



联合国
粮食及
农业组织

Food and Agriculture
Organization of the
United Nations

Organisation des Nations
Unies pour l'alimentation
et l'agriculture

Продовольственная и
сельскохозяйственная организация
Объединенных Наций

Organización de las
Naciones Unidas para la
Alimentación y la Agricultura

منظمة
الغذية والزراعة
للأمم المتحدة

COMMITTEE ON FISHERIES

SUB-COMMITTEE ON AQUACULTURE

Eleventh Session

24–27 May 2022

SPECIAL EVENT ON THE GLOBAL CONFERENCE ON AQUACULTURE MILLENNIUM +20 – AQUACULTURE FOR FOOD AND SUSTAINABLE DEVELOPMENT

Executive Summary

At the Thirty-third Session of the Committee on Fisheries (Rome, 9–13 July 2018), the Committee supported the request from the Network of Aquaculture Centres in Asia-Pacific (NACA) members to hold a global conference on aquaculture in 2020, and requested FAO to collaborate with preparations, building upon the successful experiences of similar conferences in 2000 and 2010. The Tenth Session of the COFI Sub-Committee on Aquaculture welcomed and supported the proposal of the People's Republic of China to host the Global Conference on Aquaculture Millennium + 20 (GCA +20) in Shanghai, and the Thirty-fourth Session of COFI welcomed the holding of the GCA +20 and encouraged all Members to participate in it. Consequently FAO, in collaboration with NACA and the Ministry of Agriculture and Rural Affairs (MARA) of the People's Republic of China organized the GCA +20, 22–25 September 2021, in Shanghai, People's Republic of China and online. Based on presentations and discussions of regional reviews, a global synthesis, thematic reviews, and in consideration of the draft Shanghai Declaration which were developed, including through wide stakeholder consultations, in support of the deliberations at the GCA +20, the participants adopted the *Shanghai Declaration on Aquaculture for Food and Sustainable Development*.

Suggested action by the Sub-Committee

The Sub-Committee is invited to:

- Take note of and consider further the information provided in this Working Document;

- Provide guidance on the frequency of holding the Global Conference on Aquaculture, possibly considering the dates for the next one;
- Advise the Secretariat on potential future work, to be continued or newly undertaken as a result of the information, discussions, recommendations and conclusions of the Conference that are deemed relevant and important by the Sub-Committee;
- Identify and support partnership and resource mobilization efforts to implement relevant recommendations of the Conference in the promotion of sustainable aquaculture development initiatives.

INTRODUCTION

Background and context

1. Farmed fish and plants have long contributed to healthy diets, poverty alleviation and rural development. It is only recently, however, that aquaculture has grown to be the world's leading source of aquatic food, which is expected to meet expanding global dietary demands while also addressing the food security needs of the poor.
2. Feeding an expected global population of 9 billion by 2050 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 the dietary demands of all people, while also meeting the food security needs of the poorest.
3. To realize the maximum contributions of the aquaculture sector toward achieving the targets set by the 2030 Agenda and the Sustainable Development Goals, coordinated and accelerated actions are required. Not only must these actions increase sustainable production, but also address the broader value chain, markets, and decent employment.
4. Recognizing the critical importance of aquaculture, and the need to exchange and discuss reliable information to further enhance its contribution to sustainable development, FAO was requested by the Thirty-third Session of the Committee on Fisheries (COFI)¹ to collaborate with the Network of Aquaculture Centres in Asia-Pacific (NACA) with preparations for a Global Conference on Aquaculture Millennium +20 (GCA +20), as was done previously in 2000 and 2010. The Tenth Session of the COFI Sub-Committee on Aquaculture² welcomed and supported the proposal of the People's Republic of China to host the GCA +20 in Shanghai, and the Thirty-fourth Session of COFI³ welcomed the holding of the GCA +20 and encouraged all Members to participate in it.
5. To this effect, the GCA +20⁴ was held 22–25 September 2021, in a hybrid format. Of the more than 2 700 people who registered their interest via the GCA +20 website, a total of 1 728 participants from 114 Members attended the conference (500 in-person in Shanghai, 1 228 online), widely represented by a range of different stakeholders.

