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**Ad hoc intergovernmental and multi-stakeholder meeting on an
intergovernmental science-policy platform on biodiversity
and ecosystem services**

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Item 3 (a) of the provisional agenda*

**Consideration of an intergovernmental science-policy
platform on biodiversity and ecosystem services:
objectives and functions of an intergovernmental science-policy
platform on biodiversity and ecosystem services**

**Submission by the Food and Agriculture Organization of the United
Nations**

Note by the secretariat

The annex to the present note contains a submission by the Food and Agriculture Organization of the United Nations. The annex is being reproduced as submitted and has not been formally edited by the secretariat.

* UNEP/IPBES/1/1.

Annex

1. Fighting hunger and achieving food security for all is at the heart of FAO's efforts. Biological diversity and the related ecosystem services are of pivotal importance in achieving this goal. Objective information on and thorough analysis of the state of the world's biodiversity are key requirements for the development of effective policies aiming at the conservation and sustainable use of biodiversity for food and agriculture. FAO, through its bodies, treaties, conventions and agreements, is involved in various country-driven assessments of (components of) biodiversity.
2. FAO has a proven track record of providing periodic assessments of the state of the world's (components of) biodiversity for food and agriculture. FAO's intergovernmental Commission on Genetic Resources for Food and Agriculture has overseen the preparation by FAO of two global assessments on biodiversity for food and agriculture: *The State of the World's Plant Genetic Resources for Food and Agriculture* (1996) and *The State of the World's Animal Genetic Resources for Food and Agriculture* (2007). In response to and based on these assessments, the Commission developed policies, action plans, codes of conduct and the International Treaty on Plant Genetic Resources for Food and Agriculture¹ all of which confirm the relevance of credible scientific information and analysis for the development of effective policies for the conservation and sustainable use of biodiversity for food and agriculture, at national and international level. Moreover, at its last Session, the Commission adopted a rolling 10-year Multi-year Programme of Work which foresees global assessments of the state of the world's plant, animal, forest and aquatic genetic resources for food and agriculture which shall ultimately lead to the first ever integrated global assessment of *The State of the World's Biodiversity for Food and Agriculture*. Currently, the Commission has two subsidiary Intergovernmental Technical Working Groups on Plant Genetic Resources and on Animal Genetic Resources for Food and Agriculture, to address issues specific to plant and animal genetic resources for food and agriculture. Examples of FAO's involvement in the analysis of the state of the world's biodiversity and ecosystem services are given in *Appendix I* to this *Annex*.
3. In addition, FAO is responsible for the collection, compilation and analysis of data and information relevant to food and agriculture, in particular for forestry and fisheries. Relevant also are a number of FAO's global databases, including for example the Global Terrestrial Observing System (GTOS), FishStat Plus and the Global Land Degradation Assessment (GLADA). Flagship FAO publications, such as the Global Forest Resources Assessment (FRA), the State of the World's Forests (SOFO) and the State of World Fisheries and Aquaculture (SOFIA), regularly analyse issues relevant to biodiversity and ecosystem services. The next FRA, to be released in 2010, will provide new and updated information on seven themes related to sustainable forest management and will, *inter alia*, cover all the forest-related indicators identified to monitor progress towards the 2010 Biodiversity Target of the Convention on Biological Diversity. All these assessments guide the policy formation of FAO Members and Governing Bodies. Recent issues of the annual *The State of Food and Agriculture* have also tackled matters of interest to this process, such as biofuels (2008), paying farmers for environmental services (2006) and agricultural biotechnology (2004). Web links to examples of relevant FAO databases and datasets are given in *Appendix II* to this *Annex*.
4. FAO is committed to cooperation with other international organizations, processes and mechanisms that aim to strengthen cooperation between governments and with intergovernmental mechanisms, in the development of authoritative, independent, credible, inclusive and internationally peer-reviewed, policy-relevant but not policy-prescriptive analyses of the state of biodiversity and ecosystem services and their relationship with human well-being to support decision-making at the appropriate levels and scales. Most recently, FAO has been involved in the Millennium Ecosystem Assessment (MEA) and the International Assessment for Agricultural Knowledge, Science and Technology for Development (IAASTD). Any cooperation in the analysis of the state of biodiversity and ecosystem services should be based on transparency and should seek full complementarity and synergy between mandates and activities of all partners involved.

