NACA Newsletter

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# New reviews of aquaculture now available online

We are pleased to announce that the FAO Reviews of Aquaculture have been published online at the FAO website, including the six regional reviews and a global synthesis. The reviews were developed and published in conjunction with the Global Conference on Aquaculture Millennium +20 (GCA+20), which was co-organised by NACA. The reviews are:

- Global Aquaculture Synthesis.
- Regional Review of Aquaculture in Asia and the Pacific.
- Regional Review of Aquaculture in Europe.
- Regional Review of Aquaculture in Latin America and the Caribbean.
- Regional Review of Aquaculture in the Near East and North Africa.
- Regional Review of Aquaculture in North America.
- Regional Review of Aquaculture in Sub Saharan Africa.

Each regional review and the global synthesis contain nine chapters:

- Social and economic background.
- General characteristics of the sector.
- Resources, services and technologies.
- Aquaculture and environmental integrity.
- Markets and trade.
- Contribution of aquaculture to food security and social and economic development.
- External pressures on the sector.
- Governance and management of the sector.
- Aquaculture contribution to the FAO strategic objectives.

The reviews are available for download from the link below.

https://www.fao.org/fishery/regional-aquaculture-reviews/reviews-2020/en/

You are welcome and invited to share the reviews widely through your networks.

Video presentations of the reviews, including expert panel discussions and question and answer sessions, are also available from the GCA+20 website at:

https://aquaculture2020.org/regional/

# Post-doctoral scholarships for women in STEM at the University of Stirling

The University of Stirling has been awarded funds by the British Council to provide funding for four Early Academic Fellowships for Women in STEM. These fellowships will be 6-12 months in duration.

The scholarships are post-doctoral awards, available to eligible candidates from South Asia, for women that have recently been awarded their PhD (0-12 months postdoctoral) and wish to have a research experience at a UK university or research institution, converting their doctoral work into publications or other academic outputs, and establishing new research relationships.

The scholarships are to run during academic year 2022/23.

## Eligibility

The scholarships are available to women who are passport holders and permanent residents of India, Pakistan, Bangladesh, Nepal and Sri Lanka.

## Applications

For further information please visit the University of Stirling website at the link below. The deadline for submissions is **31 March 2022**:

https://www.stir.ac.uk/scholarships/natural-sciences/british-council-scholarships-for-women-in-stem-post-doctoral-level/

# Research breakthrough seen to curb shortage of 'poor man's fish'

**Report by Rex Delsar**

A scientific breakthrough at a research center in the Philippines might finally be the long-term solution to the perennial shortage of round scad (*Decapterus* spp.), known as the "poor man's fish" in the country.

In a world's first, researchers successfully spawned the round scad *Decapterus macrosoma* in captivity at the Southeast Asian Fisheries Development Center, Aquaculture Department (SEAFDEC/AQD) in Tigbauan, Iloilo, marking a critical milestone towards farming the fish, locally known as *galunggong*.

Round scad is considered a staple fish in the Philippines with over 202,000 metric tons harvested by commercial and municipal fisheries in 2020 according to government statistics. However, the haul could not keep up with market demand leading to increasing prices, now reaching $5 to $6 a kilo, and controversial moves to import the fish amid closed fishing seasons.

"Our breeders have been spawning continuously since December last year until this February, and we now have thousands of galunggong in different larval to early juvenile stages at our hatchery which we hope to further grow to market sizes to prove that we can farm galunggong," revealed SEAFDEC/AQD chief Dan Baliao in an interview last Feb. 28, 2022.

*Round scad (Decapterus macrosoma) breeders feeding on krill during an experiment at SEAFDEC/AQD. Photo by EV Antolino.*

*Some of the world's first captive-bred round scad, 48 days after hatching, at SEAFDEC/AQD in Iloilo, Philippines. Photo by JF Aldon.*

Researcher Ma. Irene Cabanilla-Legaspi said they started collecting wild breeders off southern Iloilo and Antique in 2020 as part of a Government of Japan-funded project at SEAFDEC/AQD, the same research center responsible for groundbreaking studies on breeding milkfish in the 70s and 80s.