¹ www.fao.org/3/ca5184en/ca5184en.pdf, para 44

² www.fao.org/3/ca7417t/CA7417T.pdf, para 73

³ www.fao.org/3/ne907en/ne907en.pdf, para 10h

⁴ www.aquaculture2020.org/

Scope and aims of the Global Conference on Aquaculture Millennium + 20

6. The GCA + 20 was the third in a series of recent development-oriented conferences with the ambition of shaping global aquaculture.

7. The FAO/NACA Conference on **Aquaculture in the Third Millennium**, Bangkok,⁵ Thailand, 2000 adopted *The Bangkok Declaration*⁶ and *Strategy on Aquaculture Development Beyond 2000*, 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.

8. The FAO/NACA **Global Conference on Aquaculture Millennium +10**, Phuket,⁷ Thailand, 2010 adopted *The Phuket Consensus: a re-affirmation of commitment to the Bangkok Declaration*,⁸ 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.

9. Under the theme “**Aquaculture for food and sustainable development**”, the GCA +20 brought together stakeholders from government, business, academia and civil society to identify the policy and technology innovations, investment opportunities and fruitful areas of cooperation in aquaculture for food and sustainable development. A key output from the GCA +20, the *Shanghai Declaration on Aquaculture for Food and Sustainable Development*, highlights the priorities, actions, principles and strategic pathways to maximize sustainable aquaculture in achieving the Sustainable Development Goals, with a special focus on “leaving no one behind”.

10. Specifically, the Global Conference on Aquaculture Millennium + 20 aimed to:

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

Preparations for the Global Conference

11. To facilitate the preparations for the GCA +20, FAO, the Network of Aquaculture Centres in Asia-Pacific (NACA) and the Ministry of Agriculture and Rural Affairs of the People’s Republic of China (MARA) established the GCA +20 Secretariat. The GCA +20 Secretariat coordinated the overall implementation of the conference, prepared communication materials and provided secretariat support to the International Programme Committee and the International and Local Organizing Committees.

12. Originally planned for October 2020, the GCA +20 had to be postponed due to the COVID-19 pandemic. The GCA +20 Secretariat engaged with all partners and determined the revised dates; the GCA +20 was finally held 22–25 September 2021.

13. The GCA +20 Secretariat, in consultation with the International Programme Committee and the International and Local Organizing Committees, arranged opening and closing ceremonies, three

⁵ www.fao.org/3/Y2815E/Y2815E00.htm#Contents

⁶ www.fao.org/3/ad351e/ad351e.pdf

⁷ www.fao.org/3/i2734e/i2734e.pdf

⁸ www.fao.org/fishery/docs/DOCUMENT/aquaculture/aq2010/Phuket_Consensus_13-12-2010.pdf

keynote speeches, and three special topic presentations. The Secretariat further organized three main workstreams to facilitate the development of technical and policy-relevant documentation and presentations to the GCA +20: (i) Regional Aquaculture Reviews and a Global Synthesis for The State of World Aquaculture 2020, (ii) Thematic Reviews and (iii) draft Shanghai Declaration on Aquaculture for Food and Sustainable Development.

14. The programme of the GCA +20 is attached as Annex 1. The report of the conference is made available as Session Background Document COFI:AQ/XI/2022/SBD.6.

MAJOR OUTPUTS

Aquaculture Regional Reviews and Global Synthesis

15. Since 1995, the FAO Fisheries and Aquaculture Department has produced Regional Aquaculture Reviews and a Global Synthesis every five years. These reviews provide up-to-date information on the status and trends of the sector at regional and global levels. The reviews pull from national, regional and global data sets and include expert opinions and literature reviews. The reviews can be of pertinent interest and use to national governments, regional organizations, policy-makers, aquaculture farmers and other aquaculture value chain actors, investors, civil society organizations, research and training institutions as well as other interested stakeholders.

