

*CGRFA/WG-PGR-6/12/REPORT*

Commission on  
Genetic Resources  
for Food and Agriculture

**Intergovernmental  
Technical  
Working Group  
on Plant Genetic  
Resources  
for Food and  
Agriculture**

Rome, Italy  
14-16 November 2012

Sixth Session



*Food and Agriculture Organization of the United Nations*



**CGRFA/WG-PGR-6/12/REPORT**

**COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

**REPORT OF THE SIXTH SESSION**

**OF THE**

**INTERGOVERNMENTAL TECHNICAL**

**WORKING GROUP ON**

**PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

**Rome, Italy, 14-16 November 2012**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**  
**Rome, 2012**

The documents prepared for the Sixth Session of the Working Group on Plant Genetic Resources for Food and Agriculture of the Commission on Genetic Resources for Food and Agriculture are available on the Internet at the following address:

<http://www.fao.org/agriculture/crops/core-themes/theme/seeds-pgr/itwg/6th/en/>

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**COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE****REPORT OF THE SIXTH SESSION OF THE  
INTERGOVERNMENTAL TECHNICAL WORKING GROUP ON  
PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

Rome, Italy 14 – 16 November 2012

**I. INTRODUCTION**

1. The Sixth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (Working Group) was held in Rome, Italy, from 14 to 16 November 2012. The list of delegates and observers is given in *Appendix D*.

**II. OPENING OF THE SESSION AND ELECTION OF THE CHAIR,  
VICE-CHAIR(S) AND RAPPORTEUR**

2. Mr. Brad Fraleigh (Canada), Chair of the Fifth Session of the Working Group, opened the session and welcomed delegates and observers. Mr. Fraleigh noted the importance of following up on the implementation of the *Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture* (Second GPA) and highlighted the need for the Working Group to continue providing advice to the Commission on Genetic Resources for Food and Agriculture (Commission) on its programme of work related to plant genetic resources for food and agriculture (PGRFA).

3. The Working Group elected Mr. Amar Tahiri (Morocco) as Chair, and as Vice-Chairs, Ms. Zofia Bulinska-Radomska (Poland) and Mr. Atanu Purkayastha (India). Ms. Laura Schweitzer Meins (United States of America) was elected *Rapporteur*.

4. In taking the Chair, Mr. Amar Tahiri (Morocco) welcomed delegates and observers to the Sixth Session, and thanked the Working Group for entrusting him with the chairmanship. He noted the important task before the Working Group and wished a successful session.

5. Mr. Clayton Campanhola, Director, Plant Production and Protection Division of the Food and Agriculture Organization of the United Nations (FAO) welcomed all delegates and observers. He stressed the importance of efficient management of natural resources to ensure sustainable agriculture and food security, and highlighted the need for an integrated approach to the management of PGRFA to address global challenges.

6. Mr. Campanhola noted that with the adoption of the Second GPA, Governments had sent a strong signal and committed themselves to the conservation and sustainable use of plant genetic resources for food and agriculture. He further referred to the link between the priorities set out in the Second GPA and the current strategic thinking process in FAO. He assured the Working Group of FAO's commitment to move forward in this area and thanked the participants for their support.

7. Ms. Linda Collette, Secretary of the Commission, welcomed delegates and observers and thanked them for their commitment to the Working Group, which since its establishment in 2001 had provided consistent guidance to FAO and delivered a series of important products that directly contributed to global efforts to ensure the conservation and sustainable use of PGRFA for

global food security. She stressed the importance of the publication of *The Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture* and the adoption of the Second GPA by the FAO Council in 2011. The agenda of the meeting showed not only how widespread the Commission's mandate in the field of PGRFA is, it also showed how deeply committed the Commission is to the conservation and sustainable use of PGRFA.

8. The Working Group adopted the Agenda, as given in *Appendix A*.

### **III. REVIEW OF INDICATORS, INCLUDING HIGHER-ORDER INDICATORS, REPORTING FORMAT AND TARGETS FOR MONITORING THE IMPLEMENTATION OF THE SECOND GLOBAL PLAN OF ACTION FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

9. The Working Group considered the document *Targets and indicators for plant genetic resources for food and agriculture*<sup>1</sup> and emphasized the importance of ensuring appropriate monitoring of all priority activities of the Second GPA through a country-led, participatory and capacity building process.

