fabulous eNewsletter Editorial Team for successfully publishing high quality eNewsletter annually since 2017. As this Edition will probably be the last eNewsletter published by the ExCo 2017-20, I would like to take this opportunity to thank the ExCo and members for your contributions to the eNewsletter and FHS-AFS over the past three years.

Best wishes,

Dr. Agus Sunarto
Chairperson FHS-AFS (2017-2020)
Email: Agus.Sunarto@csiro.au



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11th Symposium on Diseases in Asian Aquaculture

29 September– 2 October 2020

Borneo Conventional Center Kuching (BCCK)
Sarawak, Malaysia

Land of Adventure: Exploring Aquatic Animal Health for Sustainable Aquaculture



Celebrating 30 years of networking

Greetings from DAA11's National Organizing Committee
We are pleased to inform you that the Symposium on Diseases in Asian Aquaculture is back!

Important Dates

Registration and Abstract Submission	Jan 10th, 2020
Abstract Submission Deadline	June 15th, 2020
Notification of Abstract Acceptance	August 30th, 2020
Early Registration Deadline	August 15th, 2020
Normal Registration	August 15th, 2020 onwards

The 11th Symposium on Diseases in Asian Aquaculture (DAA11) marks the 30 years of AFS-FHS establishment and it will be celebrated in Malaysia. Local hosts, the Department of Fisheries Malaysia (DOF) under the Ministry of Agriculture and Agro-based Industry together with the Ministry of Modernisation of Agriculture, Native Land and Regional Development Sarawak (MANRED) will be organizing the event in collaboration with the FHS-AFS.

The DAA11 symposium aims to combine intellectual stimulation while exploring the nature of Sarawak. DAA11 anticipates the attendance of 300-500 delegates from 20-30 countries which will be held in two plenaries and six sessions over four days. With the chosen theme:

Land of Adventure: Exploring Aquatic Animal Health for Sustainable Aquaculture, main topics will cover Biosecurity in Aquaculture, Epidemiology, Diagnostics, Prevention & Control Measures and cutting-edge research in fish and shrimp health management. Ample time is scheduled for networking, field trips, and social functions during the Symposium. Trade displays will be exhibited throughout the Symposium. DAA11 has introduced a 3-Minute Pitch (3MP) for each session and is an extended form of an elevator pitch that was introduced in DAA10 (2017). 3MP is a great exercise for all speakers to construct research findings and pertinent information into a 3 minute speech. It will expose researchers to initiate their ideas and share research discoveries in brief, simple and clear manner to wider audience. It also aims to encourage more oral presentations and serves as a platform for researchers to highlight the impact of their research using one slide only.

The Symposium aims to bring academicians, scientists, and business professionals, general public, current and prospective fish farmers to join and share their research findings at DAA11 in Kuching, Sarawak, Malaysia. We are now calling for online abstract submission and online registration. For more information about the symposium, please visit DAA11 website at <https://www.daa11.org>. For assistance, please feel free to contact our secretariat at daa11@dof.gov.my
See you in the land of adventure!

DAA11 Organizing Committee





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Dr. Huang Jie is the new Director General of NACA



Dr Huang Jie took over the charge of Director General of NACA for a five year term, beginning in May 2019. Dr Huang succeeded Dr Cherdasak Virapat, who completed his own five-year term in April 2019. Dr Huang, a Chinese national, obtained his BSc on Virology in Wuhan University in 1987, an MSc in the Wuhan Virology Institute, Chinese Academy of Science (CAS) in 1990, and his PhD in Marine Biology at the Ocean Institute, CAS, in 2010. He is a Senior Researcher of the Maricultural Disease Control and Molecular Pathology Laboratory, Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences (CAFS); the Chief Scientist of CAFS on aquatic animal disease control; an OIE Designated Expert for White spot disease (WSD) and Infectious hypodermal and haematopoietic necrosis (IHNN); and a doctoral tutor for Shanghai Ocean University.

Dr Huang has been conducting research projects on the diagnostics, epidemiology, molecular mechanism of virus infection and control technology for WSD and other aquatic animal diseases for 26 years. He identified a new virus, HHNBV (now named WSSV), as the pathogen of WSD in

China in 1993 and reported the transmission route of the virus. His research group has discovered several new viruses, new genotypes, or new emerging diseases in marine farming industries of China, including turbot reddish body iridovirus; acute viral necrotic virus in scallop; covert mortality nodavirus in shrimp; a new genotype of yellow head virus (YHV-8) in shrimp; an earliest identified virulent strain of *Vibrio parahaemolyticus* in shrimp causing acute hepatopancreatic necrosis disease (AHPND) in 2010; shrimp hemocyte iridescent virus (SHIV), and a virulent strain of *V. campbellii* causing AHPND. His laboratory has established a series of detection techniques, including gene probes, PCR, LAMP, and gene chips, for different aquatic animal pathogens and national standards for shrimp diseases diagnosis. They have also developed rapid detection kits for more than 20 aquatic animal pathogens, non-specific immunostimulants and probiotic bacteria for shrimp disease prevention, microorganism-enhanced biofloc technology for aquaculture, and marine fish vaccines for *V. anguillarum* and *Edwardsiella tarda*. Dr Huang proposes the concept of microbiological control technology to prevent aquatic animal disease and actively promotes the concept of biosecurity systems for the aquaculture industry.