16. With the support of NACA and World Fisheries Trust (WFT), and the technical contributions of leading aquaculture development experts and authors, FAO facilitated the preparation of six Regional Aquaculture Reviews and a Global Synthesis, as follows:

- Regional Review of Aquaculture in Asia and the Pacific
- Regional Review of Aquaculture in Europe
- Regional Review of Aquaculture in Latin America and the Caribbean
- Regional Review of Aquaculture in the Near East and North Africa
- Regional Review of Aquaculture in North America
- Regional Review of Aquaculture in Sub-Saharan Africa
- Global Synthesis: World Aquaculture 2020 - A brief overview

17. These reviews were first prepared by selected aquaculture experts and then extensively reviewed by colleagues of FAO, NACA and WFT as well as peer-reviewed by numerous invited experts worldwide. In addition, the draft regional reviews and the global synthesis including their key messages were presented and discussed during seven technical webinars held in October 2020 with the attendance of the authors, invited speakers, panelists, experts and a total of more than 1 600 participants. This provided opportunities for fruitful exchange and further improvements of the reviews. The Global Synthesis was presented as a keynote speech to the GCA +20, and participants were referred to the recordings of the October webinars for the Regional Reviews.⁹

18. The six regional reviews and the global synthesis are available as Session Background Documents COFI:AQ/XI/2022/SBD.7–13.

Thematic Reviews

19. A set of nine Thematic Reviews was developed to provide additional evidence base for the GCA +20 and the draft Shanghai Declaration. For each theme, a group of technical experts was convened by FAO and commissioned to produce thematic review papers for corresponding sessions of the GCA +20. These themes, carefully selected by the International Programme Committee and chosen

⁹ www.aquaculture2020.org/regional

for their current and future relevance for the sector, covered technical topics on production, ranging from innovations in aquaculture systems to developments in feed and feeding practices, and from biosecurity to aquatic genetic resources and seed supply. Value chains, market access and consumer perceptions relate directly to social and human dimensions of aquaculture, including gender, nutrition and youth employment. Finally, aquaculture policies, planning and governance connect to the needed transformation of aquaculture towards achieving the Sustainable Development Goals. Each Thematic Review considered a number of cross-cutting issues including, among other things, biodiversity mainstreaming, climate change and capacity building. The nine thematic reviews were as follows:

1. Aquaculture systems
2. Aquaculture innovation and technical solutions
3. Transforming aquaculture to achieve the SDGs
4. Aquaculture feed and feeding
5. 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

20. The nine Thematic Reviews were presented by a core group of experts who prepared them during the GCA +20. Presentations were followed by panel discussion with all participants invited to provide comments and questions.

21. All draft Thematic Reviews were published online¹⁰ for a commenting period of six weeks, with all registered participants encouraged to provide input, comments or other feedback.

Shanghai Declaration: Aquaculture for Food and Sustainable Development

22. The key messages of the Regional Reviews, Global Synthesis and Thematic Reviews were used for the development of the key output of the GCA +20, the Shanghai Declaration on Aquaculture for Food and Sustainable Development (the Declaration). Early in the preparatory process, the GCA +20 Secretariat invited a group of renowned aquaculture experts to develop a first draft of the Declaration. This draft was refined through multiple revisions and shared widely with interested aquaculture stakeholders and experts, incorporating and considering all feedback received. The resulting “pre-final” version of the Declaration was then made available to all participants of the GCA +20 for an open commenting period. Once these comments were integrated, the final draft Declaration was introduced to the GCA +20 on the first day. The Shanghai Declaration was adopted by the participants of the GCA +20 on 24 September 2021.

