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# COMMITTEE ON FISHERIES

## Thirty-third Session

Rome, 9–13 July 2018

## STATE OF WORLD FISHERIES AND AQUACULTURE

### Executive Summary

This paper provides a summary of the SOFIA Publication and constitutes an update to a similar document presented at the last FAO Committee on Fisheries (COFI) in 2016. It reviews the role of the biennial flagship publication The State of World Fisheries and Aquaculture (SOFIA) within the global framework as defined by the adoption of the 2030 Agenda for Sustainable Development; in supporting the work of decision-makers in general and that of FAO in particular, and draws attention to some specific messages in SOFIA 2018 concerning the current status, recent trends and prospects in the fisheries and aquaculture sector.

### Suggested action by the Committee

#### The Committee is invited to:

- underline the importance of FAO's role in reporting on the state of world fisheries and aquaculture, and advise on how COFI can best contribute to this and benefit from it;
- underline the relevance of SOFIA and advise on its role in the framework of the 2030 Agenda for Sustainable Development.
- Provide advice on how the publication can be improved in future editions.

*This document can be accessed using the Quick Response Code on this page;  
an FAO initiative to minimize its environmental impact and promote greener communications.  
Other documents can be consulted at <http://www.fao.org/cofi/en>*



1. The State of World Fisheries and Aquaculture (SOFIA) publication is usually launched shortly before or at the COFI Opening Session. Recognizing the relevance of the subject of the state of world fisheries and aquaculture to the work of COFI, it was first decided to include a dedicated item on SOFIA in the Agenda for the Thirtieth Session of COFI in 2012.
2. Since 2015 when the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) were adopted, FAO and its Member States are firmly engaged in meeting these goals, some of which are highly relevant to fisheries and aquaculture. Such engagement calls for ambitious and innovative approaches in the ways policies, programmes, partnerships and investments are pulled together to achieve these common goals.
3. The purpose of the present document is to: (i) consider the role of SOFIA in supporting the work of decision-makers in general and that of FAO in particular within the new global framework set by the 2030 Agenda; and (ii) present key information in SOFIA 2018 concerning the current status, recent trends and prospects in the fisheries and aquaculture sector.
4. SOFIA is intended to facilitate a comprehensive, objective and global view of the fisheries and aquaculture sectors, particularly of emerging issues. SOFIA 2018 is the thirteenth edition in the biennial series, which started in 1994.

## I. ROLE AND INFLUENCE OF SOFIA PUBLICATION

5. Since the Thirtieth Session of COFI the relevance, quality and influence effectiveness of SOFIA publications at the science–policy interface were reported and confirmed both by the Committee and through specific studies<sup>1</sup> and evaluations conducted by FAO,<sup>2</sup> and described in a recent publication.<sup>3</sup> Indicators have pointed to a clear and growing interest in SOFIA as measured by media and citation analysis as well as web traffic.
6. These evaluations revealed that the Overview section attracts the most attention, while notable interest has also been shown for information such as the Code of Conduct for Responsible Fisheries, the FAO Fish Price Index (introduced in 2010 edition), or the growth in aquaculture as a source of fish food along with the state of marine fishery stocks (2012 edition). Among policy-makers, SOFIA is perceived as a critical source of global trends and statistics, and, to a lesser degree, of knowledge about fisheries in a variety of topics and contexts, which supports decision-making and policy decisions. SOFIA has helped to improve sectoral statistics over the years, and SOFIA reports have significantly guided the development/improvement of sectoral strategies or programmes.
7. Generally speaking, media coverage has grown over the last issues. SOFIA 2016 was launched with a press release, radio interviews on UN radio and various requests for interviews from major news outlets, including The Guardian, BBC, El Pais, and Reuters, among others. Social media was instrumental in reaching a wider audience and infographics were created to amplify messages of SOFIA through wider audiences. SOFIA 2016 was featured on the FAO home page and on regional offices homepages.

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<sup>1</sup> in-depth analysis on the impact of SOFIA, in partnership with Dalhousie University of Halifax Nova Scotia, as part of a project under the 'Environmental Information: Use and Influence' initiative

<sup>2</sup> specific assessment conducted in 2014-15 by FAO's Office of Evaluation, within a broader overall evaluation of FAO flagship information products, assessed the extent to which SOFIA is achieving its intended outcomes.

