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## CONFERENCE

### Thirty-eighth Session

Rome, 15-22 June 2013

### Report of the 14<sup>th</sup> Regular Session of the Commission on Genetic Resources for Food and Agriculture (Rome, 15-19 April 2013)

#### Executive Summary

This document contains the report of the 14<sup>th</sup> Regular Session of the FAO Commission on Genetic Resources for Food and Agriculture (Commission), which was held from 15 to 19 April 2013. As requested by the Conference (C 2011/REP, paragraph 69 refers) the report provides information on the implementation of the Commission's existing global action plans. The Commission considered, amongst other topics, the first report on *The State of the World's Forest Genetic Resources* and agreed on a Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources, as given in *Appendix F* to the meeting report. The Commission invited the Director-General to bring the Global Plan of Action to the attention of the Conference with a view to its being adopted at its 38<sup>th</sup> Session in June 2013.

#### Suggested action by the Conference

The Conference may wish to welcome the report of the Commission's 14<sup>th</sup> Regular Session and adopt the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources.

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***CGRFA-14/13/Report***

# **Fourteenth Regular Session of the Commission on Genetic Resources for Food and Agriculture**

**Rome, Italy, 15 – 19 April 2013**



Food and Agriculture Organization of the United Nations



**REPORT OF THE COMMISSION ON GENETIC RESOURCES  
FOR FOOD AND AGRICULTURE**

**Fourteenth Regular Session  
Rome, 15 – 19 April 2013**

The documents of the Fourteenth Regular Session of the  
Commission on Genetic Resources for Food and Agriculture  
are to be found on the internet at:

<http://www.fao.org/nr/cgrfa/cgrfa-meetings/cgrfa-comm/fourteenth-reg/en/>

They may also be obtained from:

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## I. OPENING OF THE SESSION

1. The Fourteenth Regular Session of the Commission on Genetic Resources for Food and Agriculture (the Commission) met in Rome, Italy, from 15 to 19 April 2013. The list of delegates and observers is available on the Commission's web site.<sup>1</sup>
2. In accordance with its Rules of Procedure, the Commission had elected the Chair, Vice-Chairs and *Rapporteur* for its Fourteenth Regular Session at its Thirteenth Regular Session in 2011. The Chair of the Fourteenth Regular Session was Mr Brad Fraleigh (Canada). Mr Modesto Fernández Díaz-Silveira (Cuba), Ms Elzbieta Martyniuk (Poland), Mr Javad Mozafari Hashjin (Islamic Republic of Iran), Mr Raj Patil (Australia), Mr Amar Tahiri (Morocco) and Ms Tashi Yangzome Dorji (Bhutan) were the Vice-Chairs. Ms Tashi Yangzome Dorji was *Rapporteur*. Mr Modesto Fernández Díaz-Silveira was not able to attend the Fourteenth Regular Session. Ms Teresita Borges Hernández was designated as his alternate.
3. Mr Fraleigh opened the session and welcomed delegates and observers.
4. Mr Daniel Gustafson, FAO Deputy Director-General, Operations, welcomed delegates and observers. Mr Gustafson recalled that the Commission, with its 177 Member countries, was one of the largest FAO bodies and remained the only intergovernmental body to address all matters specifically related to genetic resources and biodiversity for food and agriculture. He noted that the Commission was a multidisciplinary body with an impressive track record in the delivery of important policy instruments for the conservation and sustainable use of genetic resources. He stressed that the Commission was recognized as a key UN body that, *inter alia*, oversees and guides global country-driven assessments of the status of genetic resources, develops policy responses and supports and monitors their implementation.
5. Mr Gustafson noted that in the face of emerging global issues such as climate change, ensuring food security, particularly in developing countries, would be a daunting challenge. He stressed that the climate change adaptation efforts of farmers, livestock keepers, fisher folk and forest-dependent communities must be recognized and supported. He expressed FAO's belief that adaptation of the agricultural sector is an imperative for human survival and that genetic resources must form an essential part of any adaptation strategy. He reminded the Commission that in this context its discussions on the roadmap on climate change and genetic resources, and on access and benefit-sharing, would be of pivotal importance. He expressed his confidence that FAO and its Commission could make an important contribution to achieving the objectives of the Rio+20 Conference on Sustainable Development. He also stressed the importance of FAO's partners in achieving the organization's global goals. He extended a particular welcome to Mr Bráulio Ferreira de Souza Dias, the Executive Secretary of the Convention on Biological Diversity (CBD).
6. Mr Dias thanked the Commission for giving him the opportunity to address the Commission in the year of its thirtieth anniversary. He stressed the CBD's long history of cooperation with FAO, including with the Commission. He highlighted the Joint Work Plan with FAO and its Commission for the period 2011–2020 and stressed the need to further strengthen collaboration in efforts to meet relevant Aichi Biodiversity Targets, particularly in the context of achieving food security and with respect to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Nagoya Protocol). He informed the Commission that the CBD and FAO had agreed on several areas for advanced cooperation to promote biodiversity for food security and sustainable production, based on proposals from the CBD and from FAO's Interdepartmental Working Group on Biodiversity.
7. Mr Dias highlighted the following issues as important topics for discussion at this meeting: global assessments, particularly welcoming the inclusion of State of the World Reports on aquatic genetic resources and on biodiversity for food and agriculture; targets and indicators, particularly emphasizing the assessment of progress towards the achievement of relevant Aichi Biodiversity Targets; micro-organisms and invertebrates, noting the relevance of the international initiatives on soil

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<sup>1</sup> [www.fao.org/nr/cgrfa](http://www.fao.org/nr/cgrfa).

biodiversity and pollinators and reiterating that the Commission could count on the CBD's continued collaboration and support in these areas; biodiversity and nutrition, recalling the relevance of the international initiative on biodiversity for food and nutrition; climate change, reiterating the CBD's commitment to efforts in this area and drawing the Commission's attention to further opportunities to look at agriculture in a landscape setting; and access and benefit sharing, noting that the Commission's Ad Hoc Technical Working Group on Access and Benefit-Sharing for Genetic Resources for Food and Agriculture had made a number of recommendations to the Commission concerning collaboration with the CBD and expressing the CBD's commitment to continuing its collaboration with the Commission in this area of work with a view to ensuring complementarities and mutual supportiveness.

8. Ms Linda Collette, Secretary of the Commission, welcomed delegates and observers. Ms Collette noted that the Commission's thirtieth anniversary presented a good opportunity to reflect on its accomplishments. She stated that the Commission could be proud of its achievements, even if much remained to be done. She stressed the importance of involving all stakeholders at local, national, regional and international levels in the implementation of the Commission's Multi-Year Programme of Work. She described the Multi-Year Programme of Work as an important element of the UN Decade on Biodiversity. She stressed the importance of reaching out to others, noting the importance of genetic resources and biodiversity not only for the food and agriculture sectors, but also for other sectors of the global economy. Ms Collette also noted that the Commission is in a position to exercise leadership in governance related to biodiversity, agriculture and food security, including by contributing to the achievement of the objectives set by governments at Rio+20, "the future we want."

9. Ms Collette stressed that the outcomes of this meeting would determine the Commission's way forward in crucial matters including the preparation of *The State of the World's Biodiversity for Food and Agriculture* and the possible adoption of the Strategic Priorities for Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources, as well as cooperation with the Secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture (International Treaty). Ms Collette welcomed Belarus, the Marshall Islands, Montenegro and Palau as new Members of the Commission. She thanked the Governments of Germany and Spain for enabling the participation of delegates from developing countries and the Governments of Germany, Norway, Spain, Sweden and Switzerland for their financial support to the implementation of the Multi-Year Programme of Work.

10. The Chair reported on the outcomes of informal consultations between the Bureaus of the Commission and the International Treaty on the legal, administrative and financial implications of transferring activities or tasks from the Commission to the International Treaty. The Bureaus, which had met on 14 April 2013, had welcomed the relevant document on this issue.<sup>2</sup> Some members of the Bureau had expressed the view that policy issues on plant genetic resources should be transferred to the Governing Body of the International Treaty and asked for an agreement in principle or a timetable for the transfer of activities. Other members had been of the view that other issues were of higher priority, or had indicated that there remained problems related to the transfer of activities because of differences in the memberships or roles of the Commission and the International Treaty. Some members had requested FAO to provide more specific information on the possible financial implications for the delivery of services to Member States.

11. The Chair also reported on the special information seminar *Biodiversity for food and agriculture: taking stock for the future*, which the Commission Secretariat had organized on 13 April 2013. He noted that the event had been attended by more than 120 participants from a broad range of backgrounds. Participants had reflected on the values of biodiversity for food and agriculture in all its forms and dimensions, noting that the important contributions of genetic resources are often invisible and that the preparation of *The State of the World's Biodiversity for Food and Agriculture* would be an opportunity to showcase them. Participants had emphasized the important roles of small-scale producers in the management of biodiversity for food and agriculture.

12. The Commission adopted the Agenda, as given in *Appendix A*.

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<sup>2</sup> CGRFA-14/13/23.

## II. KEY ISSUES AND THE PREPARATION OF *THE STATE OF THE WORLD'S BIODIVERSITY FOR FOOD AND AGRICULTURE*

13. The Commission considered the document *Preparation of The State of the World's Biodiversity for Food and Agriculture*<sup>3</sup> and took note of the *Draft Guidelines for the Preparation of Country Reports Contributing to The State of the World's Biodiversity for Food and Agriculture*.<sup>4</sup>

14. The Commission requested FAO to prepare *The State of the World's Biodiversity for Food and Agriculture*, for consideration at its Sixteenth Regular Session, according to the process identified in document CGRFA-14/13/3. It stressed that the process for preparing *The State of the World's Biodiversity for Food and Agriculture* should be based on information from country reports and should also draw on thematic studies, reports from international organizations and inputs from other relevant stakeholders, including centres of excellence from developing countries. It stressed that *The State of the World's Biodiversity for Food and Agriculture* should focus on the interactions between sectors and on cross-sectoral matters, taking full advantage of existing information sources, including sectoral assessments. It also suggested that priority be given to key supplementary information not available in existing sources.

15. The Commission acknowledged that the report's findings would be preliminary and incomplete in a number of areas and requested FAO to ensure that such information gaps would be assessed and highlighted in the report. It also requested FAO to include in the report lessons learned and success stories on the conservation and sustainable use of biodiversity for food and agriculture. It also stressed that the *The State of the World's Biodiversity for Food and Agriculture* should be widely disseminated, for which an effective communication strategy would be required.

16. The Commission endorsed the proposed structure and content of *The State of the World's Biodiversity for Food and Agriculture*, as given in *Appendix B*. It invited relevant international and regional organizations, including the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), and other initiatives such as The Economics of Ecosystems and Biodiversity (TEEB), to participate in the preparatory process and requested its Secretary to explore ways and means of ensuring that the report and its preparation contribute to mainstreaming the importance of genetic resources for food and agriculture in other relevant international initiatives such as the UN Decade on Biodiversity and the achievement of the Aichi Targets.

17. The Commission invited countries each to officially nominate a National Focal Point to lead the preparation of country reports, and to communicate the name and contact details of the National Focal Point to the Secretary of the Commission by 30 November 2013. It requested FAO to finalize the draft guidelines for the preparation of country reports by 30 November 2013.

18. The Commission urged donors to provide the financial resources needed to enable the preparation of *The State of the World's Biodiversity for Food and Agriculture*. It requested its Secretary to review and revise the budget, including resources from FAO's Regular Programme, to ensure the effective use of financial resources. The Commission also requested its Secretary to report on progress made in the preparation of the *The State of the World's Biodiversity for Food and Agriculture* at its next Regular Session.

## III. TARGETS AND INDICATORS FOR BIODIVERSITY FOR FOOD AND AGRICULTURE

19. The Commission considered the document *Targets and indicators for biodiversity for food and agriculture*<sup>5</sup> and reviewed the sector-specific targets and indicators proposed in the documents *Targets and indicators for plant genetic resources for food and agriculture*,<sup>6</sup> *Targets and indicators*

<sup>3</sup> CGRFA-14/13/3.

<sup>4</sup> CGRFA-14/13/Inf.23.

<sup>5</sup> CGRFA-14/13/4.

<sup>6</sup> CGRFA-14/13/4.1 Rev.1.

for animal genetic resources for food and agriculture<sup>7</sup> and Targets and indicators for forest genetic resources.<sup>8</sup>

20. The Commission welcomed progress made in the development and use of international targets and indicators for biodiversity for food and agriculture. It requested FAO to continue developing, testing and applying indicators for biodiversity for food and agriculture at the genetic level, and, whenever relevant, at species and ecosystem levels, giving due attention to headline and higher-order indicators. The Commission further requested FAO to strengthen work on targets and indicators in relation to the implementation of the Strategic Plan for Biodiversity 2011-2020 and the monitoring of the Aichi Biodiversity Targets.

21. The Commission stressed the need for resources to ensure the effective use of indicators in developing countries. It also stressed the importance of keeping the number of indicators to an appropriate level and of accounting for the need to obtain reliable data. It further stressed that the identification and development of such indicators called for a participatory approach, involving experts at all levels, including small-scale producers and farmers.

22. The Commission requested FAO to develop and finalize a thematic study on indicators for the state of genetic resources in fisheries and aquaculture, emphasizing that this study should also explore how genetic information and diversity measures could be integrated into aquaculture and fisheries statistics. It also requested FAO to continue updating the FAO/INFOODS Food Composition Database for Biodiversity on a regular basis, highlighting the need to enhance efforts to collect sufficient reliable data. It further requested FAO to report on the food and nutrition indicators to the Commission at its Fifteenth Regular Session.

#### ***Targets and indicators for plant genetic resources***

23. The Commission revised and adopted the indicators for monitoring the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (Second GPA) and adopted the three targets for plant genetic resources for food and agriculture, as given in *Appendix C*. It requested FAO to apply these indicators, revise them, taking their usefulness into account, and report to the Commission, at its next session, accordingly.

24. The Commission requested FAO to finalize the Reporting Format for monitoring the implementation of the Second GPA<sup>9</sup> by 31 May 2013, taking into account the revised indicators. It invited Member Countries to provide comments on the Reporting Format by 20 May 2013 in order to improve the clarity and common understanding of the questionnaire, provide flexibility for reporting countries and ensure data consistency.

25. The Commission requested its Secretary to submit the indicators for monitoring the implementation of the Second GPA to the Conference of the Parties to the CBD as a contribution to the development of indicators for Aichi Target 13, together with information on ongoing work on the development of higher-order indicators.

26. The Commission requested FAO to upgrade the existing computer application for monitoring the implementation of the Second GPA in order to enable the use of the relevant indicators, and to assist countries in the use of the computer application when required. It requested FAO, subject to the availability of funds, to make the upgraded computer application available in the languages in which the current version is available.

27. The Commission further requested FAO to elaborate higher-order composite indices for each of the plant genetic resources targets, basing them on data collected from the indicators for monitoring the implementation of the Second GPA. It requested its Working Group on Plant Genetic Resources to review these indices at its next session and to make recommendations to the Commission.

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<sup>7</sup> CGRFA-14/13/4.2.

<sup>8</sup> CGRFA-14/13/4.3.

<sup>9</sup> CGRFA-14/13/Inf.9 Rev.1

### *Targets and indicators for animal genetic resources*

28. The Commission agreed to the use of the proposed process and resources indicators and related targets to monitor the implementation and impact of the Global Plan of Action for Animal Genetic Resources. It requested FAO to include the set of resource indicators in future reports on the status and trends of animal genetic resources and to publish the process indicators in future synthesis progress reports on the implementation of the Global Plan of Action.
29. The Commission requested FAO to introduce, for the purpose of calculating breed risk status, a cut-off point of ten years, beyond which the risk status of a breed will be considered to be unknown if no updated population data are reported. It further requested that other factors influencing the risk status of animal genetic resources be reviewed by the Working Group on Animal Genetic Resources for future inclusion in DAD-IS. The Commission also requested that pilot studies to identify trends in breed risk status be prepared.
30. The Commission further requested FAO, when calculating trends in breed risk status for presentation in future status and trends reports, to utilize the most up-to-date current and historical data available in DAD-IS at the time of calculation.
31. The Commission urged FAO to provide long-term Regular Programme staff support for the maintenance and development of the Domestic Animal Diversity Information System (DAD-IS). It also requested FAO to further develop DAD-IS so as to facilitate the entry of data, including those related to the new locally adapted versus exotic breed classification set out in the document *Report of a consultation on the definition of breed categories*,<sup>10</sup> and so as to give countries the option of indicating that a given locally adapted breed is native to the respective country. The Commission invited donors to provide support to enable the maintenance and development of DAD-IS (e.g. to make it more user-friendly and to allow for automated data-entry) as the global clearing house mechanism for animal genetic resources. It thanked the Government of Switzerland for its contribution dedicated to DAD-IS.
32. The Commission invited countries to provide information on how their breeds recorded in DAD-IS should be assigned to the categories “exotic” and “locally adapted” for the purposes of calculating the resource indicators. It encouraged National Coordinators for the Management of Animal Genetic Resources to consider all relevant information sources. It further called upon countries to regularly update their breed population data in DAD-IS, including data on exotic breeds.

### *Targets and indicators for forest genetic resources*

33. The Commission requested FAO to continue working on the provisional list of indicators to monitor the state of the world's forest genetic resources and the status of implementation of the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources and the implementation strategy for the Global Plan of Action, taking feasibility into account, and focusing particularly on the need to develop indicators for the implementation of the strategic priorities of the Global Plan of Action. It further requested FAO to include other sources of information in advancing work on the provisional list of indicators and to link the development of indicators to processes, such as the implementation strategy for the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources and criteria and indicators for sustainable forest genetic resources management.

## **IV. PROGRAMME OF WORK ON CLIMATE CHANGE AND GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

34. The Commission considered the document *Roadmap on climate change and genetic resources for food and agriculture*<sup>11</sup> and took note of relevant background information.<sup>12</sup>

<sup>10</sup> CGRFA/WG-AnGR-7/12/Inf.7.

<sup>11</sup> CGRFA-14/13/5.

35. The Commission reaffirmed the importance of genetic resources for food and agriculture for coping with climate change and the need for raising awareness of their potential roles, as appropriate.
36. The Commission adopted the Programme of Work on Climate Change and Genetic Resources for Food and Agriculture (Programme of Work), as given in *Appendix D*. It requested its Secretary, subject to the availability of funding, to initiate the implementation of the Programme of Work and to report on progress in its implementation to the Commission at its Sixteenth Regular Session.
37. The Commission invited Members, as appropriate, and other donors to provide the financial resources needed for the implementation of the Programme of Work. It also requested FAO to provide it with information, at its next session, on the human and financial resources needed to implement the Programme of Work.

## V. ACCESS AND BENEFIT-SHARING FOR GENETIC RESOURCES FOR FOOD AND AGRICULTURE

38. The Commission considered the *Report of the First Session of the Ad Hoc Technical Working Group on Access and Benefit-sharing for Genetic Resources for Food and Agriculture*.<sup>13</sup> Mr Raj Patil (Australia), Vice Chair of the Working Group on Access and Benefit-Sharing, introduced the report. The Commission welcomed the report, and thanked the Chair, Ms Grethe Helene Evjen (Norway), and the Members of the Working Group on Access and Benefit-sharing for their work. The Commission also thanked the Government of Norway for hosting the meeting of the Working Group on Access and Benefit-sharing and the Governments of Spain and Switzerland for providing financial support.

### *The need for and modalities of access and benefit-sharing arrangements for genetic resources for food and agriculture*

39. The Commission considered the document *The need for and modalities of access and benefit-sharing arrangements for genetic resources for food and agriculture*.<sup>14</sup> The Commission agreed that it was premature to negotiate an international agreement or agreements on access and benefit-sharing for genetic resources for food and agriculture.