23. The Shanghai Declaration highlights principles and pathways to maximize sustainable aquaculture in achieving the Sustainable Development Goals, and specifically presents i) a shared vision of sustainable aquaculture, ii) five overarching commitments, iii) ten strategic priorities and iv) a call for action. The Declaration recommends global priorities and actions related to aquaculture’s role in implementing and mainstreaming the Sustainable Development Goals and, over the next 10 years, to optimizing the contribution of aquaculture towards achieving the 2030 Agenda for Sustainable Development. Subject to guidance by COFI, the Declaration may act as a guide to Members working towards sustainable aquaculture development under the Code of Conduct for Responsible Fisheries,

¹⁰ www.aquaculture2020.org/thematic

including the 2021 COFI Declaration¹¹ on its 25th Anniversary, the 2000 The Bangkok Declaration¹² and Strategy as well as the 2010 The Phuket Consensus,¹³ and to underpin future national, regional and global integrated sustainable aquaculture development initiatives on capacity building, partnership and resource mobilization towards promoting food security, poverty eradication and rural development.

The *Shanghai Declaration: Aquaculture for Food and Sustainable Development* is available as Information Document COFI:AQ/XI/2022/INF.15.

24. More than forty organizations and institutions submitted pledges and statements of support to the Shanghai Declaration, some twenty of which were presented after the adoption of the Declaration during the GCA +20. All these pledges and statements can be found at www.aquaculture2020.org/declaration/.

Other items of note

25. FAO participated in a high-level segment entitled *South-South and Triangular Cooperation for Sustainable Aquaculture Development* organized by the Ministry of Agriculture and Rural Affairs of the People's Republic of China concurrently with the GCA +20.

26. A poster competition encouraged youth and early career researchers to submit academic posters to the GCA. Over 177 posters were received, all of which were displayed on the GCA website and in the conference venue. One outstanding poster from each theme was selected, and these nine authors presented their research to the plenary session. The awardees came from many different regions and were comprised of eight youth and six women.

27. A special topic workshop on *Artemia* preceded the GCA +20, co-organized in hybrid format by FAO, NACA, University of Ghent, the Asian Regional Artemia Reference Center and the Artemia Association of China. The workshop was well attended with close to 400 participants (mostly online). The outcome of the workshop is expected to facilitate the *Artemia* research and industry development and will be important to sustain the fast growth of aquaculture.

PRELIMINARY ANALYSIS AND NEXT STEPS

28. The ambitious objectives of the GCA +20 were met. The GCA +20 reviewed status, trends and emerging issues in aquaculture development on a regional basis and successfully presented the results in a series of well attended six consecutive webinars in October 2020. The Regional Reviews and Global Synthesis provided the necessary quantitative information, the facts and figures, for the Shanghai Declaration. The preparation of these reviews is an essential part of FAO's work programme in aquaculture since 1995, conducted every five years, and the next round of regional reviews is scheduled for 2025.

29. The identification of opportunities and challenges in aquaculture and its contributions to sustainable development as well as an evaluation of the progress of aquaculture development were comprehensively covered in the nine thematic reviews that were prepared ahead of and discussed at the GCA +20, with the commenting period extended until after the GCA +20. The discussions on the most pressing issues and way forward were rich and insightful and provided a complementary source of indispensable qualitative information for preparing the Shanghai Declaration. Given the rapid

¹¹ FAO. 2021. 2021 COFI Declaration for Sustainable Fisheries and Aquaculture. Rome.
<https://doi.org/10.4060/cb3767en>

¹² www.fao.org/3/ad351e/ad351e.pdf

¹³ www.fao.org/fishery/docs/DOCUMENT/aquaculture/aq2010/Phuket_Consensus_13-12-2010.pdf

advancement of the aquaculture sector, similar thematic reviews may need to be prepared with increased frequency, for example instead of the current every 10 years to every 5 years.

30. There is some scope for improvement for evaluating the impact of previous declarations, and the outputs of the GCA +20 should serve as a baseline. Members may wish to develop indicators, possibly to be included and integrated into Member reporting via the CCRF Aquaculture Questionnaire.