<sup>3</sup> Ababouch, L., Taconet, M., Plummer, J., Garibaldi L. & Vannuccini, S. 2016. Bridging the science–policy divide to promote fisheries knowledge for all: the case of the Food and Agriculture Organization of the United Nations. In B.H. MacDonald, S.S. Soomai, E.M. De Santo & P.G. Wells, eds. *Science, information and policy interface for effective coastal and ocean management*, pp. 389–417. Boca Raton, Florida, USA, CRC Press.

8. Past reports on citation and content analysis of SOFIA<sup>1 2</sup> revealed an increase of citations of SOFIA editions over time, with a wide variation of sources and publishers indicating an extensive and diverse use of SOFIA information, including a significant number of sources in policy contexts. SOFIA remains regularly quoted in workshops, meetings, scientific papers, press articles and media outlets, as well as by partner international organizations. According to the Web of Science Core Collection, SOFIA 2016 has been cited 147 times in other publications (scientific and non-) since its issuance.

9. Web traffic has continuously increased with every new issue, and still does: data from FAO's Document Repository regarding SOFIA 2016 shows an average of 22 653 views per month (all languages) over period July 2016 until December 2017 (with a very significant total number of views reaching 407 768), compared to the 21 247 views per month for SOFIA 2014 over period (July 2014 – April 2016), based on comparable metrics. Over this period, SOFIA 2016 totalled a very significant total number of views reaching 407 768, complemented with 84 868 views for the booklet and flyer of interest to a broader audience. The SOFIA evaluation<sup>2</sup> conducted in 2014-15 noted that web traffic for older editions tapers with the release of more recent SOFIA publications, however specific topics covered remain visited over time. This together with the positive usage trends provide a solid indication of subject matter and content quality that continues to garner interest.

10. In order to harness SOFIA's utility and influence towards meeting the 2030 Agenda, the 2018 SOFIA edition has undergone some restructuring compared to previous versions. While Part 1 continues to report global status and trends, the other sections have changed in focus with Part 2 presenting FAO's position and work directions on key topics for which FAO strategies are established, Part 3 discussing global issues and reviewing possible solutions and strategies with a specific attention to cross-cutting/sectoral aspects, and Part 4 (outlook and emerging issues) firmly geared on sectoral perspectives through modelled projections and a prospective review of our changing environment. SOFIA's 2016 edition was the first to undergo a change in layout design, to align to a FAO corporate style and communication strategy across all FAO's flagship publications. This 2018 edition follows the same corporate style with some improvements.

11. The SOFIA 2018 development process lasted one year and has broadly involved Fisheries and Aquaculture Department staff with significant contributions from staff from other FAO Departments. Its quality assurance process included close collaboration with the Office of Corporate Communication (OCC) responsible for the design and layout of the publication, reviews from other FAO Departments, and for the first time also external review by three independent experts (from fisheries, aquaculture and trade fields respectively).

## **II. SOME KEY UPDATE ON GLOBAL TRENDS IN SOFIA 2018**

12. A summary of SOFIA's Part 1 'World review' is herewith provided (par. 13 to 21) with highlights of latest sectoral trends based on FAO global fishery statistics. The Governance and policy section of Part 1 concerning update on progress and status on the Code and related international instruments is provided in Meeting Document COFI/2018/3.

13. Excluding aquatic plants, global fish<sup>4</sup> production peaked at about 171 million tonnes in 2016, with aquaculture representing 47 percent of the total and 53 percent if non-food uses (including reduction to fishmeal and fish oil) are excluded. In addition, the world production of aquatic plants, mostly seaweeds, reached 31.2 million tonnes in 2016, of which 30.1 million tonnes (96.5 percent) was harvested from aquaculture.

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<sup>4</sup> In this paper, the term "fish" indicates fish, crustaceans, molluscs and other aquatic animals, but excludes aquatic mammals, crocodiles, alligators and caimans, seaweeds and other aquatic plants.

14. With 79.3 million tonnes produced from marine waters and 11.6 million tonnes from inland waters, global capture fisheries production totalled 90.9 million tonnes in 2016, a small decrease in comparison to the two previous years. Alaska pollock surpassed again anchoveta as the top species in 2016, with the highest catches since 1998. Inland catches provide a key food source for many local communities, especially in land-locked and low-income countries in Asia and Africa. In 2016, sixteen countries, mostly in Asia, produced almost 80 percent of these catches.