40. The Commission, taking into account the International Treaty, the CBD, the Nagoya Protocol and other relevant international agreements and ongoing processes, and subject to the availability of resources:

- (i.) encouraged countries that have not done so, to consider the option of ratifying or acceding to the International Treaty as soon as possible, to promote its full implementation in regard to plant genetic resources for food and agriculture and to recognize the importance of providing support to countries for this purpose, in particular through the capacity-building activities under the International Treaty;
- (ii.) encouraged countries that have not done so, to consider the option of ratifying or acceding to the Nagoya Protocol, taking into account its role in the international regime on access and benefit-sharing, as well as the importance of genetic resources for food and agriculture and their special role in food security;
- (iii.) invited the Governing Body of the International Treaty, in its continued governance of plant genetic resources for food and agriculture, to continue to closely coordinate with the Commission, in order to address in a complementary way the distinctive features and specific uses of plant genetic resources for food and agriculture, especially in light of the development of access and benefit-sharing measures at both national and international levels; invited the Ad Hoc Open-ended Intergovernmental Committee for the Nagoya Protocol on Access and

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<sup>12</sup> CGRFA-14/13/Inf.10.

<sup>13</sup> CGRFA-14/13/6.

<sup>14</sup> CGRFA-14/13/7.

Benefit-sharing, other international organizations and the private sector to coordinate with the Commission to ensure complementarity;

(iv.) requested its Secretary to develop, upon request from governments, targeted awareness-raising activities at national level, including materials, with regard to access and benefit-sharing for different subsectors of genetic resources for food and agriculture and, in collaboration with all relevant FAO divisions and the Secretariats of the International Treaty and the CBD, provide support to national, regional and international awareness-raising processes on access and benefit-sharing, including in the context of wider access and benefit-sharing initiatives implemented by other organizations and institutions; requested that such awareness raising activities should include, upon request of governments, information on the distinctive features of genetic resources for food and agriculture, on Prior Informed Consent (PIC) and on Mutually Agreed Terms (MAT);

(v.) requested its Secretary to develop, with a view to enhancing cooperation between the environmental and the agricultural sectors, targeted capacity-building and technical assistance activities at national level with regard to access and benefit-sharing for different subsectors of genetic resources for food and agriculture, in cooperation with the Secretariats of the CBD, the International Treaty and other relevant stakeholders, taking into account existing regional and national institutions and the special needs of farmers and indigenous and local communities; requested that to the extent possible such activities should be complementary to and coordinated with efforts supported and/or conducted by other international entities, such as the Consultative Group on International Agricultural Research (CGIAR), donor agencies, foundations and non-governmental organizations, as well as by the private sector;

(vi.) requested its Secretariat to work with the Secretariat of the CBD to ensure the former's active participation at regional and national level meetings, including capacity-building activities, organized by the Secretariat of the CBD to discuss the Nagoya Protocol, including, as appropriate, making presentations at such meetings and providing its expertise and inputs in the preparation of documentation for such meetings, with the purpose of sharing information on access and benefit-sharing for genetic resources for food and agriculture; requested its Secretariat to invite the Secretariat of the CBD to participate in regional and national-level meetings, including capacity-building activities, organized by the Commission Secretariat to discuss access and benefit-sharing for genetic resources for food and agriculture;

(vii.) requested the Members of the Commission to identify stakeholders within the respective subsectors to help define and illustrate commonly accepted practices where they exist, and to consider how subsector-specific factors might be addressed within an access and benefit-sharing system. A list of these stakeholders should be provided to the Commission Secretariat so that the Secretariat may draw on it to facilitate awareness raising and capacity building activities, in coordination with the Secretariat of the International Treaty for plant-related issues;

(viii.) requested its Secretary to invite countries to report, at national and/or regional levels, on the conditions under which specific genetic resources for food and agriculture are exchanged and utilized, with the engagement of relevant stakeholders, including institutions, in all subsectors; requested its Secretary to compile the information obtained for consideration by the Commission's intergovernmental technical working groups, in order that the Commission would be able to take a decision on the collection of model contractual clauses for subsectors of genetic resources for food and agriculture other than plant genetic resources for food and agriculture at its Fifteenth Regular Session;

(ix.) requested its Secretary to invite stakeholder groups to report on voluntary codes of conduct, guidelines and best practices, and/or standards in relation to access and benefit-sharing for all subsectors of genetic resources for food and agriculture, and to compile them for consideration by the intergovernmental technical working groups and for review by the Commission at its Fifteenth Regular Session, while acknowledging that voluntary measures

should not undermine legally binding provisions developed as part of domestic legislative, administrative or policy measures;

(x.) further requested its Secretary to develop explanatory notes to the distinctive features of genetic resources for food and agriculture identified in *Appendix E* to this document taking into account the specificities of the different subsectors, for review by the intergovernmental technical working groups and for consideration by the Commission at its Fifteenth Regular Session, while acknowledging the need to further refine the list of distinctive features and to focus on the utilization of genetic resources for food and agriculture;

(xi.) requested its Secretary to develop, and share with the Secretariat of the CBD, a matrix illustrating international practices, initiatives and instruments of relevance to the subsectors of genetic resources for food and agriculture in the context of access and benefit-sharing that are, or could form, mutually supportive parts of the international regime on access and benefit-sharing, including recognition of the distinctive features of genetic resources for food and agriculture;

(xii.) requested the intergovernmental technical working groups to explore access and benefit-sharing issues for their respective subsectors;

(xiii.) requested each region to appoint up to two representatives by notifying its Secretary through their Bureau member, each of whom has expertise in access and benefit-sharing and preferably in genetic resources for food and agriculture, to form a team of technical and legal experts on access and benefit-sharing. With the assistance of the Secretariat, this team of experts will coordinate, by electronic means as appropriate, to help prepare the intergovernmental technical working group meetings, and based on input from their regions will prepare written materials and propose guidance for the intergovernmental technical working groups. The members of this team of experts will participate in designated portions of the intergovernmental technical working group meetings dedicated to addressing access and benefit-sharing issues, to help inform and shape the intergovernmental technical working group discussions and output.

(xiv.) for subsectors where no intergovernmental technical working groups have been established, the expert team will collaborate closely with the Secretariat in the work described in paragraphs (vii), (viii), (ix), (x), and (xi);

(xv.) requested that the output of this process (paragraphs xii to xvi) be *Draft Elements to Facilitate Domestic Implementation of Access and Benefit-Sharing for Different Subsectors of Genetic Resources for Food and Agriculture*, taking into account relevant international instruments on access and benefit-sharing. These draft elements would be voluntary tools to assist national governments, not new international access and benefit-sharing instruments. After each intergovernmental technical working group meeting, the experts should work with the Secretariat to compile the intergovernmental technical working group outputs into the *Draft Elements*, and communicate the *Draft Elements* to their regions for information. The *Draft Elements* will build on the work in subparagraphs (vii), (viii), (ix), (x), and (xi) identifying existing international practices, initiatives, and instruments relevant to all subsectors of genetic resources for food and agriculture access and benefit-sharing, as well as on relevant work under the International Treaty, and will be provided to the Commission at its next session for its consideration; and

(xvi.) recognized that this process is subject to the availability of extra-budgetary funds, including in particular for the participation of team members from developing countries, and invited donors to provide extra-budgetary funds for that purpose.



## VI. KEY ISSUES ON BIODIVERSITY AND NUTRITION

41. The Commission considered the document *Review of key issues on biodiversity and nutrition*<sup>15</sup> and took note of relevant background information.<sup>16</sup>

42. The Commission highlighted the importance of biodiversity for food and nutrition and noted that its potential role in nutrition is underexplored and undervalued. It welcomed the progress FAO had made in awareness raising and requested FAO to continue its leading role in the Cross Cutting Initiative on Biodiversity for Food and Nutrition. The Commission appreciated that food biodiversity, in the context of the Initiative, regarded genetic resources, including neglected and underutilized species, and noted that improved information on their nutrient contents could facilitate new market opportunities.

43. The Commission requested FAO to further develop its work on biodiversity and nutrition, recognizing the importance of linking food biodiversity and the environment sector to human nutrition and healthy diets, and of the concept that nutrients in food and whole diets, as well as food, should be explicitly regarded as ecosystem services. It stressed the need to strengthen collaboration with relevant organizations and fora and to avoid duplication of work.

44. The Commission requested FAO to continue to incorporate biodiversity into relevant nutrition activities and to further mainstream nutrition within its work on biodiversity.

45. The Commission appealed to funding organizations to support research and interventions in key areas.

46. The Commission requested FAO, upon the availability of funds, to develop draft guidelines for mainstreaming biodiversity into policies, programmes and national and regional plans of action on nutrition. It requested its intergovernmental technical working groups to review these draft guidelines and to provide recommendations for the Commission's consideration at its Fifteenth Regular Session.

47. The Commission requested FAO, upon availability of funds, to continue updating the FAO/INFOODS Food Composition Database for Biodiversity on a regular basis and to report on progress made to the Commission at its Fifteenth Regular Session. The Commission further requested FAO to undertake capacity development in INFOODS Regional Data Centres to train responsible authorities in generating and compiling nutrient data for food biodiversity.

48. The Commission requested FAO to develop new survey methods and guidelines for modifying existing methods of dietary consumption to better capture information on the role of food biodiversity in food security and nutrition, and to assist countries that are already undertaking food consumption surveys to generate food consumption data for biodiversity on a regular basis.

49. The Commission suggested that additional priority areas of work could include characterization, utilization and consumption of food biodiversity; breeding efforts to develop improved agronomic characteristics of nutrient-rich food biodiversity; diversification of agriculture and diets to address malnutrition in all its forms, with special regard to micronutrient deficiencies; and *in situ* conservation, traditional knowledge and improved market access.

## VII. FOREST GENETIC RESOURCES

### *Presentation of The State of the World's Forest Genetic Resources*

50. The Commission considered the document *Preparation of The State of the World's Forest Genetic Resources*.<sup>17</sup> It took note of the *Draft Report on The State of the World's Forest Genetic Resources*,<sup>18</sup> acknowledged the progress made in preparing the report and provided comments on the

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<sup>15</sup> CGRFA-14/13/8.

<sup>16</sup> CGRFA-14/13/Inf.11; CGRFA-14/13/Inf.12; CGRFA-14/13/Inf.13.

<sup>17</sup> CGRFA-14/13/9.

<sup>18</sup> CGRFA-14/13/Inf.14.

key findings presented, which it requested be taken into consideration in the finalization of the report. The Commission requested FAO to finalize the report during 2013, in line with the proposed structure,<sup>19</sup> and in the process of finalization to allow Members of the Commission to comment on the final draft. It also requested FAO to prepare a synthetic account of *The State of the World's Forest Genetic Resources*.

***Report of the Second Session of the Intergovernmental Technical Working Group on Forest Genetic Resources***

51. The Commission considered the *Report of the Second Session of the Intergovernmental Technical Working Group on Forest Genetic Resources*.<sup>20</sup> Ms A. Lolona Ramamonjisoa Ranaivoson (Madagascar), Chair of the Working Group on Forest Genetic Resources, introduced the report. The Commission thanked Ms Ranaivoson and the Members of the Working Group on Forest Genetic Resources for their work and welcomed the report.

***Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources***

52. The Commission reviewed and revised draft strategic priorities for action for forest genetic resources<sup>21</sup> and agreed on them as the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources, as given in *Appendix F*. It invited the Director-General of FAO to bring the Global Plan of Action to the attention of the FAO Conference with a view to its being adopted at the Conference's 38th Session in June 2013.

53. The Commission requested FAO to develop an implementation strategy for the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources.

54. The Commission encouraged the mobilization of adequate financial resources, preferably from voluntary contributions, particularly to support developing countries, to support the implementation of the Global Plan of Action.

55. The Commission requested its Secretariat to prepare an informative working document to support the discussions of the Working Group on Forest Genetic Resources on the scope of forest genetic resources for food and agriculture, taking into consideration the mandate of the Commission.

## VIII. ANIMAL GENETIC RESOURCES

***Report of the Seventh Session of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture***

56. The Commission considered the *Report of the Seventh Session of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture*.<sup>22</sup> Mr Arthur da Silva Mariante (Brazil), Chair of the Working Group on Animal Genetic Resources, introduced the report. The Commission thanked Mr Mariante and the Members of the Working Group on Animal Genetic Resources for their work and welcomed the report.

***Review of the implementation of the Interlaken outcomes***

57. The Commission considered the documents *FAO progress report on the implementation of the Global Plan of Action for Animal Genetic Resources and the Interlaken Declaration*<sup>23</sup> and *Review of the Funding Strategy for the Implementation of the Global Plan of Action for Animal Genetic Resources*.<sup>24</sup> It also took note of other relevant information.<sup>25</sup>

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<sup>19</sup> CGRFA-14/13/Inf.14.

<sup>20</sup> CGRFA-14/13/10.

<sup>21</sup> CGRFA-14/13/11.

<sup>22</sup> CGRFA-14/13/12.

<sup>23</sup> CGRFA-14/13/13.

<sup>24</sup> CGRFA-14/13/14.

### ***Implementation of the Global Plan of Action for Animal Genetic Resources***

58. The Commission welcomed the progress made in the implementation of the Global Plan of Action for Animal Genetic Resources and requested FAO to continue its activities and to maintain and strengthen its work in providing technical assistance to countries and regions in their implementation efforts, including in the establishment of Regional Focal Points. The Commission encouraged FAO to continue raising awareness on animal genetic diversity via the Domestic Animal Diversity Network (DAD-Net) and the journal *Animal Genetic Resources*.

59. The Commission stressed the need for countries to regularly update their national data and information in DAD-IS or the European Farm Animal Biodiversity Information System Network (EFABIS-net) in order to facilitate well-informed decision-making in the management of animal genetic resources. It urged countries to collect and insert data into the production environment descriptor module of DAD-IS or EFABIS-net. The Commission requested FAO to provide technical support to facilitate data collection and entry by developing countries.

60. The Commission endorsed the *Draft guidelines on in vivo conservation of animal genetic resources* and requested FAO to publish and widely distribute them. It requested FAO to continue developing technical guidelines on animal identification, traceability and performance recording.

61. The Commission requested FAO to identify the nature of ecosystem services provided by livestock species and breeds kept by all livestock keepers, with special consideration to the important contributions of small-scale livestock keepers and pastoralists, and to report back to the Commission at its Fifteenth Regular Session.

### ***Funding Strategy for the Implementation of the Global Plan of Action for Animal Genetic Resources***

62. The Commission thanked the governments that had contributed to the FAO Trust Account and urged governments and other potential donors to provide or increase funding to the FAO Trust Account and to other funds that support the implementation of the Global Plan of Action for Animal Genetic Resources.

63. The Commission also thanked the Bureaus of the Working Group on Animal Genetic Resources and the Commission, the Regional Focal Points for Animal Genetic Resources and the Panel of Experts for their work in the first project cycle of the Funding Strategy.

64. The Commission requested FAO to continue providing Regular Programme funds and technical advice to support country implementation of the Global Plan of Action for Animal Genetic Resources and to continue pursuing partnerships and alliances with other international mechanisms and organizations to enhance the mobilization of financial and in-kind resources.

65. The Commission adopted the procedures for monitoring and independent evaluation of projects granted, as given in *Appendix G.1*.

66. The Commission mandated the Secretariat of the Working Group on Animal Genetic Resources to launch, between the Commission's sessions, a second call for proposals once USD 1 million was available in the Trust Account, and apply the procedures and priorities applied during the first project cycle, while encouraging the submission of high-quality concept notes from all regions.

67. The Commission agreed on the amendments to the Funding Strategy,<sup>26</sup> as shown in *Appendix G.2*.

68. The Commission decided, with regard to future calls for proposals, that countries could submit a single-country concept note and join, in addition, one multiple-country concept note.

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<sup>25</sup> CGRFA-14/13/Inf.15; CGRFA-14/13/Inf.16; CGRFA-14/13/Inf.17; CGRFA-14/13/Inf.18.

<sup>26</sup> CGRFA-12/09/Report, *Appendix C*.

69. The Commission acknowledged the role of Regional Focal Points in quality assurance during the development and pre-screening of concept notes and requested that, for the next call for proposals, Regional Focal Points compile lists of qualified and suitable concept notes from their regions.

***Preparation of The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture***

70. The Commission considered the document *Preparation of The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*<sup>27</sup> and reviewed the *Draft questionnaire for collecting national data to support the preparation of The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*.<sup>28</sup>

71. The Commission requested FAO to prepare *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture* (Second Report), focusing on changes since the preparation of the first report, for presentation to the Commission at its Fifteenth Regular Session. It urged all FAO Members and relevant international mechanisms, funds and bodies to give immediate and due priority and attention to the effective allocation of voluntary and extra-budgetary resources for the preparation of the Second Report. It requested FAO to review the budget, with a view to increasing the proportion covered by Regular Programme resources.

72. The Commission endorsed the draft questionnaire for collecting national data to support the preparation of the Second Report. It invited countries to provide comments on the questionnaire to FAO by 19 May 2013. The Commission invited the Bureau of the Working Group on Animal Genetic Resources to review the comments and finalize the questionnaire, in a timely manner, prior to its distribution to countries. It requested FAO to present a draft version of the Second Report to the Eighth Session of the Working Group on Animal Genetic Resources, for its consideration and to facilitate its deliberations on the potential need to update the Global Plan of Action.

73. The Commission appealed to all FAO Members and international organizations to provide, in a timely manner, the information required for the preparation of *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*, noting that some countries may need technical support in this respect.

## **IX. AQUATIC GENETIC RESOURCES**

***Status of preparation of The State of the World's Aquatic Genetic Resources for Food and Agriculture***

74. The Commission considered the documents *Status of preparation of The State of the World's Aquatic Genetic Resources for Food and Agriculture*<sup>29</sup> and *Scoping policy analysis: gaps and opportunities related to aquatic genetic resources*.<sup>30</sup> It took note of the information documents *Draft Guidelines for the Preparation of Country Reports for The State of the World's Aquatic Genetic Resources for Food and Agriculture*<sup>31</sup> and *Scoping policy analysis for aquatic genetic resources*.<sup>32</sup>

75. The Commission requested FAO to continue its work towards the preparation *The State of the World's Aquatic Genetic Resources for Food and Agriculture*, taking care not to duplicate or assume the work of other UN agencies and recognizing in particular the UN General Assembly's central role in addressing issues related to the conservation and sustainable use of biodiversity in marine areas beyond national jurisdiction, especially through its Ad Hoc Open-ended Informal Working Group to

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<sup>27</sup> CGRFA-14/13/15.

<sup>28</sup> CGRFA-14/13/Inf.19.

<sup>29</sup> CGRFA-14/13/16.

<sup>30</sup> CGRFA-14/13/18.

<sup>31</sup> CRGRA -14/13/Inf.24.

<sup>32</sup> CGRFA-14/13/Inf.25.

study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, established by the General Assembly.<sup>33</sup>

76. The Commission stressed that work towards the preparation of *The State of the World's Aquatic Genetic Resources for Food and Agriculture* should link to and build on the FAO Code of Conduct for Responsible Fisheries. The Commission 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.

77. The Commission agreed on the structure of *The State of the World's Aquatic Genetic Resources for Food and Agriculture*, as given in *Appendix H*.

78. The Commission called on countries to participate in the process by preparing national reports on aquatic genetic resources and to strengthen related information systems. The Commission invited relevant stakeholders to participate in the preparation of *The State of the World's Aquatic Genetic Resources for Food and Agriculture*, including by providing reports to FAO. The Commission requested FAO to identify the scope for strengthening the ongoing collection and analysis of country-level data and information on fisheries and aquaculture by including information on aquatic genetic resources.

79. The Commission 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*<sup>34</sup> 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.

80. The Commission noted the recommendation of the Committee on Fisheries (COFI) that an Advisory Working Group on Genetic Resources and Technologies be established to advise FAO on matters concerning aquatic genetic resources and technologies.

81. The Commission requested FAO to provide, in *The State of the World's Aquatic Genetic Resources for Food and Agriculture*, examples of relevant national policies and legislation that specifically address the conservation and sustainable use of farmed aquatic genetic resources and their wild relatives, in particular at the genetic level.

82. The Commission requested FAO to prepare an overview of drivers affecting aquatic genetic resources, including information on how to address them. The Commission requested that this be done in consultation with countries and taking advantage of intergovernmental mechanisms.

83. The Commission noted that national policy and legal frameworks for aquatic genetic resources were at an early stage of development and requested FAO to undertake capacity-building activities, as required, in this area.