31. The pledges and statements of support of over 40 important and influential organizations, institutions and networks are testament to the strong will of the global aquaculture community.

GUIDANCE SOUGHT

32. The Sub-Committee is invited to:

- Take note of and consider further the information provided in this Working Document;
- Provide guidance on the frequency of holding the Global Conference on Aquaculture, possibly considering the dates for the next one;
- Advise the Secretariat on potential future work, to be continued or newly undertaken as a result of the information, discussions, recommendations, conclusions of the Conference that are deemed relevant and important by the Sub-Committee;
- Identify and support partnership and resource mobilization efforts to implement relevant recommendations of the Conference in the promotion of sustainable aquaculture development initiatives.

**ANNEX 1: Programme of the Global Conference on Aquaculture Millennium + 20,
22-25 September 2021, Shanghai, China.**

Day 0: Wednesday 22 September			
Pre-conference workshop: SDG-aligned Artemia Aquaculture Moderators: Rodrigo Roubach & SUI Liying 21:00 - 22:35			
Day 1: Thursday 23 September			
Keynote Presentations			
16:30 - 17:00	Warm-up session: Video presentation - Chinese sustainable aquaculture		
Opening speeches Moderator: MA Youxiang , Vice Minister, Ministry of Agriculture and Rural Affairs of the People's Republic of China			
17:00 - 18:00	<ul style="list-style-type: none"> • QU Dongyu, Director-General, Food and Agriculture Organization of the United Nations (FAO) • TANG Renjian, Minister for Agriculture and Rural Affairs, Ministry of Agriculture and Rural Affairs of the People's Republic of China • Frank K. Tumwebaze, Minister for Agriculture, Animal Industry and Fisheries, Ministry of Agriculture, Animal Industry and Fisheries of the Republic of Uganda • Úrsula Desilú León Chempén, Vice Minister for Fisheries and Aquaculture, Ministry of Production of the Republic of Peru • Virginijus Sinkevičius, Commissioner for the Environment, Oceans and Fisheries, European Commission • HUANG Jie, Director-General, Network of Aquaculture Centres in Asia-Pacific (NACA) • PENG Chenlei, Vice Mayor of Shanghai Municipal Government 		
Keynote presentations Moderator: Jennifer Cobcroft			
18:00 - 18:30	Keynote 1: Green Development and Future of Aquaculture (Tang Qisheng)		
18:30 - 19:00	Keynote 2: Global synthesis of the state of world aquaculture (Devin Bartley)		
19:00 - 19:30	Keynote 3: The Shanghai Declaration (Matthias Halwart)		
19:30 - 21:00	<i>Dinner</i>		
Special topic presentations Moderator: Maria Celia Portella			
21:00 - 21:30	SME Aquaculture: leading sector growth in sub-Saharan Africa - Harrison Charo Karisa & Lovin Kobusingye		
21:30 - 22:00	Investment in Aquaculture - Randall Brummett & Flavio Corsin		
22:00 - 22:30	Unfed Aquaculture and Integrated Multi-trophic Aquaculture: Theories and Practices in China - JIANG Zengjie		
Parallel Sessions			
	Stream 1 Thematic Reviews: 1, 2 & 3 Facilitators: Selina Stead & David Little	Stream 2 Thematic reviews: 4, 5 & 6 Facilitator: Rohana Subasinghe	Stream 3 Thematic reviews: 7, 8 & 9 Facilitator: Melanie Siggs
22:30 - 00:00	TR1: Aquaculture systems <u>Speakers/Panelists</u> Marc Verdegem (Lead) U. Win Latt Sandra Shumway Alejandro Buschmann Local moderator: <i>WANG Qingyin</i>	TR4: Aquaculture feed and feeding <u>Speakers/Panelists</u> Brett Glencross (Lead) Kangsen Mai Luisa Valente Rodrigo Roubach <u>Additional Panelist:</u> Albert Tacon Local moderator: <i>XIE Shouqi</i>	TR7: Aquaculture policies, planning and sectoral governance <u>Speakers/Panelists</u> Curtis Jolly (Co-lead) Beatrice Nyandat (Co-lead) YANG Zhengyong (Co-lead) Felipe Matias <u>Additional Panelists:</u> Ana Menezes, Neil Ridler Local moderator: <i>YANG Zhengyong</i>