After collecting round scad breeders onboard commercial fishing vessels and through fish traps, Cabanilla-Legaspi's team transported them to SEAFDEC/AQD's headquarters in Tigbauan and stocked them in fish tanks to prepare them for spawning.

It was the breeders they caught in August and October 2021 that began laying eggs in December 2021, and continued to produce good eggs through February 2022. Though still in an early experimental stage, they already have fingerlings in the hatchery that are more than 50 days old.

## 'Very fast' growth

"We observed that the fish were growing very fast. When they reach 20 days old, they have a very fast growth and we can obtain 2.5-centimeter round scad in 25 days," Cabanilla-Legaspi said. Although trials in the hatchery are still few, SEAFDEC/AQD scientist Dr. Leobert de la Peña noted that the round scad fry also have "very high survival" compared to other marine fish being grown at SEAFDEC/AQD, reaching as much as 20% survival 25 days after they hatch.

Meanwhile, the SEAFDEC/AQD team will continue to collect broodstock from the wild for more experimental runs that will also cover studying the fish's larval development, reproductive development, feeding habits, and the formulation of hatchery, nursery, and grow-out procedures.

"We hope our attempts to grow galunggong will proceed quickly. We are excited to roll out the technology and promote the culture of galunggong so prices may become more affordable as farms can surely augment the catch from the wild," Baliao added.

SEAFDEC/AQD deputy chief Dr. Sayaka Ito also noted that round scad is a potential export product for the Philippines as it is now being imported by Japan as otsumami, a kind of snack or finger food.

The research on round scad is under an umbrella program at SEAFDEC/AQD that aims to develop aquaculture technologies on new aquatic species that also includes kawakawa (mackerel tuna) and flathead lobster. The main goal of the research program is to close the life cycle of these species in captivity and to develop production techniques for hatchery, nursery, and grow-out.

**News provided by:**

Southeast Asian Fisheries Development Center, Aquaculture Department (SEAFDEC/AQD)

SEAFDEC is a regional treaty organisation, with 11 member countries, and is tasked with promoting sustainable fisheries and aquaculture in Southeast Asia. Its Aquaculture Department (AQD) is based in Iloilo, Philippines.

# Free online aquaculture courses

Five free online aquaculture courses are now available on the platform OpenLearn Create. The courses are outputs of the EU GAIN project (Green Aquaculture Intensification in Europe). The courses are:

- Introduction to the GAIN project and courses - developed by Ca' Foscari University of Venice.
- Sustainability of aquaculture products - developed by the University of Stirling.
- Sustainable Aquafeeds - developed by SPAROS.
- Valorisation of aquaculture wastes: An approach to the circular economy - developed by CSIC with contributions from ANFACO-CECOPESCA, Salten Havbrukspark and Waister AS.
- Precision aquaculture.

The courses are self-paced and intended for people actively engaged withaquaculture production, seafood value chains, certification schemes and policy organisations, but are also of interest to students and academic audiences.

To sign up for courses visit the OpenLearn Create website:

https://www.open.edu/openlearncreate/course/index.php?categoryid=502

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# "Fishing for Life 2022"

**South and South-East Asian Conference on Small Scale Fisheries and Aquaculture, 19-20 September 2022 at the Ocean University of Sri Lanka**

In celebrating the Year of Artisanal Fisheries and Aquaculture-2022, as declared by the United Nations, Sri Lanka Forum for Small Scale Fisheries (SLFSSF) is organising a conference under the theme "Fishing for Life", which will be an international conference covering the South and South-East Asian region. This will be organised in partnership with Sri Lanka Association for Fisheries and Aquatic Resources (SLAFAR) and the Ocean University of Sri Lanka (OCUSL). The event will be held during 19-20 September 2022, in virtual format due to the Covid-19 pandemic situation.

The conference aims to bring to light, the important contribution made by artisanal and small scale fisheries to food supply, nutrition, employment, poverty alleviation and wellbeing of the people in the region, while at the same time, unearthing issues of governance failures, including social injustices emerging from the process of blue economic development. It is expected that the conference will yield an outcome having implications for effective management measures to be adopted, to secure sustainable artisanal and small-scale fisheries and aquaculture sub-sectors in the region.The organisers decided to invite you to share the conference flyer and information among your networks and empower the participation.