10. The Working Group welcomed the proposal for indicators for monitoring the implementation of the Second GPA and for targets for PGRFA, and considered it a timely initiative, contributing to the Aichi Biodiversity Targets 1, 7 and 13. The Working Group also noted with appreciation the efforts made to reduce the number of indicators without losing meaningful information, but noted that many indicators may be difficult to measure.

11. The Working Group reviewed the proposed indicators and targets<sup>2</sup> as well as the draft reporting format for monitoring the implementation of the Second GPA, as contained in the document, *Reporting format for monitoring the implementation of the Second Global Plan of Action*<sup>3</sup>. It recommended that the Commission adopt the indicators, targets as well as the reporting format, as revised by the Working Group. The indicators and targets, as revised by the Working Group, are given in *Appendix E* and *F*, respectively. The Working Group recommended that the reporting format should allow respondents to show where specific priority activities, indicators and/or questions are not applicable.

12. The Working Group stressed the need to support member countries in applying the indicators and reporting format for monitoring the implementation of the Second GPA. The Working Group, therefore, recommended that the Commission request FAO to upgrade the existing computer application for monitoring the implementation of the Global Plan of Action (GPA), including its user manual, to fully enable the management of the indicators and reporting format for monitoring the implementation of the Second GPA in all languages in which the computer application is currently available, subject to availability of resources, as well as to assist countries in building capacity in the management and use of the indicators and the computer application, as required.

13. The Working Group recommended that the Commission request FAO to examine the data gathered from the revised indicators and reporting format and, based on the collected data, identify indicators that may be suitable for the elaboration of composite indices and report the results to the Commission or this Working Group for their consideration. The Working Group recommended that the Commission urge donors to make available extra-budgetary resources to support the tasks referred to in paragraphs 12 and 13.

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<sup>1</sup> CGRFA/WG-PGR-6/12/2 Rev.1

<sup>2</sup> See CGRFA/WG-PGR-6/12/2 Rev.1, *Appendices I & II*.

<sup>3</sup> CGRFA/WG-PGR-6/12/Inf.1

#### IV. FAO ACTIVITIES IN SUPPORT OF THE IMPLEMENTATION OF THE SECOND GLOBAL PLAN OF ACTION FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

14. The Working Group considered the document *FAO activities in support of the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*.<sup>4</sup> It took note of the *Draft Guide for National Seed Policy Formulation*.<sup>5</sup>

15. The Working Group reiterated the importance of the Second GPA as a key policy document governing the conservation and sustainable use of PGRFA. While recognizing that each country should make every effort to implement the Second GPA through its national PGRFA programme, it recommended that international cooperation for the conservation and sustainable use of PGRFA should be strengthened, in particular to support and complement the efforts of developing countries and countries with economies in transition. The Working Group asked FAO to carry out, as far as possible, all the activities relevant to plant genetic resources that were requested by the Commission. The Working Group urged the Commission to invite donors to provide extra-budgetary resources to ensure the full implementation of the Second GPA.

##### ***In situ* conservation and on-farm management**

16. The Working Group emphasized the importance of, and need for, on-farm management of PGRFA and *in situ* conservation of crop wild relatives, especially in light of global challenges such as climate change. The Working Group emphasized the need for knowledge sharing and strengthening of national and regional networks and capacities on related issues in these sectors. It further highlighted the need for coordination between the International Treaty on Plant Genetic Resources for Food and Agriculture (International Treaty) and the Commission, and collaboration with the Convention on Biological Diversity (CBD) and relevant stakeholders at national, regional and international levels to promote *in situ* conservation and on-farm management. It took note of the technical workshop, *Towards the establishment of a global network for in situ conservation and on-farm management of plant genetic resources for food and agriculture*, held by FAO in Rome on 13 November 2012, with the participation of a wide range of stakeholders. The Working Group called upon the Commission to take into account the work done with regard to its request for exploring mechanisms for establishing a global network for *in situ* conservation and on-farm management of PGRFA. The Working Group felt that the establishment of a Global Network is premature, but recommended that the Commission request FAO to develop a concept note detailing the possible structure and functions of such a network and its financial implications, taking into account the need to strengthen national and regional networks, for submission to the Commission at its next session.

17. The Working Group stressed the importance of establishing genetic reserves for *in situ* conservation of priority crop wild relatives. In some circumstances, these genetic reserves could address traditional cultivars. The Working Group recommended that the Commission request FAO to provide technical support and remind donors of the extra-budgetary resources that are necessary for the establishment of such reserves.

