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Продовольственная и
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Organización de las
Naciones Unidas para la
Alimentación y la Agricultura

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COMMITTEE ON FISHERIES

Thirty-fourth Session

1-5 February 2021

DECISIONS AND RECOMMENDATIONS OF THE TENTH SESSION OF THE COFI SUB-COMMITTEE ON AQUACULTURE, TRONDHEIM, NORWAY, 23-27 AUGUST 2019

Executive Summary

This document provides an overview of the topics discussed at the 10th Session of the COFI Sub-Committee on Aquaculture and makes reference to its main recommendations. The document provides supplementary information in the annexes on the preparation of a draft Global Plan of Action for Aquatic Genetic Resources for Food and Agriculture, the development of a Global Integrated Sustainable Aquaculture Programme (GISAP), and the preparation of the Global Conference on Aquaculture Millennium+20. The full report is available as document COFI/2020/Inf.9.

Suggested action by the Committee

The Committee is invited to:

- endorse the report of the 10th Session of the COFI Sub-Committee on Aquaculture;
- provide guidance with regard to the work of FAO in the field of aquaculture, and in particular the preparation of the Global Conference on Aquaculture Millennium+20 and the Global Integrated Sustainable Aquaculture Programme (GISAP), including the development of a multi-donor assisted long-term component on aquaculture biosecurity;
- take note of the accomplishments of the implementation of the FAO Action Plan on Antimicrobial Resistance (AMR) 2016-2020 in aquaculture and provide guidance on the FAO Action Plan on Antimicrobial Resistance 2021-2025; and
- welcome the publication of the report on the *State of the World's Aquatic Genetic Resources for Food and Agriculture* and take note of the ongoing development of a draft Global Plan of Action for Aquatic Genetic Resources for Food and Agriculture.

Queries on the substantive content of this document may be addressed to:

Documents can be consulted at www.fao.org

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I. INTRODUCTION

1. This Working Document summarizes the decisions and recommendations of the 10th Session of the Sub-Committee on Aquaculture (SCA) of the FAO Committee on Fisheries (COFI), which was held in Trondheim, Norway, from 23-27 August 2019. It was attended by 59 FAO Members, by one associate Member and by observers from four intergovernmental and seven international non-governmental organizations to review a full agenda of aquaculture-related items. The full report of the session is provided as document COFI/2020/Inf.9. Furthermore, the Working Document provides supplementary information in the annexes with regard to key technical areas that have been recommended for further action by the Secretariat, specifically: preparation of a draft Global Plan of Action for Aquatic Genetic Resources for Food and Agriculture, development of a Global Integrated Sustainable Aquaculture Programme (GISAP), and preparation of the Global Conference on Aquaculture Millennium+20.

2. The welcome address on behalf of the Kingdom of Norway was delivered by Mr Roy Angelvik, State Secretary of the Norwegian Ministry of Trade, Industry and Fisheries.

3. The Sub-Committee elected Dr Balaji Jujjavarapu (India) as Chairperson of the Drafting Committee, and the Argentine Republic, the People's Republic of Bangladesh, the Federative Republic of Brazil, the Republic of Cameroon, Canada, the Republic of Chile, the Republic of Finland, the Federal Republic of Germany, the Republic of Indonesia, the United Mexican States, the Kingdom of Norway, the Republic of Peru, the Republic of Korea, and the Republic of South Africa as members of the Drafting Committee.

II. MAIN OUTCOMES OF THE SESSION

Progress reporting on the implementation of the Code of Conduct for Responsible Fisheries (CCRF) provisions relevant to aquaculture and culture-based fisheries

4. The Sub-Committee recognized the usefulness of the CCRF self-assessment tool, which supports Members in developing relevant policy guidance for aquaculture development, and welcomed the increased responses and increasing trend in scores. The Sub-Committee suggested possible modifications to the survey tool so that questions are not duplicated, recognize different types of aquaculture, and reflect emerging issues. The Sub-Committee called for more effort and enhanced commitment by Members in implementing the CCRF provisions relevant to aquaculture, especially those with low scores.

Fisheries Division's efforts in implementing the recommendations of the past sessions of the COFI Sub-Committee on Aquaculture

5. The Sub-Committee commended the work implemented during the intersessional period and appreciated the efforts of FAO in responding to recommendations of past sessions. The Sub-Committee requested reference be made to the specific recommendations to facilitate progress monitoring, and requested benchmarking and evaluation of the success of the FAO activities.

6. The Sub-Committee highlighted specific areas, including the ecosystem approach to aquaculture (EAA), spatial planning for aquaculture, agroecology, adaptation to climate change and the development of Guidelines for Sustainable Aquaculture (GSA) (previously referred to as Sustainable Aquaculture Guidelines (SAG)), and called on FAO to further develop and expand related tools. The Sub-Committee suggested additional areas to be considered during the next intersessional period, including capacity development for data collection.