¹ <http://www.planttreaty.org>

APPENDIX I

EXAMPLES OF FAO'S INVOLVEMENT IN THE ANALYSIS OF THE STATE OF BIODIVERSITY AND ECO-SYSTEM SERVICES

PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

*The State of the World's Plant Genetic Resources for Food and Agriculture*² was developed through a participatory, country-driven process under the guidance of the Commission. One hundred and fifty-seven countries were actively involved in the preparatory process. The full report was subsequently peer-reviewed by a number of the world's leading authorities on various aspects of plant genetic resources for food and agriculture. The Fourth International Technical Conference on Plant Genetic Resources, held in Leipzig, Germany, in June 1996, welcomed the report as the first comprehensive worldwide assessment of the state of plant genetic resource conservation and use. The Conference also adopted a "Leipzig Declaration" and the *Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture*. Subsequently, the FAO Council and the Conference of the Parties to the Convention on Biological Diversity welcomed the outcome of the International Technical Conference, and the World Food Summit, convened in Rome in November 1996, called for the implementation of the *Global Plan of Action*.

The State of the World's Plant Genetic Resources for Food and Agriculture assessed the state of plant genetic diversity and the state of genetic vulnerability and genetic erosion. The report also provided an assessment of the state of capacity at the local and global levels for *in situ* and *ex situ* management, conservation and utilization of plant genetic resources, and addressed the issues of access to genetic resources, the sharing of benefits derived from their use and the realization of Farmers' Rights.

The *Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture* provides an integrated framework for systematic, rational, balanced and equitable cooperation. The rolling *Global Plan of Action* has 20 priority activity areas which are organized into four main groups. The first group deals with *in situ* conservation and development; the second with *ex situ* conservation; the third with utilization of plant genetic resources; and the fourth with institutions and capacity building.

Overall progress in the implementation of the *Global Plan of Action* and of the related follow-up processes are being monitored and guided by FAO Members, through the Commission. To facilitate the monitoring of the implementation of the Global Plan of Action as well as re-assessments of the state of the world's plant genetic resources, FAO established the *World Information and Early Warning System on PGRFA* (WIEWS).³

In 1999, the Commission agreed that a second *State of the World's Plant Genetic Resources*, and an amendment to the *Global Plan of Action*, be considered by the Commission. At its Eleventh Regular Session, upon reviewing the status of preparations of the second report, the Commission requested its IT-WG PGR to review and guide the completion of the draft report, and recommended that FAO make it available at the next Regular Session of the Commission in 2009, to consider its finalization. The Commission also agreed to consider, at the same Session, a proposed plan for the process of up-dating the *Global Plan of Action*.

The State of the World's Plant Genetic Resources for Food and Agriculture, and the *Global Plan of Action* are given specific roles in the International Treaty on Plant Genetic Resources for Food and Agriculture which entered into force on 29 June 2004. By Article 14 of the

² http://www.fao.org/ag/AGP/AGPS/Pgrfa/wrlmap_e.htm

³ <http://apps3.fao.org/wiews/wiews.jsp>

International Treaty, Contracting Parties should promote the effective implementation of the *Global Plan of Action*, including through national actions and, as appropriate, international cooperation to provide a coherent framework, *inter alia*, for capacity building, technology transfer and exchange of information. Contracting Parties shall also cooperate with the Commission in its periodic reassessment of *The State of the World's Plant Genetic Resources for Food and Agriculture* in order to facilitate the updating of the rolling Global Plan of Action (Article 17.3).

ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE

In 1999 at its Eighth Regular Session, the Commission agreed that FAO should coordinate the preparation of a country-driven report on the state of the world's animal genetic resources. *The State of the World's Animal Genetic Resources for Food and Agriculture* launched at and welcomed by the International Technical Conference on Animal Genetic Resources for Food and Agriculture, held in Interlaken, Switzerland, in September 2007, is the first global assessment of the status and trends of animal genetic resources, and of the state of institutional and technological capacity to manage these resources. Drawing on 169 country reports, reports received from international organizations, and thematic studies commissioned by FAO, *The State of the World's Animal Genetic Resources for Food and Agriculture* presents an important step in achieving the improved management of animal genetic resources, including enhancing the basis for further policy development. The Interlaken Conference also adopted the "Interlaken Declaration" and the *Global Plan of Action for Animal Genetic Resources*. Subsequently, the FAO Conference and the Conference of the Parties to the Convention on Biological Diversity welcomed the outcome of the Interlaken Conference and stressed the importance of implementing the Global Plan of Action.

The State of the World's Animal Genetic Resources for Food and Agriculture presents an analysis of the state of agricultural biodiversity in the livestock sector – origins and development, uses and values, distribution and exchange, risk status and threats – and of capacity to manage these resources – institutions, policies and legal frameworks, structured breeding activities and conservation programmes. Needs and challenges are assessed in the context of the forces driving change in livestock production systems. Tools and methods to enhance the use and development of animal genetic resources are explored in sections on the state of the art in characterization, genetic improvement, economic evaluation and conservation.

The *Global Plan of Action for Animal Genetic Resources* provides a framework to support and increase the overall effectiveness of national, regional and global efforts for the sustainable use, development and conservation of animal genetic resources for food and agriculture, and to facilitate mobilization of resources, development of institutions, human resources and cooperative frameworks. It aims to promote a pragmatic, systematic and efficient overall approach, which harmoniously addresses these issues. The *Global Plan of Action* contains 23 Strategic Priorities, clustered into four Strategic Priority Areas: Characterization, inventory and monitoring of trends and associated risks; Sustainable use and development; Conservation; Policies, institutions and capacity-building.

The Commission oversees, assesses and reports on the implementation of the *Global Plan of Action*. For this purpose, the Commission will need to agree on modalities for the presentation of progress reports, as well as on criteria and parameters for the evaluation of progress in the implementation of the *Global Plan of Action*. The Commission has also been requested by the Interlaken Conference and the Thirty-fourth Session of the FAO Conference, to develop a Funding Strategy for the implementation of the *Global Plan of Action*.

FOREST RESOURCES

FAO regularly monitors the world's forests through *Global Forest Resources Assessments* and supports and collaborates with developing countries with a strong technical/political dedication to improve the forest information base. FAO has implemented Global Forest Resources Assessments (FRA) every five to ten years since 1946. The recent FAO publication, *State of the World's Forests 2007*, provides a nutshell summary of the latest figures on forests - including on forest cover and change (a basic indicator of biological diversity) - by country and region. Information is based on the findings of the *Global Forest Resources Assessment 2005* (FRA 2005). In 2008, the FRA 2010 process was officially launched. This assessment will provide new and updated information on seven themes related to sustainable forest management and will, *inter alia*, cover all the forest-related indicators identified to monitor progress towards the 2010 Biodiversity Target of the Convention on Biological Diversity. This will be achieved through country reporting, a global remote sensing survey of forests and a series of special studies.⁴

FAO facilitates the collection, analyses and dissemination of national, regional and international statistics on all aspects of forest resources, production and trade and other important socio-economic variables. Global and Regional Forest Sector Outlook Studies are prepared, covering analysis of the status, trends and emerging opportunities and challenges for the forest sector in the mid- and long-term. Since 1947 FAO has produced annual statistics and the *Yearbook of Forest Products* which compiles statistical data on basic forest products for all countries and territories of the world. FAO also works towards the enhancement of forests and forest products' contribution to poverty alleviation while ensuring environmental sustainability by: 1) identifying the potential of non-wood forest products (NWFPs), improved harvesting and production methods, and wide dissemination of related knowledge at all levels; 2) re-appraising the value and potential of wood fuels as a clean, safe and economical energy source and raising awareness of their importance at policy level, including improved information systems; and 3) developing a regional code of forest harvesting for South America and assisting countries in Asia, Africa and South America to introduce reduced impact logging practices based on regional codes of harvesting.