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<sup>4</sup> CGRFA/WG-PGR-6/12/3

<sup>5</sup> CGRFA/WG-PGR-6/12/Inf.3



### **Sustainable use**

18. The Working Group commended FAO's work relating to the strengthening of capacities for sustainable use of PGRFA, including partnerships, especially with regard to the development of adapted crop varieties and the dissemination of quality seeds and planting materials to farmers. The Working Group noted with satisfaction the work of the Global Partnership Initiative for Plant Breeding Capacity Building.

19. The Working Group recommended that the Commission reaffirm the importance of further capacity development in the areas of plant breeding, including farmer participatory plant breeding and seed systems, and request FAO to continue work in collaboration with partners, in particular, the International Treaty and the CGIAR, in capacity strengthening and related activities and avoid duplication of efforts with the Programme of Work on Sustainable Use of the International Treaty. It called upon donors to continue supporting this work through extra-budgetary resources. The Working Group noted that there was not sufficient time to review the *Draft Guide for National Seed Policy Formulation*, and agreed that Members of the Working Group and relevant organizations would submit written comments on the *Draft Guide* by 15 January 2013, for consideration by the Commission at its next session.

20. The Working Group recommended that the Commission request FAO to continue supporting Member Countries in mainstreaming crop diversification, increasing the use of underutilized crops, strengthening seed systems and integrating climate change and related aspects for increasing sustainable production intensification.

### **Building sustainable institutional and human capacities**

21. The Working Group commended FAO's work with regard to the building of sustainable institutional and human capacities, including through support to development of National PGRFA Strategies and the establishment of National Information Sharing Mechanisms (NISMs), as well as the updating of the Facilitating Mechanism. The Working Group recommended that the Commission:

- i. Request FAO to continue supporting countries in strengthening their capacity in decision-making processes, which are relevant to the implementation of the Second GPA, including support through provision of guidelines, best practices and tools as appropriate;
- ii. Request FAO to prepare draft guidelines for the preparation of national PGRFA strategies, for review by the Working Group at its next session;
- iii. Invite its Members to establish or continue updating NISMs, in line with the new indicators and reporting format for monitoring the Second GPA;
- iv. Reiterate the need for strengthening collaboration with the International Treaty to ensure that the NISMs and the Facilitating Mechanism provide a cost effective support for building the Global Information System; and
- v. Call for extra-budgetary resources to ensure continuity in the implementation of the Second GPA including the development of an improved version of the NISM software and the application of the indicators and reporting format of the Second GPA in a maximum number of countries.

## V. DRAFT UPDATED GENE BANK STANDARDS

22. The Working Group reviewed the document, *Revision of the Draft Genebank Standards for Plant Genetic Resources for Food and Agriculture*<sup>6</sup>, and recommended that the Commission endorse the *Draft Genebank Standards for Plant Genetic Resources for Food and Agriculture* (Draft Genebank Standards), as amended by the Working Group. It commended the comprehensive coverage of the *Draft Genebank Standards*. While some members had submitted technical suggestions during this session, the Working Group agreed that its Members could submit written comments on the *Draft Genebank Standards* by 15 January 2013.

23. The Working Group recognized the universal value and utility of the *Draft Genebank Standards* and agreed that the document would be a useful instrument for facilitating the conservation and sustainable use of PGRFA. The Working Group also thanked FAO's partners, including the National Focal Points for plant genetic resources, the International Treaty, the CGIAR, and the Global Crop Diversity Trust involved in the preparation of the *Draft Genebank Standards*.

24. The Working Group considered it premature to initiate work on species-specific standards. It recommended that the Commission request FAO to monitor and evaluate the implementation of the Genebank Standards and report on the impact at a future meeting in collaboration with other international institutions. The development of species-specific standards could be considered in light of that evaluation.

25. The Working Group recommended that the Commission confirm the need for comprehensive capacity development for the implementation of the *Draft Genebank Standards* and call upon donors to provide adequate resources, particularly in developing countries, in collaboration with the International Treaty, the CGIAR and other relevant international institutions.

## VI. PROCESS FOR THE PREPARATION OF THE THIRD REPORT ON THE STATE OF THE WORLD'S PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

26. The Working Group considered the document, *Preparation of The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*,<sup>7</sup> and took note of the document, *Draft Strategic Plan for the Commission on Genetic Resources for Food and Agriculture*<sup>8</sup>.