Conference themes include: Sustainable use of resources; Impact of policy, technology, trade and development on SSF; Poverty, rights and rural aquaculture; Gender issues in SSF; Governance and management of SSF; and Implementation of SSF guidelines.

The conference is organised with the SLFSSF in partnership with the Sri Lankan Association of Fisheries and Aquatic Resources, and the Oceans University of Sri Lanka.

To register or obtain further information, please visit the SLFSSF website at:

https://slfssf.org/

# Reported Aquatic Animal Diseases in the Asia-Pacific Region during the Third Quarter of 2021

**Report by E.M. Leaño**

*Senior Programme Officer, Aquatic Animal Health, NACA*

With the implementation of the new aquatic animal disease reporting in the Asia Pacific region from January 2021, and in lieu of the published QAAD Reports (last issue published was 4th quarter of 2020), NACA is publishing reported aquatic animal diseases submitted by countries in the Asia-Pacific region. This report covers the third quarter of 2021. The following diseases were reported:

## Finfish Diseases

- Infection with *Aphanomyces invadans* (EUS): India in green chromide (Etroplus suratensis).
- Viral encephalopathy and retinopathy (VER): Australia in farmed barramundi (*Lates calcarifer*) and giant grouper (*Ephinephelus lanceolatus*), and wild orange spotted grouper (*E. coioides*); and New Caledonia (affected species not specified).
- Infection with red seabream iridovirus (RSIV): India in molly (*Poecilia* sp.), dwarf gourami (*Trichogaster lalius*), three-spot gourami (*T. trichopterus*), and angelfish (*Pterophyllum* sp.).
- Enteric septicaemia of catfish: Vietnam in pangas catfish (*Pangasianodon hypophthalmus*)
- Carp edema virus disease (CEV): New Caledonia (affected species not specified).
- Infection with Tilapia lake virus (TILV): India in tilapia (*Oreochromis niloticus*); and, Philippines in tilapia (juveniles and adults).

## Molluscan Diseases

- Infection with abalone herpesvirus: Australia in wild green lip abalone (*Haliotis laevigata*) and black lip abalone ( *H. rubra*).

## Crustacean Diseases

- Infection with white spot syndrome virus (WSSV): India in whiteleg shrimp (*Penaeus vannamei*); Philippines in PLs and juveniles of tiger shrimp (*Penaeus monodon*) and whiteleg shrimp (*P. vannamei*), and broodstock of mudcrab (*Scylla serrata*); and, Vietnam in *P. monodon* and *P. vannamei*.
- Infection with infectious hypodermal and haematopoietic necrosis virus (IHHNV): Philippines in tiger shrimp (*P. monodon*; PL), whiteleg shrimp (*P. vannamei*), and Indian prawn (*P. indicus*).
- Acute hepatopancreatic necrosis disease (AHPND): Chinese Taipei in tiger shrimp (*P. monodon*); Philippines in PLs and juveniles of whiteleg shrimp (*P. vannamei*); and, Vietnam in *P. vannamei* and *P. monodon*.
- Infection with Infectious Myonecrosis Virus (IMNV): India in whiteleg shrimp (*P. vannamei*).
- Hepatopancreatic microsporidiosis caused by *Enterocytozoon hepatopenaei* (EHP): India in whiteleg shrimp (*P. vannamei*); and, Philippines in PLs and juveniles of tiger shrimp (*P. monodon*), and juveniles of whiteleg shrimp (*P. vannamei*) and Indian prawn (*P. indicus*).
- Infection with decapod iridescent virus 1 (DIV-1): Chinese Taipei in freshwater crayfish (*Cherax quadricarinatus*).

## Amphibian Diseases

- Infection with Ranavirus species: Chinese Taipei bullfrog (*Lithobates catesbeianus*).
- Infection with *Batrachochytrium dendrobatidis*: New Caledonia (affected species not specified).