FAO's information system REFORGEN is the result of gathering, through workshops, country-driven information on forest genetic resources status, trends, priorities and threats. The process is overseen by the FAO Panel of Experts on Forest Gene Resources established in 1968 at the request of the fourteenth session of the FAO Conference with a mandate to "help plan and coordinate FAO's efforts to explore, utilize and conserve the gene resources of forest trees and, in particular, help prepare detailed short- and long-term programmes of action, and to provide information to Member Governments". The panel carries out this mandate by:

- systematically reviewing work in the field of forest genetic resources worldwide;
- discussing priorities for action at the national, regional, eco-regional and global levels based on up-to-date information received from member countries;
- making recommendations on the main focus and operational priorities of FAO, with due concern to collaboration, complementarity and coordination of programmes and activities with other international organizations in the field.

Based on information made available to it by countries and international organizations, the panel regularly compiles and updates regional lists of priority tree species, specifying their main uses and priorities for action in exploration, collection, conservation and wise use of their genetic resources (including improvement and breeding). While the priority lists are based on country-derived information, special attention is paid to those species that are of actual or potential importance to more than one country and for which action thus has an international dimension.

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www.fao.org/forestry/fra2010

At its last Session in 2007, the Panel recommended that FAO take stronger action to support the management of forest genetic resources to achieve sustainable forest development, to cope with the challenge of mitigating and adapting to global change, and to address world wide deforestation and potential great losses of local diversity from invasive pests. The Panel therefore recommended FAO to increase its knowledge base on the current status of forest genetic resources. Priority should be given to the preparation of a *State of the World's Forest Genetic Resources*, linking these activities with FRA, and the strengthening of FAO information systems, such as REFORGEN.

The Commission, at its last Session, decided to consider, at its forthcoming Twelfth Regular Session, an analysis of key issues in forest genetic resources. The first ever *State of the World's Forest Genetic Resources* shall be made available to the Fourteenth Regular Session of the Commission. The preparatory process, including the possibility of establishing an ad hoc intergovernmental technical working group on forest genetic resources will be presented and discussed at the Commission's forthcoming Twelfth Regular Session.

AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE

FAO is the only intergovernmental organization formally mandated by its constitution to undertake the worldwide collection, compilation, analysis and diffusion of data and information on fisheries and aquaculture. Since its inception, the FAO Fisheries and Aquaculture Department has built up statistical databases that are publicly accessible. The data are provided by FAO Members and verified from other sources wherever possible. The reliability of the analysis based on the data, and the quality of the advice to which it gives rise, depends on the reliability and quality of the data itself. To this end the FAO seeks to continue supporting and strengthening national capacity in the collecting, analysis and use of accurate, reliable and timely data. In this respect the FAO has a unique role in supporting the management and development of the aquaculture and fishery sectors.

At its last Session, the Commission decided to consider, at its Thirteenth Regular Session, the information base for aquatic genetic resources with a view to consider the first ever State of the World's aquatic genetic resources, at the Fourteenth Regular Session.

CROSS-CUTTING INITIATIVE ON BIODIVERSITY FOR FOOD AND NUTRITION

FAO is leading, in collaboration with Bioversity International, the Cross-Cutting Initiative on Biodiversity for Food and Nutrition as mandated in the decisions of the Eighth Meeting of the Conference of the Parties to the Convention on Biological Diversity, on the agricultural biodiversity work programme.

In 2007, FAO, through the process of an Expert Consultation, developed a biodiversity and nutrition indicator for use in biodiversity conservation and in nutrition and food security programmes. Baseline reporting has been completed and first year data-collection has started. A second indicator on food consumption will be developed in 2009 using the same process.

A Special Issue of the Journal of Food Composition and Analysis on Biodiversity and Nutrition was jointly published by FAO and Elsevier in 2006, containing original research and review papers on biodiversity in local and traditional food systems; new nutrient data to underpin the sustainable use of plant genetic resources for food and agriculture; diversity of fruits, nuts and their products for improving nutrient intakes; farm animals and fisheries diversity for human nutrition; ecosystems and nutrition: rice-based aquatic ecosystems and dietary diversity. Further Special Issues of this journal are being planned on relevant topics including animal genetic resources.