The State of the World's Aquatic Genetic Resources for Food and Agriculture and possible follow-up

7. The Sub-Committee welcomed and commended FAO on the finalization of the report on *The State of the World's Aquatic Genetic Resources for Food and Agriculture* (the Report). It recommended FAO further develop a communication strategy to widely disseminate the Report and its key messages, and that Country Reports be made available and shared among Members. The Sub-Committee also recommended that Members develop national management plans on aquatic genetic resources (AqGR) and a range of specific actions in response to the Report.

8. The Sub-Committee welcomed the draft objectives, principles and potential strategic priorities of the Global Plan of Action for Aquatic Genetic Resources for Food and Agriculture (GPA-AqGR)¹. The Sub-Committee provided advice on the strategic priorities of the GPA-AqGR and recommended its further development. The outline of the strategic priorities of the GPA-AqGR and specific advice provided by the Sub-Committee are shown in Annex 1. The Sub-Committee recommended that FAO move forward with the development of several activities, including: the development of a global registry of farmed types and an associated information system; accelerating the development of AqGR for aquaculture on a range of species, with emphasis on selective breeding; the conservation of threatened species, with emphasis on gene banking; and the development of relevant guidelines. The Sub-Committee sought assistance from FAO to put in place Access and Benefit Sharing (ABS) measures and material transfer agreements, if requested by Members, and further encouraged Members and regional organizations to work with FAO on the development of globally applicable models. The Sub-Committee also stressed the need for investment in capacity building, including training in genetics and breeding.

Report from the secretariat of the COFI Sub-Committee on fish trade

9. The Sub-Committee underlined the synergies between the two Sub-Committees, specifically noting relevance of FAO's work on market access, post-harvest issues, reducing losses and waste, tracking market and trade data on fisheries products, and quality assurance. The Sub-Committee called on FAO to continue its efforts in addressing the potential impact of the presence of microplastics in fisheries products.

Preventing and managing aquatic animal disease risks in aquaculture through a progressive management pathway

10. The Sub-Committee welcomed the work by FAO on the Progressive Management Pathway for Improving Aquaculture Biosecurity (PMP/AB) and further highlighted the importance of improved aquaculture biosecurity in reducing disease burden, improving health at farm and national levels, minimizing global spread of diseases and achieving One Health goals.

11. The Sub-Committee requested the formation of an FAO Technical Working Group to develop further the PMP/AB and associated tools and mechanisms, such as: governance, centres for collaboration, assessment tools, surveillance checklists, biosecurity action plans, risk analyses, microbiome studies and microbial management protocols, aquaculture health economics and emergency preparedness tools, and guidance on public-private partnership. Additionally, the Sub-Committee requested enhanced collaboration with relevant international bodies, such as the World

¹ Please refer to documents CGRFA-17/19/8.3 *Options for follow-up to The State of the World's Aquatic Genetic Resources for Food and Agriculture* available at www.fao.org/3/my596en/my596en.pdf and COFI:AQ/X/2019/2.1 *The State of the World's Aquatic Genetic Resources for Food and Agriculture and possible follow-up* available at www.fao.org/3/na484en/na484en.pdf.

Organisation for Animal Health, the International Plant Protection Convention, the International Council for the Exploration of the Seas, the CGIAR and the World Bank.

12. Subsequent to the Sub-Committee meeting, the 127th Session of the Programme Committee of FAO underlined the need for a new FAO Action Plan on AMR (2021-2025) and invited the FAO Committee on Agriculture (COAG) and COFI to provide guidance in their upcoming sessions.² COFI/2020/Inf.9.2 provides further detail on the work of FAO regarding the implementation of the Action Plan on AMR in aquaculture and includes the proposal for the new FAO Action Plan on AMR 2021-2025.

13. The Sub-Committee recognized the importance of developing an assessment tool on aquaculture health economics and emergency preparedness, taking into account the initiatives of Global Burden of Animal Diseases.

14. The Sub-Committee recommended COFI consider the development of a long-term component on aquaculture biosecurity as part of FAO's Global Integrated Sustainable Aquaculture Programme (GISAP) (Annex 2), and encouraged commitment to multi-donor resource mobilization towards this programme.

Aquaculture's contribution to ending hunger, securing food supplies and promoting good health and dietary practices

15. The Sub-Committee recognized the contribution of aquaculture to food security and nutrition, and highlighted the need for a holistic approach and collective action to address the complex issue of ending hunger. It requested support for the inclusion of women and youth in policies, and better understanding of the complex relationships between nutrition, poverty, gender, youth, competition for scarce resources and climate change.

16. The Sub-Committee called for raising awareness of the health benefits of fish and enhancing consumer acceptance of aquaculture products, and encouraged Members to promote nutrition-sensitive aquaculture in the UN Decade of Action on Nutrition.

Aquaculture innovations, their upscaling and technology transfer to increase efficiency, combat environmental degradation and adapt to climate change

17. The Sub-Committee called for more technical support on aquaculture innovation, upscaling and technology transfer on voluntary and mutually agreed terms to increase efficiency, combat environmental degradation and adapt to climate change, and for support on the inclusion of innovation in national aquaculture strategies.