84. The Commission considered the document *Establishment of an Intergovernmental Technical Working Group on Aquatic Genetic Resources for Food and Agriculture*.<sup>35</sup>

85. The Commission expressed various views on the establishment of an Intergovernmental Technical Working Group on Aquatic Genetic Resources for Food and Agriculture. It did not reach consensus on the establishment of the Working Group during this session.

86. The Commission invited COFI, should it establish an Advisory Working Group on Aquatic Genetic Resources and Technologies, to consider inviting the Advisory Working Group to contribute to the preparation of *The State of the World's Aquatic Genetic Resources for Food and Agriculture*.

87. The Commission requested to be informed, through its Bureau, about the contributions of the Advisory Working Group to the preparation of the report.

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<sup>33</sup> Resolution 59/24, paragraph 73.

<sup>34</sup> CGRFA-14/13/Inf.25.

<sup>35</sup> CGRFA-14/13/17.

## X. KEY ISSUES IN MICRO-ORGANISMS AND INVERTEBRATES

88. The Commission considered the document *Key issues in micro-organisms and invertebrates*<sup>36</sup> and took note of the related background information.<sup>37</sup>

89. The Commission stressed the importance of microbial and invertebrate diversity for sustainable agriculture and for food and nutrition security, particularly in the light of global environmental and health challenges.

90. The Commission requested FAO to undertake, subject to the availability of funds, focused targeted assessments of the status of, and trends in, the characterization, conservation and use of soil micro-organisms, biological control agents and plant pathogens for additional major food crops, such as wheat, maize and soybean, with a special emphasis on good agricultural practices favouring the delivery of ecosystem services by beneficial micro-organisms and invertebrates. It also requested FAO to report on developments in the characterization, conservation and use of micro-organisms in ruminant digestion, soils under different crop production systems, agro-industrial processes and food processing, where relevant.

91. The Commission requested FAO to present information on new developments in the characterization, conservation and use of micro-organisms and invertebrates of relevance to food and agriculture, if applicable, at the Commission's Fifteenth Regular Session, when it would review the work of the intergovernmental technical working groups on the most recent application and integration of biotechnologies for the conservation and sustainable utilization of genetic resources for food and agriculture.

92. The Commission requested FAO to address, where relevant, the role of micro-organisms and invertebrates in, *inter alia*, the delivery of ecosystem services for food and agriculture, human nutrition and health, sustainable agriculture, pollination and soil biodiversity in *The State of the World's Biodiversity for Food and Agriculture*.

## XI. PLANT GENETIC RESOURCES

### *Report of the Sixth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture*

93. The Commission considered the *Report of the Sixth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture*. Mr Amar Tahiri (Morocco), Chair of the Working Group on Plant Genetic Resources, introduced the report. The Commission thanked Mr Tahiri and the Members of the Working Group on Plant Genetic Resources for their work and welcomed the report.

### *Implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*

94. The Commission considered the document *Implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*<sup>38</sup> and took note of relevant background information.<sup>39</sup>

95. The Commission welcomed the progress made in implementing the Second GPA and thanked FAO for making its synthetic account available in all the official languages of the Organization. It requested FAO to continue supporting countries in strengthening their capacities for the implementation of the Second GPA, in close collaboration with the International Treaty and other partners. The Commission invited donors to provide extra-budgetary resources to ensure the full

<sup>36</sup> CGRFA-14/13/19.

<sup>37</sup> Background Study Papers Nos. 61, 62, 64 and 65.

<sup>38</sup> CGRFA-14/13/21.

<sup>39</sup> CGRFA-14/13/Inf.20.

implementation of the Second GPA, in particular by strengthening capacities in developing countries and countries with economies in transition.

96. The Commission emphasized the importance of *in situ* conservation and on-farm management of plant genetic resources and requested FAO to prepare a concept note detailing the governance, structure, functions and financial implications of the establishment of either a global network for *in situ* conservation and on-farm management, or two networks separately addressing these areas, for consideration by the Working Group on Plant Genetic Resources and the Commission at their next regular sessions. The Commission stressed that the concept note should also consider means of improving and strengthening national and regional networks and means of avoiding the duplication of efforts.

97. The Commission stressed the importance of establishing genetic reserves for *in situ* conservation of priority crop wild relatives (CWR), which in some circumstances could also include traditional cultivars, and requested FAO to consider providing technical support. It also reminded donors of the extra-budgetary resources that would be necessary for the establishments of such genetic reserves.

98. The Commission requested FAO to continue collaborating with partners in capacity development in the areas of plant breeding and seed systems and called upon donors to provide extra-budgetary resources for these areas of work. The Commission stressed the importance of implementing these efforts in synergy with the Programme of Work on Sustainable Use of the International Treaty. It requested its Working Group on Plant Genetic Resources to review the *Draft Guide for National Seed Policy Formulation*<sup>40</sup> for consideration by the Commission at its Fifteenth Regular Session.

99. The Commission expressed its appreciation for FAO's assistance to countries in developing national plant genetic resources strategies, best practices and tools for the implementation of the Second GPA. It requested FAO to prepare draft guidelines for national plant genetic resources strategies for review by the Working Group on Plant Genetic Resources and the Commission at their next sessions.

100. The Commission commended the progress made in establishing and enhancing the National Information Sharing Mechanisms (NISMs) and invited its Members to establish or continue updating NISMs and to explore other electronic means of data collection and dissemination in line with the indicators adopted for monitoring the Second GPA. It called for extra-budgetary resources for monitoring the Second GPA in a maximum number of countries and reiterated the need to continue to strengthen collaboration with the International Treaty to ensure that NISMs provide cost-effective support for building the Global Information System.

#### ***Preparation of The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture***

101. The Commission endorsed the proposed timeline<sup>41</sup> for the preparation of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (Third Report) and requested FAO to provide a detailed outline of the Third Report, including suggested chapters and thematic areas, as well as a revised estimated budget indicating Regular Programme contributions, to the Working Group on Plant Genetic Resources and the Commission at their next sessions. The Commission stressed that the monitoring of the Second GPA and the preparation of the Third Report should be fully integrated. It invited FAO to engage with relevant international organizations to ensure their participation in the preparation of the Third Report from an early stage and invited donors to provide the necessary extra-budgetary resources to facilitate the preparatory process.

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<sup>40</sup> CGRFA-14/13/Inf.20.

<sup>41</sup> CGRFA-14/13/21, *Table I*.

### ***Genebank Standards for Plant Genetic Resources for Food and Agriculture***

102. The Commission considered the document *Draft Genebank Standards for Plant Genetic Resources for Food and Agriculture*<sup>42</sup> and endorsed it, taking into account the voluntary nature of these standards.

103. The Commission recognized the Genebank Standards as a significant accomplishment and noted that these standards would be extremely valuable for facilitating germplasm conservation worldwide. It thanked the experts and institutions that had contributed to the preparation of the standards. The Commission requested FAO to publish and disseminate the Genebank Standards widely, raise awareness of their importance and assist countries in developing capacities for their application. The Commission requested FAO to survey the application of the Genebank Standards and report on their impact, relevance and efficacy to the Working Group on Plant Genetic Resources and the Commission.

104. The Commission noted that specific fora might care to develop crop-specific standards.

### ***Cooperation with the International Treaty on Plant Genetic Resources for Food and Agriculture***

105. The Commission considered the document *Transfer of activities or tasks from the Commission to the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture: legal, administrative and financial implications*.<sup>43</sup> It also recalled the document on this topic presented to the previous session of the Commission.<sup>44</sup>

106. It welcomed the analysis of the legal implications of transferring activities or tasks from the Commission to the Governing Body. At the same time, it considered that additional information, particularly in respect of financial and administrative implications, was necessary to take a decision on the transfer of tasks or activities. It also requested early circulation of documents providing the information necessary to facilitate the decision-making process.

107. The Commission stressed the need for close cooperation in areas of common interest between the Commission and the International Treaty, through their respective secretariats and bureaus, and that duplication of work should be avoided.

108. The Commission noted that there was no consensus among its Members on the transfer of the tasks or activities set forth in paragraph 15 of the document CGRFA-14/13/23 at this point in time and agreed to keep the matter under review.

## **XII. IMPLEMENTATION OF THE MULTI-YEAR PROGRAMME OF WORK**

### ***Human and financial resources to support the implementation of the Multi-Year Programme of Work***

109. The Commission considered the document *Human and financial resources to support the implementation of the Multi-Year Programme of Work*.<sup>45</sup>

110. The Commission took note of the human and financial resources available within FAO for the implementation of the Multi-Year Programme of Work (MYPOW) and stressed the importance of adequate, stable and predictable financial resources being made available for all sectors of genetic resources, in a strategic manner, over the coming years. The Commission requested that more detailed information be provided at its Fifteenth Session.

111. The Commission invited FAO to continue to mobilize extra-budgetary resources for work on all sectors of genetic resources for food and agriculture and, in particular, in the context of the

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<sup>42</sup> CGRFA-14/13/22.

<sup>43</sup> CGRFA-14/13/23.

<sup>44</sup> CGRFA-13/11/7.

<sup>45</sup> CGRFA-14/13/24.



implementation of the MYPOW. It also invited donors to provide extra-budgetary resources to support the implementation of the MYPOW and the participation of developing countries in relevant meetings.

***Strategic Plan 2014-2023 for the implementation of the Multi-Year Programme of Work***

112. The Commission considered the *Draft Strategic Plan for the Commission on Genetic Resources for Food and Agriculture 2014-2021*.<sup>46</sup>

113. The Commission adopted the Strategic Plan for the Commission on Genetic Resources for Food and Agriculture 2014-2023, as given in *Appendix I*, as the planning and implementation framework to assist Members of the Commission, the Bureau and the Secretariat of the Commission, FAO and other organizations to contribute to the implementation of the MYPOW. The Commission requested that an updated draft annex be presented to the Bureau for its consideration.

114. The Commission welcomed the proposal for a ten-year cycle for the launch of State of the World Reports, with the exception that it requested FAO to launch both *The State of the World's Biodiversity for Food and Agriculture* and *The State of the World's Aquatic Genetic Resources for Food and Agriculture* at its Sixteenth Regular Session.

115. The Commission requested FAO to strengthen existing, and establish new, cooperative arrangements with relevant international organizations to support the implementation of the Strategic Plan 2014-2023 and invited UN and other intergovernmental organizations; international agricultural research institutes and scientific organizations; civil society organizations, producer organizations and the private sector; focal points and regional networks for genetic resources for food and agriculture; and relevant funding agencies to contribute actively to the implementation of the MYPOW and to use the Strategic Plan 2014-2023 as a vehicle in the planning of their activities.

116. The Commission requested FAO to explore the establishment of a trust fund to facilitate the preparation of State of the World Reports under the Commission's mandate.

117. The Commission requested its Secretary to align the Strategic Plan 2014-2023 with FAO's reviewed Strategic Framework and Medium Term Plan 2014-17/ Programme of Work and Budget 2014-15.

### **XIII. COOPERATION WITH INTERNATIONAL INSTRUMENTS AND ORGANIZATIONS**

118. The Commission considered the document *Cooperation with international instruments and organizations*.<sup>47</sup> It took note of the information documents *Submissions by international organizations on the prioritised themes of the session*,<sup>48</sup> *Report from the CGIAR Consortium of the International Agricultural Research Centers to the Commission on Genetic Resources for Food and Agriculture*<sup>49</sup> and the *Report from the Global Crop Diversity Trust to the Commission on Genetic Resources for Food and Agriculture*.<sup>50</sup>

119. The Commission thanked the international instruments and organizations for their submissions and commended their work in supporting the activities of the Commission. It requested its Secretary to continue to seek inputs on the prioritized themes of the regular sessions from international instruments and organizations and to make them available to the Commission for its information.

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<sup>46</sup> CGRFA-14/13/25.

<sup>47</sup> CGRFA-14/13/26.

<sup>48</sup> CGRFA-14/13/Inf.26.

<sup>49</sup> CGRFA-14/13/Inf.22.

<sup>50</sup> CGRFA-14/13/Inf.21.

#### **XIV. STATUS AND PROFILE OF THE COMMISSION**

120. The Commission considered the document *The Status of the Commission*.<sup>51</sup> The Commission reaffirmed the position that it should maintain its current status as a Commission established under Article VI.1 of the FAO Constitution. It decided to amend its Rules of Procedures, as follows (amended text in italics and underlined):

(1) Rule IV.1 shall read: The Commission shall normally hold one regular session each biennium. It may also decide to convene extraordinary sessions as necessary, subject to the approval of the FAO Council. Sessions of the Commission shall normally be held at the Organization's Headquarters. *Regular sessions shall be held with timing that enables the Programme and Finance Committees to take into consideration the report of the Commission in formulating advice to the Council.* Regular sessions shall normally not exceed five days. Sessions shall normally be preceded by regional consultations with appropriate facilities.

(2) The following paragraph 2 shall be added to Rule XI:

*2. The Commission shall make every effort to ensure that recommendations are precise and can be implemented.*

121. The Commission requested its Secretary to report, at its next session, on new developments in FAO with regard to the status of observers.

#### **XV. COMPOSITION AND ELECTION OF MEMBERS OF INTERGOVERNMENTAL TECHNICAL WORKING GROUPS**

122. The Commission decided to maintain the composition of its intergovernmental technical working groups. However, the Commission decided to discuss this matter further at its next session and requested its Secretary to provide information on possible criteria for the composition of the intergovernmental technical working groups. The Commission also agreed to consider the issue of the attendance of observers and alternates at sessions of the intergovernmental technical working groups.

123. The Commission requested its Intergovernmental Technical Working Groups on Animal, Forest and Plant Genetic Resources to meet prior to its next regular session to address the tasks assigned to them<sup>52</sup> and elected the Members of the intergovernmental technical working groups, as given in *Appendix J*.

#### **XVI. EXPO 2015: FEEDING THE PLANET, ENERGY FOR LIFE**

124. Mr Eduardo Rojas-Briales, FAO Assistant Director-General for Forestry and recently appointed Commissioner-General for the UN's preparations for Expo 2015, informed the Commission about the upcoming event.

125. Mr Rojas-Briales noted that the theme of the Expo 2015 would be "Feeding the Planet, Energy for Life" and that participants would focus on issues that are directly linked to the work of FAO and the Commission, such as biodiversity, food security and best practices for sustainable development. Mr Rojas-Briales further noted that around 140 countries were expected to take part in Expo 2015, including around 80 developing countries, and that civil society would also be present. He informed the Commission that the Rome-based UN agencies, FAO, the World Food Programme and the International Fund of Agricultural Development, under the leadership of the Director-General of FAO, would coordinate the participation of UN system agencies. He noted that Expo 2015 would be a good

<sup>51</sup> CGRFA-14/13/27.

<sup>52</sup> Working Group on Animal Genetic Resources: paragraphs 29, 40 (xii), 46, 60, 61 and 72; Working Group on Plant Genetic Resources: paragraphs 23, 27, 40 (xii), 46, 96, 98, 99 and 101; and Working Group on Forest Genetic Resources: paragraphs 33, 40 (xii), 46, 53 and 55.

opportunity for the UN system to highlight goals and challenges related to the themes of the Expo and to showcase its activities.

## **XVII. DATE AND PLACE OF THE COMMISSION'S FIFTEENTH REGULAR SESSION**

126. The Commission agreed that its Fifteenth Regular Session would be convened in Rome, Italy in 2015, at a suitable date before the next meeting of the FAO Conference. Taking this into account, the Secretary announced that the Commission's Fifteenth Regular Session would be held from 19 to 23 January 2015.

## **XVIII. ELECTION OF THE CHAIR, VICE-CHAIRS AND *RAPPORTEUR***

127. The Commission elected its Chair and Vice-Chairs for its Fifteenth Regular Session. Mr Amar Tahiri (Morocco) was elected as Chair. Mr K.C. Bansal (India), Ms Paula Rassi Brasil (Brazil), Ms Christine Dawson (United States of America), Ms Elzbieta Martyniuk (Poland), Mr Javad Mozafari Hashjin (Islamic Republic of Iran) and Mr William Wigmore (Cook Islands) were elected as Vice-Chairs. Ms Elzbieta Martyniuk was elected *Rapporteur*.

## **XIX. CLOSING STATEMENTS**

128. Regional representatives took the floor to thank the Chair, the Bureau, the Secretariat and the support staff and to express their satisfaction with the outcomes of the meeting. Thanks were also expressed to the governments that had provided financial assistance to support the attendance of delegates from developing countries.

129. A representative of Practical Action, on behalf of civil society organizations present at this session of the Commission, noted the important role of the Commission in providing overarching governance for all biodiversity for food and agriculture. He welcomed the forthcoming preparation of *The State of the World's Biodiversity for Food and Agriculture* and emphasized the importance of involving small-scale producers from all subsectors in the process and of ensuring that their views and perspectives were included. He also commented on the need to develop targets and indicators that account for the roles of small-scale producers, on the need to support farmers' organizations and farmer-led research, and on the need for national seed policies that reflect the contributions of biodiverse food systems to nutrition and resilience to climate change.

130. He called on the Commission to improve its engagement with civil society organizations, especially international and regional organizations and social movements of farmers and other small-scale producers.

131. Ms Collette noted that this was the beginning of a new decade of intergovernmental work on biodiversity for food and agriculture. She reflected on the outcomes of the meeting, noting that the Commission had once again proved to be an essential intergovernmental forum and that its decisions would help to position genetic resources at the top of global agendas. Ms Collette also noted that the success of the Commission's future work would depend upon collaboration with a wide range of stakeholders. She thanked the Chair and the Bureau for their work during the meeting and the intersessional period and all the delegates and observers for their contributions to the success of the meeting. She also expressed her gratitude to all the staff.

132. Mr Fraleigh thanked the Commission Secretariat and FAO's technical departments, along with the interpreters and other support staff. He also thanked the Vice-Chairs and the *Rapporteur* and extended his best wishes to the incoming Chair and Bureau. Finally, he thanked delegates for their hard work, spirit, clarity and willingness to compromise.