27. In reviewing the documents, the Working Group welcomed the close link between monitoring the implementation of the Second GPA and the preparation of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (Third Report). The Working Group stressed the importance of a simplified and cost-effective process and recommended that the preparation process and time-line be adjusted, as reflected in *Table 1*. It recommended that the Commission aligns its Multi-Year Programme of Work (2013-2021), as well as the *Draft Strategic Plan for the Commission on Genetic Resources for Food and Agriculture 2014-2021*, with the proposed adjustments.

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<sup>6</sup> CGRFA/WG-PGR-6/12/4

<sup>7</sup> CGRFA/WG-PGR-6/12/5

<sup>8</sup> CGRFA/WG-PGR-6/12/Inf.2

*Table 1: Monitoring the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture and preparing The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture.*

Reports to the Working Group and the Commission	Information sources	Timeline		
		ITWG-8 2016 CGRFA-16 2017	ITWG-9 2018 CGRFA-17 2019	ITWG-10 2020 CGRFA-18 2021
Second GPA implementation assessments	Data provided through NISM or other sources on the basis of <i>Appendix E</i> indicators			
Report on feasibility of composite indices for PGRFA				
Third Report	Data provided through NISM or other sources on the basis of <i>Appendix E</i> indicators, country reports and thematic studies and other relevant sources			

28. The Working Group recommended that the Commission request the Secretariat to provide a detailed outline of the Third Report, including suggested chapters, thematic areas as well as a revised estimated budget to the next session of the Working Group for its consideration. The budget should indicate extra-budgetary and FAO's Regular Programme resources.

29. The Working Group further recommended that the Commission encourage Members and other countries to monitor the implementation of the Second GPA and to contribute through their National Focal Points to the preparatory process for the Third Report. The Working Group also recommended that, when reporting on material that conserved in *ex situ* collections, their reports put emphasis on providing information on distinct accessions, in order to avoid counting of unintended duplication.

30. The Working Group recommended that the Commission invite relevant international organizations to actively participate in the preparation of the Third Report and donors to provide the necessary extra-budgetary resources to facilitate the preparatory process, in particular the participation of developing countries and least developed countries.

## **VII. STATUS AND TRENDS IN THE CONSERVATION AND USE OF MICRO-ORGANISMS AND INVERTEBRATES IN RICE AND ROOT CROP-BASED PRODUCTION SYSTEMS**

31. The Working Group considered the document, *Status and trends in the conservation and use of micro-organisms and invertebrates in rice and root and tuber production systems*.<sup>9</sup> The Working Group reiterated the importance of microbial and invertebrate diversity for sustainable crop production and for food and nutrition security. It also stressed the need for follow-up activities, including the development of strategies for the conservation and sustainable use of below and above ground microorganisms and invertebrates, particularly in light of global environment and health challenges.

<sup>9</sup> CGRFA/WG-PGR-6/12/6

32. The Working Group recommended that the Commission request FAO to undertake similar studies for other major food crops of importance for the different regions, subject to the availability of funds, with a special emphasis on good agricultural practices, and favouring the delivery of ecosystem services by beneficial micro-organisms and invertebrates. These studies should follow an ecosystem approach in addressing the contribution of micro-organisms and invertebrates to the delivery of ecosystem services, and should contribute to the preparation of *The State of the World's Biodiversity for Food and Agriculture*.

#### **VIII. ACCESS AND BENEFIT-SHARING FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

33. The Working Group welcomed 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 (ABS Working Group)*<sup>10</sup> and took note of the working documents presented to the ABS Working Group<sup>11</sup>. It reviewed the recommendations of the ABS Working Group, as they apply to PGRFA.

34. The Working Group welcomed the recommendations of the ABS Working Group. The Working Group stressed, in particular, the ABS Working Group's recommendation that the Commission encourage countries that have not yet done so, to ratify or accede to the International Treaty. Moreover, it highlighted the recommendation that the Commission invite the Governing Body of the International Treaty, in its continued governance of PGRFA, to continue to closely coordinate with the Commission, to address in a complementary way, the distinctive features and specific uses of genetic resources for food and agriculture, especially in light of the development of access and benefit-sharing measures at both national and international levels.

