

	منظمة الأغذية والزراعة للأمم المتحدة	联合国 粮食及 农业组织	Food and Agriculture Organization of the United Nations	Organisation des Nations Unies pour l'alimentation et l'agriculture	Продовольствен ная и сельскохозяйств енная организация Объединенных	Organización de las Naciones Unidas para la Agricultura y la Alimentación
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Item 8 of the Provisional Agenda

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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

Fifth Session

Rome, 27-29 April 2011

FOLLOW-UP TO OTHER RECOMMENDATIONS REGARDING PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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I. INTRODUCTION

1. At its Twelfth Session, the Commission on Genetic Resources for Food and Agriculture (Commission) endorsed *The Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (SoWPGR-2) and agreed on updating the *Global Plan of Action on the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture* (*Global Plan of Action*) for consideration at its next session.

2. The Commission also considered other areas of work in plant genetic resources for food and agriculture¹ and in adopting its Strategic Plan 2010-2017² for the implementation of the Multi-Year Programme of Work made recommendations with regard to:

- the Facilitating Mechanism of the *Global Plan of Action*;
- the National Information Sharing Mechanisms;
- plant breeding and seeds systems;
- crops for food security including underutilized crops, *in situ* conservation and on-farm management of plant genetic resources for food and agriculture.

3. This document provides information on follow-up action taken by FAO in response to the Commission's recommendations. It provides a summary of the ongoing work and progress made since the last session of the Commission and requests guidance on further work in these areas, in particular in light of the updated *Global Plan of Action*³. It also reports on the finalization of the SoWPGR-2 and the synthetic account that contains its main findings and conclusions.

II. FACILITATING MECHANISM FOR THE IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION*

4. At its Twelfth Regular Session, the Commission welcomed the progress made in the further development of the Facilitating Mechanism and stressed the need to continue to advance it in order to mobilize financial and other support for developing countries, to assist their implementation of the *Global Plan of Action*⁴. It also agreed that the further operation of the Facilitating Mechanism, including awareness-raising, should be undertaken in synergy with activities undertaken by the International Treaty on Plant Genetic Resources for Food and Agriculture (International Treaty).

5. Since the Commission's last session, activities have progressed mainly in the information servicing through the web-based portal by enriching existing content for widening the range of potential beneficiaries. The number of searchable funding opportunities has been increased and the portal continues to provide news about recent publications, forthcoming events and related activities, also in collaboration with the portal updates of the International Treaty. It can be expected that in light of the updated *Global Plan of Action*, some adjustments to the Facilitating Mechanism may become necessary.

6. The Facilitating Mechanism continues to be funded exclusively through the FAO Regular Programme and no extra-budgetary resources have been made available during the reporting period. In order to advance the Facilitating Mechanism, as requested by the Commission at its Twelfth Regular Session, adequate additional funds will need to be secured.

¹ CGRFA-12/09/Report, Paragraph 25.

² CGRFA-12/09/Report/Appendix G.

³ CGRFA/WG-PGR-5/11/2.

⁴ CGRFA-12/09/Report, Paragraph 26.

III. NATIONAL INFORMATION SHARING MECHANISMS

7. The Commission, at its last session, acknowledged the considerable effort undertaken in applying the new monitoring approach of the *Global Plan of Action*, which had resulted in the establishment of 60 National Information Sharing Mechanisms accessible through WIEWS, and agreed that extra-budgetary resources were needed to establish and strengthen National Information Sharing Mechanisms in the maximum number of developing countries, also in view of future Country Reports and national assessments on plant genetic resources.

8. FAO has continued to update and improve the tools used by countries for applying the new monitoring approach. Since the Commission's last session, the six National Information Sharing Mechanisms that were in the process of being established have been completed, with support from the FAO Regular Programme and extra-budgetary resources from Japan.⁵ The latest version operates in twenty-four languages,⁶ as does the web version. The application of the monitoring approach to all countries as recommended by the Commission, however, will require additional extra-budgetary resources. Support for strengthening the existing mechanisms in selected countries may also be required. Any further development of the current monitoring approach, including the indicators and the reporting format, are associated with the updating of the *Global Plan of Action*. The development of the global information system will also impact any development in the National Information Sharing Mechanisms.

