The highlights of the AFS during the reporting period were: (i) organisation of the 12th Asian Fisheries and Aquaculture Forum (12AFAF) in Iloilo, the Philippines which was well attended by scientists from the region, as well as representatives of some regional/international organisations; (ii) revitalisation of one of the networks of AFS – the Asian Fisheries Social Scientists Research Network (AFSSRN), which was dormant for some time; (iii) Joint General Assembly of the Asian Fisheries Social Science Research Network (AFSSRN) and Gender in Aquaculture and Fisheries Section (GAFS); and (iv) election of 13th Council (2019-2022) with Prof. Alice Joan Ferrer as the Chair. Wish the new Council all the Best.

Gender issues not only in agriculture, but also in fisheries and aquaculture have been receiving increased attention in recent times at national, regional and global level and AFS has been playing a major role. Gender in Aquaculture and Fisheries Section of AFS (GAFS) has been going strong under the leadership of Dr Meryl J William, the Founder and Chair of the GAFS. It is heartening to know that the Australian Council for International Agriculture Research (ACIAR) has announced a new leadership program targeting female agriculture researchers in the Indo-Pacific and aptly named the Fellowship Program as “Meryl Williams Fellowship Program”, in recognition of her immense contribution to the gender issues.

I am sure, Members of AFS will join me in congratulating Dr I-Chiu Liao, former President of AFS for receiving the coveted 24th Nikkei Asia Prize in May 2019 in recognition of his outstanding contributions to Asian fisheries and aquaculture development. All these activities have been presented in detail in this issue of newsletter. Suggestions for improvement of content of the newsletter are welcome.

M. V. Gupta
Editor
Dear Members of the Asian Fisheries Society,

Greetings!

I am both humbled and honored to be given the opportunity to give this message to you all. The AFS Newsletter is one important channel by which the Asian Fisheries Society (AFS) can reach its members and to provide information on what is going on in the Society.

AFS is a prestigious scientific society founded in 1984 by seven scientists in Southeast Asia. It has grown and expanded through the years and its impact felt. After 35 years, the AFS remains a strong and respected organization of fishery and aquaculture scientists, researchers, technicians, and other stakeholders, not only in Asia-Pacific region, but all over the world. The AFS journal, *Asian Fisheries Science*, first published in 1987 remains a highly demanded and respected journal after 32 years. For years, the AFS has provided venues through the triennial Asian Fisheries and Aquaculture Forum (AFAF), International Symposium for Aquaculture and Fisheries Education (ISAFE), and International Symposium on Cage Aquaculture in Asia (CAA), where recent trends and on-going research and technology in the region are shared and discussed. Similarly, the Gender in Aquaculture and Fisheries Section of AFS (formed in January 2017) through the Gender in Aquaculture and Fisheries Symposium (GAF) and many other activities has provided venues where gender issues in fisheries and aquaculture are discussed and addressed. The Fish Health Section of AFS (formed in January 1989) has provided a venue through the Symposium on Diseases in Asian Aquaculture (DAA) for knowledge on fish health management to be shared and discussed towards contributing to a sustainable aquaculture in the region. The Asian Fisheries and Social Science Research Network (AFSSRN) has recently been revived and slowly but definitely will be back better in the next years.

For all these AFS achievements, we give thanks to all AFS members for the support, to all the past AFS Presidents, other officers and Councilors for nurturing AFS to what it is today, to the AFS Editorial Board for the commitment and hard work, and to all the affiliates, networks, and friends of AFS for the support. However, AFS has more work to do. Support of AFS members is needed more than ever.

AFS now exists in more challenging times. There are new and bigger challenges in the fishery and aquaculture in the region. There are more professional organizations founded and more fisheries and aquaculture fora being organized. With your support, AFS can face these challenges and maintain its relevance and vital role in the fishery and aquaculture in the Asia-Pacific Region.

I request for your continued and stronger support to AFS. In the next three years, I hope AFS will be bigger and stronger with more Permanent Active Members, more organizational members, and more members in the three sections --- AFSSRN, GAFS, and Fish Health, and in the different branches ---- Taiwan, India, and Japan. We hope to bring in more capacity building programs to the members in the next three years. We look forward to see you in the AFS events: in 2020 in DAA11; in 2021 in ISAFE4 in Taiwan, CAA8 in China, and GAFS8; and, in 2022 for the 13AFAF in Taiwan.

Thank you.

ALICE JOAN DE LA GENTE FERRER
President 13th AFS Council
Since the last AFS Newsletter, members of GAFS have been busy in events associated with the Asian Fisheries Society’s 12th Asian Fisheries and Aquaculture Forum (12AFAF), finalising reports from our 2018 GAF7 Conference, preparing funding proposals and other activities to further the goals of GAFS.

We are delighted to congratulate GAFS ExeComm member, Prof Alice J Ferrer, on her election as new President of the Asian Fisheries Society. Prof Ferrer also took a leading role in organising the successful 12AFAF.

**GAFS AT 12AFAF**

**The scientific programme**

Many members of GAFS attended the 12th Asian Fisheries and Aquaculture Forum (12AFAF) in Iloilo in April and presented in, chaired and organised several sessions. In particular, the Socio-Economics, Gender, Capacity Building and Livelihood session, run over 4 time slots, with 30 oral and poster presentations was very well attended and lively. Prof. Gay D. Defiesta led the organising team for the session and presented the summary in the final Forum Plenary.

As a special event, Dr Arlene Nietes Satapronvanit and the USAID Oceans and Fisheries Partnership team presented “Strengthening Regional Fisheries Management: Sharing Program Experiences and Special Launch of Tools for Collaborative, Holistic, and Gender-Inclusive Fisheries Management.” The Tools launched included “Assessing Fisheries in a New Era: Extended Guidance for Rapid Appraisals of Fisheries Management Systems,” which contains the gender tools launched in advance at GAF7, and also presented at 12AFAF as part of the whole rapid appraisal package.

Also on gender, the National Network on Women in Fisheries in the Philippines, Inc (WINFISH) held a Special Session called “Engendering Tuna Fisheries Value Chain of General Santos City and Sarangani Bay Area.” This Session presented exciting developments by WINFISH and grassroots women’s groups that have built on and grown out of work done with USAID Oceans.

**Joint General Assembly of the Asian Fisheries Social Science Research Network (AFSSRN) and Gender in Aquaculture and Fisheries Section (GAFS)**

Taking advantage of the members of AFSSRN and GAFS participating in 12AFAF, a Joint General Assembly was held, chaired by Prof Alice Ferrer and Dr Meryl Williams, to discuss potential collaborations and lessons learned from the respective bodies of AFS. The Assembly was very productive. It covered the background to the formation of each body, their future plans, and scoped potential forms of collaboration before arriving at the following next steps:

- **AFSSRN to conduct an online consultation to arrive at one or a small number of focus topics** for activities [June to August 2019]
- **Prof Ferrer and Dr Pomeroy to undertake a scan of social science capacity,** including the countries, institutes active, and the topics and disciplines currently active in Asia, and being applied for Asian fisheries and aquaculture [May 2019 to April 2020]
- **GAFS and AFSSRN ExeComms to consider running back to back conferences,** with some overlap [2 months to decide]
- **AFSSRN and GAFS to recommend to AFS that 13AFAF include plenary time for all the sections/conferences to present on outcomes of their recent events.**
RELEASE OF FIRST GAFS NEWSLETTER

The Newsletter is launched at 12AFAF by President Dr J.K. Jena, shown here with a copy being presented by Dr Meryl Williams.

At 12AFAF, the GAF Section released its first annual newsletter. The newsletter provides an overview of exciting gender events that took place in 2018 as well as those coming up in 2019 and beyond. It features new research and projects on gender in fisheries, a blog that examines a range of perspectives and methods employed by researchers and practitioners who participated in GAF7 to enable women’s empowerment and gender equality. It also has information on our GAF Section Executive Committee.

http://www.genderaquafish.org/gender-section-e-newsletter/

We thank our Newsletter Editor, GAFS ExeComm member Suren-dran Rajaratnam for producing the Newsletter, and WorldFish for providing production services. We recommend you to read it! We were also delighted that the Newsletter was officially launched at 12AFAF by the then President Dr J.K. Jena.