## Other Diseases

- Bangladesh reported Infection with *Staphylococcus* sp. in gulsha (*Mystus cavasius*) and Infection with *Aeromonas* spp. in stinging catfish (*Heteropnuestes fossilis*) and koi (*Cyrpinus carpio*), while Hong Kong SAR reported Infection with Infectious Spleen and Kidney Necrosis Virus (ISKVN) in Sabah hybrid grouper (*E. fuscoguttatus* x *E. lanceolatus*).

## Historical reports

Previous / historical QAAD reports are available for download from the NACA website at:

https://enaca.org/?id=8

# Shrimp 2022: INFOFISH World Shrimp Trade Conference and Exhibition

## 8-10 June, 2022

World aquaculture production attained an all-time record high of 114.5 million metric tonnes (MMT) in live weight during 2018 with a total farmgate sale value of USD 263.6 billion, where Asia contributed significantly (66%). Three major shrimp species viz. whiteleg shrimp (52.9 MMT), black tiger shrimp (8 MMT) and giant river prawn (2.5 MMT) constituted 67.54% of the global crustacean production (93.87 MMT) (SOFIA 2020). Despite lower demand from the hotel, restaurant and catering sector due to COVID-19, the retail demand for fresh and frozen shrimp increased worldwide. Industry analysts suggested that shrimp production moderately increased in Ecuador and Indonesia but reduced in India, Thailand, Malaysia, and Bangladesh compared to 2019. Higher production drops were observed in China than other Asian countries. (GLOBEFISH 1st Issue 2021).

COVID-19 had an unprecedented impact on all nodes of the value chains, while simultaneously being the catalyst for some far-reaching changes that in many cases are likely to be permanent. At the same time, products, logistics, sales channels, marketing strategies and consumer behaviour have all been fundamentally affected by the economic and social turmoil that has taken place since the initial lockdowns in early 2020. Although these changes have been accompanied by heavy financial losses in many cases, they have also created a more resilient seafood sector and extensive new market opportunities. Newly developed distribution channels, products oriented towards home consumption, and operational adaptations are likely to remain key features of the industry, increasing the ability of businesses to respond to future crises of a similar nature and opening new routes for innovation. A similar tight supply is expected in 2021 for several key species. (FAO Food Outlook, June 2021).

The INFOFISH WORLD SHRIMP TRADE CONFERENCE AND EXHIBITION, the 6th Global Shrimp Conference of its kind, will be held virtually for the first time ever considering the uncertainty posed by the COVID-19 pandemic. SHRIMP 2019 Bangkok attracted more than 200 delegates from 26 countries as well as exhibitors. SHRIMP 2022 has been transformed virtually with the theme Recovery through resilience and innovation although you will experience the same interactive sessions, networking opportunities and showcase the shrimp brands as well.

SHRIMP 2022 will bring together all the key stakeholders (Broodstock Suppliers, Farmers, Feedmillers, Feed additive manufacturers, Health Management Product Suppliers, Disease Diagnostic Service Providers, Equipment Suppliers, Processors, Packaging Solution Providers, Traders, Exporters & Importers, Investors, Innovators, Academia, Policy Makers, Media, IGOs, NGOs, Certification Bodies, and Competent Authorities etc. around the globe throughout shrimp value chains.

Don't miss this opportunity to be part of the biggest shrimp conference, updated on the major shrimp markets, innovative solutions, explore one-to-one business contacts, showcase brands and also to learn about the recovery pathways towards a resilient and sustainable industry.

For more information or to register, please visit the conference website at:

https://shrimp.infofish.org/

# Tuskfish CMS v2.0.3 available

A new version of the software that powers the NACA website, Tuskfish CMS, is available for free download.

### New features

- PHP 8.1 compatibility.
- Support for embedding external Youtube videos via link (you can change the template to support other video services if you want).
- Added sitemap generation function to Settings.
- Added a 'minimum views' preference (before displaying the view counter).
- Added live character counter to meta description field, so you can see when you are approaching Google's 160 character soft limit.

### Maintenance

- Updated templates to Bootstrap 5 compatibility.
- Updated third-party libraries to contemporary stable versions.
- Fixed occasional 'database locked' error under high load conditions.

Tuskfish CMS is open source software published under the GNU General Public License V2. Get it from:

https://github.com/crushdepth/tuskfish2/archive/refs/tags/2.0.3.zip

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