35. The Working Group welcomed the agreement by the ABS Working Group on the set of distinctive features of genetic resources for food and agriculture requiring distinctive solutions. The Working Group noted that not all features identified will necessarily apply to all genetic resources for food and agriculture and that not all plant genetic resources share the same features. In reviewing the distinctive features, as given in *Appendix B* to the document CGRFA/WG-PGR-6/12/7, the Working Group highlighted several features which it considered of particular relevance to plant genetic resources, as given in *Table 2*.

36. The Working Group noted that the scope of the International Treaty covers all PGRFA, and that the Governing Body, therefore, has the mandate and authority to decide and carry out work on all matters within this scope, including any further work on access and benefit-sharing for PGRFA. The Working Group recognized the coverage of the International Treaty's Multilateral System of Access and Benefit Sharing, as set out in Article 11 of the International Treaty. It requested the Commission to continue coordinating with Commission to continue coordinating with the Secretariat of the International Treaty, in order to promote complementarity in the work of the two bodies, and avoid duplication of efforts.

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<sup>10</sup> CGRFA/WG-PGR-6/12/7.

<sup>11</sup> Distinctive features of genetic resources for food and agriculture (CGRFA/WG-ABS-1/12/3); Options to guide and assist countries in developing legislative, administrative and policy measures (CGRFA/WG-ABS-1/12/4); Possible modalities for addressing access and benefit-sharing for genetic resources for food and agriculture (CGRFA/WG-ABS-1/12/5).

*Table 2: Distinctive features of genetic resources for food and agriculture, particularly relevant to PGRFA*

<b>Distinctive features of genetic resources for food and agriculture requiring distinctive solutions (CGRFA/WG-PGR/6/12/7)</b>	<b>Relevance to PGRFA</b>
A.1 Genetic resources for food and agriculture 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.	Sustainable development of future food security depends on well functioning seed chains that links conservation, crop improvement and seed delivery. In order to improve varieties and adapt to climate change, access to a wide diversity of PGRFA is imperative.
C.1: Historically, genetic resources for food and agriculture 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.	The distinctive feature of PGRFA (along with AnGRFA) is that they have been extensively exchanged over the last 10 000 years, and crop production in most regions of the world today utilizes genetic resources that originated or were developed elsewhere.
C.3: The international exchange of genetic resources for food and agriculture is essential to the functioning of the sector, and its importance is likely to increase in future.	For many crops the main production area is outside the centre of origin of the species, hence the interdependence between crop producing countries and the countries in the centres of origin is very high.
D.1: The innovation process for genetic resources for food and agriculture 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.	This feature is particularly relevant to plant breeding.
D.2 Many genetic resources for food and agriculture products are not developed out of an individual genetic resource, but with the contributions of several genetic resources for food and agriculture at different stages in the innovation process.	Continuous plant improvement requires multiple genetic resources, and yet the outcome is still uncertain (hundreds of PGRFA are required to improve a variety, while this is not the case for farm animals). The use of biotechnology allows for reducing uncertainty, still, gene interaction is unpredictable.  Plant improvement is a time consuming process, still it requires less time than animal breeding. There is no other sub-sector with similar complexity in pedigrees.
D.3 Most products developed with the use of genetic resources for food and agriculture 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 genetic resources for food and agriculture.	For the major crops on which the world's food supply depends, the main commodity is at the same time the reproductive unit, the seed. This is not the case for farm animals, or forestry.
E.1: Genetic resources for food and agriculture 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 genetic resources for food and agriculture.	The distinctive feature of PGRFA is that the community of providers and users operates in a very different set of circumstances than the communities of providers and users of the other sub-sectors of GRFA, with different financial, technical and legal capacities. This is one reason the Treaty was negotiated to address that single sub-sector.

<p>F.1 The exchange of genetic resources for food and agriculture takes place in the context of customary practices and existing communities of providers and users.</p>	<p>The distinctive feature of PGRFA is that the exchange of genetic material is a long-standing practice among various stakeholder groups. Over time, the community of providers and users of PGRFA has established its own practices and modalities of exchange, mostly based on donation or contractual relations.</p> <p>Specifically for PGRFA, sustainable intensification will depend on well a functioning seed chain, starting from PGRFA to the end consumer.</p>
<p>G.1: While the overall benefits of genetic resources for food and agriculture are very high, it is difficult to estimate at the time of the transaction the expected benefits of an individual sample of genetic resources for food and agriculture.</p>	<p>Sustainable management of genetic diversity in plants depends on active science and breeding when maintaining productivity. Continuous plant improvement requires multiple genetic resources, and yet the outcome is still uncertain. The use of biotechnology allows for reducing uncertainty, still gene interaction is unpredictable.</p>