GAF7 FOLLOW-UP

Our GAF7 Conference in October last year – “Expanding the Horizons” (http://www.genderaquafish.org/gaf7-2018-bangkok/) has produced many products so far, including several publications. More are still in train. First, the comprehensive GAF7 report, covering all presentations, Special Workshops and special events, will be online shortly. It has been written by a willing team and is now being finally checked by all the presenters. Second, presenters were given the opportunity to submit papers to the peer reviewed journal Gender, Technology and Development, which will publish a special section in 2020 containing papers from GAF7 and related. Third, a number of the presentations are publishing peer reviewed papers in other journals. In total, the outputs of GAF7 will leave a substantial footprint in the scientific and other literature. As far as possible, GAFS is tracking the outputs.
GAFS ExeComm meeting

The Executive Committee met by teleconference in February, focusing on the Action Plan of the Section. Senior members have been involved in and some are leading a number of high profile gender and fisheries activities, including the efforts to find sex-disaggregated data for the Illuminating Hidden Harvests project (FAO, Duke University, WorldFish) on small scale fisheries, and the FAO forthcoming International Symposium on Fisheries Sustainability on “Strengthening the Science-Policy Nexus.” At the invitation of a donor, senior members of ExeComm have been preparing a proposal for project funding and expect to be in a position to make an announcement in the near future.

GAFS SOCIAL MEDIA

GAFS continues its strong internet and social media presence on the internet through its website (www.genderaquafish.org) and its FaceBook and Twitter feeds. Key stories are compiled and relayed to GAFS members in the monthly news digest by email, called “Keeping up with GAF”, by our Ms Sijitha Mary in the Secretariat.

Contributed by: Meryl Williams, Nikita Gopal, Kafayat Fakoya

Website: https://www.genderaquafish.org/; https://www.genderequality.genderaquafish.org/
Twitter: @Genderaquafish https://twitter.com/Genderaquafish

FELLOWSHIPS IN GENDER RESEARCH

ACIAR keeping in line with a commitment made in their 10-Year Strategy and Gender Equity Policy and Strategy, announced a new leadership program targeting female agriculture researchers in the Indo-Pacific.

The Fellowship is named as “Meryl Williams Fellowship Program” in honour of the contribution of Dr Meryl Williams who needs no introduction, especially those involved in gender issues in fisheries and aquaculture. For the few who may not be well acquainted, Dr Williams is an eminent Australian agricultural research leader and was Director General of the WorldFish Centre, one of the CGIAR Centres, from 1994 – 2004. From 2007-10 she chaired the ACIAR Commission for International Agricultural Research. Dr Williams founded and is currently the Chair of the Gender in Aquaculture and Fisheries Section of the Asian Fisheries Society.

Applications for the first cohort of the Meryl Williams Fellowship are currently being invited from women in ACIAR Partner organisations in Fiji, Papua New Guinea, Laos, Cambodia, Indonesia and Vietnam. The first cohort of 20 women will start the fellowship in Australia in late-January 2020. Other countries are expected to be targeted in subsequent years.


Source: Jayne Curnow, ACIAR

We thank Dr A.K. Singh for writing the profile, and Dr Roel Bosma for his careful peer review.

Striped catfish harvest in India. Note the women and men buyers in the background. Photo: A.K. Singh.

The profile reveals many interesting facts about this amazing aquaculture species. Did you know the following about striped catfish?

- Striped catfish (also known as river catfish and sutchi) is one of the fastest growing species used in aquaculture.
- In the wild, its natural distribution was restricted to a small geographical area in Vietnam, Thailand, Lao, PDR and Cambodia in the Mekong and Phraya River basins and wild populations are listed as Endangered on the IUCN Red List.
- In recent decades, it has been introduced for aquaculture to Bangladesh, India, China, Indonesia, Myanmar, Nepal, Pakistan and many more countries.
- Striped catfish is an omnivore with an interesting biology. It has both well-developed gills and a modified swim bladder which functions as an air-breathing organ and thus they are obligate air breathers.
- With global production of about 2 million tons annually, striped catfish is one of the three top consumed freshwater fish types, having extensive supply chains and markets covering over 130 countries in US, Europe and Asia. In Vietnam, most production is exported, but in other producing countries striped catfish is consumed on the domestic market. The striped catfish from Vietnam has become an affordable “white fish” in the Western world, and it is acceptable on the huge global market for cheap white fish.
Three farming systems dominate production: ponds, cages and net pens. Striped catfish are mostly produced at a large-scale from large ponds having depth over 2 m. Production rates are very variable depending on whether farming technology is extensive, semi-intensive or intensive, and the location of farms and inputs used. The costs of feed dominate the variable costs of production.

Striped catfish farming lacks a continuous research agency or industry led breed improvement program such as occurs for other major aquaculture species. Vietnam is starting on genetic improvement programmes.

Sustainable farming of striped catfish depends on good management of in-pond farming waste.

Under climate change, environmental parameters most likely to affect striped catfish are increased temperature variation, precipitation, salt-water intrusion and sea level rise.

**Updated information:** In February, we updated the status of stocks of the six tunas covered in the species pages (skipjack, yellowfin, bigeye, albacore, longtail and Pacific Bluefin tuna). See the species profiles at: http://www.asiapacfish.org/index.php/species. Our handy guide to users on where to find key information on tunas and tuna fisheries in the Western Central Pacific and Indian Oceans was updated and can be consulted at: http://www.asiapacfish.org/index.php/item/24-tracking-down-expert-knowledge-on-oceanic-tunas.

**Plans for new species to add:** We are presently planning to add more species in a collaboration with the Central Marine Fisheries Research Institute of India.

**Social media:** The second activity has been our social media outreach to a growing number of followers. AFS members can keep abreast of Asia-Pacific fisheries and aquaculture news by liking our Facebook page (https://www.facebook.com/asiapacificfishwatch), and following us on Twitter (@Asiapacfish, https://twitter.com/Asiapacfish).

******************
Meryl J Williams, interim Director AsiaPacific-FishWatch http://asiapacfish.org/
We welcome suggestions and contributions for AsiaPacific-FishWatch. Please contact: asiapacfish@gmail.com.
AFSIB has initiated a funded project ‘Marine Fisheries Improvement Project’ to be operated along the west coast and south east coasts of India, in particular at major marine fishing centres in the States of Andhra Pradesh, Tamil Nadu, Kerala, Karnataka, Goa, Maharashtra and Gujarat and also Union Territories of Puducherry and Daman and Diu. This project aims at mainly sensitizing the coastal fisher folk and other stake holders on the need to follow the guidelines and regulations set by the respective State Governments for ensuring sustainability of the fishery resources through responsible and informed exploitation practices. It also aims at sensitizing the fishers against illegal and destructive fishing activities.

Thirty Professors and students led by Chair Prof. Jiang-Shiou Hwang represented AFS Taiwan branch at 12AFAF held in the Philippines. The 13th AFAF will be hosted by National Cheng Kung University, Taiwan. We look forward to seeing you all in 2022.

Dr. Han-Jia Lin, Professor of National Taiwan Ocean University, an expert in biochemistry and biotechnology of aquatic pathogen control was elected as the incoming Chair of AFS Taiwan branch. We thank the great contribution of the current Chair, Prof. Jiang-Shiou Hwang during his term of service.
Former AFS president, Dr. I-Chiu Liao was awarded the 24th Nikkei Asia Prize in recognition of his outstanding contributions to Asian fisheries and aquaculture development. The ceremony was held in Tokyo on May 29, 2019.

Due to globalization, the progression of technology is growing quickly. The demand of international aquaculture platform in Taiwan has become critical and necessary. National Taiwan Ocean University (NTOU) made outstanding research achievements in aquaculture, biotechnology and engineering science. Many talented professionals are joining NTOU Global Research and Industry Alliance (GLORIA).

NTOU GLORIA aims to integrate aquaculture industry and connects the resources between the industries and research agencies in Taiwan and Asian countries. NTOU GLORIA is now recruiting new members. Through the customized events and activities, NTOU GLORIA members can link with each other and increase their business cooperation opportunities.

More information can be found on the NTOU GLORIA website (http://www.gloria.ntou.edu.tw/)

Contributed by Professor Dr. Han-Jia Lin
The FHS-AFS is firing up with the preparations for the “11th Symposium on Diseases in Asian Aquaculture (DAA11)” to be held in Kuching, Malaysia in 2020. What started in Bali, Indonesia in 1990 as a humble gathering, DAA has evolved as the biggest aquatic animal event in Asia. To celebrate 30 years of the symposium, DAA11 is coming to Malaysia where the FHS-AFS was founded in 1989. We hope this milestone will not only attract active members of the Society and other fish health workers from around the globe, but also the founding fathers of FHS-AFS for a well-deserved reunion.