9. The Commission also requested its Secretary to collaborate with the Secretary of the International Treaty in the development of the vision paper that had been requested by the Governing Body of the International Treaty⁷, to take stock of existing information systems and to outline a process for the development of the global information system in the context of Article 17 of the International Treaty, in order to ensure that the roles of the Facilitating Mechanism, WIEWS, and the National Information Sharing Mechanisms are adequately considered without duplicating efforts.⁸

IV. STRENGTHENING PLANT BREEDING AND SEED SYSTEMS

STRENGTHENING PLANT BREEDING CAPACITIES

10. The Commission, at its last session, commended the FAO-led Global Partnership Initiative for Plant Breeding Capacity Building (GIPB) for its success in strengthening national capacity building and in fostering collaboration among national and international stakeholders. It recognized the importance of these efforts in the context of the implementation of Article 6 of the International Treaty, and emphasized the role of plant breeding in addressing food security in light of climate change and other emerging issues. The Commission requested FAO to continue its work to strengthen seed systems at national, regional and global levels, and continue to report on activities and programmes being implemented on plant breeding and seeds systems⁹.

11. As emphasized in the SoWPGR-2, there is a need for strategies and capacities within national programmes that strategically link conservation of plant germplasm through their use in crop improvement to the dissemination of quality seeds and planting materials.¹⁰ The Commission has emphasized the role of plant breeding in achieving sustainable food security, especially for

⁵ GCP/RAS/240/JPN: Capacity Building and Regional Collaboration for Enhancing the Conservation and Sustainable Use of Plant Genetic Resources in Asia.

⁶ www.pgrfa.org

⁷ IT/GB-3/09/Report, *Appendix A.7*, Paragraph 22.

⁸ CGRFA-12/09/Report Paragraph 27.

⁹ See IT/GB-4/11/19.

¹⁰ <http://www.fao.org/docrep/013/i1500e/i1500e04.pdf>

harnessing PGRFA to develop crop varieties with enhanced adaptation to the effects of climate change and variations.¹¹ The document *Strengthening Plant Breeding Capacities*¹² reviews innovations in plant breeding technologies and elaborates on the ongoing work relating to building capacity and the development of tools for raising awareness and strengthening national strategies for a PGRFA that links plant breeding to germplasm conservation and seed systems.

12. With Regular Programme and extra-budgetary resources, and in collaboration with the relevant FAO technical units and Bioversity International, efforts have been taken to develop an authoritative E-learning course on Pre-breeding – the interface between germplasm conservation and plant breeding – that is an essential step for strengthening germplasm use for plant breeding. The E-learning course will be made available through GIPB's portal. In addition, six in-depth country case studies¹³ were undertaken to generate baseline data that inform strategies for strengthening the continuum between plant breeding to the delivery of high quality seeds of improved varieties. GIPB is developing the 'Plant Breeding Capacity Assessment Tool' which, on account of its ability to identify programme strengths and weaknesses, will be available to support policy makers, research and development managers and funding agencies in the management of crop improvement and seeds programmes. A global stakeholder consultation is being proposed to generate a suite of relevant best practices that could be subsequently synthesized into a set of actionable policy interventions. The main objective is to assist Member countries, in adopting strategies and a road map to institutionalize effective plant breeding programmes that sustainably make use of PGRFA and adequate technologies to produce better crop varieties in response to national needs, attain enhanced levels of food security. GIPB is partnering with the International Treaty Secretariat in clarifying the notion of a 'toolbox for the sustainable use of PGRFA', as it relates to Article 6 of the International Treaty.¹⁴

13. So far, the GIPB has been funded by the FAO Regular Programme and through an extra-budgetary project from the Global Crop Diversity Trust. Additional funds will need to be secured in order to advance further the role of GIPB and expand activities to promote the sustainable use of PGRFA.