FAO and CINE have published four posters on the 2nd International Decade of the World's Indigenous Peoples: Celebrate Diversity in Indigenous Food for Africa, Asia, Pacific Islands and global.

ECOSYSTEM SERVICES

The FAO *Global Action on Pollinator Services for Sustainable Agriculture* provides guidance to member countries and relevant tools to use and conserve pollination services that sustain agro-ecosystem functions, and to formulate policies that will ensure sustainability of these ecosystem services. An international assessment of the state of knowledge on status and trends of pollinators globally has been carried out in the context of the International Initiative for the Conservation and Sustainable Use of Pollinators, and the results, the first *Rapid Assessment of Pollinators' Status Report* was presented to the ninth meeting of the Conference of the Parties to the Convention on Biological Diversity.⁵

At its last Session, the Commission noted that micro-organisms and invertebrates, although an important component of biodiversity for food and agriculture, had not received adequate attention, especially given the many types of micro-organisms and invertebrates that play critical roles in the provision of essential services within the food chain. The Commission stressed the important role of micro-organisms and invertebrates in relation to food security and sustainable agriculture, and the need to strengthen capacity and knowledge in order to further understand the many roles and functions of these essential resources in relation to sustainable agriculture. It agreed to a timeline for organizing future work, which will see issues on micro-organisms and invertebrates being addressed at the Fourteenth Regular Session of the Commission. In order to prepare for a detailed discussion on micro-organisms and invertebrates, the Secretariat of the Commission, in cooperation with relevant organizations, will provide to the Commission, at its Twelfth Regular Session, a brief scoping study on micro-organisms and invertebrates describing current policies and programmes of relevant international organizations, including the status of international collections of micro-organisms, and identifying policy gaps and options for strengthening international cooperation.

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<http://www.cbd.int/doc/meetings/cop/cop-09/information/cop-09-inf-24-en.pdf>

APPENDIX II

EXAMPLES OF RELEVAN FAO DATABASES AND DATASETS

Plant Genetic Resources for Food and Agriculture

Report of the State of the World's Plant Genetic Resources for Food and Agriculture
http://www.fao.org/ag/AGP/AGPS/Pgrfa/wrlmap_e.htm

Animal Genetic Resources for Food and Agriculture

DAD-IS

<http://www.fao.org/ag/againfo/themes/en/AnGR.html>

The State of the World's Animal Genetic Resources for Food and Agriculture
<ftp://ftp.fao.org/docrep/fao/010/a1250e/a1250e.pdf>

Forestry datasets:

Global Forest Resources Assessment (FRA)

Map of the World's forests: <http://www.fao.org/forestry/static/data/fra2005/maps/2.2.jpg>

Mangrove statistics: <http://www.fao.org/docrep/010/a1427e/a1427e00.htm>

Forest Products and Trade Data Collections in FAOSTAT

Fisheries datasets:

The state of world fisheries and aquaculture

State of World Fisheries and Aquaculture (SOFIA)

FISHSTAT+

FIGIS - Fisheries statistics page for online query

Fishery Data Collections in FAOSTAT

CONSUMPTION The Series of Apparent Consumption of Fish and Fishery Products

DIAS Database on Introductions of Aquatic Species

FISAT Stock Assessment Tools

FISHERS Time Series of Number of Fishers

SPECIESDAB Global Species Database for Fishery Purposes

Land and Water datasets

Agro-MAPS (sub national aggregated crop statistics)

Data Sets of selected Global AEZ assessment results

FAO's global information system of water and agriculture (AQUASTAT) databases

GLADA - Global Land Degradation Assessment

Global Maps of Drylands and Desertification (GLADA v0.1)

Global Map of irrigated areas

Problem Soils (ProSoil)

Terrastat

World Overview of Conservation Approaches and Technologies (WOCAT)

Ecosystems:

Global Terrestrial Observing System (GTOS)

Terrestrial Ecosystem Monitoring Sites (TEMS)