With the objective of promoting effective interaction and cooperation among persons involved in living aquatic resources social science research, AFS is reactivating the Asian Fisheries Social Sciences Research Network (AFSSRN) section of AFS. Prof Alice Joan G Ferrer of University of Philippines Visayas has kindly consented to coordinate the network.

Prof Alice Ferrer and Dr Meryl Williams chaired a joint General Assembly of AFSSRN and GAFS during the 12AFAF held in Iloilo, the Philippines to discuss potential collaborations and lessons learned from each of the networks. This was attended by Members of both AFSSRN and GAFS. The Assembly was very productive. It covered the background to the formation of each body, their future plans, and scoped potential forms of collaboration before arriving at the following next steps:

- AFSSRN to conduct an online consultation to arrive at one or a small number of focus topics for activities [June to August 2019]
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- AFSSRN and GAFS to recommend to AFS that 13AFAF include plenary time for all the sections/conferences to present on outcomes of their recent events.

Members of AFS who are interested in membership of AFSSRN can enrol themselves in the network by sending a message of interest to Executive Secretary of AFS at info@asianfisheriessociety.org

Thanks to Dr Meryl Williams for providing information
The 52nd Council meeting was held on 8 April 2019 in the Philippines. Dr. J.K Jena and Prof. Dr. Aziz Arshad signed the Supplemental Agreement between Universiti Putra Malaysia and Asian Fisheries Society. The extension of this agreement will be from 18th November 2019 to 17th November 2023.

52nd Council Meeting at Hotel Diversion 21, Iloilo City, Philippines.

Signing of Supplemental Agreement between Universiti Putra Malaysia and Asian Fisheries Society
Membership Account

- Reminder was sent through email to AFS members who did not renew their membership fees. All the members were advised to make the payment using Paypal or Telegraphic Transfer (TT).

  The username and password were remain as below:
  Username: ID Number      password: afs@123

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Working Committee
13th Council (2019-2022)

<table>
<thead>
<tr>
<th>Committee</th>
<th>Chair</th>
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<tr>
<td>1) Executive Committee</td>
<td>Dr. Alice Joan Ferrer</td>
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<tr>
<td>Vice President</td>
<td>Prof. Han-Ching Wang</td>
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<td>Immediate Past President</td>
<td>Dr. J.K.Jena</td>
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<td>Treasurer</td>
<td>Dr. Nur Leena Wong Wai Sin</td>
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<td>Secretary</td>
<td>Assoc. Prof. Dr. Murni Marlina Abd Karim</td>
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<td>2) Finance Committee</td>
<td>Dr. Nur Leena Wong Wai Sin</td>
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<td>Chair</td>
<td>Prof. Atsushi Hagiwara</td>
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<td>Members</td>
<td>Dr. A. Gopalakrishnan</td>
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<td>Assoc. Prof. Dr. Murni Marlina Abd Karim</td>
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<td>3) Membership Committee</td>
<td>Dr. Wilfredo Campos</td>
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<td>4) Publication Committee</td>
<td>Dr. A. Gopalakrishnan</td>
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<td>5) Forum and Conference Committee</td>
<td>Prof. Han-Ching Wang</td>
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<td>Chair</td>
<td>Prof. Jin long Yang</td>
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<td>Members</td>
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<td>Dr. J.K.Jena</td>
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<td>Dr. Umi Muawanah</td>
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<td>6) Workshop and Training Committee</td>
<td>Prof. Neil Loneragan</td>
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<td>Dr.A.Gopalakrishnan</td>
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<td>Prof. Liping Liu</td>
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Asian Fisheries Society (AFS) Awards

The 12th Council Awards were given to the individuals and institutions as appreciation for their support to the society. The awards and the recipients are as follows:

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<thead>
<tr>
<th>No.</th>
<th>Award category</th>
<th>Recipients</th>
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<tr>
<td>1.</td>
<td>Honorary Life Member</td>
<td>Dr. Derek Staples</td>
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<td>2.</td>
<td>Gold Medal Award</td>
<td>Dr. Sirawut Klinbunga</td>
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<td>Prof. Dr. Aziz Arshad</td>
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<td>Prof. Dr. Abol Munafi Ambok Bolong</td>
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<td>Prof. Dr. Shoulin Huang</td>
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<td>AFS Taiwan Branch</td>
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<td>AFS India Branch</td>
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<td>3.</td>
<td>Merit Awards</td>
<td>Prof. Dr. Chen Huei Huang</td>
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<td>Dr. Gopal Krishna</td>
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<td>Dr. Arlene Nites Satapornvanit</td>
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<td>4.</td>
<td>Certificate of Appreciation</td>
<td>All AFS 12th Councillors</td>
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<td>Dr. J.K. Jena - (India)</td>
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<td>Prof. Shouling Huang - (China)</td>
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<td>Dr. Alice Joan Ferrer - (Philippines)</td>
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<td>Prof. Abol Munafi - (Malaysia)</td>
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<td>Prof. Aziz Arshad - (Malaysia)</td>
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<td>Prof. Atushi Hagiiwara - (Japan)</td>
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<td>Prof. Chen-Huei Huang - (Taiwan)</td>
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<td>Dr. Sirawut Klinbunga - (Thailand)</td>
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<td>Dr. Thaithaworn Lirdwitayaprasit - (Thailand)</td>
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<td>Dr. A. Gopalakrishnan – Councilor (India)</td>
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<td>Dr. Kathy Han-Ching Wang - Councilor (Taiwan)</td>
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<td>Dr. Ilona Stobutzki - Councilor (Australia)</td>
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<td>Prof. Marieta B. Sumagaysay - Councilor (Philippines)</td>
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<td>Dr. Nicholas Paul - Councilor (Australia)</td>
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<td>Prof. Shunsuke Koshio – Councilor (Japan)</td>
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<td>5.</td>
<td>Organisers</td>
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<td>6.</td>
<td>Special Sponsor</td>
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<td>WorldFish (CGIAR Program)</td>
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<td>9.</td>
<td>Silver Sponsor</td>
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<td>10.</td>
<td>Partners</td>
<td>University of Philippines Visayas</td>
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<td>11.</td>
<td>Kanazawa Research Fellowship</td>
<td>Ms. Nur Jasmin</td>
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<td>Ms. Manisha Gupta</td>
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<td>12.</td>
<td>Yang Yi Young Scientist Fellowship</td>
<td>Ms. Nattida Boonpeng</td>
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<td>Mr. Mojibar Rahman Ripon</td>
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The 13th General Assembly was held on 10th April 2019, Wednesday, in Iloilo Convention Centre, Iloilo City, Philippines.

AFS members during 13th General Assembly

Dr. Derek Staples Honorary Life Members receiving Honorary Life Member award
The 53\textsuperscript{rd} Council meeting was held on 10\textsuperscript{th} April 2019, Wednesday, in Iloilo Convention Centre, Iloilo City, Philippines attended by 11 Councillors members.
Thailand leads Asia-Pacific in improving fishers lives

Thailand has become the first country in the Asia-Pacific region to ratify an international treaty designed to bolster the living and working conditions onboard commercial fishing vessels. Thailand Labour Minister, Police General Adul Sangsingkeo, presented the signed Work in Fishing Convention No 188, 2007 (WIFC) to Guy Ryder, director-general of the International Labour Organisation (ILO) in Geneva, on behalf of the Thailand government. The WIFC sets out binding requirements relating to work on board fishing vessels, including occupational health and safety, medical care at sea and ashore, rest periods, written work agreements, and social security protection. The WIFC also sets the minimum age of workers onboard fishing boats at 16, though an exemption is possible for 15-year-olds engaged in fishing industry vocational training. All those working on fishing boats must also poses valid medical certificates and be examined at regular intervals.


Tuvalu dismisses citizenship for fisheries idea

Tuvalu’s leader Enele Sopoaga has lambasted a former Australian leader’s suggestion to swap Australian citizenship for maritime resources. Mr Rudd wrote in a recent essay that Australia should offer citizenship to residents of the small Pacific nations of Tuvalu, Kiribati and Nauru in exchange for control of their seas, Exclusive Economic Zones, and fisheries. Mr Sopoaga warned, in an interview with the ABC, it amounted to neo colonialism. He said Tuvalu was a fully independent country and there was no way he was going to compromise its rights to fisheries resources. He said what was needed was urgent action on climate change. Mr Sopoaga has called for the establishment of a Pacific supra-state, along the lines of the European Union, that is “based on cooperation and integration, perhaps into some sort of United States of the Pacific”.