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**APPENDIX A**

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**AGENDA OF THE FOURTEENTH REGULAR SESSION OF THE COMMISSION  
ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

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1. Adoption of the agenda and timetable

**MULTI-YEAR PROGRAMME OF WORK**

2. Cross-sectorial matters
  - 2.1 Key issues and the preparation of *The State of the World's Biodiversity for Food and Agriculture*
  - 2.2 Review of relevant international targets and indicators for biodiversity for food and agriculture
  - 2.3 Roadmap or work programme on climate change and genetic resources for food and agriculture
  - 2.4 Consideration of the need for and modalities of access and benefit-sharing arrangements for genetic resources for food and agriculture, including Report of the First Session of the Ad Hoc Technical Working Group on Access and Benefit-sharing for Genetic Resources for Food and Agriculture
  - 2.5 Review of key issues on biodiversity and nutrition
3. Forest genetic resources
  - 3.1 Presentation of *The State of the World's Forest Genetic Resources*
  - 3.2 Report of the Second Session of the Intergovernmental Technical Working Group on Forest Genetic Resources, including discussion of options for the follow-up
4. Animal genetic resources
  - 4.1 Report of the Seventh Session of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture
  - 4.2 Review of the implementation of the Interlaken outcomes
  - 4.3 Preparation of *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*
5. Aquatic genetic resources
  - 5.1 Status of preparation of *The State of the World's Aquatic Genetic Resources*
  - 5.2 Review of scoping policy analysis
6. Review of key issues in micro-organisms and invertebrates
7. Plant genetic resources
  - 7.1 Report of the Sixth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
  - 7.2 Follow-up to the Commission's recommendations regarding the implementation of the *Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*

- 7.3 Genebank Standards for Plant Genetic Resources for Food and Agriculture
- 7.4 Review of cooperation with the International Treaty on Plant Genetic Resources for Food and Agriculture
- 8. Implementation of the Multi-Year Programme of Work
  - 8.1 Human and financial resources available for the implementation of the Multi-Year Programme of Work
  - 8.2 Strategic Plan 2014-2021 for the implementation of the Multi-Year Programme of Work

### **COOPERATION WITH INTERNATIONAL INSTRUMENTS AND ORGANIZATIONS**

- 9. Cooperation with international instruments and organizations

### **THE COMMISSION'S MODE OF OPERATION**

- 10. Status and profile of the Commission, including discussion of the operation of Commission meetings
- 11. Composition of intergovernmental technical working groups

### **OTHER MATTERS**

- 12. Other business
- 13. Date and place of the Commission's Fifteenth Regular Session
- 14. Election of Chair and Vice-Chairs
- 15. Adoption of the Report

## APPENDIX B

### **STRUCTURE AND CONTENT OF *THE STATE OF THE WORLD'S BIODIVERSITY FOR FOOD AND AGRICULTURE***

Chapter Title	Scope of Chapter and indicative contents
1. Introduction	<p>An introduction to the Report and its scope, including:</p> <ul style="list-style-type: none"> <li>• The nature, roles and values of biodiversity for food and agriculture;</li> <li>• The relationships of biodiversity for food and agriculture to food and nutrition security, sustainable production and rural development (including economic, social and cultural dimensions);</li> <li>• Ecosystem perspectives (ecosystem services and functions and the ecosystem approach);</li> <li>• International and national interdependencies on genetic resources.</li> </ul>
2. Drivers and change	<p>The effect of different drivers and stressors on the extent and availability of biodiversity for food and agriculture and future expectations, including the effects of:</p> <ul style="list-style-type: none"> <li>• Population growth;</li> <li>• Changing social and economic features and relationships;</li> <li>• Changes in land use and land management, habitat destruction and over-exploitation;</li> <li>• Climate change;</li> <li>• The possible impacts of natural disasters.</li> </ul> <p>Possible future developments and changes over the next few decades.</p>
3. The current status and trends of biodiversity for food and agriculture	<p>Integrated assessments of the state of biodiversity for food and agriculture, including:</p> <ul style="list-style-type: none"> <li>• Overall synthesized assessment of plant, animal, forest and aquatic genetic resources;</li> <li>• Assessment of the state of other components of biodiversity for food and agriculture - micro-organisms, invertebrates and other associated biodiversity present in agricultural landscapes.</li> </ul> <p>Comparative analyses of differences and similarities, synergies, inter-linkages and trade-offs between sectors and other components.</p> <p>Major gaps and needs</p>
4. The state of use of biodiversity for food and agriculture	<p>An assessment and analysis of the overall state of the sustainable use of biodiversity for food and agriculture</p> <p>Assessment of the use of biodiversity for food and agriculture and of its contribution to agricultural production, to ecosystem services and function and to sustainability, including:</p> <ul style="list-style-type: none"> <li>• Use of biodiversity for food and agriculture to increase productivity, improve food security and nutrition and reduce rural poverty;</li> <li>• Contribution of biodiversity for food and agriculture to specific supporting and regulating ecosystem services;</li> <li>• Contribution to sustainability, resilience and to sustainable intensification;</li> </ul> <p>Major gaps and needs</p>

<p>5. The state of interventions on conservation and use of biodiversity for food and agriculture</p>	<p>Assessment and analysis of international, national and local interventions and activities that support conservation and use, including:</p> <ul style="list-style-type: none"> <li>• National conservation and use programmes and policies that support conservation and sustainable use;</li> <li>• National programmes and policies and that support ecosystem services and the ecosystem approach;</li> <li>• Local and informal sector initiatives;</li> <li>• Available capacity and resources;</li> <li>• The state of science of biodiversity for food and agriculture management and use;</li> <li>• International and regional policies, legal frameworks and collaboration.</li> </ul> <p>Major gaps and needs</p>
<p>6. Future agendas for conservation and sustainable use biodiversity for food and agriculture; helping to secure the multiple benefits of agriculture</p>	<p>An assessment and analysis of actions that can help secure improved conservation and use of biodiversity for food and agriculture now and of the future opportunities for enhancing the contribution of biodiversity for food and agriculture to food and nutrition security and to eliminating rural poverty, including:</p> <ul style="list-style-type: none"> <li>• Ways of strengthening the contribution of biodiversity for food and agriculture to secure the multiple benefits of agriculture including food and nutrition security, rural development, sustainability, sustainable intensification and resilience;</li> <li>• Ways of improving recognition of, and support for, the role and contribution of women;</li> <li>• Actions that will contribute to the UN Strategic Plan for Biodiversity and to achieving the Aichi Targets, and that will link to related processes undertaken through the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and the Convention on Biological Diversity;</li> </ul> <p>An assessment of future needs with respect to policies and legal arrangements, economic frameworks, knowledge creation, capacity development, collaboration.</p> <p>The future contribution of the Commission to improved conservation and use of biodiversity for food and agriculture</p>

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## APPENDIX C

### TARGETS AND INDICATORS FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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#### I. INDICATORS FOR MONITORING THE IMPLEMENTATION OF THE SECOND GLOBAL PLAN OF ACTION FOR PLANT GENETIC RESOURCES

##### *In situ* conservation and management

##### **Priority Activity 1: Surveying and inventorying plant genetic resources for food and agriculture**

- Number of *in situ* (including on farm) surveys/inventories of PGRFA<sup>1</sup> carried out
- Number of PGRFA surveyed/inventoried
- Percentage of PGRFA threatened out of those surveyed/inventoried<sup>2</sup>

##### **Priority Activity 2: Supporting on-farm management and improvement of plant genetic resources for food and agriculture**

- Number of farming communities involved in on-farm PGRFA management and improvement activities
- Percentage of cultivated land under farmers' varieties/landraces in areas of high diversity and/or risk<sup>3</sup>
- Number of farmers' varieties/landraces delivered from national or local gene banks to farmers (either directly or through intermediaries)<sup>4</sup>

##### **Priority Activity 3: Assisting farmers in disaster situations to restore crop systems**

- Number of households that received seeds for planting as an aid after disaster situations
- Percentage of seed produced at the local level<sup>5</sup> out of that made available through disaster response interventions
- Existence of disaster risk management policies for restoring crop systems that include seed security provisions

##### **Priority Activity 4: Promoting *in situ* conservation and management of crop wild relatives and wild food plants**

- Number of crop wild relatives and wild food plants *in situ* conservation and management actions with institutional support
- Percentage of national *in situ* conservation sites with management plans addressing crop wild relatives and wild food plants
- Number of crop wild relatives and wild food plants species actively<sup>6</sup> conserved *in situ*

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<sup>1</sup> PGRFA means “any genetic material of plant origin of actual or potential value for food and agriculture” (International Treaty on Plant Genetic Resources for Food and Agriculture, Article 2).

<sup>2</sup> Also listed in Priority Activity 16: Developing and strengthening systems for monitoring and safeguarding genetic diversity and minimizing genetic erosion of plant genetic resources for food and agriculture.

<sup>3</sup> Out of the total cultivated land in the same areas.

<sup>4</sup> Also listed in Priority Activity 10: Promoting diversification of crop production and broadening crop diversity for sustainable agriculture.

<sup>5</sup> Produced in neighbouring areas with similar agro-ecological conditions.

<sup>6</sup> By “actively conserved” it is meant that the target species are specifically addressed by the management plan of the conservation area.



**Ex situ Conservation****Priority Activity 5: Supporting targeted collecting of plant genetic resources for food and agriculture**

- Existence of a strategy for identification of gaps in collections held by national gene banks and for targeted collecting missions to fill identified gaps
- Number of targeted collecting missions in the country
- Number of accessions resulting from targeted collecting missions in the country
- Number of crops collections conserved in the national gene bank(s) that require targeted collecting

**Priority Activity 6: Sustaining and expanding *ex situ* conservation of germplasm**

- Trend in annual capacity for sustaining *ex situ* collections
- Number of crops conserved *ex situ* under medium or long-term conditions<sup>7</sup>
- Number of species conserved *ex situ* under medium or long-term conditions
- Number of accessions conserved *ex situ* under medium or long-term conditions
- Percentage of *ex situ* accessions safety duplicated

**Priority Activity 7: Regenerating and multiplying *ex situ* accessions**

- Percentage of *ex situ* accessions for which a budget for regeneration does not exist
- Number of *ex situ* accessions regenerated and/or multiplied
- Percentage of *ex situ* accessions in need of regeneration

**Sustainable use****Priority Activity 8: Expanding the characterization, evaluation and further development of specific collection sub-sets to facilitate use**

- Average number of morphological traits characterized per accession for the *ex situ* collections
- Number of publications on germplasm evaluation and molecular characterization
- Number of trait-specific collection subsets published
- Number of accessions distributed by gene banks to users of germplasm
- Number of samples distributed by gene banks to users of germplasm

**Priority Activity 9: Supporting plant breeding, genetic enhancement and base-broadening efforts**

- Number of crops with active public pre-breeding and breeding programmes
- Number of crops with active private pre-breeding and breeding programmes
- Number of active public crop breeders
- Number of active private crop breeders
- Number of new varieties released<sup>8</sup>

**Priority Activity 10: Promoting diversification of crop production and broadening crop diversity for sustainable agriculture**

- Number of programmes/projects/activities to increase genetic heterogeneity of crop species and diversity within the agro-ecosystem
- Number of new crops and/or wild species introduced into cultivation
- Number of farmers' varieties/landraces delivered from national and local gene banks to farmers (either direct or through intermediaries)<sup>9</sup>

<sup>7</sup> Also listed in Priority Activity 10: Promoting diversification of crop production and broadening crop diversity for sustainable agriculture.

<sup>8</sup> Also listed in Priority Activity 12: Supporting seed production and distribution.

<sup>9</sup> Also listed in Priority Activity 2: Supporting on-farm management and improvement of plant genetic resources for food and agriculture.

- Number of crops conserved *ex situ* under medium or long term conditions<sup>10</sup>

**Priority Activity 11: Promoting development and commercialization of all varieties, primarily farmers' varieties/landraces and underutilized species**

- Number of programmes/projects/activities promoting development and commercialization of all varieties, primarily farmers' varieties/landraces and underutilized species
- Number of farmers' varieties/landraces and underutilized species with potential for commercialization identified
- Existence of national policies that promote development and commercialization of all varieties, primarily farmers' varieties/landraces and underutilized species

**Priority Activity 12: Supporting seed production and distribution**

- Number of new varieties released<sup>11</sup>
- Number of formal/registered seed enterprises
- The least number of varieties that together account for 80% of the total area for each of the five most widely cultivated crops
- Percentage of area supplied with seed meeting the standard of the formal seed sector for the five most widely cultivated crops
- Existence of a national seed policy and seed law

**Building institutional and human capacities**

**Priority Activity 13: Building and strengthening national programmes**

- Existence of a national entity (agency, committee, etc.) functioning as a coordination mechanism for PGRFA activities and/or strategies
- Existence of a formally appointed national focal point or coordinator for PGRFA
- Existence of a governmental policy framework and strategies for PGRFA conservation and use
- Existence of a national information sharing mechanism for PGRFA

**Priority Activity 14: Promoting and strengthening networks for plant genetic resources for food and agriculture**

- Membership in a regional PGRFA network
- Number of crop improvement networks in which national stakeholders are members
- Number of publications produced by national stakeholders within the framework of networks

**Priority Activity 15: Constructing and strengthening comprehensive information systems for plant genetic resources for food and agriculture**

- Number of crop wild relatives conserved *in situ* documented in a publicly available information system
- Number of farmers' varieties/landraces cultivated on-farm and documented in a publicly available information system
- Number of accessions in *ex situ* collections documented in a publicly available information system
- Number of released varieties documented in a publicly available information system
- Participation in publicly accessible, international/regional PGRFA information systems

<sup>10</sup> Also listed in Priority Activity 6: Sustaining and expanding *ex situ* conservation of germplasm.

<sup>11</sup> Also listed in Priority Activity 9: Supporting plant breeding, genetic enhancement and base-broadening efforts.

**Priority Activity 16: Developing and strengthening systems for monitoring and safeguarding genetic diversity and minimizing genetic erosion of plant genetic resources for food and agriculture**

- Percentage of PGRFA threatened out of those surveyed/inventoried<sup>12</sup>
- Existence of national systems to monitor and safeguard genetic diversity and minimize genetic erosion
- Number of remedial actions resulting from the existing national systems to monitor and safeguard genetic diversity and minimize genetic erosion

**Priority Activity 17: Building and strengthening human resource capacity**

- Existence of post-graduate, graduate and secondary educational and training programmes with incorporated aspects on PGRFA conservation and sustainable use
- Percentage of staff whose knowledge and skills in conserving and using PGRFA have been upgraded

**Priority Activity 18: Promoting and strengthening public awareness of the importance of plant genetic resources for food and agriculture**

- Existence of a public awareness programme promoting PGRFA conservation and utilization
- Number of stakeholder groups participating in the implementation of the public awareness programme
- Number of types of products developed to raise public awareness

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<sup>12</sup> Also listed in Priority Activity 1: Surveying and inventorying plant genetic resources for food and agriculture.

## II. TARGETS FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

### Conservation of PGRFA

**Target:** *By 2020, an increasing proportion of the genetic diversity of cultivated plants and their wild relatives, as well as of wild food plant species is maintained in situ, on farm and ex situ in a complementary manner.*

**Technical Rationale:** Plant genetic resources for food and agriculture are conserved in farmers' fields, seed and field gene banks and wild habitats. The conservation of PGRFA in natural ecosystems and their on-farm management provide for the continued evolution and adaptation of these resources to changing environmental forces, and thus for the generation of new diversity that is important for future crop improvements. A large and important amount of PGRFA, vital to world food security, is stored *ex situ*. The safety of the genetic material already collected should be secured and its regeneration and safety duplication provided. Conservation planning and decision-making require regular monitoring of the existing diversity of PGRFA, its distribution and evolution over time.

### Sustainable use

**Target:** *By 2020, there has been an increased use of plant genetic resources for food and agriculture to improve sustainable crop production intensification and livelihoods while reducing genetic vulnerability of crops and cropping systems.*

**Technical Rationale:** PGRFA are used by farmers either directly or after research, improvement, seed multiplication and distribution processes. Their sustainable use allows to take full advantage of their potential to reduce hunger and poverty, and provide options for agriculture to cope with climate change. Accessing a large gene pool from gene bank collections is a pre-requisite for the improvement of plant varieties with new traits, such as higher yields and resistance or tolerance to environmental and biological stresses. The diversification among and within crops contributes to the resilience and long-term sustainability of agricultural systems, thus ensuring food, nutritional and income security. The introduction of new crops and/or wild species into cultivation as well as the identification of underutilized species with potential for commercialization are part of a broad effort to enhance diversity in farming systems.

### Institutional and human capacities

**Target:** *By 2020, many more people are aware of the values of plant genetic resources for food and agriculture and institutional and human capacities are strengthened to conserve and use them sustainably while minimizing genetic erosion and safeguarding their genetic diversity.*

**Technical Rationale:** Effective conservation and sustainable use of PGRFA require an enabling institutional framework and human resources capacities. Governments should have a functioning policy framework on conservation and sustainable use of PGRFA which empowers a strong national programme with facilitated access to information on, *inter alia*, *ex situ* germplasm, including passport, characterization and evaluation data, *in situ* geo-referenced inventories of crop wild relatives and wild food plants, on farm landraces and cultivars together with their agronomic description, distribution and seed production data. Governments should also have strong capacity to respond to threats of PGRFA erosion in order to prevent loss of existing diversity. It is also vitally important for the national programme to rely on a well trained working force able to efficiently apply latest standards and technologies for conservation and use of PGRFA. Finally, public awareness raising is vital to a national programme, as it mobilizes popular opinion and spurs political action. One message, however, does not fit all audiences and public awareness interventions should be carefully planned and aligned with the interests and priorities of the target audiences.

## APPENDIX D

### PROGRAMME OF WORK ON CLIMATE CHANGE AND GENETIC RESOURCES FOR FOOD AND AGRICULTURE (2013 -2017)

Recognizing that the Commission's Programme of Work does not prejudice efforts under the United Nations Framework Convention on Climate Change (UNFCCC) to address climate change, and that the Programme of Work will refrain from providing policy prescriptive recommendations; the Programme of Work has two objectives:

- A. Promote the understanding of the roles and importance of genetic resources for food and agriculture in food security and nutrition and in ecosystem function and system resilience in light of climate change.
- B. Provide technical information to enable countries to understand the role of genetic resources for food and agriculture in climate change mitigation and adaptation, as appropriate.

#### 2013

<u>Tools and technologies</u>	<ul style="list-style-type: none"> <li>• Preparation of technical material on genetic resources for food and agriculture and climate change to facilitate the implementation of national adaptation programmes of action (NAPAs) and national adaptation plans (NAPs), as well as awareness-raising material for planners, policy makers and farming communities.</li> <li>• Conduct a survey on the theme of "Lessons learned about ways and means to conserve and use genetic diversity to build resilience to climate change in food and agriculture systems".</li> <li>• Organize expert meeting to finalize results of the survey.</li> </ul>
<u>Strategies and policies</u>	<ul style="list-style-type: none"> <li>• Provide formal submission to the UNFCCC on the importance of genetic resources for food and agriculture with respect to climate change.</li> <li>• Explore the possibility of a side event at the 19<sup>th</sup> Session of the Conference of the Parties (COP) to the UNFCCC (November 2013, Poland).</li> <li>• Respond to invitation from the UNFCCC Adaptation Committee to provide information.</li> <li>• Provide material and information in support of training workshops on adaptation.</li> <li>• Explore the possibility of a side event at, or providing documentation to, the 17<sup>th</sup> Session of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (CBD).</li> </ul>

#### 2014

<u>Tools and technologies</u>	<ul style="list-style-type: none"> <li>• Compile information on hotspots of biodiversity for food and agriculture under particular threat from climate change.</li> <li>• Commission's intergovernmental technical working groups to develop guidelines for the integration of genetic-diversity considerations into climate change adaptation planning (NAPs, NAPAs).</li> </ul>
<u>Strategies and policies</u>	<ul style="list-style-type: none"> <li>• Participate in activities of the work plan of the UNFCCC Adaptation Committee, as relevant.</li> <li>• Explore the possibility of a side event at, or providing documentation to, CBD SBSTTA 18.</li> <li>• Explore the possibility of a side event at CBD COP 12.</li> </ul>

**2015**

<u>Strategies and policies</u>	<ul style="list-style-type: none"> <li>• Explore the possibility of a side event, or delivering a submission, at UNFCCC Subsidiary Body for Implementation.</li> <li>• Explore the possibility of a side event at, or providing documentation to, CBD SBSTTA 19.</li> </ul>
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**2016**

<u>Strategies and policies</u>	<ul style="list-style-type: none"> <li>• Explore the possibility of a side event or submission at UNFCCC COP 22.</li> <li>• Explore the possibility of a side event or document at CBD SBSTTA 20.</li> <li>• Explore the possibility of a side event at CBD COP 13.</li> </ul>
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**2017**

- Report to the Commission, at its Sixteenth Session, on progress in the implementation of the Programme of Work for consideration of possible future work.

## APPENDIX E

### DISTINCTIVE FEATURES OF GENETIC RESOURCES FOR FOOD AND AGRICULTURE

The distinctive features of genetic resources for food and agriculture (GRFA) requiring distinctive solutions for access and benefit-sharing are presented below in seven clusters. They aim to reflect an equilibrium between all subsectors of food and agriculture. Not every feature is necessarily applicable to each and every genetic resource for food and agriculture and the various subsectors often have different features. Further detailing of subsector-specific features may still be developed.

The features are distinctive, but not necessarily unique to genetic resources for food and agriculture. While other genetic resources may share with genetic resources for food and agriculture some of the features listed below, the specific combination of these features distinguishes genetic resources for food and agriculture from most other genetic resources.