18. The Sub-Committee acknowledged that aquaculture innovation is necessary for the sustainable development of the sector, and suggested the regular dissemination of successful innovations such as rice-fish farming systems, integrated multi-trophic aquaculture, ecosystem approach to aquaculture, recirculating aquaculture systems, culture-based fisheries, natural fish feed, macro/microalgae culture, as well as innovations towards the improvement of governance, quality, diversification, environmental performance, biosecurity and traceability. The Sub-Committee emphasized the importance of risk assessment, before upscaling and dissemination of innovative technologies.

19. The Sub-Committee recognized the need for financial support and commitment for aquaculture innovation, upscaling and technology transfer on voluntary and mutually agreed terms,

² CL163/4, para 27

noting the importance of bilateral or multi-lateral cooperation, South-South Cooperation (SSC), Triangular Cooperation (TrC) and Public-Private Partnership.

Special event on better management practices and guidelines for sustainable aquaculture development

20. The Sub-Committee recognized the value of the development of the Guidelines for Sustainable Aquaculture towards further advancement of national policies for the aquaculture sector. It indicated its strong support to convene regional consultations, requested a more detailed roadmap and methodology, and identified national governance improvements as the primary target of the GSA. The Sub-Committee recommended that the GSA be a dynamic document, subject to periodic revision.

21. The Sub-Committee agreed with the thematic modules proposed for the GSA, noting that the GSA should be aligned with relevant mechanisms and coordinate with relevant bodies, including regional organizations. The Sub-Committee underlined the need for developing guidelines covering all aspects of aquaculture, applicable to both large and small-scale farms, and recognizing regional differences.

Election of the Chairperson and Vice-Chairpersons of the 11th Session of the COFI Sub-Committee on Aquaculture

22. Mr Giovanni Fiore Amaral of Mexico was elected Chairperson of the 11th Session of the Sub-Committee. Turkey was elected first Vice-Chair. Indonesia, South Africa, Fiji and Belgium were elected second, third, fourth and fifth Vice-Chairs, respectively.

Any other matters

23. The Sub-Committee was informed of the outcome of the side event on the critical role of aquatic genetic resources in aquaculture development, and the official launch of *The State of the World's Aquatic Genetic Resources for Food and Agriculture*. Three presentations were made by experts from WorldFish, Indian Council of Agricultural Research – National Bureau of Fish Genetic Resources and FAO. The presentations covered the potential enhancement of aquaculture production through the application of genetic improvement programmes and the importance of genetic characterization of aquatic genetic resources.

24. The Sub-Committee was informed of the outcome of the side event on *Seaweed aquaculture-development potential and challenges*. Six presentations were made by experts from Costa Rica, the Philippines, Saint Lucia, Tanzania, FAO and the Scottish Association of Marine Sciences. The presentations covered an overview of the production growth and value of the seaweed aquaculture industry over the last 50 years, development and key challenges for seaweed industry globally, with case studies from Africa, Europe, Latin America and the Caribbean and South-East Asia. The Sub-Committee registered its interest in receiving more information on seaweed aquaculture in future sessions.

25. The Sub-Committee recommended intersessional work on guidance for concrete action on adaptation to and mitigation of impacts of climate change on aquaculture. It recognized that this is a particular concern in Small Island Developing States.

26. The Sub-Committee made proposals to improve the efficiency of the intersessional work of FAO, notably enhanced coordination between the work of FAO and the Regional Commissions.

27. The Sub-Committee welcomed and supported the proposal of the People's Republic of China to host the Global Conference on Aquaculture 2020 (Annex 3), from 26-30 October 2020 in Shanghai, China. Due to the COVID-19 pandemic, and following close consultation by FAO and Network of

Aquaculture Centres in Asia-Pacific (NACA) with the host country, the new dates for the Global Conference on Aquaculture have been determined for 22-27 September 2021, in Shanghai, China.

Date and place of the 11th Session

28. The Sub-Committee welcomed the kind invitation of Mexico to host its 11th Session. The dates and venue will be announced at the 34th session of COFI.

29. The Sub-Committee was informed about a recent letter by Turkey to FAO reiterating their offer to host the twelfth session of the Sub-Committee. Indonesia reiterated its interest to host a future session of the Sub-Committee.

Adoption of the report

30. The report of the 10th Session of the Sub-Committee was adopted on 27 August 2019.

ANNEX 1

Outline of the overall structure and potential strategic priorities of draft Global Plan of Action for Aquatic Genetic Resources for Food and Agriculture including specific feedback provided by COFI/AQ

Overall structure

Follow-up actions on AqGR could be structured along the following main themes or priority areas:

- Establish and strengthen national and global characterization, monitoring and information system for AqGR
- Accelerate appropriate development of AqGR for aquaculture
- Promote sustainable use and conservation of AqGR
- Policies, institutions and capacity building

For each of these priority areas, the Commission on Genetic Resources for Food and Agriculture (Commission) may wish to formulate specific actions that governments can agree to undertake at national, regional and/or international levels to meet the objectives. These actions would be based on the key findings, needs and challenges identified in the report on *The State of the World's Aquatic Genetic Resources for Food and Agriculture*. A list of tentative strategic priorities for follow-up actions the Commission could consider, at its next session, under the above priority areas is given below.