Source: https://www.radionz.co.nz/international/pacific-news/382768/tuvalu-dismisses-citizenship-for-fisheries-idea

Vietnam Fisheries industry sets export target of $10 billion

The Government of Vietnam has set an export target of US$ 10 billion by 2010, according to the Việt Nam Association of Seafood Exporters and Producers (Vasep). Vasep Chairman Ngô Văn Ích said exports last year had been worth $9 billion, with a year-on-year increase of 6%, and met the target. Tra fish exports had surged 26% to $2.26 billion, with increased buying by the US and China and the recovery of the EU market. But shrimp exports were down by 8% to $3.6 billion due to a drop in demand in a number of markets such as the US and Canada and higher production by competitors like India, Indonesia and Thailand, resulting in a 15-20% fall in prices. Last year had also been difficult for the industry after the EC imposed a yellow card warning on Vietnamese seafood for failing to make progress in fighting illegal, unreported and unregulated (IUU) fishing. “Exports increased by just 6% last year, rather low considering the sector’s capacity. The sector can absolutely achieve growth of 10% and even 12% a year if it is developed in the right direction. ”With its potential and preferential tariffs from free trade agreements, including the Comprehensive And Progressive Agreement for Trans-Pacific Partnership, the sector would achieve exports of $10 billion this year, he said. “In 2019 shrimp exports are expected to be better because the US Department of Commerce recently announced the final results of the 12th period of review (POR 12), lowering the anti-dumping tariff on shrimp imports from Việt Nam.” Trương Đình Hòe, Vasep’s General Secretary, said shrimp, tra fish and other seafood exports were expected to reach $4.2 billion, $2.3 billion and $3.5 billion this year.

Source: https://vietnamnews.vn/economy/505489/fisheries-industry-sets-export-target-of-10-billion
**India Sets Target of 20 Million Ton Fish Production**

India’s Finance Minister announced plans to launch a ‘Matsya Sampada Yojana’ aimed to turn India into a hotspot for fish and aquatic products through appropriate policy, marketing and infrastructure support. The government intends to promote aquaculture through easy access to credit. The government also intends to bring all fishermen under the ambit of all farmer welfare programmes and social security schemes with expanded coverage for accident insurance. The government has made it clear that it is committed towards ‘Blue Revolution’ to attain first place in the world in fish production. A separate Department has been constituted for integrated development of fisheries and a special fund has been created to develop infrastructure related to the fishing industry. The government has set a target to augment fish production to achieve its target of 15 million tonne by 2020 and raise it thereafter about 20 million tonnes by 2022-23.


**Why Japan Risking Condemnation to Restart Commercial Whaling**

Fishermen in the village of Taiji are counting the days until July, when they will be able to hunt large, fatty minke whales commercially for the first time in decades. The community, which faces the Pacific coast of central Japan, is still haunted by its moment in the international spotlight 10 years ago, when the documentary "The Cove" criticized its dolphin kills and attracted a flood of activists. Until now, Japan has been catching minkes only for "research purposes" under its scientific whaling program. But last December, the government announced its withdrawal from the International Whaling Commission, meaning whalers will no longer be subject to prohibitions on catching certain species. It will be open season in Japanese waters and the country’s exclusive economic zone. Abandoning a widely accepted international framework never looks good – particularly not when it relates to an issue as sensitive as whale conservation. So why did Tokyo stick its neck out to defend an industry that barely registers economically? Taiji, which has historically depended on whaling, is home to about 3,000 people. Cetaceans, including dolphins, accounted for roughly 20% of the village’s fishing volume in 2015. The villagers currently catch species that are not protected under IWC rules, such as pilot whales, using one medium-size vessel and numerous small boats. But there are only five medium-size whaling boats operating in all of Japan, along with one large vessel and three catcher boats that accompany it. The total whaling crew count is under 200, according to Japan’s Fisheries Agency. Even if those who cut up and process whales are included, very few Japanese livelihoods truly depend on whaling.

**Climate change affects 50% of livestock, crops and fisheries**

About 50% of livestock, fisheries, and crops are affected by climate change in the coastal and floodplain areas of Bangladesh, a recent study finds. Calling the Climate change impact “severe,” experts speaking at a workshop, said the coastal and floodplain areas of Bangladesh experience irregular rainfall and high salinity, which eventually affects livestock, fisheries, and crops. The study on climate resilient agriculture in coastal and floodplain regions, was done by Manusher Jonno Foundation. The Swedish International Development Cooperation Agency (Sida) funded the study.

In a Statement to the 14th Round of Informal Consultations of States Parties to the United Nations Fish Stocks Agreement (UNFSA) on 2 May 2019 at the United Nations, New York, the International Collective in Support of Fishworkers (ICSF) called on regional fisheries management organizations (RFMOs) to deal with the vulnerabilities of developing States. According to Article 24 of the UNFSA paragraph 2 (a), the Statement pointed out, in giving effect to the duty to cooperate in the establishment of conservation and management measures for straddling fish stocks and highly migratory fish stocks, States are to take into account the special requirement of developing States, in particular the vulnerability of developing States which are dependent on the exploitation of living marine resources, including for meeting the nutritional requirements of their populations. The Statement pointed out that this aspect is linked to the Sustainable Development Goal 1 to end poverty, and SDG 2 to end hunger, in particular, of fishing communities, including women and children in these communities. States and regional bodies should work together to ensure that the tenure rights of small-scale fishing communities are protected, as has been highlighted in the 2014 Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication in para 5.19, the Statement said. The Statement urged RFMOs to broaden their perspective on long-term conservation and sustainable use to recognize the importance of strengthening the social pillar of sustainable development to achieve their mandate. It called for the recognition of the human rights-based approach to complement the application of the precautionary approach to conservation and management.


IUU Fishing Index Helps Track Illegal Fishing

The IUU Fishing Index provides a measure of the degree to which states are exposed to, and effectively combat, illegal, unreported and unregulated (IUU) fishing. It provides an IUU fishing score for all coastal states of between 1 and 5 (1 being the best, and 5 the worst). The Index allows countries to be benchmarked against each other, and assessed for their vulnerability, prevalence and response to IUU fishing. The Index has been developed by Poseidon Aquatic Resource Management Ltd., a fisheries and aquaculture consultancy company working globally, and the Global Initiative Against Transnational Organized Crime, a Geneva-based NGO network of experts. Funding for the Index was provided by the Norwegian Ministry of Foreign Affairs. The IUU Fishing Index comprises a suite of 40 indicators, with each indicator related to both a ‘responsibility’ and a ‘type’. Coastal responsibilities relate to a state’s management of its exclusive economic zone. Flag responsibilities are things states should do to manage vessels they flag. Port responsibilities relate to control of fishing activity in ports. ‘General’ indicators are those not specific to coastal, flag or port state responsibilities. Types of indicators relate to vulnerability – the risk of exposure to IUU fishing, prevalence – known or suspected IUU fishing, and response – actions by a state to reduce IUU fishing. Data for the indicators are derived from both secondary sources and expert opinion. The Country Profiles page provides detailed data on all 152 coastal countries, with total country scores provided along with scores for all individual indicators and indicator groups. The profiles show the country’s rank compared to its region and ocean basin. China received the worst score out of 152 coastal states assessed worldwide. You can download PDFs of the country profiles from the webpage.

Source and for details visit: http://www.iuufishingindex.net/about
A 40-page “Summary for Policy Makers” of the forthcoming full report (expected to exceed 1,500 pages) on Global Assessment Report on Biodiversity and Ecosystem Services released on May 6, 2019 in Paris warns that the window is closing to safeguard biodiversity and a healthy planet. Based on a review of about 15,000 scientific and government sources and compiled by 145 expert authors from 50 countries, the global report is the first comprehensive look in 15 years at the state of the planet’s biodiversity. This report includes, for the first time, indigenous and local knowledge as well as scientific studies.

The authors say they found overwhelming evidence that human activities are behind nature’s decline. They ranked the major drivers of species decline as land conversion, including deforestation; overfishing; bush meat hunting and poaching; climate change; pollution; and invasive alien species. In parts of the ocean, little life remains but green slime. And 66 percent of the oceans, which cover most of our blue planet, have suffered significant human impacts. This includes more than 400 dead zones—where scant life can survive—that collectively would cover the state of Oregon or Wyoming.