		WG AnGR <sup>1</sup>	WG FGR <sup>2</sup>	WG PGR <sup>3</sup>
<b>A. The role of GRFA for food security</b>	A.1 GRFA are an integral part of agricultural and food production systems and play an essential role for achieving food security and the sustainable development of the food and agriculture sector.		+	+
	A.2 Plant, animal, invertebrate and micro-organism GRFA form an interdependent network of genetic diversity in agricultural ecosystems.		+	
<b>B. The role of human management</b>	B.1 The existence of most GRFA is closely linked to human activity and many GRFA can be regarded as human-modified forms of genetic resources.		-	
	B.2 The maintenance and evolution of many GRFA depend on continued human intervention, and their sustainable utilization in research, development and production is an important instrument to ensure conservation.	+	-	
<b>C. International exchange and interdependence</b>	C.1 Historically, GRFA have been widely exchanged across communities, countries and regions over often long periods of time, and a relevant part of the genetic diversity used in food and agriculture today is of exotic origin.	+	-	+
	C.2 Countries are interdependent with regard to GRFA and act both as providers of some GRFA and as recipients of others.		+	
	C.3 The international exchange of GRFA is essential to the functioning of the sector, and its importance is likely to increase in future.	+	+	+
<b>D. The nature of the innovation process</b>	D.1 The innovation process for GRFA is usually of incremental nature and the result of contributions made by many different people, including indigenous and local communities, farmers, researchers and breeders, in different places and at different points in time.	+	+	+
	D.2 Many GRFA products are not developed out of an individual genetic resource, but with the contributions of several GRFA at different stages in the innovation process.		-	+
	D.3 Most products developed with the use of GRFA can in turn be used as genetic resources for further research and development, which makes it difficult to draw a clear line between providers and recipients of GRFA.		+	+
	D.4 Many agricultural products reach the market place in a form in which they may be used both as biological resources and as genetic resources.	-	+	

<sup>1</sup> CGRFA-14/13/12, paragraph 32.

<sup>2</sup> CGRFA-14/13/10, paragraph 21.

<sup>3</sup> CGRFA-14/13/20, Table 2.

<b>E. Holders and users of GRFA</b>	E.1 GRFA are held and used by a broad range of very diverse stakeholders. There are distinct communities of providers and users with respect to the different subsectors of GRFA.	+	-	+
	E.2 The different stakeholders managing and using GRFA are interdependent.		+	
	E.3 A significant amount of GRFA is privately held.	+	-	
	E.4 An important part of GRFA is held and can be accessed <i>ex situ</i> .	-	-	
	E.5 An important part of GRFA is conserved <i>in situ</i> and on farm under different financial, technical and legal conditions.	+	+	
<b>F. GRFA exchange practices</b>	F.1 The exchange of GRFA takes place in the context of customary practices and existing communities of providers and users.	+	+	+
	F.2 An extensive transfer of genetic material between different stakeholders along the value chain occurs in research and development.	+	-	
<b>G. Benefits generated with the use of GRFA</b>	G.1 While the overall benefits of GRFA are very high, it is difficult to estimate at the time of the transaction the expected benefits of an individual sample of GRFA.		+	+
	G.2 The use of GRFA may also generate important non-monetary benefits.		+	
	G.3 The use of GRFA may lead to external effects going far beyond the individual provider and recipient.		+	

*Note:* The Intergovernmental Technical Working Groups on Plant, Animal, and Forest Genetic Resources, in reviewing the distinctive features identified by the Ad Hoc Technical Working Group on Access and Benefit-sharing for Genetic Resources for Food and Agriculture, highlighted features particularly relevant (marked in the table above by plus signs [+]) or less (or not) relevant (marked in the table by minus signs [-]) to their subsectors.



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## APPENDIX F

### GLOBAL PLAN OF ACTION FOR THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES

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#### *Introduction*

1. Forest covers about 31 percent of the world's total land area; 93 percent of this is natural forest and only 7 percent planted. Estimates of the number of tree species vary from 80 000 to 100 000. Forest ecosystems remain essential refuges for biodiversity, and 12 percent of the world's forest land is designated primarily for the conservation of biological diversity. Approximately 14 million people worldwide are formally employed in the forestry sector. Many more depend directly on forests and forest products for their food security and livelihoods. In developing countries, wood-based fuels are the dominant source of energy for more than 2 billion poor people. In Africa, over 90 percent of harvested wood is used for energy. Wood is not the only resource taken from forests. About 80 percent of people in developing countries use non-wood forest products to meet their nutrition and health needs and for income.

2. The contribution of forests and trees to meeting the present and future challenges of food security, poverty alleviation and sustainable development depends on the availability of rich diversity between and within tree species. Genetic diversity is needed in order to ensure that forest trees can survive, adapt and evolve under changing environmental conditions. It also maintains the vitality of forests and provides resilience to stresses such as pest and diseases. Furthermore, genetic diversity is needed for artificial selection, breeding and domestication programmes for the development of adapted varieties or to strengthen useful traits. In many countries, prospects for sustainable development in rural areas will be greatly influenced by the state of diversity in forest ecosystems and species.

3. Efforts to sustainably manage forest genetic resources (FGR) at international as well as at national levels need to draw on solid and coherent baseline information. The country reports submitted during the preparation of *The State of the World's Forest Genetic Resources*, which were developed based on FAO guidelines, are the main source of comparable information on FGR and their management and have served as the basis for the identification of priority areas for action on FGR.

4. Conserving FGR is vital, as they are unique and irreplaceable resources for the future. FAO has for many decades acknowledged their importance. Already in 1967, the FAO Conference recognized that forest genetic diversity was increasingly being lost, and requested the establishment of the Panel of Experts on Forest Gene Resources (the Forest Gene Panel), to help plan and coordinate FAO's efforts in the management of the genetic resources of forest trees.

5. FAO's activities on FGR are an integral part of the FAO Forestry Programme and contribute to other programme components such as the Global Forest Resources Assessment, national forest programmes, sustainable forest management, tree breeding and plantation development and protected area management. For many decades, the Forest Gene Panel has guided FAO's work on FGR, reporting on progress made to the Committee on Forestry (COFO).

#### *The nature of the Global Plan of Action*

6. The Global Plan of Action is voluntary and non-binding and should not be interpreted or implemented in contradiction with existing national legislation and international agreements where applicable.

7. The Global Plan of Action constitutes a rolling document that can be updated in line with any follow-up that the Commission on Genetic Resources for Food and Agriculture may decide upon.
8. The relative priority of each strategic priority and associated actions may differ significantly in different countries and regions. Relative priority may depend on the genetic resources themselves, the natural environment or production systems involved, current management capacities, financial resources or policies already underway for the management of FGR.

### ***The rationale for the Global Plan of Action***

#### *Key features of forest genetic resources*

9. Most forest tree species are wild, managed in natural ecosystems, or are at a very primitive stage of selection or domestication compared to agricultural crops<sup>1</sup>
10. Forest tree species are typically long-lived, highly heterozygous organisms that have developed natural mechanisms to maintain high levels of intraspecific variation, such as a high rates of out-crossing, and dispersal of pollen and seeds over wide areas. These mechanisms, combined with native environments that are often variable in both time and space, have contributed to the evolution of forest tree species into some of the most genetically variable organisms on earth<sup>2</sup>. *In situ* conservation allowing dynamic maintenance of genetic diversity and processes is the preferred approach for forest species, while *ex situ* conservation is most commonly used for domesticated plant species.
11. Forest species have multiple functions in that they provide numerous products and services. About 80 percent of people in the developing world use non-timber forest products for nutrition, health and income.
12. Quantifying the value of the benefit derived from FGR is difficult for several reasons. Apart from timber, most forest products are harvested for local consumption or commercialized without proper national monitoring and documentation. This is particularly the case in developing countries.
13. In terms of their present or potential contribution to food security and sustainable development, FGR are underutilized and undervalued.
14. Knowledge of FGR is usually scattered and held by various institutions in unpublished reports, meaning that in many countries access to it is limited. Baseline information, such as country species checklists, species distribution maps and forest reproductive material catalogues, are lacking.
15. The number of known forest tree species exceeds 80 000, but current efforts in Member countries to test and improve forest species focus on approximately 450 species.

### ***Aims of the Global Plan of Action***

16. The main aims of the Global Plan of Action are:
- to strengthen understanding and knowledge of FGR;
  - to promote the sustainable use and management of FGR;
  - to develop and strengthen *in situ* and *ex situ* FGR conservation programmes through collaboration at national, regional and global levels;
  - to promote access to, and sharing of, information on FGR at regional and national levels;

<sup>1</sup> National Academic Press. 1991. *Managing global genetic resources: Forest Trees*. Washington D.C.

<sup>2</sup> FAO, FLD, IPGRI. 2004. *Forest genetic resources conservation and management. Vol 1: Overview, concepts and some systematic approaches*. Rome.

- to create and strengthen national programmes to increase regional and international cooperation, including in research, education and training on the use and sustainable management of FGR, and to enhance institutional capacity;
- to assist countries, as appropriate, to integrate FGR conservation and management needs into wider national policies and programmes and frameworks of action at national, regional and global levels;
- to promote the assessment of FGR-related traditional knowledge, innovations and practices, the equitable sharing of benefits arising from their use, the recognition of their roles, and, where appropriate, the putting in place of effective policies and legislation addressing these matters;
- to promote adequate access to, and use of, quality forest reproductive material to support research and development programmes at national and regional levels and in line with the international laws and regulations regarding intellectual property;
- to promote ecosystem and ecoregional approaches as efficient means of promoting sustainable use and management of FGR;
- to assist countries and institutions responsible for the management of FGR to establish, implement and regularly review national priorities for the sustainable use and management of FGR; and
- to strengthen national programmes and enhance institutional capacity – in particular, in developing countries and countries with economies in transition – and develop relevant regional and international programmes. Such programmes should include education, research and training to address the characterization, inventory, monitoring, conservation, development and sustainable use of FGR.

17. The strategic priorities of the Global Plan of Action are based on the assumption that countries have sovereign rights over their natural resources, including FGR, and that substantial international cooperation is necessary in the management of FGR. In this context, the strategic priorities of the Global Plan of Action were developed on the basis of the following principles:

- Genetic diversity is the mainstay of biological stability; it enables species to adapt to changing environments, including the effects of climate change and emerging diseases. It is the basis for present and future selection and breeding programmes. In addition to their irreplaceable contribution to environmental sustainability, FGR provide a direct food source for human and animals, even at times when annual crops fail.
- Inventory, characterization and monitoring are necessary to generate the knowledge needed for proper understanding of trends in the status of FGR and to enable adequate decision-making in the sustainable management and use of FGR.
- *In situ* conservation is the most widespread conservation practice because most forest species grow wild and are not being domesticated. It also allows species populations to continue to be exposed to evolutionary processes.
- The effective management of FGR, at all levels, depends on the inclusion and willing participation of all relevant stakeholders. Appropriate participatory processes that ensure that the interests of different stakeholders are respected and balanced are required.
- Strengthening efforts to develop institutional partnerships within and among countries is essential, given that species distributions and ecosystems boundaries do not respect country borders. Strong partnerships and collaboration at various levels are needed in order to improve awareness and develop appropriate national and international regulations and policy tools that lead to sound technical and scientific programmes at national, regional and global levels.

18. Resource mobilization to allow timely and adequate implementation of the Global Plan of Action requires due attention and effort at all levels, including coordination with the numerous

initiatives underway within countries, regionally and globally (Convention on Biological Diversity [CBD], Global Environment Facility, etc).

### ***Structure and organization of the Global Plan of Action***

19. The strategic priorities of the Global Plan of Action are often closely related and interlinked. Many of the actions foreseen are relevant to more than one priority. They are grouped into four priority areas:

1. Improving the availability of, and access to, information on FGR
2. Conservation of FGR (*in situ* and *ex situ*)
3. Sustainable use, development and management of FGR
4. Policies, institutions and capacity-building.

### **Priority Area 1: Improving the availability of, and access to, information on forest genetic resources**

#### ***Introduction***

It is recognized that reliable data on forest status and trends are of great importance to the efficient management of FGR. However, currently available forest-related information largely relates to forest resources in general rather than to forest diversity and variation in tree species. The availability of specific information on the status and trends in FGR is inadequate, although some progress has been made at national and subregional levels during the last decade.

The availability of, and access to, quality and up-to-date information on FGR is reported to be poor in many countries. Most country reports highlight the need to promote awareness among decision-makers and the general public of the importance of FGR and their roles in meeting present and future development needs. Lack of information limits the capacity of countries and the international community to integrate FGR management into cross-cutting policies.

Gaps in information related to FGR include the following:

- in many countries, a lack of an updated species checklist;
- a lack of an accurate global picture of the status and trends of FGR;
- a lack of a comprehensive assessment of national and international capacities to manage FGR;
- a lack of an accepted methodology for directly linking general information on changes in forests to their impacts on biological diversity, species, populations and genetic variation; and
- a lack of the knowledge of the reproductive and development characteristics of forest species that would allow for effective *ex situ* conservation, production of seedlings, planting and development of such species outside their original habitats.

These deficiencies complicate global monitoring of the status and trends of FGR and limit capacity for effective decision-making and action at national and international levels.

In many countries, there is an important relationship between the use and management of FGR and traditional knowledge. This valuable knowledge supports the livelihoods of indigenous and local communities in many developing countries, while also representing a tremendous asset for industrial and trade development in sectors such as pharmacy, food and biopesticides. Policies on FGR information management should take these important roles into consideration. Traditional knowledge is under threat as a consequence of FGR degradation and changes in land-use and sociocultural

practices.

***Long-term goal***

Improve the availability and accessibility of knowledge and information on species and their genetic diversity, forest ecosystems and related traditional knowledge, to facilitate and enable decision-making on sustainable use and management of FGR and to enhance their contribution to solving serious global problems such as food shortage, land and water degradation, the effects of climate change, and increased demand for various forest products and services.

***NATIONAL LEVEL***

**Strategic Priority 1**

**Establish and strengthen national FGR assessment, characterization and monitoring systems**

**Rationale:** Information on FGR is inadequate in many countries. National forest inventories do not usually include the parameters needed for planning the sustainable management of FGR. Baseline information on the status, trends and characteristics of FGR is needed in order to allow the definition and regular review of priorities for sustainable use and conservation, as well as the development of tree domestication and improvement programmes.

**Action:** Promote species inventory and characterization. Promote mapping of the distribution of priority or important species populations. Reinforce the capacities of **national herbaria and botanic surveys** to support the development of knowledge on forest species.

Develop **technical standards, protocols and documentation systems** for assessing and monitoring the status of FGR management. Promote and support the development of **national and regional species checklists** and mechanisms for updating them regularly.

**Develop networks of forest genebanks, information units and databases,** and enhance information management and sharing at national and international levels.

**Strategic Priority 2**

**Develop national and subnational systems for the assessment and management of traditional knowledge on FGR**

**Rationale:** **Traditional knowledge** can make a significant contribution to sustainable development through practices such as local conservation and sustainable use of plants and can contribute to efforts to solve serious global problems such as climate change, desertification, and land and water degradation. There is therefore a need to preserve traditional knowledge of FGR by developing national assessments and improving documentation.

**Action:** Promote national-level assessments and documentation of traditional knowledge related to the use and management of FGR by local communities.

Develop national and subnational traditional knowledge registration mechanisms and databases to preserve, protect and promote traditional

knowledge on FGR.

As appropriate, develop guidance on registering, accessing, storing and using traditional knowledge of FGR at national, subnational and local scales, with effective participation of indigenous and local communities, taking into consideration similar initiatives under the CBD.

## **INTERNATIONAL LEVEL**

### **Strategic Priority 3**

#### **Develop international technical standards and protocols for FGR inventories, characterization and monitoring of trends and risks**

**Rationale:** Scientifically sound, realistic and policy-relevant indicators for defining a baseline and monitoring the status and trends of FGR and their management are lacking at global, regional and national levels. There is a need to develop and use standardized methods and protocols for inventory, characterization and monitoring. There is also a need to enhance the coordination of research on the identification, mapping and characterization of species populations and to improve the impact of the results on FGR management policies.

**Action: Develop global criteria and indicators** for assessing the status and trends of FGR within national forest inventories and other forest-related programmes.

Develop protocols for participatory assessment and monitoring of FGR.

### **Strategic Priority 4**

#### **Promote the establishment and the reinforcement of FGR information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations**

**Rationale:** *The State of the World's Forest Genetic Resources* provides the first global overview of the diversity, status and trends of FGR and of national regional and global capacity to manage these resources. Many country reports indicate that there are important gaps in knowledge of FGR and that information at country level is scattered and difficult to access. Furthermore, research programmes suffer from a lack of adequate financial support, especially in developing countries. There is therefore an urgent need to improve access to information on FGR for all stakeholders, while also developing the knowledge base required for sustainable use and management of FGR. There is also a need to improve countries' financial support to research activities.

**Action:** Improve access to information by developing and strengthening information management and sharing mechanisms at national and global levels.

Promote the establishment and maintenance of FGR databases at local, subnational, national, regional and global levels.

Improve access to information on forest species for a wide range of stakeholders, including indigenous and local communities.

### Priority Area 2: *In situ* and *ex situ* conservation of forest genetic resources

The development of a worldwide conservation strategy for FGR is necessary in order to maintain the adaptive and neutral genetic diversity of forest trees and shrubs. This goal can be met by applying *in situ* conservation methods across the distribution ranges of tree species. Regional collaboration through species or thematic networks should play an important role in implementing the conservation strategy and monitoring the progress made. This collaboration should aim to facilitate the use of the ecosystem approach and to promote greater awareness of the different types of forest and tree management (Table 1) and the different levels of genetic conservation.

**Table 1: The main types of forest and tree resources management**

Naturally regenerated forests		Planted forests				Trees outside forests, and agroforestry systems
Primary	Modified natural	Semi-natural		Plantations		
		Assisted natural regeneration	Planted component	Productive	Protective	
Forests of native species, where there are no clearly visible indications of human activities and the ecological processes are not directly disturbed by humans	Forests of naturally regenerated native species where there are clearly visible indications of significant human activities	Silvicultural practices in natural forest by intensive management: <ul style="list-style-type: none"> <li>weeding</li> <li>fertilizing</li> <li>thinning</li> <li>selective logging</li> </ul>	Forests of native species, established through planting or seeding intensively managed	Forests of introduced and/or native species established through planting or seeding mainly for production of wood or non-wood goods	Forests of introduced and/or native species, established through planting or seeding mainly for provision of services	Stands smaller than 0.5 ha; tree cover in agricultural land (agroforestry systems, home gardens, orchards); trees in urban environments; and scattered along roads and in landscapes

**Protected areas** are established, regulated and managed to achieve conservation objectives in the context of growing pressure from the harvesting of forest resources and the conversion of forests to other land-use types. They mostly serve as refuges for species that are unable to survive in intensely managed landscapes. National programmes for the sustainable use and management of FGR should therefore take the important roles of protected areas into account, even though most of them may have been primarily design for purposes such as the protection of wildlife (mostly animals), recreation and various ecosystem services.

Protected areas are suitable for the conservation of viable forest tree populations of diverse species and of representative ecosystem samples, as well as for maintaining vital ecosystem services.

**Marginal and/or range-limits<sup>3</sup> tree species populations** may be crucial sources of adaptation to the

<sup>3</sup> Sexton *et al.*, 2009. *Annu. Rev. Ecol. Syst.*, 40: 415–436

novel environmental extremes that are expected to occur as a result of rapid climatic change. It is necessary to understand the dynamics of marginal forest species populations through adequate examination of adaptive genetic variation in quantitative traits. Furthermore, conservation in the context of climate change requires accurate estimates of the positions of future extreme environmental conditions (range limits). Modelling of species distribution dynamics needs to account for changes in species' distribution areas and in those of their associated environmental correlates (e.g. pollinators) and also for the possible influences of interactions with other plant or animal species.

Adequate *in situ* conservation measures are needed in order to preserve the natural growing conditions of tree species and thereby allow study and better understanding of their evolutionary processes and adaptation to changes. Information from *in situ* conservation activities for marginal and/or range-limits populations will be essential in providing options for adaptation to climate change.

**On-farm management of FGR**, including agroforestry systems, is identified as a land-use type that contributes substantially to *in situ* conservation of FGR, particularly domesticated or semi-domesticated species (e.g. the agroforestry parkland system in West Africa).

Many priority species identified in country reports from semi-arid zones are trees growing on farmlands, including agroforestry systems. Most of them are indigenous species that have been traditionally managed by farmers for centuries.

Tree diversity in farmland varies from a few species in some countries to more than 100 in some others. Some of these species are semi-domesticated species that occur only in agroforestry systems. Sustainable management of agroforestry systems is therefore needed in order to conserve the genetic resources of these species.

