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Item 5.3 of the Provisional Agenda

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Thirteenth Regular Session

Rome, 18 – 22 July 2011

PROGRESS IN THE REVIEW OF KEY ISSUES IN MICRO-ORGANISMS AND INVERTEBRATES FOR FOOD AND AGRICULTURE

TABLE OF CONTENTS

| | <i>Para.</i> |
|--|--------------|
| I. Introduction | 1 - 4 |
| II. Progress in the review of key issues in micro-organisms and invertebrates for food and agriculture | 5 - 14 |
| III. Guidance sought | 15 |

I. INTRODUCTION

1. The Commission on Genetic Resources for Food and Agriculture (the Commission) at its Twelfth Regular Session, considered two brief scoping studies describing the main functions and services provided by micro-organisms and invertebrates of relevance to food and agriculture.¹ It agreed that on the basis of these studies, additional information could be gathered between its Twelfth and Fourteenth Regular Sessions, to enable the review of key issues at its Fourteenth Regular Session, and to consider a more detailed overview of the overall status of work on micro-organisms and invertebrates at its Fifteenth Regular Session.²

2. The Commission also reiterated that while invertebrates and micro-organisms are considered separately in its Multi-Year Programme of Work (MYPOW), work in these respective fields should be closely linked to ensure synergies.³ It requested:

- FAO to prepare, together with relevant international organizations and scientific institutions:
 - focused targeted assessments on the status and trends in the conservation and use of soil micro-organisms, biological control agents and plant pathogens, in particular of important crops;⁴ and
 - a global synthesis on status and trends of the ecosystem services provided by invertebrates relevant to food and agriculture, using existing case studies, economic analyses and technical reports.⁵
- Its Secretariat to prepare further analyses and studies on status and trends of micro-organisms for ruminant digestion, agro-industrial processes, and food processing.

3. The Commission further requested its Secretariat to inform relevant international organizations and forums of the plans of the Commission to advance work on micro-organisms of relevance to food and agriculture and to promote collaborative contributions from diverse organizations with relevant expertise to this work, and ensure synergies.⁶

4. This document provides a brief progress report on the status of preparations to review key issues in micro-organisms and invertebrates for food and agriculture at the Commission's next regular session.

II. PROGRESS IN THE REVIEW OF KEY ISSUES IN MICRO-ORGANISMS AND INVERTEBRATES FOR FOOD AND AGRICULTURE

5. Aware of the key services that micro-organism and invertebrate genetic resources provide both to the ecosystems on which food production depends, and to the environment,⁷ the Commission agreed to advance work in these sectors, as reflected in its MYPOW and the Strategic Plan 2010-2017.

6. To advance work and prepare reports on the major milestones and outputs of its MYPOW in the areas of plant, animal, forest and aquatic genetic resources, the Commission Secretariat relies on the relevant technical departments in FAO. These departments have established focal groups that are responsible for coordinating FAO's work under the Commission's guidance, including the preparation of global genetic resources assessments, such as *The State of the World's Plant Genetic Resources* and *The State of the World's Animal Genetic Resources*.

¹ CGRFA-12/09/15.1 and CGRFA-12/09/15.2

² CGRFA-11/07/Report, paragraph 68.

³ CGRFA-12/09/Report, paragraph 58.

⁴ CGRFA-12/09/Report, paragraph 60.

⁵ CGRFA-12/09/Report, paragraph 63.

⁶ CGRFA-12/09/Report, paragraph 61.

⁷ CGRFA-12/09/Report, paragraph 58.

7. Through regular progress reporting on their programmes and activities, the relevant technical departments enable the Commission to monitor and guide FAO's work. The Commission is assisted by three intergovernmental technical sectoral working groups that provide advice and recommendations on matters relevant to plant, animal and forest genetic resources. Given the interdisciplinary nature of the micro-organism and invertebrate sectors, it may be more appropriate to consult the existing intergovernmental technical working groups in their respective areas of expertise, when relevant, rather than to establish a new intergovernmental technical working group to specifically provide advice in these fields.

8. Within FAO there are a number of experts working on issues involving micro-organism and invertebrate genetic resources for food and agriculture. These experts work across different technical departments,⁸ and are involved in a broad variety of programmes and activities, including integrated pest management, pollination services, aquatic and marine ecosystem management, sustainable forest management, conservation agriculture and the conservation and sustainable use of soil biodiversity.

9. To advance work in the areas of micro-organism and invertebrate genetic resources, the Commission Secretariat needs to strengthen and rely on interdepartmental cooperation between FAO's technical departments and cooperation with relevant international organizations.

10. In preparation for the Commission's Thirteenth and Fourteenth Regular Sessions, two internal meetings of FAO experts on micro-organisms and invertebrates, respectively, were organized. During these meetings, the MYPOW's major milestones and outputs as they relate to micro-organisms and invertebrates, as well as the processes and activities foreseen for their implementation were discussed. The experts reviewed the draft background study paper on climate change and micro-organisms⁹ and the background study paper on climate change and invertebrate genetic resources.¹⁰ These meetings contributed to establishing informal linkages that will be essential to advancing work in the areas of micro-organism and invertebrate genetic resources.

11. In the light of the Commission's request to its Secretary at its Twelfth Regular Session, to inform relevant international organizations and forums of the plans of the Commission to advance work on micro-organisms and invertebrates of relevance to food and agriculture, and to closely collaborate with international organizations and scientific institutions,¹¹ two expert workshops were organized in January 2011. The scope of the discussions during these workshops was mainly limited to the functions and services delivered by micro-organisms and invertebrates in relation to crop production; their (potential) roles in animal production and sustainable forest management were briefly addressed. The experts did not discuss the functions of micro-organisms and invertebrates in relation to aquaculture; relevant issues in this area will be addressed in *The State of the World's Aquatic Genetic Resources*.¹²

12. The first workshop was on micro-organism genetic resources, and was organized jointly by the International Institute of Tropical Agriculture (IITA) and the Commission Secretariat. It was held from 12 to 13 January at FAO in Rome, Italy, and was attended by scientists from a variety of international institutions, including CGIAR¹³ research centres, universities and national research institutions, with expertise in plant pathogens, biological control, soil health, ecosystem resilience and food processing.

13. The experts expressed interest in collaborating with FAO and the Commission to advance work in the area of micro-organism genetic resources and provided views on the process of preparing status and trends reports on the conservation and use of soil micro-organisms, on

⁸ including the departments of Agriculture and Consumer Protection, Fisheries and Aquaculture, Forestry and Natural Resources Management and Environment

⁹ Background Study Paper No.57

¹⁰ Background Study Paper No.54

¹¹ CGRFA-12/09/Report, paragraphs 60 to 64

¹² CGRFA-13/11/11.1, paragraph 20.

¹³ The Consultative Group on International Agricultural Research

biological control agents and on plant pathogens for the Commission's Fourteenth Regular Session.

14. A second workshop was organized by CABI-Europe, Switzerland, from 17 to 18 January, in Engelberg, Switzerland, bringing together invertebrate genetic resources scientists from CGIAR research centres, national and international research institutes, and universities, with expertise in pollination services, biological control, soil invertebrates and ecosystem services, and climate change in relation to invertebrates. The experts expressed interest in collaborating with FAO and the Commission to advance work in the area of invertebrate genetic resources, and agreed on the need to involve additional relevant international organizations.

III. GUIDANCE SOUGHT

15. The Commission may wish to welcome progress made by FAO in advancing work on micro-organisms and invertebrates for its Fourteenth Regular Session and acknowledge the importance of collaboration with other international organizations.