The new report paints “an ominous picture” of the health of ecosystems rapidly deteriorating, said Sir Robert Watson, Chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), which conducted the global assessment. IPBES is often described as the equivalent of the Intergovernmental Panel for Climate Change for biodiversity and does scientific assessments on the status of the non-human life that makes up the Earth’s life-support system.

“We are eroding the very foundations of our economies, livelihoods, food security, health, and quality of life worldwide,” Watson said in a statement. Coral reefs and mangroves protect coastal areas from storms such as hurricanes. Wetlands reduce flooding by absorbing heavy rainfall. Yet each of these ecosystems has declined dramatically, with wetlands down to less than 15 percent of what they were 300 years ago and coral reefs facing a global bleaching crisis. Nearly 100 groups around the world have endorsed the goal of protecting half of the planet by 2050. Recently, 19 of the world’s leading scientists published a study to make a science-backed plan for an interim step that would protect 30 percent by 2030 under what’s called a Global Deal for Nature. The proposed protection does not mean “no go” areas, but rather areas protected from resource extraction and land conversion. Sustainable uses would be permitted in all but the most sensitive areas, the groups wrote.


Indonesia Fisheries Minister Vows to Destroy Illegal Fishing Boats

Indonesian border patrol sank 13 Vietnamese fishing boats in May 2019 – the first time it did so in the past eight months – as Maritime Affairs and Fisheries Minister Susi Pudjiastuti vows to continue her fight against illegal fishing. “We destroy these ships to stop illegal fishing on Indonesian waters. Our marine resources, our fish, should be enjoyed by our own people, not foreign fishermen,” Susi said on Saturday at a government event in Pontianak, West Kalimantan, as reported by Antara.

Twitter Ads info and privacy

The Vietnamese boats were part of a group of 51 fishing boats from Vietnam, Malaysia, China, the Philippines and Indonesia which were scheduled to go out to sea over the next two weeks. “This is a way of putting the fear of God into these illegal fishermen. We also continue to warn them through their ambassadors and their bosses,” Susi said. The seemingly extreme measure has helped Indonesia recover its fish stocks from 7.1 million tons in 2014 to 12.5 million tons in 2016, according to the Fisheries Ministry’s latest data. “Auctioning the catch from these illegal ships, that’s okay. But if the ships are auctioned off, they will be used to steal again. Then we have to capture them again. Do you want other countries to see us as a joke?” Susi said.

Source: https://jakartaglobe.id/context/stop-joking-around-fisheries-minister-vows-to-continue-blowing-up-illegal-fishing-boats
Cooperation among fishers can improve fish stock in coral reefs

According to a study published in Nature Communications, cooperation among competing fishers can boost fish stocks on coral reefs. The study analyzed the social relationships among competing fisheries, the species they collect, and the local reefs from which these species are extracted. The results suggest that even though they are considered business rivals, fishers communicate and cooperate in addressing local environmental issues, which can lead to improvements in both the quality and quantity of fish in their local reefs. In the end, this cooperation could translate into further economic gain and more sustainable business, explains Orou Gaoue, Assistant Professor of Ecology and evolutionary biology at the University of Tennessee, Knoxville, and co-author of the study. For the study, the team interviewed 648 fishers and gathered data on reef conditions across five coral reef fishing communities in Kenya. They found that in places where fishers communicated with their competitors about the fishing gear they use, locations for hunting, and fishing rules, there were more fish in the sea -- and of higher quality. "Relationships between people have important consequences for the long-term availability of the natural resources we depend on," Barnes says. "Although this study is on coral reefs," says Gaoue, "the results are also relevant for terrestrial ecosystems where, in the absence of cooperation, competition for non-timber forest products can quickly lead to depletion even when locals have detailed ecological knowledge of their environment."


Artificial Intelligence to Impact the Lives of Aqua Farmers in India

Identifying the exact cause of death in aquatic animals is extremely difficult. Most of the times it has to do with the quality of feed and the water in which they are cultivated. Aqua Connect, a Chennai-based start up company in India, is attempting to defy this trend by using technology to help aqua farmers boost their revenue by predicting diseases of animals and suggesting ways to enhance water quality by launching mobile application, Farm MOJO. The venture has added value to the lives of over 3,000 farmers across Gujarat, Tamil Nadu, and Andhra Pradesh in India. The application of Farm MOJO has multiple utilities -- right from preventing diseases of animals to tracking their growth and feed and also determining water quality. This is resulting in increasing the revenue of farmers by around 5 percent after using the app. It has also reduced the occurrence of diseases by assisting farmers in taking corrective actions, thereby minimising losses.

Source: https://yourstory.com/socialstory/2019/05/chennai-startup-artificial-intelligence-aqua-farmers

Law on Enterprise Development for Farmers and Fishermen in The Philippines

President Rodrigo Duterte has signed into law a measure that aims to improve the lives of farmers and fishermen through enterprise development (Republic Act No. 11321 or the "Sagip Saka Act). The program promotes the establishment of enterprises involving agricultural and fishery products as well as partnerships and alliances between farmers and fisherfolks, and the private sector to improve market access. Farmers and fishermen under the new law can avail of assistance in skills development, wider access to financing in the form of credit grants and crop insurance, and access to improved technologies for research and development. The development program covers the following areas: agricultural and fisheries production; acquisition of work animals, farm and fishery equipment and machinery; acquisition of seeds, fertilizer, poultry, livestock, feeds, and other similar items; procurement of agricultural and fisheries products for storage, trading, processing, and distribution; construction, acquisition, and repair of facilities in support of agriculture and fisheries; working capital for agriculture and fisheries graduates to enable them to engage in economic activities; agribusiness activities in support of soil and water conservation and working capital for long-gestating projects.

Source: https://news.abs-cbn.com/news/05/27/19/duterte-signs-law-on-enterprise-development-for-farmers-fishermen
**Advances in Selective Breeding of Tiger Shrimp in Australia**

Nearly all of the post-larvae supplying the world’s aquaculture of black tiger shrimp (*Penaeus monodon*) are produced from wild caught broodstock. This dependency on progeny of wild broodstock has limited the productivity of this sector. Considerable efforts have been made to establish selective-breeding programs for black tigers around the world, but few have achieved commercial success. Several *P. monodon* domestication programs have faltered when low level viral infections progressed to disease when shrimp were reared in suboptimal environments. To overcome these health issues, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and a collaborating Australian farm have used clear-water tank and raceway systems for domesticating *P. monodon*. The use of these systems has been an important factor in advancing domestication of *P. monodon* stocks in Australia and when reared in commercial ponds, the progeny of these domesticated broodstock have significantly higher survival than the progeny of wild broodstock. Survival from post-larvae to adult has also improved beyond the second generation, reaching 85% by the third generation. The modest fecundities and low hatching rates of spawnings from the domesticated stocks in the initial generations also increased beyond the second generation. These improvements are attributed to the combined effects of improved husbandry, selection for survival and growth in captivity, and improved maturation diets.

The reproductive performance of domesticated black tiger stocks in Australia is reaching commercially viable levels, with hatcheries able to produce enough post-larvae to stock commercial ponds. More importantly, the improvement in reproductive output now provides operators the opportunity to selectively breed their stocks with heightened levels of selection intensity, which will significantly increase their farm productivity. The economic benefits of the increased selection intensity can clearly be seen in the increased yields of fifth-generation *P. monodon* stocks reared in commercial ponds in Australia. The modest selection intensities applied in the earlier generations due to the limited reproductive output of the stocks resulted in negligible improvements in pond yield. However, the impacts of the cumulative selections and increasing selection intensities with each successive generation produced significant improvements in pond yields by the fifth generation. The Australian industry has the opportunity to develop further breeding programs that use advanced genetic techniques to overcome some of the constraints of conventional selective-breeding techniques. Australia has some unique challenges compared to other *P. monodon*-producing countries. These include very strict import regulations, relatively high labor costs, and broad variation in climate regimes across the production sector. These factors may result in the development of breeding programs that are significantly different from those in other producing regions. Since Australian regulations prohibit the importation of live shrimp, it is unlikely Australian breeders will ever be able to source new genetic stocks from breeding programs overseas. Consequently, the only sources of new genetic material for Australian breeders will be endemic wild stocks or Australian breeding programs.