Dr Huang has more than 330 publications of which 80 were published in international journals, has obtained 48 patents, published 30 national or professional standards, won 13 national and provincial awards, and trained 94 doctoral and masters level students. He won the Distinguished Expert for TAISHAN scholars of Shandong Province, the Excellence Talent and Innovation Team for Agriculture Research, and holds other national, provincial and ministerial honor titles.

Source: NACA Newsletter, April-June 2019

Workshop on Asia-Pacific Laboratory Proficiency Testing Program for Aquatic Animal Diseases

The Network of Aquaculture Centres in Asia-Pacific (NACA) hosted a workshop on the Asia-Pacific Laboratory (APL) Proficiency Testing (PT) Program for 33 laboratories from 12 Asia-Pacific countries on 13-14 March 2019 in Bangkok, Thailand. Fifty people in total from 12 participating countries attended the workshop. The aim of the workshop was to offer direct communication with laboratory representatives from the program to assist in the

understanding of diagnostic standards, proficiency testing procedures and laboratory quality assurance management systems. It also allowed participants to discuss any issues they had come across during the first two rounds of completed testing. It is expected that laboratories will gain increased confidence in their testing capabilities and performance, and increased ability to diagnose and detect aquatic animal diseases of transboundary significance.



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The APL PT Program on Aquatic Animal Diseases is a four year long program (2018/19 – 2021/22) designed to strengthen laboratory diagnostic capabilities for aquatic animal diseases of significance across the Asia-Pacific. It is a follow on from a previously funded PT program in 2012-2014 that saw an improvement in the regional capability of Australia’s trading partners to detect and diagnose important aquatic animal diseases.

The program was funded by the Australian Government Department of Agriculture and Water Resources. The current program includes 39 laboratories from 14 countries within the Asia-Pacific, including Bangladesh, Brunei, China, Hong Kong, India, Indonesia, Iran, Malaysia, New Caledonia, Philippines, Singapore, Sri Lanka, Thailand and Vietnam. Ten economically significant finfish and crustacean diseases were agreed upon for inclusion for testing over eight rounds.

Second International Conference on Aquatic Animal Epidemiology



The second International Conference on Aquatic Animal Epidemiology (AquaEpi II) was held during 4-6 November 2019 in Hua Hin, Thailand. The conference was organized by the Faculty of Veterinary Medicine, Kasetsart University,

in collaboration with Kasetsart University Veterinary Alumni Association, Department of Fisheries, Ministry of Agriculture and Cooperatives, Thailand, Faculty of Fisheries, Kasetsart University, The International



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Society of Aquatic Animal Epidemiology (ISAAE), Norwegian Veterinary Institute (NVI) and the Atlantic Veterinary College (AVC), University of Prince Edward Island, Canada. In the conference, there were one keynote presentation, 5 lead presentations, 32 oral and 17 poster presentations under different scientific sessions including epidemiological investigations in clinical settings; risk assessment and management studies; molecular epidemiology, spatial and

temporal patterns in prevalence and risk mapping; surveillance and disease detection; epidemiology of antimicrobial use and resistance, epidemiology based trans-boundary regulation. All the presentations were followed by a round table discussion on 'Current Status and Future Challenges to Aquatic Animal Health and Epidemiology.

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



The 18th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health (AGM 18) was organized by the Network of Aquaculture Centres in Asia-Pacific (NACA). It was held in Bangkok, Thailand on 18-19 November 2019, and attended by invited aquatic animal health experts from the region, representatives of NACA partner organizations including World Organization for Animal Health (OIE), Food and Agriculture Organization of the United Nations (FAO), and Southeast Asian Fisheries Development Center (SEAFDEC), and the private sectors. Observers from Chinese Taipei also attended the meeting.

Updates on aquatic animal health management and other related issues in the region were discussed during the 2-day meeting. These include progress reports from NACA, OIE, FAO and SEAFDEC on their activities in the Asia-Pacific region, aquatic animal health programs and activities of Australia, China and Thailand, and an invited

presentation of the aquatic animal health activities in the region by Norwegian Veterinary Institute (NVI). Updates on important diseases of finfishes, crustaceans, molluscs and amphibians were also presented and discussed. With the increasing interest on aquaculture biosecurity, especially in the prevention of transboundary aquatic animal diseases, the FAO's initiative on Progressive Management Pathway for improved Biosecurity in Aquaculture (PMP-AB) was presented and discussed. Other specific issues highlighted during the meeting were AMU and AMR in aquaculture, and renaming of Shrimp hemocyte iridescent virus (SHIV) to Decapod iridescent virus – 1 (DIV-1) in the QAAD list of diseases.

The final report of the meeting is still under preparation and will be available for free download at NACA website in the first quarter of 2020.