15. World aquaculture production reached 80.0 million tonnes of food fish in 2016. With 5.8 percent annual growth rate during the period 2001–2016, aquaculture continues to grow faster than other major food production sectors, but it no longer enjoys the high annual growth rates of around 10 percent experienced in the 1980s and 1990s. Also, the disparity in the level of sectoral development and uneven production distribution remain great among the countries within the regions and across the world.

16. Between 1961 and 2016, the average annual increase in global food fish consumption<sup>2</sup> (3.2 percent) outpaced population growth (1.6 percent). In per capita terms, food fish consumption grew from 9.0 kg in 1961 to 20.2 kg in 2015, at an average rate of about 1.5 percent per year. Preliminary estimates point to further growth reaching about 20.5 kg in 2017. Moreover, about 3.2 billion people get from fish almost 20 percent of their average per capita intake of animal protein in 2015.

17. Many millions of people around the world find a source of income and livelihood in the fisheries and aquaculture sectors. In 2016, about 59.6 million people were engaged in their primary sectors, on a full-time, part-time or occasional basis. Engagement in aquaculture was estimated to be 32 percent of the total (an increasing proportion compared to the 1990s), or 19.3 million people. Women play an important role in this workforce and represent about 14 percent of the people employed in the primary sector and about half of them if the secondary sector is included.

18. In 2016, the total fleet was estimated at 4.6 million vessels and this is within the range of 4.5 – 4.7 million vessels between 2011 and 2016. Three-quarters of these vessels are found in Asia. More than 60 percent of all vessels were motorized and most (86 percent) of these motorized vessels were less than 12 meters overall length. On the contrary, the largest vessels, classified as those greater than 24 meters overall length made up about 2 percent of the total fleet.

19. Based on FAO's monitoring of assessed marine fish stocks, the fraction of marine fish stocks fished within biologically sustainable levels has continued to decline from 90.0 percent in 1974 to 66.9 percent in 2015. Thus, 33.1 percent of fish stocks were estimated as fished at biologically unsustainable level and therefore overfished. In 2015, maximally sustainably fished stocks (formerly termed fully fished stocks) accounted for 59.9 percent and underfished stocks for 7.0 percent of the total assessed stocks.

20. Of the 171 million tonnes of total fish production in 2016, about 88 percent (over 151 million tonnes) was utilized for direct human consumption, a share that has increased significantly in recent decades. The greatest part of the 12 percent used for non-food purposes (about 20 million tonnes) was reduced to fishmeal and fish oil (about 15 million tonnes mainly originating from marine capture fisheries). Loss or wastage between landing and consumption decreased, but still accounts for an estimated 27 percent of landed fish.

21. Fish and fish products are some of the most traded food items in the world today, with about 35 percent of global fish production entering international trade in 2016. Trade in fish and fish products reached USD 143 billion in 2016 and it is expected to have reached a new peak at about USD152 billion in 2017. Developing countries play a key role in this trade and during the past 40 years, the growth rate of exports from developing countries has increased faster than from developed ones.

22. SOFIA's Part 2 'FAO fisheries and aquaculture in action' presents FAO's position on key work areas for which FAO strategies are established, including: FAO fisheries and sustainable development goals: meeting Agenda 2030; FAO approach to data collation, curation, management and dissemination; Combating IUU fishing; Mainstreaming biodiversity in fisheries and aquaculture; Inland fisheries contribution to achievement of the SDGs; Fish, nutrition and health; Recent successes in implementing the Ecosystem Approach.

23. Part 3 'Highlights of ongoing studies' discusses global issues and reviews possible solutions and strategies with a specific attention to cross-cutting/sectoral aspects. This include: Climate change impacts and responses; Small-scale fisheries and aquaculture; Realizing aquaculture potential; Market developments; Sustainable value chains and consumer protection; Ocean pollution; Social issues in fisheries and aquaculture.

24. Part 4 'Outlook and emerging issues' is firmly geared on sectoral perspectives through modelled projections and a prospective review of our changing environment. It includes: Blue Growth in action; The emerging role of regional cooperation for sustainable development; The role of RFBs in aquaculture development; Examples of disruptive technologies, and; Projections of fisheries, aquaculture and markets.