**Malaysia’s New Illegal Fishing Task Force in the Spotlight**

Malaysia’s newly-formed task force to combat illegal fishing conducted a pre-planned, high-profile operation in May 2019 that led to the detention of several vessels. Illegal fishing has long been a problem for Malaysia as it has been for a few other Southeast Asian countries as well, with previous government estimates having indicated that the country loses about 6 billion ringgit ($1.43 billion) annually, mostly from fishing vessels coming from Thailand and Vietnam, but also at times with local involvement as well. In response, various Malaysian agencies have been taking steps to address the problem, including being stricter in prosecuting guilty foreign fishermen to even sinking ships. Over the past few weeks, Malaysia’s illegal fishing task force has been in the headlines with respect to an ongoing operation designed to combat this challenge. Per Malaysia’s home ministry, the task force embarked on an operation called Ops Naga, which covered Malaysian waters and airspace in Pahang, Terengganu, and Kelantan, and took place between May 2 and May 16, 2019. It is said that 266 vessels were checked and 25 Vietnamese fishing vessels and 123 crew members were detained. It signals the country’s intent to undertake a tougher approach in a more coordinated way. The significance that the Malaysian government has placed on addressing this issue as well as the actions recently taken by the new task force, these developments will continue to be worth monitoring to give a sense of just how well the Southeast Asian state is managing this challenge on its own as well as with other countries and institutions.

Saudi Arabia recently tweaked regulations that allow foreign investors to own aquaculture assets. The country will also spend a whopping $3.5 billion for development of aquaculture. Prince Mohammad Bin Salman Al Saud wants to push a major aquaculture expansion in the Red Sea as part of Vision 2030, an economic reform plan that will transform the oil-rich nation into a modern, diversified economy. One of the few success stories the Middle Eastern country has had in diversifying the economy away from oil is with National Aquaculture Group (NAQUA), which has become a major exporter. Through the state-owned company, shrimp output has surged to more than 60,000 metric tons in 2018, compared with an almost negligible amount in 2013. Now, Saudi Arabia wants to invite foreign companies to invest in tropical marine aquaculture in the Red Sea to grow its aquaculture industry and diversify away from shrimp. The ultimate goal is to deliver an industry producing 600,000t of seafood by 2030, a goal that is one of the pillars of the country’s “vision 2030”. The idea is to bring in know-how in terms of management and marketing as the laws have changed and so investors can have full control of a company and the government is open to joint ventures or any type of cooperation. Saudi Arabia is endowed with some of the best ocean temperatures to raise marine finfish in the world, with calm waters and temperatures that oscillate between 28 and 32°C. There is little contamination in Red Sea waters, as neighbouring countries such as Djibouti and Eritrea have little industry. The 2030 push involves a massive SAR 1.3 billion ($346.5 million investment in infrastructure, research and development, and marketing campaigns. The aquaculture pillar of the plan is designed to boost domestic production and provide safe and strategic food reserves to the Saudi population, according to a government brochure. Saudi Arabia’s aquaculture plan is thought to be unique in focusing efforts on total certification of its farms. The foundations have been laid, with 95% of its produce already covered by the Best Aquaculture Practices (BAP) certification. Saudi Arabia plans to increase seafood consumption by 7.4% a year to about 20 kg by 2030, in line with the current global average, according to the government plan. China’s Guangdong Evergreen will be one of the first foreign companies to subscribe to the Saudi invitation for foreign investment, with a huge fisheries park in the country. The site will cover 4,000 hectares near Jazan, a coastal town on the Red Sea, and resemble a big project the Chinese company built in Egypt. That project was a $90m investment that stretched over 2,200ha at the mouth of the River Nile. The Saudi investment could be worth $300m, Evergreen executives told Undercurrent in September 2018.

Source: https://www.undercurrentnews.com/2019/06/04/saudi-arabia-invites-foreign-investors-to-build-fish-farms-for-princes-2030-plan/?fbclid=IwAR2TSJEC4GbTi-jcZ_BqOi5UR7yLGvVajsdx24isi8077MBPPLDItbe-Btzy4

Asia-Pacific revenues and livelihoods threatened as billions lost annually to illegal, unreported, unregulated fishing – UN FAO

REPORT
from Food and Agriculture Organization of the United Nations
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05/06/2019 Bangkok, Thailand

More coordinated action is needed to stamp out illegal, unreported and unregulated (IUU) fishing in Asia and the Pacific – activities that result in estimated losses to the region of some USD 5 billion annually, the UN’s Food and Agriculture Organization (FAO) said today. FAO has been responding to the growing problem of IUU fishing by working with governments worldwide encouraging them to accede to the Port State Measures Agreement (PSMA), a legally binding treaty, where signatory countries share information on non-compliant fishing boats with others who can refuse those fishing boats access to their ports to land the IUU catch. While IUU fishing is a global problem, the situation is worse here in the Asia-Pacific region because it produces 75 percent of the world’s seafood, and because IUU fishers target countries home to some of the most vulnerable communities with poorly developed economies and inadequate capacity to enforce regulations. “IUU fishing has an impact on food security and it hits honest fishers and communities dependent upon them, right in the pocket. That includes buyers, sellers and legitimate industrial operations,” said Kundhavi Kadiresan, FAO Assistant Director-General and Regional Representative for Asia and the Pacific. “The FAO’s PSMA is a potent instrument to be applied in the fight against IUU.” Kadiresan was speaking at a regional event in Bangkok to mark the 2nd International Day for the Fight against IUU Fishing. It was noted that many Asia-Pacific countries are increasingly recognizing the need to take action on IUU fishing. Nineteen countries and territories in this region have so far acceded to the FAO’s Port State Measures Agreement (PSMA) which will help to close the net on IUU fishing and make it much less profitable and much more difficult for IUU fishers to land their catch.
Genetically engineered salmon won't come from US's biggest farm state

Bioengineered salmon is heading to store shelves in the U.S., but it won't be coming from the biggest salmon farming state in the country. Massachusetts-based AquaBounty Technologies has said American supermarkets could begin selling the much-debated fish by the end of next year. Its fish are modified with added genes from other fish to grow about twice as fast as conventional salmon. The company modifies Atlantic salmon, a species that forms the backbone of the worldwide salmon aquaculture industry. Maine is the biggest producer of conventional Atlantic salmon in the U.S., sometimes producing more than 35 million pounds (15.9 million kilograms) of salmon per year, and its industry is poised to grow. Two new major salmon farms are in the approvals process in the state. But fish farmers in Maine are not considering using the genetically engineered fish, said Sebastian Belle, executive director of the Maine Aquaculture Association. Numerous conditions would have to be met before that would change, including customers requesting the fish in stores, he said. The group also feels the environmental assessment of the fish conducted by regulators was not rigorous enough, Belle said. “Our competitors would have to be using them and that would have to be giving our competitors an advantage in the marketplace,” Belle said. “We have no interest in growing GMO salmon, but we reserve the right to reassess that position.” AquaBounty’s salmon is the first genetically modified, or GMO, animal to be approved for human consumption. It has become a touchstone for the international debate about genetic engineering and food. The U.S. Food and Drug Administration has signed off on the fish as safe to eat. The genetically modified salmon are also approved for sale in Canada. The company’s Indiana facility recently received the first batch of genetically engineered salmon eggs in the U.S., and they should be ready for harvesting in the final quarter of 2020, said AquaBounty spokesman Dave Conley. Other growers hoping to use the technology will face hurdles, he said. Fish farmers who want to use the eggs need FDA-approved, land-based facilities with containment features, and they will face regulatory oversight, he said. Genetically engineered salmon have faced numerous regulatory delays since a Canadian research team first developed them in the 1980s. Conley has said the goal of genetically modifying the fish is to “produce food more efficiently and more responsibly.” But consumers, fish farmers and retailers are slow to warm to the idea. Some retail chains have flatly refused to sell the genetically engineered fish. The International Salmon Farmers Association issued a statement years ago that it “firmly rejects” the idea because of environmental concerns. The group’s president, Trond Davidsen, said that position still holds. Nordic Aquafarms, a Norwegian firm, is planning a salmon farming operation in Belfast, Maine, that would be one of the largest in the United States. Erik Heim, the company’s president of U.S. operations, said genetically engineered fish are not part of the plan. “Based on practices and knowledge of consumers in our market at least, our decision is we will not pursue that,” Heim said. “It’ll be interesting to see how that goes with them.”