## IX. REPORTS FROM OTHER INTERNATIONAL ORGANIZATIONS

37. The Working Group considered the document, *Reports from International Organizations and Instruments*, and the six information documents it refers to.<sup>12</sup>

38. The Working Group thanked the International Treaty, the International Union for the Protection of New Varieties of Plants, the CGIAR Consortium, the Global Crop Diversity Trust, the International Seed Federation and the Global Forum of Agriculture Research and Practical Action for the wealth of information provided, which allows awareness-raising and contributes to enhancing the collaboration between the Commission and its relevant partners.

39. The Working Group recommended that the Commission continue receiving reports from relevant organizations and instruments to facilitate its work on PGRFA within its Multi-Year Programme of Work and its implementation.

## X. CLOSING STATEMENTS

40. The Working Group expressed its gratitude to the Chair for his guidance and leadership during the session. It also thanked the Vice-Chairs and *Rapporteur* for their dedicated efforts as well as the Secretariat for preparing the session. The Chair thanked all the delegates and observers for their active participation and constructive spirit throughout the meeting and acknowledged the hard work of all the FAO staff, including the translators and interpreters, who had been working to support the session from behind the scene.

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<sup>12</sup> *Report from the International Treaty on Plant Genetic Resources for Food and Agriculture to the Intergovernmental Technical Working group on Plant Genetic Resources for Food and Agriculture (CGRFA/WG-PGR-6/12/Inf.4), Report from the CGIAR Consortium of International Research Centres to the Intergovernmental Technical Working group on Plant Genetic Resources for Food and Agriculture (CGRFA/WG-PGR-6/12/Inf.5), Report from the Global Crop Diversity Trust to the Intergovernmental Technical Working group on Plant Genetic Resources for Food and Agriculture (CGRFA/WG-PGR-6/12/Inf.6), Report from the International Union for the Protection of New Varieties of Plants to the Intergovernmental Technical Working group on Plant Genetic Resources for Food and Agriculture (CGRFA/WG-PGR-6/12/Inf.7), Report from the International Seed Federation to the Intergovernmental Technical Working group on Plant Genetic Resources for Food and Agriculture (CGRFA/WG-PGR-6/12/Inf.8) and Report from the Global Forum of Agriculture Research to the Intergovernmental Technical Working group on Plant Genetic Resources for Food and Agriculture (CGRFA/WG-PGR-6/12/Inf.9).*

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**APPENDIX A**

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**INTERGOVERNMENTAL TECHNICAL WORKING GROUP ON  
PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE****Sixth Session**

Rome, Italy, 14 – 16 November 2012

**AGENDA**

1. Election of the Chair, the Vice-Chair(s) and the *Rapporteur*
2. Adoption of the agenda and timetable
3. Implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture
  - 3.1 Review of indicators, including higher-order indicators, reporting format and targets for monitoring the implementation of the Second Global Plan of Action
  - 3.2 FAO activities in support of the implementation of the Second Global Plan of Action
4. Review of the draft updated *Genebank Standards*
5. Process for the preparation of the *Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*
6. Status and trends in the conservation and use of micro-organisms and invertebrates in rice and root crop-based production systems
7. Access and benefit-sharing for plant genetic resources for food and agriculture
8. Reports from international organizations and instruments
9. Other Business
10. Adoption of the Report





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**APPENDIX B**

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**LIST OF DOCUMENTS****WORKING DOCUMENTS**

CGRFA/WG-PGR-6/12/1	Provisional Agenda
CGRFA/WG-PGR-6/12/1/Add.1	Provisional annotated agenda and timetable
CGRFA/WG-PGR-6/12/2/Rev.1	Targets and indicators for plant genetic resources for food and agriculture
CGRFA/WG-PGR-6/12/3	FAO activities in support of the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/4	Revision of the Draft Genebank Standards for Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/5	Preparation of The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/6	Status and trends in the conservation and use of micro-organisms and invertebrates in rice and root and tuber production systems
CGRFA/WG-PGR-6/12/7	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/WG-PGR-6/12/8	Reports from international organizations and instruments