Potential strategic priorities

The following potential strategic priorities for follow-up action, listed under the proposed priority areas, are based on the needs and challenges identified in the report on *The State of the World's Aquatic Genetic Resources for Food and Agriculture*.

Priority Area 1: Establish and strengthen national and global characterization, monitoring and information system for AqGR

Strategic Priority 1.1: Promote the globally standardized use of terminology, nomenclature and descriptions of AqGR.

Strategic Priority 1.2: Improve and harmonize reporting procedures and expand existing species-based information systems to cover unreported AqGR including ornamental species and micro-organisms.

Strategic Priority 1.3: Develop, promote and commercialize/institutionalize national, regional and global standardized information systems for the collection, validation, monitoring and reporting on AqGR below the level of species (i.e. farmed types and stocks).

The Sub-Committee supported the need for effective characterization of both farmed and wild species, including for non-food use. The Sub-Committee acknowledged FAO's work on the global registry of farmed types and the development of an associated information system on AqGR and recommended that FAO move forward with the development of a prototype registry. The Sub-Committee encouraged Members and regional organizations to work with FAO on the development of national and regional strategies for characterization, monitoring, development and sustainable use of AqGR, including case studies.

Priority Area 2: Accelerate appropriate development of AqGR for aquaculture

Strategic Priority 2.1: Raise awareness and improve understanding of the properties, roles and risks of genetic technologies and their application to AqGR including traditional selective breeding and emerging technologies.

Strategic Priority 2.2: Promote greater adoption of well-managed, long-term, selective breeding programmes as a core genetic improvement technology for all major aquaculture species.

Strategic priority 2.3: Establish national species and breed development strategies and programmes to unlock the full potential of AqGR. Such strategies need to set an appropriate balance between the development of aquaculture of new species (both native and non-native), and development of farmed types of existing cultured species.

Strategic Priority 2.4: Conduct appropriate training and capacity building in genetic improvement, particularly in quantitative genetics.

The Sub-Committee strongly supported Priority Area 2 of the GPA on accelerating the development of AqGR for aquaculture on a range of species, with emphasis on selective breeding. Genetic improvement should focus on a range of traits including growth, disease resistance and stress resistance.

Priority Area 3: Promote sustainable use and conservation of AqGR

Strategic Priority 3.1: Develop risk-based policies and controls on introductions and transfers of AqGR and implement monitoring systems to understand the impacts of non-native species and reduce their negative impacts on both farmed and wild relative AqGR.

Strategic Priority 3.2: Identify wild relative AqGR most at risk to ensure that they are managed sustainably and appropriate conservation measures are implemented where necessary.

Strategic Priority 3.3: Monitor and anticipate the current and future impacts of environmental change on AqGR and respond accordingly, for example through conservation of threatened resources and the development of climate change adapted farmed types for aquaculture.

Strategic Priority 3.4: Promote in situ conservation, including habitat protection and aquatic protected areas, as the primary measure to protect threatened wild relatives AqGR.

Strategic Priority 3.5: Identify threatened wild relative AqGR that are critical to aquaculture development and to wild catch fisheries and to prioritize these for in situ conservation.

Strategic Priority 3.6: Actively incorporate conservation of AqGR in the development of fisheries management plans, particularly for threatened species.

Strategic Priority 3.7: Aquatic protected areas should be considered in the development of in situ conservation of key AqGR.

Strategic Priority 3.8: Identify the priority threatened and important AqGR as candidates for effective ex situ conservation.

Strategic Priority 3.9: Develop and promote guidelines and best practices for both in vivo and in vitro ex situ conservation.

Strategic Priority 3.10: Monitor the use and exchange of AqGR for non-food use, such as ornamental species, alongside that of food fish, and identify related risks and needs.

The Sub-Committee placed emphasis on the conservation of threatened species and the need for gene banking in support of conservation.

Priority Area 4: Policies, institutions and capacity building

Strategic Priority 4.1: Support Members to develop, monitor and enforce policies and good governance that adequately consider issues affecting conservation, sustainable use and development of AqGR, harmonized across sectors of government.

Strategic Priority 4.2: Develop national strategies for in situ and ex situ conservation of AqGR and their sustainable use.

Strategic Priority 4.3: Support improved national and regional communication on AqGR and raise awareness of the importance of AqGR among stakeholders from consumers to policy-makers.

Strategic Priority 4.4: Promote development of understanding of the roles of key stakeholders in AqGR, including indigenous communities and women, and their roles in the conservation, sustainable use and development of AqGR.

Strategic Priority 4.5: Support reviews of national legislation governing non-native AqGR including responsible use and exchange based on appropriate assessments of risks and access and benefit sharing specific to properties of AqGR.