UN agencies unite in call for more action against irresponsible fishing and better working conditions on fishing boats in Asia-Pacific waters

In addition to the economic, environmental and ecological losses caused by IUU fishing, the often unregulated and/or unenforced nature of workers’ rights and working conditions in the region’s fisheries require further attention, UN agencies warned. “IUU fishing enterprises routinely exploit vulnerable migrants. On IUU vessels they face human rights abuses, including physical violence, dangerous working conditions, unacceptably long periods at sea and when voyages eventually end, agreed wages are often withheld,” said Dr. Nenette Motus, International Organization for Migration (IOM) Regional Director for Asia and the Pacific. “This is akin to modern-day slavery and IOM is committed to working with our partners to support international efforts to eliminate these abuses,” she added. “The ILO Convention on Work in Fishing (C188) sets the standard for decent work in a notoriously dangerous industry. The ratification of the convention, together with efforts to end illegal fishing, are critical to end labour abuses in the fishing sector,” said ILO Deputy Regional Director, Panudda Boonpala. “The Thai government—with backing from workers organizations and employers—has ratified the Convention and is leading the way to decent work in fishing in South-East Asia.” The regional heads of the three agencies (FAO, ILO and IOM) today issued a joint statement urging member countries that haven’t done so to accede to the PSMA, adopt and ratify the work in fishing convention (C188) and the 2012 Cape Town Agreement. The organizations pointed out that better coordination and collaboration between all stakeholders is needed to tackle the issues of IUU fishing and inhumane conditions that have plagued the region’s fishing industry. Their full statement is available online.


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**90% of Sri Lanka’s Corals are Dead**

Marine Environment Protection Authority (MEPA) General Manager Dr. Terney Pradeep Kumara said Sri Lanka’s corals are faced with an imminent threat of destruction due to climate change, pollution and illegal fishing methods. Observing that 90 percent of corals in Sri Lankan waters are already dead, he warned that the remaining 10 percent would also be lost in another 10 years. “Sri Lankans will lose the luxury of viewing colourful corals 10 years from now if urgent steps are not taken to stop their current rate of destruction,” he said. The pressure on the corals is also very high due to human activities such as tourism, discharge of industrial effluent, agriculture, aquaculture, discharge of municipal sewerage and squatter settlements. We need a collective national effort to protect the remaining live coral patches,” he explained.

Source: https://www.eurasiareview.com/11062019-90-percent-of-sri-lankas-corals-are-dead/

**Government of India – New Ministry of Fisheries**

Keeping in line with its policies to give importance to fisheries development in the country, the Government of India through an amendment to its rules has created a separate Ministry for Fisheries, Animal Husbandry and Dairying with two separate departments, one for fisheries and the other for animal husbandry and dairying.

**Fish passage technology improving river connectivity across the Mekong**

Since 2008, a series of projects funded by the Australian Centre for International Agricultural Research (ACIAR) in Lao PDR have researched the impacts of irrigation infrastructure on river and floodplain connectivity, with the aim to improve the productivity of freshwater fisheries through re-establishing fish migration. Researchers from Charles Sturt University of Australia in collaboration with Lao counterparts started the fishery research project at Pak Peung in 2006 where an irrigation scheme was built for rice production and water control but blocked fish migration between the Mekong River and the wetland area where they breed. From the research project, fishways were introduced, allowing fish to pass through the barriers. In collaboration with Laos Ministry of Agriculture and Forestry, National University of Laos and local authorities in Paksan district, the fishways were constructed and completed in 2013 using Australian technologies.

Once the fishways were successfully demonstrated in the Mekong wetlands, the project reached out to other fishery industry partners so there could be benefits gained on a larger scale. There is substantial interest from donor bodies such as the World Bank and Asian Development Bank as well as other developers to expand fishway constructions along the Mekong but they are seeking guidance to ensure programs are implemented effectively. Australia and Laos will be able to support these proposals by sharing their collaborative knowledge.

ACIAR is now expanding this work throughout the Mekong region and other south-east Asian countries. In 2020 a new project will start, led by the Charles Sturt University in partnership with both government and donor agencies, working on fish passage refurbishment programs in Laos, Myanmar, Cambodia and Indonesia. The project will provide a platform to connect and bring together the diverse stakeholders involved, to better understand their technical and broader data needs, as well as promoting enabling policy development within each country context.

Source: Dr Ann Fleming, ACIAR Fisheries Research Program
Building on the success of earlier Australian Centre for International Agricultural Research (ACIAR) projects, the oyster industry in Vietnam continues to grow rapidly and expand into new provinces. Oyster production is now estimated to have exceeded 15,000 tonnes per annum, and involves 2,500 households in 28 provinces. The processing and marketing sectors are also expanding. New processing facilities have been constructed and investment in the industry continues. Oyster farming has significantly improved livelihoods in the coastal communities that practice it. A ‘photovoice’ project captured community benefits by giving cameras and diaries to oyster farmers to record their stories of impact. Results indicated oyster farming has been largely positive and the income has enabled diversification into other types of farming, provided jobs, more assets, better life quality and opportunity for the young to stay in the commune. Social impact was often linked to the new industry with positive stories across community spirit and quality of life.

A recently completed ACIAR project, led by Dr Wayne O’Connor of New South Wales (NSW) Department of Primary Industry in partnership with Research Institute for Aquaculture No. 1 and the National Marine Broodstock Centre, has confirmed the key species produced is Crassostrea angulata (the Portuguese oyster not the Pacific oyster) and that the stock currently present within Vietnam are sufficiently genetically diverse to form the basis of a breeding program. Replicated rearing systems have been constructed at the National Marine Broodstock Center, Cat Ba and three generations of over 450 families have now been bred. These families have been assessed for key performance traits including growth and survival, and farmers have acknowledged their superior performance.

To provide a framework of support for the developing industry, a series of audits of mollusc biosecurity, mollusc health diagnostic capacity and oyster quality assurance were undertaken by independent experts and the outcomes of those assessments were used to direct ongoing research and guide training exercises. Considerable focus was placed on mollusc health management, with over 20 staff from various government institutions receiving training. To detect and manage threats to the industry a water quality monitoring program has been established to regularly collect environmental data on farms that include physico-chemical parameters, nutrients, metals and bacterial contaminants. These criteria were then reviewed and modified following an oyster quality assurance audit. The potential for harmful algal blooms and contaminated wastewater to affect both oyster and human health was acknowledged and the project team has worked to develop algal sampling and identification skills as well as identifying potential pollution sources through shoreline surveys.

Recognising the contribution Dr O’Connor has made to the development of oyster aquaculture in Viet Nam, in late 2018 the Vietnamese government awarded him the Medal for Agriculture and Rural Development.

Source: Dr Ann Fleming, ACIAR Fisheries Research Program
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Effects of Dietary Inclusion of Vitamin C on Immune and Antioxidant Defence System in Captive Reared Juvenile Mahseer, Tor putitora (Hamilton, 1822)

KIFAYAT ULLAH KHAN, IMDAD ULLAH, HUDA SARWAR, AMINA ZUBERI

https://doi.org/10.33997/j afs.2019.32.01.001

Juvenile mahseer were fed four semi-purified diets of vitamin C and at the end of the 70-day all fish of each group were subjected to hypoxia stress for 48 h. Fish fed 300 mg.kg⁻¹ vitamin C showed significantly increased serum lysozyme activity in response to hypoxia stress, followed by 200 and 100 mg.kg⁻¹ vitamin C. Similar results were observed for glutathione peroxidase (GSH-Px), glutathione reductase (GSR) and superoxide dismutase (SOD) activity. After hypoxia, malondialdehyde (MDA) concentration was considerably reduced in fish fed 300 mg.kg⁻¹ vitamin C. Thus in stressful conditions feeding diets supplemented with 300 mg.kg⁻¹ vitamin C would be better than 200 and 100 mg.kg⁻¹ vitamin C, to obtain the optimum immune and antioxidant status of captive-reared juvenile mahseer.

Dietary Guild Structure in Fish Assemblages and Trophic Position of Constituent Species in Brush Parks of a Tropical Estuary

MENAKE GAMMANPILA, U.S. AMARASINGHE, M.J.S. WIJEYARATNE

https://doi.org/10.33997/j afs.2019.32.01.002

Diets of 46 fish species caught in brush parks were analysed and the food items were categorised into 11 broad groups. Based on the composition of diets, fish were grouped into 8 trophic guilds. Levin’s index of niche breadth indicated that the constituent species in the trophic guilds for which food was abundant, were generalists, whereas the trophic guilds of higher trophic levels were specialists. Within each trophic guild, constituent species showed different trophic indices indicating low inter-specific competition resulting in optimum food resource utilisation.