Given the large number of tree species recorded worldwide (see above), it is clear that there is a need for **priority setting** among the many species that might be targeted for action. Priority setting is complicated greatly by the lack of basic information on the variation, variation patterns and potentialities of many tree species.

The general aim of priority setting is to compare the consequences and trade-offs of a range of actions. It implies that some areas, species or genetic resources will be given lower priority than others. When different stakeholders have similar priorities, concerted action on the part of these stakeholders is possible. When their priorities are dissimilar, independent but harmonized action is more likely to succeed. It is likely that among governmental, non-governmental and international organizations active in forest biological diversity and genetic conservation, substantial differences will exist in terms of priorities, as well as in terms of their capabilities to implement various management techniques. Where such differences exist, it will be necessary to form coalitions for action, operating under coherent frameworks and at appropriate levels.

Commitment at national and local levels to specified objectives and priorities is a prerequisite for the implementation of sustainable conservation programmes. Governments have worked towards ensuring wide ownership of their country reports by organizing stakeholder workshops to review and validate them. During regional consultations in the Near East and North Africa, West Africa, Central Asia, Asia, the Pacific, Central Africa, East and Southern Africa and Latin America, regional priorities for action were identified. In many cases, regional priority species were discussed. However, the process needs to be continued in order to define detailed actions for each species and to allocate responsibilities among actors and partners at national, regional and international levels.

**Ex situ conservation.** In a growing number of situations, *in situ* conservation of FGR is no longer possible, in particular due to the effects of climate change. As a consequence, conservation strategies should include the creation of *in situ* and of *ex situ* conservation units.

#### *Long-term goal*

Maintain genetic diversity and the evolutionary processes of forest species by better implementing and



harmonizing measures to conserve FGR, both *in situ* and *ex situ*, including through regional cooperation and networking.

## NATIONAL LEVEL

### Strategic Priority 5 **Strengthen the contribution of primary forests and protected areas to *in situ* conservation of FGR**

**Rationale:** In the current context of increasing pressure on forest land and forest resources, primary forests and protected areas remain refuges for threatened FGR. A substantial proportion of wild and/or endemic plants occur only in primary forests and protected forest areas. Only in those forests is the natural population genetic structure conserved. Natural processes involved in the dynamics of FGR resources are better assessed and understood in protected natural forests, which remain the best laboratories for studying species' ecology and biology. The contributions of primary forests and protected areas to the development of knowledge on plant species and to the conservation of FGR, therefore, need to be promoted.

**Action:** Develop collaboration between institutions or programmes in charge of protected forest areas and those responsible for the development and use of FGR, such as national forest tree breeding centres, forest tree seed centres and other forest germplasm collection and conservation institutions operating at national or regional levels.

Promote and reinforce the development of national FGR assessment and conservation activities in primary forests and **protected areas** and in **conservation forests**, with the participation of indigenous and local communities, as appropriate.

Manage genetic reserves within protected areas to maintain the evolutionary potentials of targeted species.

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### Strategic priority 6 **Promote the establishment and development of efficient and sustainable *ex situ* conservation programmes, including *in vivo* collections and genebanks**

**Rationale:** A comprehensive FGR conservation programme requires some combination of *in situ* and *ex situ* conservation. *Ex situ* conservation of FGR is mainly concerned with sampling as much as possible of the genetic variation that resides within and among populations of the target species.

*Ex situ* conservation is, in many cases, the only option available for conserving the intraspecific genetic variation present in peripheral or isolated populations<sup>4</sup> that are seriously threatened by changes in land use and environmental conditions (drought, flooding, salinity, etc). The main objectives of an *ex situ* conservation programme for any particular species are:

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<sup>4</sup> FAO, FLD, IPGRI, 2004. *Forest genetic resources conservation and management. Vol. 3: In plantations and genebanks (ex situ)*. Rome.

- to serve as a backup measure should *in situ* conservation measures be unworkable or unavailable;
- to ensure that a wide range of the diversity available in the species is conserved; and
- to manage the regeneration of the species outside its original natural range (provenance) in a more controlled way, with specific objectives for conservation or use.

**Action:** promote the documentation, characterization, regeneration and evaluation of FGR germplasm.

Collect seeds that are representative of natural variation.

Establish collections of improved seeds.

Promote the use of post-harvesting procedures that maintain the quality of the seed before and after *ex situ* conservation.

Promote and support the FGR conservation initiatives of indigenous and local communities.

Promote and develop mechanisms for the involvement of the private sector in the conservation of FGR.

Foster studies on seed collection, quality, conservation and reproduction.

Promote and encourage research on the conservation of recalcitrant-seed species.

Promote the establishment of incentives for *ex situ* conservation.

#### Strategic Priority 7

##### **Support assessment, management and conservation of marginal and/or range-limits forest species populations**

**Rationale:** Marginal populations are fragile and more inclined to degradation than central populations, because they normally have less variation. Evolutionary forces can have particular effects on marginal populations and may lead to specific adaptations. Marginal populations should therefore have high priority in global and regional conservation strategies and programmes.

**Action:** Develop guidelines for the inventory and documentation of marginal forest species populations and promote their management and conservation through their integration into conservation networks and by emphasizing the participation of local communities.

Support programme development at global and regional levels to assess marginal populations and promote their conservation and evaluation in both *in situ* and *ex situ* conditions.

#### Strategic Priority 8

##### **Support and develop sustainable management and conservation of FGR on farmland**

**Rationale:** Farmers contribute to FGR **management and conservation**

**on-farm** in traditional land-use systems such as **agroforestry systems**. **They therefore influence the interspecific and intraspecific diversity of species in the landscape**. FGR managed in traditional agroforestry systems are seriously threatened by a lack of regeneration resulting from the increasing pressure on forest resources and current trends in agricultural intensification. There is a need to address the issue of on-farm management of FGR in countries where agroforestry is a common practice.

**Action:** Develop methodological tools for on-farm management and conservation of important agroforestry species.

Assess the status of conservation and management of important agroforestry species at national and regional levels.

Provide technical support to promote on-farm sustainable management and use of FGR.

### Strategic priority 9

#### **Support and strengthen the role of forests managed by indigenous and local communities in the sustainable management and conservation of FGR**

**Rationale:** forests managed by indigenous and local communities often have a stronger role in maintaining genetic resources than protected areas do. Forest management by indigenous and local communities has been shown to be one of the most effective means of combining conservation with poverty alleviation. There is a need for greater recognition and support for this role in countries where this type of management is relevant.

**Action:** Assess the status of conservation and management of FGR in forests managed by indigenous and local communities.

Provide technical support for the sustainable management and conservation of FGR in forests managed by indigenous and local communities.

### Strategic Priority 10

#### **Identify priority species for action**

**Rationale:** Because of the complexity of the subject, FGR management is better handled using a species approach. Processes involved in genetic diversity dynamics determine species adaptation and performance in a given environment. Understanding and developing FGR using a species approach is regarded as a useful option. Given the high number of forest species present in each country, it is impossible to develop research activities or programmes for all forest species. Priority species should be identified at national and subnational levels and these priorities should be shared in existing regional and international fora so as to provide better focus and more efficient resource use.

**Action:** Promote research networks focusing on important species at national, regional and international levels.

Update priority species lists regularly at both country and regional levels.

Provide international support for the development of guidelines for species prioritization and for the identification of priority areas of research.

The prioritization of species could focus on species, populations or varieties that have reduced populations and are in danger of extinction or on species of diverse current and future value, including those with strategic, scientific and economic importance. The values of these species, populations, breeds or varieties could be linked to socio-economic, gender, food security or climate change adaptation factors or to sacred or cultural significance at local, national and international levels.

## **REGIONAL LEVEL**

### **Strategic Priority 11    Develop and implement regional *in situ* conservation strategies and promote ecoregional networking and collaboration**

**Rationale:** The ecosystem approach is a way to manage entire ecosystems in a holistic manner without excluding other management and conservation approaches such as area-based management tools and single-species conservation practices. Ideally, all these approaches should be integrated, through regional networks when appropriate.

Regional strategies for conservation of FGR, including regional networks of *in situ* genetic conservation units and corridors of priority species, are needed in order to ensure the dynamic conservation of key FGR and their evolutionary abilities for the future. Definition and implementation of regional conservation strategies provide a good justification for coordination and collaboration at regional level. Investment in joint activities at regional level may often be more efficient and cost-effective than the multiplication and duplication of activities at national level.

**Action:** Develop methodologies for the preparation of regional strategies for conservation of FGR, including principles for their implementation, taking into account existing experiences and using existing regional networks relevant to FGR.

Promote ecosystem-based partnerships and regional collaboration to develop species genetic resources conservation and evaluation programmes (*in situ* and *ex situ*) in line with commitments under existing international regulations.

Mobilize resources by involving existing regional economic and environmental organizations.

### **Priority Area 3: Sustainable use, development and management of forest genetic resources**

The challenge of achieving food security for all and environment sustainability in the context of the combined effects of climate change and increasing human pressure on forests is greater now than it has ever been. More efficient use and management of forest resources is therefore needed, especially

in tropical and less-developed countries, in order to meet the growing demand for forest goods and services.

To ensure sustainable management of forests, the genetic resources of forest trees must be conserved and developed, whether they exist as trees in planted forest, natural forest or protected conservation stands, or as seeds or tissue cultures in storage. Managing FGR involves developing overall strategies, applying specific methodologies, developing and applying new technologies, and coordinating local, national, regional and global efforts.<sup>5</sup>

Monitoring forest biological diversity and managing FGR requires reliable information on the status and trends of these resources. There are no common standard methods for measuring changes in the status of FGR in relation to sustainable forest management as undertaken in most countries.

Parameters commonly included in national and global forest resources assessments, such as forest area, species occurrence and richness, and forest fragmentation, are not on their own sufficient to provide information on FGR. Adequate and commonly agreed indicators are needed and should be integrated into national forest assessment policies and monitoring tools.

Many countries face difficulties in obtaining the quantity and quality of forest reproductive material needed to implement their plantation programmes. Lack of an efficient tree seed supply system was reported as a bottleneck for national afforestation programmes by many countries. Furthermore, using improved forest reproductive material can be expected to provide a substantial production gain. Efforts should therefore be made to support the seed supply system.

#### *Long-term goal*

Enhance the sustainable use, development and management of FGR as a key contribution to environmental sustainability, food security and poverty alleviation.

## **NATIONAL LEVEL**

### **Strategic Priority 12    Develop and reinforce national seed programmes to ensure the availability of genetically appropriate tree seeds in the quantities and of the (certified) quality needed for national plantation programmes**

**Rationale:** Countries reported that large plantations are being established to serve many purposes, including the production of timber biofuel and fibres, and the provision of various environmental services such as reclamation of degraded land and soil and water management. However, most developing countries lack adequate forest seed supply systems. This jeopardizes the success and performance of plantation programmes in these countries. This concern is highlighted in most countries reports and was identified as a priority area for action by most regional consultations.

**Action:** Promote the establishment of, and support to, national tree seed supply systems.

Enhance **collaboration** between tree seed centres, and **develop common quality seed standards**, to facilitate the exchange of forest reproductive material within regions and support national afforestation programmes.

### **Strategic Priority 13    Promote restoration and rehabilitation of ecosystems using genetically appropriate material**

<sup>5</sup> National Academic Press. 1991. *Managing global genetic resources: forest trees*. Washington D.C.

**Rationale:** Millions of square kilometres of degraded and disturbed forest land are attracting attention from many national and international organizations and agencies as potential sites for restoration or rehabilitation, but little attention is typically paid to the importance of selecting appropriate genetic sources to produce planting material. The challenge of matching adapted populations to current and future environmental conditions is often complicated by the extent and the type of degradation and disturbance involved, which may require field testing and/or predictive modelling.

**Action:** Support and conduct research to identify key variables for choosing populations that are well-matched to current and future conditions at degraded sites.

Develop guidelines and decision-support tools for selecting appropriate genetic composition of planting materials.

Develop and implement monitoring protocols to assess the viability and resilience of tree populations over time at rehabilitated sites.

#### **Strategic Priority 14 Support climate change adaptation and mitigation through proper management and use of FGR**

**Rationale:** The current growing concern about climate change and its effects on ecosystems and the performance of forest-related production systems, challenges stakeholders in FGR management to better understand forest species and mechanisms for adaptation to current and future climate changes. Genetic diversity is needed in order to ensure that species can adapt, as well as to allow for artificial selection and breeding to improve productivity. Thus, genetic diversity, including diversity among species, is the key to the resilience of forest ecosystems and the adaptation of forest species to climate change.

**Action:** Develop subnational, national and regional standard methods and guidelines for the identification, selection and use of species population conservation units, based on environmental and sociocultural factors, which are the main determinants of the status of forest and agroforestry ecosystem diversity.

Assist countries in their efforts to improve the conservation and sustainable use of FGR in the face of climate change by:

- promoting best practices in FGR management, specifically in the fields of conservation, exploration, testing, breeding and sustainable use; and
- promoting FGR's contributions to environmental sustainability through the development and use of well-suited genetic material.

#### **Strategic Priority 15 Promote appropriate use of emerging technology to support the conservation development and sustainable use of FGR**

**Rationale:** Tree improvement activities remain limited to a few economically important tree species, not only because of financial constraints but also because of trees' specific characteristics. Trees are long-lived perennial species, with long regeneration cycles and late sexual maturity.

Because of these characteristics, improvement and breeding research in tree species require more time than is required for the equivalent activities in other crops.

New technologies, as appropriate, such as genomics and micro-propagation, can help accelerate the selection process and unlock the huge potential of forest trees.

These new technologies have proved to be useful for understanding forest ecosystem dynamics, including genetic processes. They can orientate appropriate practical measures for sustainable conservation, management, restoration and rehabilitation.

**Action: Promote the use of emerging technology** to support the conservation and sustainable use of FGR, as well as tree improvement programmes, and to enhance the use of quality FGR in forestry programmes. Assess available technologies and their effectiveness for use in *in situ* and *ex situ* conservation and in the development of the genetic resources of priority species.

**Strategic Priority 16    Develop and reinforce research programmes on tree breeding, domestication and bioprospection in order to unlock the full potential of FGR**

**Rationale:** In addition to timber, forests provide many other commodities that are important to local communities and to national economies. The importance of medicinal plants, fodder plants and food plants is increasingly recognized and strongly reflected in many country reports. In many developing countries, a large proportion of the population makes use of medicinal plants for health care. Free grazing is still a common practice in many developing countries, and forests are often an essential source of fodder. These various resources are still harvested from wild plants in forest lands and in some cases are under threat due to over-exploitation. Domestication of such plants will improve the supply of the targeted products while reducing the vulnerability of their genetic resources.

**Action:** Assess and evaluate the contributions of forest species to environmental services (soil and water conservation, carbon sequestration, etc.).

Assess and evaluate the contributions of priority forest species to important national production sectors (timber, fruits, fodder, vegetable oil, vegetables, medicines, etc.).

Develop programme-based multipurpose tree breeding for priority species. Promote participatory approaches by involving local communities in selection and breeding programmes for priority species, based on farmers' desired traits.

## INTERNATIONAL LEVEL

**Strategic Priority 17    Develop and promote networking and collaboration among concerned countries to combat invasive species (animals, plants and micro-organisms) as well as diseases and pests affecting FGR**

**Rationale:** Invasive species are increasingly being noted as major threats to

FGR. The major threats come from plant species that have the capacity to invade natural and/or slightly disturbed forest associations and become predominant, often displacing whole ecosystems and species. Pest and diseases affecting forests and trees are predicted to become an increasing threat as the effects of climate change become more prominent and the movement of plant material across countries and continents accelerates.

**Action:** Review existing standards and protocols, where appropriate, and, when needed, propose voluntary protocols for the movement of forest plant material across countries and regions, to avoid the spread of invasive organisms.

Promote national assessments of invasive alien species and their effects on FGR, using a regional or ecosystem approach.

Work with the International Plant Protection Convention to include FGR in existing biosecurity regulations and integrate concerns about FGR.

Promote the development of research on pests and diseases that affect FGR.

#### **Priority Area 4: Policies, institutions and capacity-building**

In many cases, national policies and regulatory frameworks for FGR are partial, ineffective or non-existent. FGR are not well understood or properly managed in many countries. Awareness building at all levels will be a key factor in mobilizing popular support and international collaboration for the implementation of the Global Plan of Action.

In many countries, there is an increasing demand for forest products, including round wood, firewood and non-wood forest products. Country data reported in the Global Forest Assessment 2010 showed that the value of non-wood forest products is sometimes higher than that of round wood and firewood. Sound social and economic policies are needed at national and global levels to ensure the integration of FGR into wider national forest policy frameworks and global initiatives such as the Global Forest Assessment and thereby promote the sustainable management of FGR.

In many countries, lack of trained personnel – both in terms of numbers and in terms of the skills needed to address FGR management in times of rapid social and economic change – is a major impediment to developing and implementing FGR policies, strategies, programmes and projects. Education and training to build sustainable capacity in all priority areas is required.

Institutional strengthening, training and support to research are needed in order to enable countries to respond to pressing and increasingly varied needs in FGR conservation and management. The measures required include the promotion of training and research – at national and international levels – on recent developments in FGR management. The role of national research systems and programmes, including tree seed centres, and their support by the CGIAR system, is crucial in this context.

In the context of scarce resources and a great risk of duplicating activities at national and regional levels, efforts should be made, when appropriate, to promote partnerships and coordination at national, regional and international levels. Promotion of networking should also be encouraged in order to improve links between stakeholders and to support institutional development and capacity-building.

#### ***Long-term goal***

Establish and review relevant policies and legal frameworks in order to integrate major issues related to sustainable FGR management and to strengthen institutional and human capacity to achieve successful medium- and long-term planning of the forestry sector in member countries, as well as for



the long-term sustainable use, management and conservation of FGR.

## ***NATIONAL LEVEL***

- Strategic priority 18**    **Develop national strategies for *in situ* and *ex situ* conservation of FGR and their sustainable use.**
- Rationale:** Countries often lack adequate policies and programmes addressing *in situ* and *ex situ* conservation of FGR. Given the large number of stakeholders involved in many ways in the use, development and management of FGR at national level, it is useful to develop national strategies and programmes that provide an appropriate framework for action.
- Action:**
- Develop policy tools, where appropriate, to provide national frameworks for action for the sustainable *in situ* and *ex situ* conservation of FGR.
- Develop or strengthen institutional capacities with respect to *in situ* and *ex situ* conservation of FGR to enable the implementation of existing or future national strategies for the conservation of FGR, including genebanks.
- 
- Strategic priority 19**    **Update FGR conservation and management needs and integrate them into wider policies, programmes and frameworks of action at national, regional and global levels**
- Rationale:** Many countries reported that due to the scarcity of financial and human resources, FGR will be best managed if relevant needs and priorities are taken care of by wider national forestry and land-use programmes and policies (e.g. national forest inventories and protected areas), in line with the Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets.
- Action:** Promote the review of national policy and legal frameworks on forests and the integration into them of key concerns related to FGR.
- Review and align forest and land-use policies and programmes, where appropriate, to better integrate the FGR dimension and contribute to climate change mitigation and adaptation.
- Amend national biosecurity regulations, where appropriate, to integrate concerns about FGR.
- 
- Strategic priority 20**    **Develop collaboration and promote coordination of national institutions and programmes related to FGR**
- Rationale:** There is a need to build synergy at national level between coordination units and national focal points of the various international programmes and conventions to enable efficient information sharing and resource use and to provide better support to efforts to address national

priorities for FGR.

**Action:** Enhance cooperation and synergies between national authorities and national focal points in charge of FGR-related international programmes and conventions (e.g. CBD, United Nations Convention to Combat Desertification, climate change, access and benefit-sharing, Global Forest Resources Assessment, national forest programmes).

Create national consultation frameworks, such as permanent national commissions for FGR, to enhance sustainable management of FGR within national development and research programmes.

**Strategic Priority 21**    **Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programmes**

**Rationale:** Many countries reported that technical and scientific capacities on FGR are weak. University curricula on issues such as FGR conservation, tree breeding and management of non-timber forest products are rare in many countries. Research and education need to be strengthened in all areas of FGR management in most countries, in particular in developing countries and countries in economic transition. Establishing, strengthening and maintaining research and educational institutions is a key factor in the development of national capacities to plan and implement priority activities in the sustainable use, development and conservation of FGR.

