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COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Item 6 of the Provisional Agenda

Fifteenth Regular Session

Rome, 19 – 23 January 2015

STATUS OF PREPARATION OF *THE STATE OF THE WORLD'S AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE*

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I. INTRODUCTION

1. Already at its Eleventh Regular Session, the Commission on Genetic Resources for Food and Agriculture (Commission) agreed that improving the collection and sharing of information on aquatic genetic resources is of high priority and included the preparation of *The State of the Worlds Aquatic Genetic Resources for Food and Agriculture* (SoW AqGR) into its Multi-Year Programme of Work (MYPOW).[1] At its Thirteenth and Fourteenth Regular Sessions, the Commission considered, in particular, the scope of the SoW AqGR and finally decided:

> "*that the scope of the report would be farmed aquatic species and their wild relatives within national jurisdiction. Countries were also invited to provide a species list of nationally important aquatic genetic resources of capture fisheries within national jurisdiction*."[2]

2. At its last session, the Commission also agreed on the structure of the SoW AqGR[3] and requested FAO to adjust the draft *Guidelines for the Preparation of Country Reports for the State of the World's Aquatic Genetic Resources for Food and Agriculture* and to reduce the number of thematic studies by prioritizing them in line with the agreed scope and focusing on the core issue of genetic diversity.[4] The Commission called on countries to participate in the process by preparing national reports on aquatic genetic resources and to strengthen related information systems.

3. This document provides an update on the review of the *Guidelines for the Preparation of Country Reports for the State of the World's Aquatic Genetic Resources for Food and Agriculture* and on the status of preparation of the SoW AqGR. Information on the Advisory Working Group on Aquatic Genetic Resources and the possible establishment of an Ad Hoc Intergovernmental Technical Working Group on Aquatic Genetic Resources under the Commission, is given in the document, *Establishment of an Ad Hoc Intergovernmental Technical Working Group on Aquatic Genetic Resources*[5].

II. THE RATIONALE FOR AND SCOPE OF *THE STATE OF THE WORLD'S AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE*

4. Despite the crucial role of farmed aquatic species and their wild relatives in contributing to global food security and sustainable livelihoods, information available on AqGR tends to be scattered, is generally incomplete. There are still major gaps in reporting aquaculture data to FAO and in the characterization of aquatic genetic variation at levels below that of the species.[6]

5. Lack of data and information and inadequate standardization result in poor understanding of the status and trends of AqGR. There is, however, growing recognition that genetic information will be increasingly important to support sustainable aquaculture. There is also an increasing body of information on genetic resources for aquaculture and on genetically distinct fish stocks and cryptic species, and an increasing need for more information to underpin sound management. At the same time, the technical difficulty and costs associated with collecting information on genetic diversity need to be recognized. The additional burden on the often over-loaded capacity in developing countries must also be taken into account; and clear procedures for sustainable development set and implemented.

6. Improvements in knowledge of the status and trends of the use and conservation of farmed aquatic species and their wild relatives will enable stronger and more comprehensive policy and planning and overall management of these essential resources. In light of the loss and

[1] CGRFA-11/07/Report, paragraph 60 & *Appendix E*.
[2] CGRFA-14/13/Report, paragraph 76.
[3] CGRFA-14/13/Report, *Appendix H*.
[4] CGRFA-14/13/Report, paragraph 79.
[5] CGRFA-15/15/18.
[6] CGRFA-13/11/Inf.14.

degradation of aquatic habitats and populations resulting in genetic impoverishment, changing environmental and economic conditions and advancement of biotechnology, the country-driven SoW AqGR will provide the opportunity to assess the status and trends of farmed aquatic species and their wild relatives. Opportunities to enhance the contribution of AqGR to food security and rural development are likely to emerge with greater understanding of their current and potential uses. Moreover, the preparation of the SoW AqGR will assist national policy makers in determining conservation and sustainable use needs and priorities and contribute to raising awareness among policy-makers.

III. PREPARATORY ACTIVITIES TOWARDS *THE STATE OF THE WORLD'S AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE*

7. A number of regular programme activities undertaken by FAO recently contribute to the preparation of the SoW AqGR, including the preparation of the *State of World's Fisheries and Aquaculture*[7], the collection and the analysis of country level data and information on fisheries and aquaculture production and value; establishment and updating of information systems and databases on the fisheries and aquaculture sectors (Aquatic Species Fact Sheets, Cultured Aquatic Species Fact Sheets; The National Fisheries Sector Overview; The National Aquaculture Sector Overview; The National Aquaculture Legislation Overview; The Fisheries Resources Monitoring System; and the Database on Introduced Aquatic Species).

8. Since the Commission's last session, FAO has undertaken the following initiatives directly contributing to the preparation of the SoW AqGR:

- Revision and translation into all UN languages of the Guidelines and Questionnaire for the *Preparation of Country Reports for the State of the World's Aquatic Genetic Resources for Food and Agriculture*[8] in accordance with the Commission's decision on the scope of the SoW AqGR;
- Prioritization of thematic background studies to be prepared for the SoW AqGR in accordance with the Commission's request (see *Appendix I*);
- Initiatives to mobilize financial and human resources in support of the preparation of the SoW AqGR; and
- Support to the Technical Cooperation Project (TCP/RER/3401) on Responsible use and development of aquatic genetic resources in Central and Eastern Europe.

IV. TIMELINE AND FINANCIAL NEEDS

9. The Commission may wish to consider the revised timeline for the preparation of the SoW AqG, as given in *Appendix II* to this document as well as the cost estimate contained in *Appendix III*.