Strategic Priority 4.6: Promote awareness among Members of the role that international agreements and instruments can play in the conservation, sustainable use and development of AqGR and improve their effective implementation for positive impact.

Strategic Priority 4.7: Establish or strengthen national institutions, including national focal points, for planning and implementing AqGR measures, for aquaculture and fishery sector development.

Strategic Priority 4.8: Establish or strengthen national institutions for education and research on AqGR and promote intersectoral collaboration on their conservation, sustainable use and development.

Strategic Priority 4.9: Strengthen national human capacity for characterization, inventory, and monitoring of trends and associated risks, for conservation, sustainable use and development of AqGR including economic valuation, characterization, and genetic improvement.

Strategic Priority 4.10: Encourage the establishment of network activities and support the development and reinforcement of international networking and information sharing on AqGR.

Strategic Priority 4.11: Strengthen efforts to mobilize resources, including financial resources for the conservation, sustainable use and development of AqGR.

The Sub-Committee made a number of recommendations for Strategic Priorities under Priority Area 4, including the request for FAO to develop guidelines for countries on international, regional and national networking, gene banking, genetic management in stock enhancement, and broodstock management and improvement.

ANNEX 2

FAO Global Integrated Sustainable Aquaculture Programme (GISAP) Concept note

Background

Aquaculture represents 46 percent of total fish production and 53 percent of aquatic food production. Although the rate of growth in aquaculture production has slowed in recent decades, it is still running at 5.3 percent per annum. In 2018, global aquaculture production reached a new record high of 114.5 million tonnes (valued at USD 234 billion), including 82.1 million tonnes of fish and 32.4 million tonnes of aquatic plants. There was a further output of 26 000 tonnes of non-food products. The Asian region is the predominant aquaculture producer, accounting for about 88.7 percent of world food fish production in 2018. The largest portion of aquaculture production (62.5 percent) comes from inland aquaculture (FAO, 2020).³

It is estimated that total world fish production will continue to expand at an annual growth rate of one percent. This growth in production is expected to be delivered almost entirely by aquaculture with cultured aquatic food production projected to reach 109 million tonnes by 2030, 37 percent higher than 2016 levels (FAO 2020).³

It is essential that this continuing growth of aquaculture is sustainable and FAO has an important role to play in supporting its Members to further develop their aquaculture sectors. Achieving the SDGs will require looking at sustainable development within and across agriculture, forestry, fisheries and aquaculture in an integrated manner, taking into account synergies and trade-offs across sectors and across sustainability dimensions. Sustainable aquaculture growth therefore requires a flexible approach building and expanding upon the existing levels of integration across sectors and reflecting the diversity of aquaculture systems and the very different stages of development of the sector across regions. Guided by the Committee on Fisheries (COFI),⁴ the common vision for sustainable food and agriculture and its five principles of (i) improving efficiency in resource use, (ii) conserving, protecting and enhancing natural ecosystems, (iii) protecting and improving rural livelihoods, equity, social well-being, (iv) enhancing the resilience of people, communities, ecosystems, and (v) promoting responsible and effective governance mechanisms across natural and human systems, provide the framework.

The purpose of this annex is to provide an outline of a global programme for FAO to support its Members in the development of sustainable aquaculture. This Programme is intended as a response to a range of requests from COFI and its Sub-committee on Aquaculture (COFI/AQ) as outlined in the working paper.

Programme Objectives

The objective of the Global Integrated Sustainable Aquaculture Programme (GISAP) is to optimize the contribution of sustainable aquaculture to the SDGs through:

- 1) enabling a focussed, coordinated and integrated approach to effectively support and meet the sustainable aquaculture development needs of Members;
- 2) to engender a fully collaborative and cohesive approach across FAO and with its strategic partners in addressing the global, regional and emerging issues;

³ <http://www.fao.org/documents/card/en/c/ca9229en>

⁴ Para 36, p.5. in FAO. 2019. Report of the Thirty-third Session of the Committee on Fisheries, Rome, Italy 9–13 July 2018. FAO Fisheries and Aquaculture. Report No. 1249. Rome. Licence: CC BY-NC-SA 3.0 IGO.

- 3) to seek significant multi-donor engagement and support for coordinated action on the identified strategic priorities.

The Principal Drivers of the Programme

GISAP will be developed to address common issues such as environmental interactions, systems development and value chains along with emerging issues such as climate change mitigation and adaptation and COVID-19 response. Whilst GISAP will be global, emphasis will be placed on groups of countries requiring dedicated support such as Least Developed Countries and Small Island Developing States as well as areas where aquaculture generally is poorly developed but holds great potential. GISAP will be focused on optimizing aquaculture's contribution to achieving the SDGs and their indicators but will respond to multiple drivers including: FAO's strategy and priorities (e.g. the Hand in Hand initiative), COFI and COFI/AQ recommendations and guidance, Members' requests and requests addressed to FAO via other fora such as the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC).