**Action:** Develop appropriate training modules to support the management and use of the genetic resources of forest plants that are important sources of non-timber forest products.

Develop inter-sector and inter-institutional collaboration to make use of available scientific and technical information to ensure that the content of training modules is appropriate.

Organize training workshops on recent technological developments, as well as exposure visits for scientists and technicians and training courses for decision-makers and forest managers.

Strengthen national research and education programmes and capacity on FGR and promote regional connectivity and collaboration between institutions.

Reinforce the capacity and operation of national herbaria to support the development of knowledge on forest species.

Develop training modules or curricula that address FGR management. This could lead to: 1) the identification of medium- and long-term needs for qualified human resources to support national development and research activities on FGR; 2) the development of extension and education modules with special emphasis on modern technology (e.g. biotechnology), to support national education capacity on forestry and FGR management.

**Strategic priority 22**    **Promote the participation of indigenous and local communities in FGR management in the context of decentralization**

**Rationale:** Many developing countries have a decentralized country administration or are undergoing a decentralization process. In such countries, natural resources management, including FGR management,

should take this context into consideration. In some cases, regulation measures are decided at province or state level. In countries where this is the case, there is a need to provide appropriate technical support to decentralized administrations in order to enable them to review or develop policy tools that ensure sustainable use and management of FGR, including protection, preservation and sustainable use of FGR for maintaining customary use by indigenous and local communities.

**Action:** Develop, strengthen or review local policies related to the management of forests, to increase awareness of FGR among local communities and to properly address the need for sustainable management, development and use of FGR at decentralized level.

Develop adequate human resources to support the proper management of FGR within ongoing decentralization processes and to enhance the contribution of FGR to local development.

## **REGIONAL LEVEL**

### **Strategic priority 23 Promote and apply mechanisms for germplasm exchange at regional level to support research and development activities, in agreement with international conventions**

**Rationale:** Transfer and exchange of forest genetic material are regulated under international agreements, which, in some cases, can limit access to proper material and subsequently prevent research programmes from delivering results that are likely to have a real impact.

**Action:** Improve member countries' awareness and understanding of existing international regulations on genetic material exchange.

In compliance with national legislation and international regulations, improve or develop adapted national and regional exchange regulations that ensure that records are kept of the source and transfer of forest genetic material for research purposes, and promote mechanisms to facilitate access to material for scientific work within the region.

Strengthen and encourage regional networking on the exchange of forest genetic material.

### **Strategic priority 24 Reinforce regional and international cooperation to support education, knowledge dissemination, research, and conservation and sustainable management of FGR**

**Rationale:** One of the most common constraints to research activities on FGR is a lack of adequate financial and human resources. Member countries therefore recommend strengthening international and regional cooperation to better support education and research activities on the conservation and sustainable management of FGR.

**Action:** Promote the establishment or strengthening of networks that share information, experiences and theoretical and practical knowledge on FGR and their management.

Identify international channels for financial support (e.g. climate-related funds).

## *INTERNATIONAL LEVEL*

### **Strategic priority 25 Encourage the establishment of network activities and support the development and reinforcement of international networking and information sharing on FGR research, management and conservation**

**Rationale:** Most regional consultation workshops identified networking as a priority for action that would improve information and experience sharing among stakeholders at global level.

**Action:** Establish better linkages and mechanisms to enhance coordination and collaboration between institutions on technology, policy implementation and information sharing.

### **Strategic priority 26 Promote public and international awareness of the roles and values of FGR**

**Rationale:** Many countries reported that decision-makers and the general public are not well aware of the importance of FGR. Needs and priorities for action at country, regional and international levels will be better supported by stakeholders if effective awareness-raising activities are developed and supported.

**Action:** Develop advocacy measures and tools to ensure effective communication and information sharing related the sustainable management and use of FGR.

Support international campaigns to raise awareness of the status and trends of FGR and their contribution to the Millennium Development Goals, including contributions to food security, ecotourism potential, poverty alleviation and environment sustainability, and subsequently seek to develop wide support at government and institutional levels and among the general public.

Organize training on FGR for forestry technicians and administration managers.

### **Strategic priority 27 Strengthen efforts to mobilize the necessary resources, including financing, for the conservation, sustainable use and development of FGR**

**Rationale:** Most countries reported that the conservation, sustainable use and development of FGR lack adequate funding. Efforts need to be made at national and international levels to ensure that strategic priorities are successfully translated in to actions within existing and/or new programmes.

**Action:** Develop efforts to assist countries and stakeholders to design appropriate programmes and policies for the conservation, sustainable use and development of FGR and to secure adequate and sustainable funding,

particularly in developing countries and countries with economy in transition.

Encourage countries and stakeholders to explore new funding opportunities, including climate change and biodiversity related funds.

Support the creation of sustainable incentives for conservation and sustainable use activities related to FGR.

<b>SUMMARY TABLE OF THE STRATEGIC PRIORITIES OF THE GLOBAL PLAN OF ACTION FOR THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES</b>				
	<b>Priority area 1:</b> Improving the availability of, and access to, information on FGR	<b>Priority area 2:</b> <i>In situ</i> and <i>ex situ</i> conservation of FGR	<b>Priority area 3:</b> Sustainable use, development and management of FGR	<b>Priority area 4:</b> Policies, institutions and capacity-building
National level	<b>SP 1. Establish and strengthen national FGR assessment, characterization and monitoring systems</b>	<b>SP 5. Strengthen the contribution of primary forests and protected areas to <i>in situ</i> conservation of FGR</b>	<b>SP 12. Develop and reinforce national seed programmes to ensure the availability of genetically appropriate tree seeds in the quantities and of the (certified) quality needed for national plantation programmes</b>	<b>SP 18. Develop national strategies for <i>in situ</i> and <i>ex situ</i> conservation of FGR and their sustainable use</b>
	<b>SP 2. Develop national and subnational systems for the assessment and management of traditional knowledge on FGR</b>	<b>SP 6. Promote the establishment and development of efficient and sustainable <i>ex situ</i> conservation systems, including <i>in vivo</i> collections and genebanks</b>	<b>SP 13. Promote restoration and rehabilitation of ecosystems using genetically appropriate material</b>	<b>SP 19. Update FGR conservation and management needs and integrate them into wider policies, programmes and frameworks of action at national, regional and global levels</b>
		<b>SP 7. Support assessment, management and conservation of marginal and/or range limits forest species populations</b>	<b>SP 14. Support climate change adaptation and mitigation through proper management and use of FGR</b>	<b>SP 20. Develop collaboration and promote coordination of national institutions and programmes related to FGR</b>

<b>SUMMARY TABLE OF THE STRATEGIC PRIORITIES OF THE GLOBAL PLAN OF ACTION FOR THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES</b>				
<b>National level</b>		<b>SP8. Support and develop sustainable management and conservation of FGR on farmland</b>	<b>SP 15. Promote appropriate use of emerging technology to support the conservation development and sustainable use of FGR</b>	<b>SP 21. Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programmes</b>
		<b>SP 9. Support and strengthen the role of forests managed by indigenous and local communities in the sustainable management and conservation of FGR</b>	<b>SP 16. Develop and reinforce research programmes on tree breeding, domestication and bioprospection in order to unlock the full potential of FGR</b>	<b>SP 22. Promote the participation of indigenous and local communities in FGR management in the context of decentralization</b>
		<b>SP 10. Identify priority species for action</b>		
<b>Regional level</b>		<b>SP 11. Develop and implement regional <i>in situ</i> conservation strategies and promote ecoregional networking and collaboration</b>		<b>SP 23. Promote and apply mechanisms for germplasm exchange at regional level to support research and development activities, in agreement with international conventions</b>
				<b>SP 24. Reinforce regional and international cooperation to support education, knowledge dissemination, research, and conservation and sustainable management of FGR</b>

<b>SUMMARY TABLE OF THE STRATEGIC PRIORITIES OF THE GLOBAL PLAN OF ACTION FOR THE CONSERVATION, SUSTAINABLE USE AND DEVELOPMENT OF FOREST GENETIC RESOURCES</b>				
<b>International level</b>	<b>SP 3. Develop international technical standards and protocols for FGR inventories, characterization and monitoring of trends and risks</b>		<b>SP 17. Develop and promote networking and collaboration among concerned countries to combat invasive species (animals, plants and micro-organisms) affecting FGR.</b>	<b>SP 25. Encourage the establishment of network activities and support development and reinforcement of international networking and information sharing on FGR research, management and conservation</b>
	<b>SP 4. Promote the establishment and the reinforcement of FGR information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations</b>			<b>SP 26. Promote public and international awareness of the roles and values of FGR</b>
				<b>SP 27. Strengthen efforts to mobilize the necessary resources, including financing, for the conservation, sustainable use and development of FGR</b>



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## APPENDIX G.1

### PROCEDURES FOR MONITORING AND INDEPENDENT EVALUATION OF PROJECTS GRANTED UNDER THE TRUST ACCOUNT OF THE FUNDING STRATEGY FOR THE IMPLEMENTATION OF THE GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES

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#### A. Objectives

These monitoring and evaluation procedures aim to promote

- a. Accountability and transparency for the achievement of priorities established by the Commission for use of resources under Trust Account through the assessment of outputs, outcomes and impact, effectiveness, processes, and performance.
- b. Learning, feedback, and knowledge sharing on results and lessons learned, as a basis for decision-making on policies, strategies, programmes, and project management.

#### B. Reporting and monitoring

In line with the reporting and monitoring requirements for individual projects funded under the Trust Account (Section B.8 of Annex 1 to the Funding Strategy), result-based management is part of the Funding Strategy and will be achieved through:

- a. use of standard reporting and monitoring procedures;
- b. recipients' reports prepared in accordance with an agreed reporting schedule and progress milestones identified in the project document and approval process;
- c. FAO standard monitoring procedures, as applied by FAO to Letters of Agreement (LoA);
- d. Responsibility for project monitoring: The executing entity will develop agreed monitoring products and deposits them with the Secretariat as set out in the project approval process.

#### C. Evaluation

- a. A terminal independent evaluation of the project portfolio is conducted at the end of the project cycle.
- b. The minimum requirements for such evaluation are:
  - compliance with norms and standards of the United Nations Evaluation Group.
  - assessing at a minimum:
    - the achievement of outputs and outcomes, and provide ratings for targeted objectives and outcomes;
    - the sustainability of outcomes after project completion, with a scale of rating;
- c. The minimum contents of the terminal evaluation report are:
  - basic data on the evaluation:
    - when the evaluation took place,
    - who was involved,
    - the key questions, and
    - the methodology;
  - basic data on the project, including expenditures from the Trust Account and other sources;

- lessons for broader applicability; and
  - the terms of reference of the evaluation (in an annex).
- d. The independent evaluation shall be based mostly on review of project documents and reports, and interviews, questionnaires, focus group discussions via electronic communication.
  - e. It shall include visits to the locations of a limited sample of projects.
  - f. The evaluation report shall be submitted to the Secretariat within a reasonable time after termination of the projects.
  - g. The evaluation report shall contain findings and recommendations and will be made public through the website.
  - h. Responsibility: the evaluation team is composed by independent experts not involved with the projects and the Trust Account. An approach paper and Terms of Reference for evaluation are prepared by the Secretariat and the FAO Evaluation Office. The evaluation report is reviewed, if needed, by the evaluation office of the executing entity. The evaluation team is solely responsible for the independent evaluation report.

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**APPENDIX G.2**
**AMENDMENTS TO THE FUNDING STRATEGY FOR THE IMPLEMENTATION  
OF THE GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES**


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<b>Annex I, Section C.II.3(d)</b> <i>Screening and response to concept notes</i>
<p>d) Responsibility for the above action: Members of the Bureau of the Working Group, on the basis of preparatory work done by the Secretariat. The Bureaus will work through email exchanges and conference calls. The Secretariat will invite preparation of project proposals based upon concept notes approved by the Bureau of the Working Group.</p>
<b>Annex I, Section C.II.4(f)</b> <i>Submission of project proposals from approved concept notes</i>
<p>f) Responsibility for the above tasks: a Commission Member or Commission Members, or legal or natural persons. Formal submissions of project proposals should be provided directly by project coordinators to the Secretariat, keeping National Focal Points informed.</p>
<b>Annex I, Section C.II.5(d)</b> <i>Appraisal of proposals will involve</i>
<p>d) Responsibility for the above tasks: the Bureau of the Working Group, on the basis of an appraisal report submitted by a panel of experts designated by the Bureau of the Working Group. The panel of experts will work without remuneration. Resources to enable work by the panel will be provided under the core administrative budget of the Trust Account including convening of necessary panel sessions.</p>
<b>Annex I, Section C.II.6(d)</b> <i>Approval of projects for funding within the project cycle</i>
<p>d) Responsibility for the above tasks: the Commission or its Bureau or the Bureau of the Working Group-</p>

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**APPENDIX H****STRUCTURE OF *THE STATE OF THE WORLD'S AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE***

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- Chapter 1: The Use and Exchange of Aquatic Genetic Resources of Farmed Aquatic Species and their Wild Relatives within National Jurisdiction
- Chapter 2: Drivers and Trends in Aquaculture: Consequences for Aquatic Genetic within National Jurisdiction
- Chapter 3: *In Situ* Conservation of Aquatic Genetic Resources of Farmed Aquatic Species and their Wild Relatives within National Jurisdiction
- Chapter 4: *Ex Situ* Conservation of Aquatic Genetic Resources of Farmed Aquatic Species and their Wild Relatives within National Jurisdiction
- Chapter 5: Stakeholders with Interests in Aquatic Genetic Resources of Farmed Aquatic Species and their Wild Relatives within National Jurisdiction
- Chapter 6: National Policies and Legislation for Aquatic Genetic Resources of Farmed Aquatic Species and their Wild Relatives within National Jurisdiction
- Chapter 7: Research, Education, Training and Extension on Aquatic Genetic Resources within National Jurisdiction: Coordination, Networking and Information
- Chapter 8: International Collaboration on Aquatic Genetic Resources of Farmed Aquatic Species and their Wild Relatives within National Jurisdiction

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## APPENDIX I

### STRATEGIC PLAN FOR THE COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE 2014-2023

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#### VISION

Conserving biodiversity for food and agriculture and promoting its use in support of global food security and sustainable development, for present and future generations.

#### MISSION

Cognizant that genetic resources for food and agriculture are a common concern of all countries, in that all countries depend on genetic resources for food and agriculture that originated elsewhere, the Commission strives to halt the loss of genetic resources for food and agriculture, and to ensure world food security and sustainable development by promoting their conservation and sustainable use, including exchange, access and the fair and equitable sharing of the benefits arising from their use.

#### STRATEGIC GOALS AND OBJECTIVES

**Goal 1:** *The Commission has a coordinating role and deals with policy, sectorial and cross-sectorial matters related to the conservation and sustainable use of genetic resources of relevance to food and agriculture.*

- The Commission guides and monitors FAO's policies, programmes and activities related to genetic resources for food and agriculture within the framework of FAO's strategic objectives.
- The Commission keeps under continuous review relevant matters in other forums, including policy developments, relating to the conservation and sustainable use of genetic resources for food and agriculture, access to these resources and the fair and equitable sharing of benefits derived from their use.

**Goal 2:** *The Commission monitors the state of the world's genetic resources for food and agriculture.*

- The Commission supervises the periodic preparation of global assessments on genetic resources for food and agriculture leading to *The State of World's Biodiversity for Food and Agriculture*, and, as appropriate, the development of a comprehensive global information system or systems for relevant genetic resources in support of this role.

**Goal 3:** *The Commission strives to reach international consensus on policies and action programmes to ensure the conservation and sustainable utilization of genetic resources for food and agriculture, as well as access to these resources and the fair and equitable sharing of benefits derived from their use.*

- The Commission provides an intergovernmental forum for negotiation of international policies on genetic resources for food and agriculture.
- The Commission oversees the implementation of, and updates, global action plans and other instruments addressing the conservation and sustainable utilization of genetic resources for food and agriculture, as well as access to these resources and the fair and equitable sharing of benefits derived from their use.
- The Commission responds to developments in other forums, where appropriate.

**Goal 4:** *The Commission contributes to the strengthening of national and regional policies on biodiversity for food and agriculture and promotes cooperation in capacity-building*

- The Commission supports the development or strengthening of national and regional policies and programmes on genetic resources for food and agriculture, in particular by facilitating the implementation of global plans of actions for genetic resources, and establishes coordination mechanisms to promote national and regional cooperation across relevant sectors and among actors.
- The Commission identifies and facilitates the availability of financial, human, scientific, technical and technological resources to enable Commission Members to contribute actively to the achievement of the outputs and milestones of the Commission's Multi-Year Programme of Work and to implement policies and recommendations developed by the Commission.
- The Commission supports its Members in the development and implementation of strategies and activities that raise public awareness and facilitate education that creates a better understanding of the relevance of biodiversity for food and agriculture and thereby promotes broader participation of stakeholders in the conservation and use of genetic resources for food and agriculture.

**Goal 5** *The Commission maintains and strengthens cooperation and partnerships on biodiversity for food and agriculture.*

- The Commission facilitates and oversees cooperation between FAO and other relevant intergovernmental and non-governmental bodies, including the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture, the Conference of Parties to the Convention of Biological Diversity (CBD), the Consultative Group on International Agricultural Research and the Global Crop Diversity Trust.
- In addition to its activities on plant and animal genetic resources, the Commission brings together international partners addressing biodiversity for food and agriculture, to facilitate exchange of experiences and to create new partnerships, including in particular for forest, aquatic, micro-organism and invertebrate biodiversity and their interrelations.
- The Commission's cooperation with other relevant international bodies strives to ensure that negotiations in other forums take into account the special needs of the agricultural sector with regard to all components of biological diversity relevant for food and agriculture.
- The Commission will actively increase the involvement of all stakeholders, such as civil society and producer organizations, including organizations representing women and small-scale producers, breeding institutions and industries, and public- and private-sector organizations involved with genetic resources for food and agriculture.

## I. RATIONALE FOR THE STRATEGIC PLAN 2014-2023

1. Biodiversity for food and agriculture is among the earth's most important resources. Crops, livestock, aquatic organisms, forest trees, micro-organisms and invertebrates –thousands of species and their genetic variability – make up the web of biodiversity that the world's food supply depends on. Biodiversity for food and agriculture contributes to food and nutrition security and sustainable livelihoods, and underpins the natural potential for adaptation to ever-changing socio-economic and environmental dynamics, such as population growth, nutritional needs and climate change.
2. Aware of the importance of each component of biodiversity for food and agriculture to global food security, the Commission on Genetic Resources for Food and Agriculture (the Commission) aims to ensure the conservation and sustainable use of genetic resources for food and agriculture, access to these resources and the fair and equitable sharing of benefits derived from their use, for present and future generations.
3. The Commission operates under a Multi-Year Programme of Work, or MYPOW, which it adopted in 2007 and revised in 2011<sup>1</sup> and 2013. The MYPOW guides the Commission in the implementation of its Strategic Plan. It suggests a structure for subsequent sessions of the Commission and consists of a clear implementation schedule of the key milestones and outputs the Commission has agreed to address. The Commission's MYPOW (2014-2023) is provided in *Table 1*.
4. The Commission also developed a Strategic Plan identifying the processes that would be needed, and the organizations with which cooperation would be needed, in order to achieve the outputs and milestones laid out in the MYPOW.<sup>2</sup> The Commission adopted this plan in 2009 and revised it in 2013. The Strategic Plan for the Commission on Genetic Resources for Food and Agriculture 2014-2023, contains two main sections:
  - The Commission's vision and mission statements, its strategic goals and objectives, and chapters on the rationale and the implementation of the Strategic Plan; and
  - The Commission's MYPOW (2014-2023).
5. In 2010, the Conference of the Parties to the CBD adopted the Strategic Plan for Biodiversity 2011-2020, as the basis for halting and reversing the loss of the planet's biodiversity.<sup>3</sup> To build support and momentum for this urgent task, the United Nations General Assembly at its 65th session declared the period 2011 to 2020 to be "the United Nations Decade on Biodiversity, with a view to contributing to the implementation of the Strategic Plan for Biodiversity for the period 2011-2020" (Resolution 65/161). The Strategic Plan for Biodiversity includes five strategic goals and 20 targets, known as the Aichi Targets. Through the implementation of its MYPOW the Commission particularly contributes to achieving Aichi Targets 4, 7, 13 and 16.<sup>4</sup>

## II. IMPLEMENTING, MONITORING AND REVIEWING

6. The Commission's MYPOW guides the Commission in the implementation of its Strategic Plan. The MYPOW is a rolling, and therefore flexible, set of outputs and milestones, which the Commission keeps under review. Reviewing the MYPOW enables the Commission to assess the progress of its work, to address and include new and emerging issues in the field of genetic resources for food and agriculture, and to take into account new developments and processes in other relevant forums. The Commission agreed to review the MYPOW at its Sixteenth and Eighteenth Regular Sessions.
7. For the implementation of the MYPOW, the Commission receives technical support from its subsidiary bodies, including the intergovernmental technical working groups. The intergovernmental

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<sup>1</sup> CGRFA-13/11/Report, *Appendix F*.