V. GUIDANCE SOUGHT

10. The Commission may wish to:

(i) Review the revised timeline for the preparation of the SoW AqG, as given in *Appendix II*;

(ii) Review the cost estimate contained in *Appendix III*;

(iii) Review and revise, as appropriate, the revised indicative list of proposed thematic background studies;

[7] FAO 2012. The State of World Fisheries and Aquaculture. Rome, FAO. 209p.
[8] CGRFA-15/15/Inf.27.

(iv) Request FAO to continue its work towards the preparation of the SoW AqGR, subject to the availability of the required funds;

(v) Call on countries to participate in the process by preparing national reports on aquatic genetic resources and to strengthen related information systems;

(vi) Invite donors to support the preparation of the SoW AqGR; and

(vii) Invite relevant stakeholders to contribute to the preparation of the SoW AqGR, including through providing reports to FAO.

APPENDIX I
REVISED INDICATIVE LIST OF PROPOSED THEMATIC BACKGROUND STUDIES

	Subject	*Rationale*
1	**Incorporating genetic diversity and indicators into statistics and monitoring of farmed aquatic species and their wild relatives**	Production and value statistics for farmed aquatic species and their wild relatives are highly aggregated to species or community levels, with many not even identifying the species used. Management of fish stocks, traceability of fish and fish products, and oversight and development of responsible aquaculture requires management of genetic diversity, linked to production. Increasingly, resource managers and the development communities are asked to identify indicators of the status of AqGR. Once better production data are available, indicators can be developed for monitoring and assessment.
2	**Biotechnology and genomics in aquaculture**	Aquaculture is making increasing use of biotechnology and application of genomic research for domestication, increased production, improved management and better traceability of fish and fish products in the supply chain. With advances often outpacing the development of policy and regulatory frameworks and consumer awareness the key is to harness biotechnology for beneficial ends, with biosecurity ensured through precaution and sound management of risks, and through understanding consumers' attitudes.
3	**Genetic resources for farmed seaweeds and freshwater macrophytes**	The farming of seaweeds and freshwater macrophyes to produce chemicals for the food and other industries, as well as products for direct consumption as human food, is the world's largest aquaculture operation. The genetic resources of these important aquatic plants require coverage in a State of the World Report as they have often been omitted from other reports.
4	**Genetic resources for micro-organisms of current and potential use in aquaculture**	Bacteria, cyanobacteria, microalgae and fungi are cultured extensively as feed sources in aquaculture. Some bacteria are used as probiotics to enhance fish growth and health. Many species and strains of microalgae are kept as *ex situ* culture collections. The genetic resources of these important micro-organisms for food and agriculture require coverage in a State of the World Report.

APPENDIX II

REVISED TIMELINE FOR PREPARING *THE STATE OF THE WORLD'S AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE*

2012	• FAO dispatches Circular State Letter C/FI-38 drawing attention to the CGRFA's request to nominate a National Focal Point for the preparation of a *Country Report on the State of Aquatic Genetic Resources* (NFP-AqGR) • FAO prepares a *Scoping policy analysis for aquatic genetic resources for food and agriculture*
2013	• Commission decides that the scope of the SoW AqGR are farmed aquatic species and their wild relatives within national jurisdiction. Countries are also invited to provide a species list of nationally important aquatic genetic resources of capture fisheries within national jurisdiction. • The Commission requests countries to prepare national reports on AqGR based on the Guidelines and to strengthen their information systems on AqGR; • The Commission invites relevant stakeholders to participate in the process of preparing the SoW AqGR, including through reports to FAO;
2014	• FAO finalizes and distributes the *Guidelines for the Preparation of Country Reports for the State of the World's Aquatic Genetic Resources for Food and Agriculture* • FAO oversees preparation of Thematic Background Studies, including ensuring peer reviews
2015	• Countries begin preparation of national reports, through NFP-AqGR, with FAO assistance and through regional networks and workshops as required • Deadline for submission of Country Reports and reports by relevant stakeholders: December 2015 • Presentation of a Progress report to CGRFA-15
2016-17	• FAO prepares a first draft report on the SoW AqGR by June 2016 • Review of first draft SoW AqGR by the Intergovernmental Technical Working Group on Aquatic Genetic Resources for Food And Agriculture, if established
2017	• Draft SoW AqGR is made available to the Commission at its Sixteenth Regular Session • Commission initiates the development of elements related to the *Code of Conduct of Responsible Fisheries* aimed to maintain a broad genetic basis and to ensure sustainable use and conservation of aquatic genetic resources
2018-19	• Consideration of elements related to the *Code of Conduct of Responsible Fisheries* and associated tools for assessing their implementation developed for the Commission Nineteenth Regular Session
2022-23	• Consideration of the implementation of relevant elements of the Code of Conduct of Responsible Fisheries prepared for the Commission's nineteenth Session in 2022/23

APPENDIX III

COST ESTIMATE FOR THE PREPARATION OF THE STATE OF THE WORLD ON AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Item	Cost (US$)	Calculation	Purpose and notes
Staff costs	600,000	One P3/P4 staff appointment for 30 months (600,000); assisted by two APOs	As a hub for coordination of the preparatory process
Regional meetings to support the preparation of Country Reports and identify common needs and priorities for action, including stakeholder consultations	500,000	5 meetings @100,000/meeting	To provide support to the preparation of Country Reports, including national workshops and consultations
Expert meetings and workshops	200,000	4 meetings / consultancies @ 50, 000/meeting	To support development of Thematic Background Studies and other background material for the Report
Editorial and layout	60,000	Editing/ layout	To edit and layout the draft consolidated report and the final volume
Sub total	$1 360,000		
Project Servicing Costs	$176,800	@ 13%	
Grand Total	$1 536,800		