In responding to these drivers and the demands from Members, the Programme will be consistent with the Code of Conduct on Responsible Fisheries (CCRF) and its development will be further shaped by the key findings and recommendations arising from the forthcoming FAO/ Network of Aquaculture Centres in Asia-Pacific (NACA) Global Conference on Aquaculture (through the planned Shanghai Declaration) and other relevant global conferences. GISAP will be an adaptive programme, responsive to changing needs, priorities and funding sources, and its focus and progress will be regularly monitored and updated at sessions of COFI/AQ.

The Programme Structure

The focus and challenge of GISAP will be to develop a programme spanning from technical to policy support mechanisms across a number of themes and effectively integrating these to address sustainable aquaculture development more holistically than current approaches allow.

GISAP will look to appropriately apply technology innovation including digital/smart technology and information and communication technologies (ICTs) in the design of the Programme elements to find effective solutions covering: aquaculture systems development best practices; biosecurity and health management; aquatic genetic resources and seed supply; feed and feed management; aquaculture governance, policy development and spatial planning; economic development and investment; and value-chain strengthening. These components may be adapted and modified as the programme is developed.

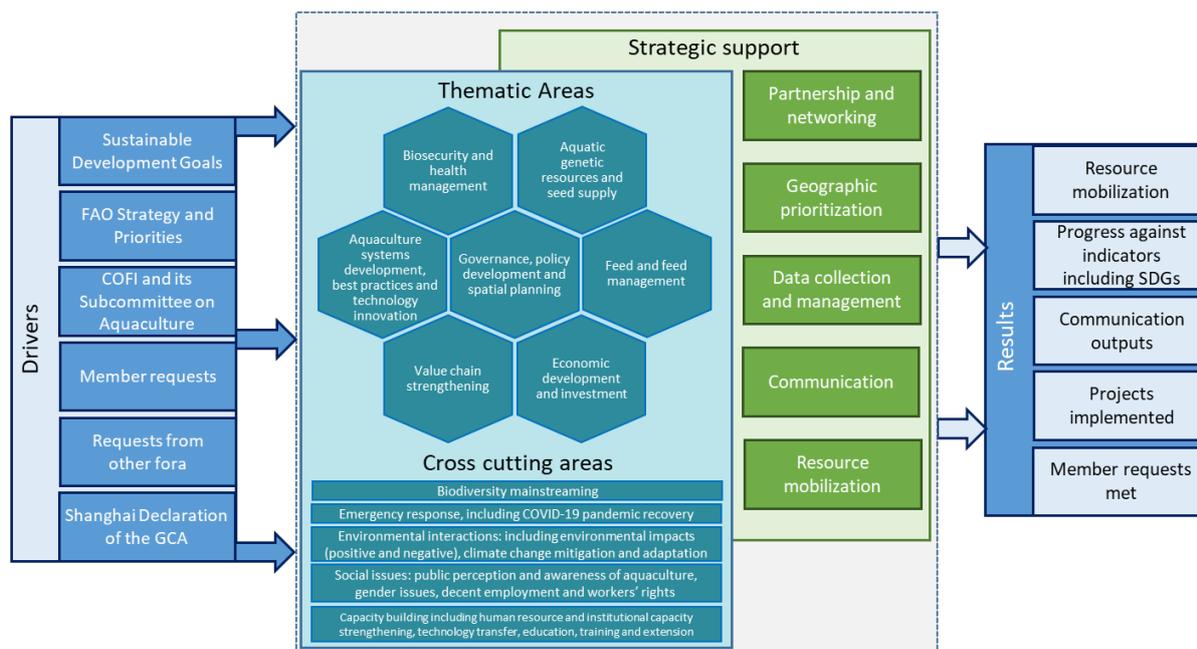
Cross cutting issues, applied across the programme, will include, but not be limited to: emergency response including Covid-19 pandemic recovery; environmental interactions including environmental impacts (positive and negative), climate change mitigation and adaptation; biodiversity mainstreaming; social issues including public perception and awareness of aquaculture, gender issues, decent employment and workers' rights; and capacity building including human resource and institutional capacity strengthening, technology transfer, education, training and extension.

Results will initially serve the work priorities of FAO identified/outlined at the 8th Session of COFI/AQ⁵ with the themes and cross cutting issues being adapted to reflect current priorities and on-going activities with Members. Programme activities will further evolve to reflect future priorities, changing drivers and the extent of resource mobilization.

⁵ Para 38, of page 4 of the Report of the 8th Session of the Sub-committee on Aquaculture, Brasilia, Brazil, 5–9 October 2015 (available at www.fao.org/3/a-i5191t.pdf)

GISAP will include integrated and strategic support with resource mobilization targeted at the development of thematic and cross theme activities including:

- Partnership and networking (within FAO and with partners)
- Geographic prioritization (e.g. SIDS, Africa, Hand in Hand Initiative priority countries)
- Data collection and management resources (e.g. FishstatJ, WAPI, DIAS)
- Resource mobilization initiatives
- Communication resources (e.g. website, FAO Aquaculture Newsletter, webinars, social media and decadal conferences)



Development and operationalization

GISAP will be a living programme, responsive to changing needs and priorities, to address emerging issues and requests, such as response to the food system transformations and the COVID-19 pandemic.