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1st Meeting of the *ad hoc* Steering Committee of the Regional Collaboration Framework on Aquatic Animal Health in Asia and the Pacific



The OIE Regional Representation for Asia and the Pacific (OIE RRAP) organised the 1st meeting of the *ad hoc* Steering Committee of the OIE Regional Collaboration Framework on Aquatic Animal Health in Asia and the Pacific in Bangkok, Thailand, on 20-21 November 2019. The meeting aimed at finalizing the Terms of Reference for the Regional Collaboration Framework; understanding the available technical resources and expertise present within OIE Reference Centres (RCs) and other institutions for better resource utilization; and determining the best communication mechanism among OIE RCs, the Framework, member countries and stakeholders.

The Regional Collaboration Framework focuses on building a framework of actors with the aim of strengthening laboratory capacity for aquatic animal disease activities in Asia and the Pacific such as emergency response. The main objectives are:

- Strengthening collaboration among and between OIE Reference Centres (i.e Reference Laboratories and Collaborating Centres) and Member Countries
- Sharing and exchanging information on test validation and reference material.

The current Framework is a partnership consisting of the following structure and actors:

A Steering Committee composed of:

- A representative of OIE Collaborating Centres (for Diagnostic Test Validation Science in the Asia-Pacific Region; and New and Emerging Diseases)
- Three representatives of OIE Reference Laboratories in the region
- Four representatives of OIE National Focal Points for Aquatic Animals
- Two representatives from the OIE Aquatic Animal Health Standards Commission
- Regional partners: FAO; NACA; SEAFDEC



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Members:

- OIE Collaborating Centres: (For Diagnostic Test Validation Science in the Asia-Pacific Region; For New and Emerging Diseases)
- OIE Reference Laboratories on aquatic animal diseases in the region
- The 32 national Focal Points for Aquatic Animals from the region
- National reference laboratories with focus on national aquatic animal disease surveillance
- Regional Organisations (FAO, SEAFDEC, NACA, etc.)

Members engaged on *ad hoc* basis:

- Universities, research institutions, private sectors as well as donors that focus on aquatic animal health and have objectives aligned with those of this Secretariat:
- OIE Regional representation of Asia and the Pacific

The 1st meeting was participated by representatives of the above list (N=25). The NACA advisory group members also participated in the meeting as observers.

ICAR-NACA School on Aquatic Animal Epidemiology and Disease Surveillance



To develop capacity in the field of Aquatic Animal Epidemiology, an ICAR-NACA School on Aquatic Animal Epidemiology and Disease Surveillance was organised at ICAR-NBFGR under National Surveillance Programme for Aquatic Animal Diseases during March 1-6, 2019 for 12 researchers from 8 Institutes. The School was led by Prof. K.L. Morgan, Emeritus Prof. of Epidemiology, University of Liverpool, Neston, UK. Besides, there were presentations by Prof. Iddya Karunasagar, International Food Safety Consultant, FAO, Rome and Dr. Eduardo Leano, Coordinator,

Aquatic Animal Health Programme, NACA, Bangkok. The major topics covered during the School included Concept and principles of epidemiology; Use of epidemiological principles in design and implementation of surveillance; Sampling considerations for surveillance; Population survey; Estimation of sensitivity and specificity of diagnostic test and Questionnaire design, Health Management in Aquaculture and Emerging Disease Risks in Global Aquaculture.



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India to host 3rd International Conference on Aquatic Animal Epidemiology

ICAR-National Bureau of Fish Genetic Resources, Lucknow in collaboration with The International Society of Aquatic Animal Epidemiology (ISAAE) and National Fisheries Development Board (NFDB), Hyderabad, Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India will be hosting the Third International Conference in Aquatic Animal Epidemiology in New Delhi, India during November 2022. Considering the catastrophic losses due to disease outbreaks, identification of risk factors responsible for disease outbreaks at farm-level using epidemiological approach can be quite useful for developing intervention strategies.



The conference would provide an opportunity for dissemination, networking and developing contacts between researchers working in the area of aquatic animal epidemiology and stakeholders. The researchers working in the area of aquatic animal epidemiology are requested to plan well in advance for attending the Conference at New Delhi, India.

FHS/AFS EXECUTIVE COMMITTEE 2017-2020

FHS Advisors: Rohana Subasinghe, Melba B. Reantaso, Supranee Chinabut

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Vice-Chairperson: Kua Beng Chu (Malaysia)

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Observers: Dang Thi Lua (Vietnam), Benjaporn Somridhivej (Thailand), Imelda Rantty (Malaysia), Dewi Syahidah (Indonesia), Partho Pratim Debnath (Bangladesh)

FHS Electronic Newsletter Editors: P.K. Pradhan, Neeraj Sood, Dewi Syahidah

The editorial team expresses its sincere thanks to all the members who have contributed to the eNewsletter. The next issue of eNewsletter is being planned in January 2021. All the members are requested to share important news or other information that would be useful for the members of FHS.

eNewsletter Editorial Team