Enhanced Growth Performance, Haematotoxic-biochemical and Immune Parameters of Asian Seabass, Lates calcarifer (Bloch, 1790) Fed Dietary Supplementation with Polygonum chinense

RASHIDAH ABDUL RAZAK, MOHAMED SHARIFF, FATIMAH MD. YUSOFF, INTAN SAFINAR

https://doi.org/10.33997/j afs.2019.32.01.003

Asian seabass fed on 0.5 % Polygonum chinense extract (PCE) diet revealed significant higher body weight gain, specific growth rate, protein efficiency ratio, condition factor, and significantly lower feed conversion ratio. Dietary supplementation with 0.5 and 1.0 % showed a significant increase in red blood cell count and haemoglobin level, but the white blood cell count significantly increased only in 1.0 % diet. In addition, all PCE supplemented diets showed significant increase in total protein, albumin, globulin, albumin:globulin ratio, total immunoglobulin, lysozyme, respiratory burst and phagocytic activities, and significantly reduced the alkaline transaminase level. Dietary P. chinensesupplementation at 0.5 % was found to be suitable to enhance the growth performance and immune status of Asian seabass.
Short Communication:

TAKASHI KITANO, KAZUKI SASAKI, SHINTARO ICHINOSEKI, KAZUO UMETSU, HIDEKI SUGIYAMA

https://doi.org/10.33997/j.afs.2019.32.01.004

The hagfish species found in the Sea of Japan has commonly and erroneously been identified as *Eptatretus atami*. Data from specimens collected from four locations in Japan for morphological and molecular analyses suggest that the hagfish species from the Sea of Japan is not *E. atami*, but *Eptatretus walkeri*. The present study also indicates that *E. walkeri* is widely distributed not only on the Pacific coast of Honshu Island but also in the Sea of Japan.

Short Communication:
The Occurrence of a Plastic Pen Inside the Gut of a Yellowfin Tuna *Thunnus albacares* (Bonnaterre, 1788)

BITOPAN MALAKAR, S. VENU, RAVI RANJAN KUMAR

https://doi.org/10.33997/j.afs.2019.32.01.005

The present paper reports the occurrence of a plastic pen inside the gut of a yellowfin tuna, *Thunnus albacares* collected from Port Blair, India. The pen measuring 13.7 cm long was found in the stomach of the fish. The total length and weight of the fish was 43cm and 4.6 kg respectively and gut/stomach length was 18.8 cm.

Short Communication:
The Cytotoxic Effect and Antioxidant Properties of Actiniarian Sea Anemones

SMITANJALI CHOUDHURY, C. RAGHUNATHAN

https://doi.org/10.33997/j.afs.2019.32.01.006

The biological activity of crude extracts from the sea anemones *Heteractis magnifica* and *Heteractis crispa* collected from Andaman Islands, India, displayed high cytotoxicity of $\text{LC}_{50} = 416.9 \, \mu\text{g.mL}^{-1}$, while for *H. magnifica* it was $\text{LC}_{50} = 575.4 \, \mu\text{g.mL}^{-1}$. The extracts of *H. magnifica* showed high total phenolic content which is an indication of significant free radical scavenging activity.
Comparative Toxicological Effects of the Herbicide, Atrazine, on Fingerlings and Juveniles of African Catfish, *Clarias gariepinus* (Burchell, 1822)

V.F. DOHERTY, ANEYO IDOWU, ABDULLAHI ADEOLA, OLUWATOBI OWOLABI

https://doi.org/10.33997/j.afs.2019.32.02.001

Toxic effects of atrazine, a herbicide, on acetylcholinesterase activity, lipid peroxidation and testosterone levels in different growth stages of African catfish, was studied. Acute and chronic evaluations were conducted while activities of acetylcholinesterase, lipid peroxidation and testosterone levels were determined. Acetylcholinesterase activity was higher in the brain of juveniles than that of the fingerlings while malondialdehyde was higher in the fingerlings. Testosterone was not detected in the serum of fingerlings. The results of this study elucidated potential biomarkers for monitoring fish health in rivers receiving runoffs of atrazine, and the risk of loss of fisheries productivity attributable to the anti-androgenic properties of the herbicide.

Comparison of Low-Cost Global Positioning System (GPS) Data Loggers for their Potential Application in Fishing Vessel Monitoring System in the Philippines

PERRY NEIL FERNANDEZ, ARNOLD GAJE, RICARDO P. BABARAN

https://doi.org/10.33997/j.afs.2019.32.02.002

Commercial GPS data logger as an alternative to vessel monitoring system (VMS) for low-cost vessel monitoring in terms of accuracy, power efficiency, and the price was investigated. Nine different commercial GPS data loggers categorised into three price groups and three different chipset groups were tested. Results showed that all GPS data loggers provide locations data that are very close to VMS. Power consumptions were statistically different among the units. Globalsat DG-100, Canmore GT-750F, and SJ5282DL all give closest positions data to commercially available satellite-based VMS that may be acceptable for regulatory purposes and offer cost-effective VMS solutions for monitoring and managing both commercial and municipal fisheries in the Philippines.

Evaluation of Hatchery Production from Captive and Wild-caught Sandfish (*Holothuria scabra* Jaeger, 1833) Broodstocks

THANE MILITZ, ESTHER LEINI, PAUL SOUTHGATE

https://doi.org/10.33997/j.afs.2019.32.02.003

The study evaluated hatchery production of sandfish using captive broodstock, maintained in a pond for 1 year, compared to newly wild-caught broodstock. At the end of the 40-day hatchery cycle, lengths of juvenile sandfish resulting from the wild-caught and captive broodstocks were comparable. Survival was comparable for juvenile sandfish derived from the wild-caught and captive broodstocks. The results demonstrate that captive sandfish broodstock supported hatchery production comparable to that of wild-caught broodstock.
Comparison of Age and Growth of the Marbled Flounder *Pseudopleuronectes yokohamae* (Günther, 1877) in the Coastal Waters of Japan

PEIQI HONG, SATOSHI KATAYAMA, MASAYUKI YAMAMOTO, MITSUHIRO ISHII, TOSHINORI BABA, MITSUHIRO SAEKI, MITSUHARU SUZUKI, MITSUHIRO NAKAYA, YUTA YAGI

https://doi.org/10.33997/j.afs.2019.32.02.004

Age composition and growth trajectory of marbled flounder from different coastal waters in Japan were estimated and compared by analysing otoliths. The majority of specimens were found to be 2 to 3 years of age. Female marbled flounder were found to have a higher total length (TL) and growth rate than males. There were significant differences in growth curves for each of the sampling locations. There were also significant differences between males and females at each sampling location, with females attaining a higher theoretical maximum TL, longer lifespan and faster growth rate than males.

Preliminary Physiological Study on the Edible Wild Bivalves in Myeik, Myanmar

TATSUYA YURIMOTO, MAUNG-SAW HTOO-THAW, NYO-NYO TUN, KAZUMI MATSUOKA, KAZUHIKO KOIKE

https://doi.org/10.33997/j.afs.2019.32.02.005

Physiological conditions of wild bivalves, hard clam, soft clam, green mussel, oyster, and pen shell landed in Myeik Coast in Southern Myanmar were studied. The bivalves were purchased at some local markets and a seafood restaurant, and their physiological conditions, including sexual maturation, food availability, and ability of nutritional absorption were investigated. Additionally, the concentration of paralytic shellfish poisoning (PSP) toxins was examined in the soft tissues of the bivalve samples with an enzyme-linked immune sorbent assay. The results showed that hard clam was the stable landing species through dry and wet seasons. Its spawning season was a long period extending from dry to wet seasons, ensuring good food availability and nutritional absorption. The concentrations of PSP toxins were low in all bivalves, making them safe for human consumption.

Short Communication:

Primary Cell Culture from Gills of Striped Bass *Morone saxatilis* (Walbaum, 1792)

SARAHÍ VEGA-HEREDIA, IVONE GIFFARD-MENA

https://doi.org/10.33997/j.afs.2019.32.02.006

There are no reports on the branchial cell lines of the striped bass *Morone saxatilis*. The importance of establishing cell lines from *M. saxatilis* branchial tissue represents an alternative to studying infective physiological and biochemical processes, which may facilitate research without compromising valuable live animals. Primary cell cultures obtained showed excellent cell adhesion and proliferation. The cell monolayer consisted of epithelial cells, and the culture was maintained for approximately 30 days. This is the first report describing primary branchial cell line culture from striped bass.
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