GISAP will effectively utilize the full capacity of FAO (including the *Partnerships and UN Collaboration, Resource Mobilization and Private Sector Partnerships* and *South-South and Triangular Cooperation* Divisions) and its strategic partners, including country partners and Public-Private Partnerships, to mobilize adequate resources to address the needs of the sector for sustainable aquaculture development.

GISAP will be operationalized and guide proposals and cooperation across the FAO Fisheries Division.

Members and partners are encouraged to provide feedback, and help securing funding to support the GISAP.

ANNEX 3

Global Conference on Aquaculture Millennium +20
Aquaculture for Food and Sustainable Development
22–27 September 2021, Shanghai, China

Prospectus

Introduction

Feeding an expected global population of 9 billion by 2050 with nutritious food is a daunting challenge that is engaging hundreds of millions of farmers, food processors, traders, researchers, technical experts and leaders the world over. Fish and other aquatic products from aquaculture can and will play a major role in meeting these dietary demands, while also meeting the food security needs of the poor. Aquatic food is considered very important for a nutritious, healthy and balanced diet complete with essential micronutrients, especially for mothers and children. Increasing production alone is not enough, there is a need to ensure proper and safe aquaculture production with strong biosecurity measures to ensure not only a good quality, safe product, that is socially acceptable, but to be able to link production with regional and global markets through value chain development. Addressing key developmental issues in the sector and supporting business and job opportunities, including for youth and women, remains important to ensure the sustainable and long-term growth of this food production sector while securing current and future employment and livelihoods. All these requires tailored training and capacity development programmes. Currently, aquaculture employs at least 20 million workers in production alone, in addition to millions of jobs generated along the entire value chains (processing, trade, and ecotourism). Overall, the contribution of aquaculture to food system transformation can be significant. Yet, to maximize contributions of the sector towards achieving the targets set under the Sustainable Development Goals, coordinated and accelerated actions are required.

Recognizing the critical role of aquaculture (both small-scale and industrial) in filling the anticipated global fish supply and demand gap, the need to exchange information and experiences, and the importance for a common vision and appreciation on how to achieve the sustainable growth of this food sector, FAO, at the request of its Members, is organizing the Global Conference on Aquaculture (GCA) Millennium + 20 in collaboration with the Network of Aquaculture Centres in Asia-Pacific (NACA) and the Ministry of Agriculture and Rural Affairs (MARA) of the People's Republic of China. Originally planned for October 2020 and postponed due to the COVID-19 pandemic, the GCA will now be held from 22–27 September 2021 in Shanghai, China. FAO and its partners remain fully committed in the fight against hunger and poverty and health and safety of all GCA participants.

Background

With the rapid, but uneven, development of aquaculture in recent decades, there is a need to review the sector for a better understanding of gaps and challenges that could be addressed through targeted and enhanced governance, investment, technology, innovation, partnership, education and creation and sharing of knowledge. In addressing global challenges such as climate change impacts, biodiversity loss risks or assurance of economic viability and social equity together, the actions of all stakeholders will take a coordinated and global effort in order to enhance the contribution of sustainable aquaculture for food and nutrition, poverty reduction, economic growth and increased balance of trade benefitting people and the planet. The challenges are too big for any individual agency to handle, and will require collaboration and cooperation among all partners to build synergies through their complementary strengths.

Conference objectives

Under the overall conference theme “Aquaculture for Food and Sustainable Development”, the GCA aims to bring together stakeholders from government, private sector, farmers, academia and civil society to identify governance mechanisms, technology innovations and investment opportunities in areas of cooperation that will drive sustainable aquaculture development. A key output from the GCA – the *Shanghai Declaration* – will highlight the principles and strategic pathways to maximize the role that the aquaculture sector will play in achieving the Sustainable Development Goals.

Specifically, the GCA will:

- 1) review the status, trends and emerging issues in aquaculture development;
- 2) evaluate the progress of aquaculture development in light of previously recommended strategies and policies at the regional and global levels;
- 3) identify needs, opportunities and challenges in aquaculture and its contributions to sustainable development; and
- 4) build consensus on priorities and actions needed for advancing aquaculture as a globally competitive and sustainable food production sector.

The main outputs of the Conference will be:

- The *Shanghai Declaration* – to highlight the principles and strategic pathways to maximize the contribution of sustainable aquaculture in achieving the Sustainable Development Goals;
- Regional Aquaculture Reviews and a Global Synthesis – that will provide information on the status, trends and emerging issues of the sector; and
- Conference Proceedings – that will synthesize the information and debate from each of the thematic sessions.