<sup>2</sup> The Strategic Plan 2010-2017 for the Implementation of the Multi-Year Programme of Work (CGRFA-12/09/Report, *Appendix G*).

<sup>3</sup> Decision X/2 of the Conference of the Parties to the CBD.

<sup>4</sup> <http://www.cbd.int/sp/targets/>

technical working groups review the situation and issues related to biodiversity in the areas under their respective competences. They provide advice and make recommendations to the Commission on these matters and consider the progress made in implementing the Commission's MYPOW.

8. Through its MYPOW, the Commission foresees the preparation and presentation of State of the World Reports on animal, plant, aquatic and forest genetic resources, as well as on biodiversity for food and agriculture. Each of the above-mentioned sectors will produce a State of the World Report every ten years and the Commission will be presented with no more than one such report at each regular session. Every two to four years, intermediate reports on the status and trends of each of the sectors will be presented to the Commission. As the preparation of State of the World Reports is largely country-driven, this schedule will reduce the reporting burden on countries. It will also facilitate the Commission's strategic planning process, including the timely mobilization of financial and human resources.

9. The success of the implementation of the Strategic Plan will depend on the support provided through FAO's Programme of Work and Budget, and on the mobilization of extra-budgetary resources, as well as on partnerships with, and the contributions of, other international organizations.

### III. PARTNERSHIPS

10. To achieve its strategic goals and objectives and support the implementation of the MYPOW, the Commission will continue to seek synergies and strengthen partnerships with the relevant specialized agencies and conventions of the United Nations as well as other intergovernmental organizations. Cooperation will also be enhanced with international agricultural research centres, national and regional scientific organizations, international and regional non-governmental organizations, civil society, producer organizations, relevant funding agencies and the private sector.

11. To facilitate the implementation of the Commission's MYPOW and strengthen cooperation in the field of biodiversity for food and agriculture, the Commission has established a focused consultation process, by which international organizations are invited to provide information on their programmes, activities and policies relevant to the prioritized themes of each of the Commission's regular sessions.

12. The *Joint Statement of Intent for Cooperation between the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture and the Commission on Genetic Resources for Food and Agriculture*<sup>5</sup> and the *Joint Work Plan of the Secretariats of the Convention on Biological Diversity and of the Food and Agriculture Organization of the United Nations and its Commission on Genetic Resources for Food and Agriculture*<sup>6</sup> also contribute to the effective implementation of the Commission's MYPOW by enhancing synergies between the programmes of work of the different bodies.

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<sup>5</sup> CGRFA-12/09/Report, *Appendix H*.

<sup>6</sup> CGRFA-13/11/Inf.11.



**Table 1. The Commission's Multi-Year Programme of Work Major Outputs and Milestones (2014-2023)**

	<b>15<sup>th</sup> Session 2014/ 2015</b>	<b>16<sup>th</sup> Session 2016/ 2017</b>	<b>17<sup>th</sup> Session 2018/ 2019</b>	<b>18<sup>th</sup> Session 2020/ 2021</b>	<b>19<sup>th</sup> Session 2022/ 2023</b>
<b><i>The State of the World's Biodiversity for Food and Agriculture</i></b>	Consideration of the internalization of the ecosystem approach to biodiversity management in agriculture, forestry and fisheries	Presentation of <i>The State of the World's Biodiversity for Food and Agriculture</i>	Follow up to <i>The State of the World's Biodiversity for Food and Agriculture</i>		
<b>Plant Genetic Resources (PGRFA)</b>	Review of implementation of the <i>Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture</i>			Presentation of <i>The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture</i> Consideration of the <i>Second Global Plan of Action</i> for adoption	
<b>Animal Genetic Resources (AnGR)</b>	Presentation of <i>The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture</i>	Consideration of the updated <i>Global Plan of Action</i> for adoption		Review of implementation of the <i>Global Plan of Action</i>	
<b>Aquatic Genetic Resources (AqGR)</b>		Presentation of <i>The State of the World's Aquatic Genetic Resources for Food and Agriculture</i>	Development of elements related to the <i>Code of Conduct of Responsible Fisheries</i> and associated tools for assessing their implementation, aimed to maintain a broad genetic basis and to ensure sustainable use and conservation of aquatic genetic resources		Review of implementation of relevant elements of the <i>Code of Conduct of Responsible Fisheries</i>
<b>Forest Genetic Resources (FoGR)</b>	Follow-up to the <i>Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources</i>		Review of implementation of the <i>Global Plan of Action</i>		Presentation of the <i>Second Report on the State of the World's Forest Genetic Resources</i>
<b>Micro-organisms and invertebrates</b>	Review of work on micro-organisms and invertebrates			Review of work on micro-organisms and invertebrates	
<b>Cross-sectorial matters</b>	Consideration of draft elements to facilitate domestic implementation of access and benefit-sharing for different subsectors of genetic resources for food and agriculture		Review of existing access and benefit-sharing instruments and their impact on genetic resources for food and agriculture		
		Review implementation of Programme of Work on Climate Change and Genetic Resources for Food and Agriculture Review and analyze lessons learnt from the implementation of targets and indicators			
	Review of the work of the Commission's Working Groups on the application and integration of biotechnologies for the conservation and sustainable utilization of genetic resources for food and agriculture		Review of work on biodiversity and nutrition	Review of the work of the Commission's Working Groups on the application and integration of biotechnologies for the conservation and sustainable utilization of genetic resources for food and agriculture	
		Progress Report/ Periodic assessment/ Review of the MYPOW	Review of impact of State of the World Reports	Progress Report/ Periodic assessment/ Review of the MYPOW	

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**APPENDIX J**
**MEMBERS OF THE INTERGOVERNMENTAL TECHNICAL WORKING GROUPS,  
ELECTED BY THE FOURTEENTH REGULAR SESSION OF THE COMMISSION**


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**MEMBERS OF THE INTERGOVERNMENTAL TECHNICAL WORKING GROUP  
ON ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

<i>Composition (no. of countries per region)</i>	<i>Country</i>
<b>Africa</b> (5)	Cameroon
	Eritrea
	Morocco
	Namibia
	Togo
<b>Asia</b> (5)	Bhutan
	India
	Malaysia
	Mongolia
	Thailand
<b>Europe</b> (5)	France
	Germany
	Slovenia
	Sweden
	Switzerland
<b>Latin America and the Caribbean</b> (5)	Argentina
	Brazil
	Chile
	Cost Rica
	Suriname
<b>Near East</b> (3)	Iraq
	Qatar
	Sudan
<b>North America</b> (2)	Canada
	United States of America
<b>Southwest Pacific</b> (2)	Cook Islands
	Fiji

**MEMBERS OF THE INTERGOVERNMENTAL TECHNICAL WORKING GROUP  
ON FOREST GENETIC RESOURCES**

<i>Composition (no. of countries per region)</i>	<i>Country</i>
<b>Africa</b> (5)	Algeria Congo Ethiopia Madagascar Mali
<b>Asia</b> (5)	China Indonesia Lao People's Democratic Republic Republic of Korea Viet Nam
<b>Europe</b> (5)	Finland France Norway Poland Russian Federation
<b>Latin America and the Caribbean</b> (5)	Brazil Chile Cuba Ecuador Trinidad and Tobago
<b>Near East</b> (3)	Iran (Islamic Republic of) Lebanon Sudan
<b>North America</b> (2)	Canada United States of America
<b>Southwest Pacific</b> (2)	Papua New Guinea Vanuatu

**MEMBERS OF THE INTERGOVERNMENTAL TECHNICAL WORKING GROUP  
ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

<i>Composition (no. of countries per region)</i>	<i>Country</i>
<b>Africa</b> (5)	Algeria Benin Central African Republic Kenya South Africa
<b>Asia</b> (5)	Cambodia Japan Pakistan Philippines Sri Lanka
<b>Europe</b> (5)	Hungary Netherlands Poland Spain Turkey
<b>Latin America and the Caribbean</b> (5)	Argentina Ecuador Guyana Paraguay Trinidad and Tobago
<b>Near East</b> (3)	Egypt Kuwait Yemen
<b>North America</b> (2)	Canada United States of America
<b>Southwest Pacific</b> (2)	Cook Islands Fiji

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## APPENDIX K

### LIST OF DOCUMENTS

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#### Working Documents

CGRFA-14/13/1	Provisional Agenda
CGRFA-14/13/2	Provisional Annotated Agenda and Time-table
CGRFA-14/13/3	Preparation of <i>The State of the World's Biodiversity for Food and Agriculture</i>
CGRFA-14/13/4	Targets and Indicators for Biodiversity for Food and Agriculture
CGRFA-14/13/4.1 Rev.1	Targets and Indicators for Plant Genetic Resources for Food and Agriculture
CGRFA-14/13/4.2	Targets and Indicators for Animal Genetic Resources for Food and Agriculture
CGRFA-14/13/4.3	Targets and Indicators for Forest Genetic Resources
CGRFA-14/13/5	Roadmap on Climate Change and Genetic Resources for Food and Agriculture
CGRFA-14/13/6	Report of the First Session of the Ad Hoc Technical Working Group on Access and Benefit Sharing for Genetic Resources for Food and Agriculture
CGRFA-14/13/7	The Need for and Modalities of Access and Benefit-sharing Arrangements for Genetic Resources for Food and Agriculture
CGRFA-14/13/8	Review of Key Issues on Biodiversity and Nutrition
CGRFA-14/13/9	Preparation of <i>The State of the World's Forest Genetic Resources</i>
CGRFA-14/13/10	Report of the Second Session of the Intergovernmental Technical Working Group on Forest Genetic Resources
CGRFA-14/13/11	Draft Strategic Priorities for Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources
CGRFA-14/13/12	Report of the Seventh Session of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture
CGRFA-14/13/13	FAO Progress Report on the Implementation of the Global Plan of Action for Animal Genetic Resources and the Interlaken Declaration
CGRFA-14/13/14	Review of the Funding Strategy for the Implementation of the Global Plan of Action for Animal Genetic Resources
CGRFA-14/13/15	Preparation of <i>The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture</i>
CGRFA-14/13/16	Status of preparation of <i>The State of the World's Aquatic Genetic Resources for Food and Agriculture</i>
CGRFA-14/13/17	Establishment of an Intergovernmental Technical Working Group on Aquatic Genetic Resources for Food and Agriculture
CGRFA-14/13/18	Scoping Policy Analysis: Gaps and Opportunities related to Aquatic Genetic Resources

CGRFA-14/13/19	Key Issues in Micro-Organisms and Invertebrates
CGRFA-14/13/20	Report of the Sixth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
CGRFA-14/13/21	Implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture
CGRFA-14/13/22	Draft Genebank Standards for Plant Genetic Resources for Food and Agriculture
CGRFA-14/13/23	Transfer of Activities or Tasks from the Commission to the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture: Legal, Administrative and Financial Implications
CGRFA-14/13/24	Human and Financial Resources to Support the Implementation of the Multi-Year Programme of Work
CGRFA-14/13/25	Draft Strategic Plan for the Commission on Genetic Resources for Food and Agriculture 2014-2021
CGRFA-14/13/26	Cooperation with International Instruments and Organizations
CGRFA-14/13/27	The Status of the Commission
CGRFA-14/13/28	The Composition of the Commission's Intergovernmental Technical Sectoral Working Groups

#### **Information Documents**

CGRFA-14/13/Inf. 1	Information Note for Participants
CGRFA-14/13/Inf.2	Statutes of the Commission on Genetic Resources for Food and Agriculture
CGRFA-14/13/Inf.4	Rules of Procedure of the Commission on Genetic Resources for Food and Agriculture
CGRFA-14/13/Inf.4	Statutes of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture, and Members elected by the Thirteenth Regular Session of the Commission
CGRFA-14/13/Inf.5	Statutes of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture, and Members elected by the Thirteenth Regular Session of the Commission
CGRFA-14/13/Inf.6	Statutes of the Intergovernmental Technical Working Group on Forest Genetic Resources, and Members elected by the Thirteenth Regular Session of the Commission
CGRFA-14/13/Inf.7	Terms of Reference of the Ad Hoc Technical Working Group on Access and Benefit-Sharing for Genetic Resources for Food and Agriculture, and Members elected by the Thirteenth Regular Session of the Commission
CGRFA-14/13/Inf.8	Statement of Competence and Voting Rights Submitted by the European Union (EU) and its Member States
CGRFA-14/13/Inf.9 Rev.1	Reporting Format for Monitoring the Implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture
CGRFA-14/13/Inf.10	Selected Processes and Initiatives on Climate Change of Relevance to Genetic Resources for Food and Agriculture

CGRFA-14/13/Inf.11	Linkages between Biodiversity, Food and Nutrition
CGRFA-14/13/Inf.12	Possible Ways to Better Generate, Compile and Disseminate Cultivar-specific Nutrient Composition Data
CGRFA-14/13/Inf.13	Characterization of Different Food Systems, Including Traditional Food Systems, in Relation to Biodiversity and Nutrition
CGRFA-14/13/Inf.14	Draft Report on <i>The State of the World's Forest Genetic Resources</i>
CGRFA-14/13/Inf.15	Synthesis Progress Report on the Implementation of the Global Plan of Action for Animal Genetic Resources – 2012
CGRFA-14/13/Inf.16 Rev.1	Status and Trends of Animal Genetic Resources – 2012
CGRFA-14/13/Inf.17	Roles of Small-Scale Livestock Keepers in the Conservation and Sustainable Use of Animal Genetic Resources
CGRFA-14/13/Inf.18	Draft Guidelines on in vivo Conservation of Animal Genetic Resources
CGRFA-14/13/Inf.19	Draft Questionnaire for Collecting National Data to Support the Preparation of <i>The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture</i>
CGRFA-14/13/Inf.20	Draft Guide for National Seed Policy Formulation
CGRFA-14/13/Inf.21	Report from the Global Crop Diversity Trust to the Commission on Genetic Resources for Food and Agriculture
CGRFA-14/13/Inf.22	Report from the CGIAR Consortium of the International Agricultural Research Centers to the Commission on Genetic Resources for Food and Agriculture
CGRFA-14/13/Inf.23	Draft Guidelines for the Preparation of Country Reports Contributing to <i>The State of the World's Biodiversity for Food and Agriculture</i>
CGRFA-14/13/Inf.24	Scoping Policy Analysis for Aquatic Genetic Resources
CGRFA-14/13/Inf.25	Draft Guidelines for the Preparation of Country Reports for <i>The State of the World's Aquatic Genetic Resources for Food and Agriculture</i>
CGRFA-14/13/Inf.26	Submissions by International Organizations on the Prioritised themes of the Session
CGRFA-14/13/Inf.27	List of documents

#### **Background Study Papers**

Background Study Paper No.61	Micro-Organisms and Ruminant Digestion: State of Knowledge, Trends and Future Prospects
Background Study Paper No. 62	Invertebrates in Rice Production Systems: Status and Trends
Background Study Paper No.63	Conservation and Use of Micro-organisms and Invertebrates in Integrated Root and Tuber Crop-based Systems: State of Knowledge, Trends and Future Prospects (Preliminary version)
Background Study Paper No.64	Status and Trends of the Conservation and Sustainable Use of Micro-organisms in Agroindustrial Processes
Background Study Paper No.65	Status and Trends of the Conservation and Sustainable Use of Micro-organisms in Food Processes

**Other documents**

CGRFA/WG-ABS-1/12/3	Distinctive features of genetic resources for food and agriculture
CGRFA/WG-ABS-1/12/4	Options to guide and assist countries in developing legislative, administrative and policy measures
CGRFA/WG-ABS-1/12/5	Possible modalities for addressing access and benefit-sharing for genetic resources for food and agriculture
CGRFA-14/13/Circ.1	Views of the European Regional Group on Possible Modalities for Addressing Access and Benefit-Sharing (ABS) for Genetic Resources for Food and Agriculture (GRFA), and on Options to Guide and Assist Countries in Developing Legislative, Administrative and Policy Measures  Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture  Synthetic Account of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture



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**APPENDIX L**
**MEMBERS OF THE COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE**


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<b>AFRICA</b>	<b>ASIA AND THE PACIFIC</b>	<b>EUROPE</b>	<b>LATIN AMERICA AND THE CARIBBEAN</b>
Algeria	Australia	Albania	
Angola	Bangladesh	Armenia	Antigua and Barbuda
Benin	Bhutan	Austria	Argentina
Botswana	Cambodia	Belarus	Bahamas
Burkina Faso	China	Belgium	Barbados
Burundi	Cook Islands	Bosnia and Herzegovina	Belize
Cameroon	Democratic People's Republic of Korea	Bulgaria	Bolivia
Cape Verde	Fiji	Croatia	Brazil
Central African Republic	India	Cyprus	Chile
Chad	Indonesia	Czech Republic	Colombia
Comoros	Japan	Denmark	Costa Rica
Congo, Republic of the	Kazakhstan	Estonia	Cuba
Côte d'Ivoire	Kyrgyzstan	European Union	Dominica
Democratic Republic of the Congo	Lao People's Democratic Republic	Finland	Dominican Republic
Equatorial Guinea	Malaysia	France	Ecuador
Eritrea	Maldives	Georgia	El Salvador
Ethiopia	Marshall Islands	Germany	Grenada
Gabon	Mongolia	Greece	Guatemala
Gambia	Myanmar	Hungary	Guyana
Ghana	Nepal	Iceland	Haiti
Guinea	New Zealand	Ireland	Honduras
Guinea-Bissau	Pakistan	Israel	Jamaica
Kenya	Palau	Italy	Mexico
Lesotho	Papua New Guinea	Latvia	Nicaragua
Liberia	Philippines	Lithuania	Panama
Madagascar	Republic of Korea	Luxembourg	Paraguay
Malawi	Samoa	Malta	Peru
Mali	Solomon Islands	Montenegro	Saint Kitts and Nevis
Mauritania	Sri Lanka	Netherlands	Saint Lucia
Mauritius	Thailand	Norway	Saint Vincent and the Grenadines
Morocco	Tonga	Poland	Suriname
Mozambique	Vanuatu	Portugal	Trinidad and Tobago
Namibia	Vietnam	Republic of Moldova	Uruguay
Niger		Romania	Venezuela
Nigeria	<b>NEAR EAST</b>	Russian Federation	
Rwanda	Afghanistan	San Marino	
Sao Tome and Principe	Azerbaijan	Serbia	
Senegal	Egypt	Slovakia	
Seychelles	Iran, Islamic Republic of	Slovenia	<b>NORTH AMERICA</b>
Sierra Leone	Iraq	Spain	Canada
South Africa	Jordan	Sweden	United States of America
Swaziland	Kuwait	Switzerland	
Togo	Lebanon	The former Yugoslav Republic of Macedonia	
Uganda	Libyan Arab Jamahiriya	Turkey	
United Republic of Tanzania	Oman	Ukraine	
Zambia	Qatar	United Kingdom	
Zimbabwe	Saudi Arabia		
	Sudan		
	Syrian Arab Republic		
	Tunisia		
	United Arab Emirates		
	Yemen		

As of April 2013, a total of 177 countries and the European Union are Members of the Commission.