Day 2: Friday 24 September			
15:00 - 17:30 South-South and Triangular Cooperation for Sustainable Aquaculture Development *			
15:00 - 16:30	<p>TR2: Aquaculture innovation and technical solutions</p> <p><u>Speakers/Panelists</u> Neil Anthony Sims (Lead) Maymyat Noelwin Alejandro Buschmann Albert Tacon</p> <p>Local moderator: <i>WANG Lumin</i></p>	<p>TR5: Aquatic genetic resources and seed supply</p> <p><u>Speakers/Panelists</u> Anna Sonesson (Lead) Graham Mair Eric Hallerman Fran Humphries</p> <p><u>Additional Panelist:</u> Rose Basita</p> <p>Local moderator: <i>CHEN Songlin</i></p>	<p>TR8: Social and human dimensions of aquaculture</p> <p><u>Speakers/Panelists</u> Cecile Brugere (Lead) Tulika Bansal Froukje Kruijssen</p> <p><u>Additional Panelists:</u> Meryl Williams, Sebastian Mathew</p> <p>Local moderator: <i>TANG Yi</i></p>
16:30 - 18:00	<p>TR3: Transforming aquaculture to achieve SDGs</p> <p><u>Speakers/Panelists</u> Max Troell (Lead) Doris Soto Selina Stead</p> <p><u>Additional Panelists:</u> Anna Farmery, Richard Cottrell, Barry Costa-Pierce</p> <p>Local moderator: <i>XU Pao</i></p>	<p>TR6: Biosecurity and aquatic animal health management</p> <p><u>Speakers/Panelists</u> Victoria Alday-Sanz (Co-Lead) Rohana Subasinghe (Co-Lead) Peter de Schryver Melba Reantaso</p> <p><u>Additional Panelists:</u> Patrick Sorgeloos, HUANG Jie</p> <p>Local moderator: <i>ZHANG Qingli</i></p>	<p>TR9: Value chains and market access for aquaculture products</p> <p><u>Speakers/Panelists</u> Lahsen Ababouch (Lead) Jose Fernandez Polanco Nguyen Kim Anh Mariana Toussaint</p> <p><u>Additional Panelists:</u> David Vivas Eugui, Majida Maarouf</p> <p>Local moderator: <i>ZHU Yaping</i></p>
18:00 - 19:30	<i>Dinner</i>		
Poster session Moderators: Austin Stankus & ZHANG Junfang			
19:30 - 20:00	Spotlight poster presentations and awards Recognition of outstanding posters - Audun Lem (FAO)		
Shanghai Declaration Moderators: Vera Agostini & Matthias Halwart			
20:00 - 21:30	Adoption of the Shanghai Declaration - Meryl Williams / Friends of the Shanghai Declaration Statements of support for the Shanghai Declaration Guest of Honour: Her Royal Highness Princess Maha Chakri Sirindhorn, FAO Special Goodwill Ambassador for Asia and the Pacific Pledges by organizations		
Closing Ceremony Moderator: Ismahane Elouafi , Chief Scientist of FAO			
21:30 - 22:00	<ul style="list-style-type: none"> • Maria Helena Semedo, Deputy Director-General of FAO • MA Youxiang, Vice Minister, Ministry of Agriculture and Rural Affairs of the People's Republic of China • HUANG Jie, Director-General of NACA 		

* This High-Level Roundtable Meeting took place in parallel to the GCA+20 and attendance was by invitation only.