**INFORMATION DOCUMENTS**

CGRFA/WG-PGR-6/12/Inf.1	Reporting Format for monitoring the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/Inf.2	Draft Strategic Plan for the Commission on Genetic Resources for Food and Agriculture 2014-2021
CGRFA/WG-PGR-6/12/Inf.3	Draft Guide for National Seed Policy Formulation
CGRFA/WG-PGR-6/12/Inf.4	Report from the International Treaty on Plant Genetic Resources for Food and Agriculture to the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/Inf.5	Report from the CGIAR Consortium of International Agricultural Research Centres to the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/Inf.6	Report from the Global Crop Diversity Trust to the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/Inf.7	Report from the International Union for the Protection of New Varieties of Plants (UPOV) to the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/Inf.8	Report from the International Seed Federation to the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/Inf.9	Report from the Global Forum of Agriculture Research (GFAR) to the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture
CGRFA/WG-PGR-6/12/Inf.10	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/WG-PGR-6/12/Inf.11	List of Documents

**OTHER DOCUMENTS**

Background Study Paper 62	Invertebrates in rice production systems: a status and trends review
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
CCGRFA-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

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**APPENDIX C**


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ELECTED AT THE THIRTEENTH REGULAR SESSION OF THE  
COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

Rome, Italy, 14 – 16 November 2012

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<i>Composition (no. of countries per region)</i>	<i>Country</i>
<b>Africa</b> (5)	Angola Democratic Republic of the Congo Mali Morocco United Republic of Tanzania
<b>Asia</b> (5)	India Japan Philippines Sri Lanka Viet Nam
<b>Europe</b> (5)	Hungary Norway Poland Spain Turkey
<b>Latin America and the Caribbean</b> (5)	Argentina Ecuador Guatemala Jamaica Venezuela (Bolivarian Republic of)
<b>Near East</b> (3)	Egypt Qatar Yemen
<b>North America</b> (2)	Canada United States of America
<b>Southwest Pacific</b> (2)	Cook Islands Tonga

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**APPENDIX D**

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**قائمة المندوبين والمراقبين**  
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Presidente	
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**APPENDIX E**

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**DRAFT INDICATORS FOR MONITORING THE IMPLEMENTATION OF THE SECOND GLOBAL PLAN OF ACTION FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE****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>13</sup> carried out
- Number of PGRFA surveyed/inventoried
- Percentage of PGRFA threatened out of those surveyed/inventoried<sup>14</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>15</sup>
- Number of farmers' varieties/landraces delivered from national or local gene banks to farmers (either directly or through intermediaries)<sup>16</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>17</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>18</sup> conserved *in situ*

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<sup>13</sup> PGRFA means any genetic material of plant origin of actual or potential value for food and agriculture (definition from ITPGRFA, 2001).

<sup>14</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>15</sup> Out of the total cultivated land in the same areas.

<sup>16</sup> Also listed in Priority Activity 10: Promoting diversification of crop production and broadening crop diversity for sustainable agriculture.

<sup>17</sup> Produced in neighbouring areas with similar agro-ecological conditions.

<sup>18</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>19</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 and eco-geographical 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>20</sup>
- Number of breeding activities oriented to small scale farmers, villages or traditional communities

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<sup>19</sup> Also listed in Priority Activity 10: Promoting diversification of crop production and broadening crop diversity for sustainable agriculture.

<sup>20</sup> Also listed in Priority Activity 12: Supporting seed production and distribution.

**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>21</sup>
- Number of crops conserved *ex situ* under medium or long term conditions<sup>22</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>23</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 quality 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

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<sup>21</sup> Also listed in Priority Activity 2: Supporting on-farm management and improvement of plant genetic resources for food and agriculture.

<sup>22</sup> Also listed in Priority Activity 6: Sustaining and expanding *ex situ* conservation of germplasm.

<sup>23</sup> Also listed in Priority Activity 9: Supporting plant breeding, genetic enhancement and base-broadening efforts.

**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 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

**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>24</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>24</sup> Also listed in Priority Activity 1: Surveying and inventorying plant genetic resources for food and agriculture.

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## APPENDIX F

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

#### Conservation of PGRFA

**Target:** *By 2020, 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 are conserved in farmers' fields, seed and field gene banks and wild habitats. The conservation management of plant genetic resources for food and agriculture (PGRFA) in natural ecosystems and on-farm, provide for the continued evolution and adaptation of these resources to changing environmental forces, and for the generation of new diversity that is important for crop improvement. 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. Sustainable use of these resources 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, 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 relies 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.