The *Shanghai Declaration* is expected to provide a roadmap to further facilitate the development of aquaculture through an enhanced and constructive collaboration among all relevant stakeholders that should facilitate the implementation of recommended actions. All Conference outputs will be freely available for consultation while key outputs will be presented and further discussed at the FAO Committee on Fisheries (COFI) and its Sub-Committee on Aquaculture (COFI/AQ).

Previous Global Conferences on Aquaculture

The GCA will be the fourth in a series of development-oriented conferences that have influenced global aquaculture development:

- 1) The FAO Technical Conference on Aquaculture (Kyoto, Japan, 1976) developed The Kyoto Strategy for Aquaculture Development⁶ and facilitated the transformation of aquaculture from a traditional to a science-based economic activity. It promoted technical cooperation among developing countries to expand aquaculture development.
- 2) The FAO/NACA Conference on Aquaculture in the Third Millennium (Bangkok, Thailand, 2000)⁷ adopted The Bangkok Declaration and Strategy on Aquaculture Development Beyond 2000,⁸ which articulated 17 strategic elements addressing the role of aquaculture in alleviating poverty, enhancing food security, and maintaining the integrity and sustainability of natural resources and the environment. The Strategy suggested measures that incorporate aquaculture into the development programmes of the public and private sectors.

⁶ www.fao.org/3/AC863E/AC863E00.htm

⁷ www.fao.org/3/Y2815E/Y2815E00.htm

⁸ www.fao.org/3/a-ad351e.pdf

- 3) The FAO/NACA Global Conference on Aquaculture Millennium +10 (Phuket, Thailand, 2010)⁹ adopted The Phuket Consensus: a re-affirmation of commitment to the Bangkok Declaration,¹⁰ which recognized the continued value and relevance of the Strategy and identified seven elements that require further strengthening in order to enhance sustainable growth of the sector.

Implementation arrangements

The GCA is jointly organized by FAO, NACA and MARA. The GCA Secretariat coordinates the overall implementation of the Conference, prepares communication materials and provides secretariat support to the organizing committees.

The GCA will be hosted by the Bureau of Fisheries (MARA), the Shanghai Municipal Agriculture and Rural Affairs Commission and the Shanghai Ocean University. The co-hosts are the Chinese Academy of Fishery Sciences, the China Society of Fisheries, China Fisheries Association, China Overseas Fisheries Association, China Aquatic Products Processing and Marketing Alliance, China Fishery Mutual Insurance Association and the China Algae Industry Association.

Conference Venue: The designated venue in Shanghai will be announced soon.

Programme

The GCA International Programme Committee (IPC) has identified nine (9) thematic topics of current and future relevance for the sector. These will be presented and discussed throughout the thematic sessions of the Conference.

The working titles of the nine thematic sessions are:

- 1) Aquaculture systems
- 2) Aquaculture innovation and technical solutions
- 3) Transforming aquaculture to achieve the Sustainable Development Goals
- 4) Aquaculture feed and feeding
- 5) Sustainable management and improvement of aquatic genetic resources and seed supply
- 6) Biosecurity and aquatic animal health management
- 7) Aquaculture policies, planning and sectoral governance
- 8) Social and human dimensions of aquaculture
- 9) Value chains and market access for aquaculture products

A poster session will showcase emerging research relevant to the thematic areas and provide opportunity for early career participants to interact with the conference attendees. Posters submitted by youth will automatically be entered into a poster competition. Winners will receive the opportunity to present a “lightening presentation” in plenary and will be invited to prepare a brief article for the Journal of Aquaculture And Fisheries (<http://www.aquacultfish.com/>).

FAO is preparing a global synthesis of The State of World Aquaculture 2020, which will be presented on the first day following the official opening and keynotes. Six regional reviews will be presented in plenary sessions. Invited guest lectures and one or more side events will highlight key topics and emerging issues. Technical presentations under the thematic sessions will include expert panel discussions covering needs, opportunities and challenges for aquaculture. Delegates will have the opportunity to provide input on the key messages and recommendations of each theme. Finally, an

⁹ www.fao.org/3/i2734e/i2734e.pdf

¹⁰ www.fao.org/fishery/docs/DOCUMENT/aquaculture/aq2010/Phuket_Consensus_13-12-2010.pdf

optional field trip to visit aquaculture facilities will be arranged by the Local Organizing Committee for 26 September.

Opportunities for contributors and sponsors are still available, and interested parties are invited to contact the organizers.

Indicative programme

Date	Activity
Wednesday, 22 September	Arrival and registration
Thursday, 23 September	Official opening Keynotes and plenary presentations Global synthesis and regional reviews Evening: Conference reception
Friday, 24 September	Guest lectures Parallel thematic presentations and panel discussions
Saturday, 25 September	Conclusions and recommendations from thematic panels Student poster competition awards* Presentation of the Shanghai Declaration Official closing
Sunday, 26 September	Field trip to aquaculture facility (optional and at cost)
Monday, 27 September	Departure
* A poster session will be organized during the conference.	

Registration

Conference attendance is free and registration procedure will be announced shortly on the GCA website.

Contacts

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