V. STRENGTHENING SEED SYSTEMS

14. FAO provides technical and policy assistance to strengthen seed systems at national, regional and global levels. Within a national context, seed systems need to be strengthened to make them more resilient. Strategies need to capture the value of plant genetic resources and their contribution to local seed systems. Within the national, regional and international context there is a critical need for concerted action to address the issues in a comprehensive manner, and in particular taking into account the needs and demands of small farmers.

15. The Commission, at its last session, reiterated that a gap analysis of the seed sector should be prepared for its next session.¹⁵ The *Gap Analysis of the Seed Sector* is provided as document, CGRFA/WG-PGR-5/11/Inf. 5. The analysis has revealed the key aspects of the seed sector which will require particular attention in the implementation of the updated *Global Plan of Action*. Information on national seed systems was gathered from national governments of Central and East European Countries (CEEC), the Economic Community Organization (ECO), and the Economic Community Of West African States (ECOWAS). The analysis of the information collected reveals a wide range of differences in the seed systems and related gaps. In many developing countries, farmers' access to quality seed of a diverse range of adapted varieties is still

¹¹ CGRFA-12/09/Report, Paragraph 30.

¹² CGRFA-WG-PGR-5/11/Inf.4.

¹³ Bangladesh, Ghana, Kenya, Malawi, Thailand and Uruguay.

¹⁴ IT/GB-4/11/17

¹⁵ CGRFA-12/09/Report, Paragraph 31.

impeded by inappropriate seed policies and/or regulatory frameworks, resulting in poor coordination between the public and private sectors, weak technical capability and infrastructure for varietal development, seed production, quality assurance systems, seed marketing and distribution and extension. These gaps vary with crop species and the characteristics of the prevailing agriculture - subsistence, semi-commercial or commercial. The public sector has an important role in creating the enabling environment through seed policy development and implementation of seed quality assurance and variety release systems. Cross-border seed trade can be encouraged by harmonizing seed rules and regulations at the regional level. Seed production can still be a profitable activity, especially for food crops with market potential when such gaps are removed.

16. Effective national seed systems are essential to remove the gaps and provide access to high quality seed of improved varieties so that farmers can respond to the challenges of increased food production. It requires support for the emergence of small-scale seed enterprises through the organization of producers, linkage to markets and value adding. FAO conducted an analysis of some successful small scale seed enterprises in Brazil, Côte d'Ivoire and India¹⁶ with a view to identifying strengths and weaknesses that could be leveraged in the provision of support to other national systems. The role of seed enterprises in Africa for local food security crops was analysed with case studies in eight countries¹⁷ conducted in collaboration with Africa Rice and national partners. The results of these studies are being prepared for publication. Based on the experience and analyses the guide, *Best Practices for decision makers for promoting the smallholder seed enterprises*, has been developed¹⁸.

17. Within the framework of the *Global Plan of Action*, FAO is working with member countries and partners in a variety of areas related to capacity building to support seed systems and to facilitate farmers' access to highly performing varieties in Africa, Asia and Latin America. The development of seed policy using a participatory approach is being facilitated (Sierra Leone, Madagascar, Rwanda, Togo, and Cambodia), and harmonization of seed rules and regulation is under way or beginning at sub-regional level in Africa, Central Asia and Central America.¹⁹ Assistance is being provided for the development of local seed enterprises and rehabilitation (Afghanistan, Benin and Cameroon) and for rebuilding the public seed sector after civil strife (Afghanistan, Sierra Leone and South Sudan). With extra-budgetary resources, regional projects have started to improve or develop seed systems in Central Asia and Central America, promote community-based seed production in Latin America, and increase the use of quality seeds in integrated production systems in West Africa.²⁰

18. With the Emergency Operations and Rehabilitation Division, the effectiveness of seed relief activities is being improved through the development of guidelines for seed emergencies, the promotion and implementation of the use of seed vouchers and fairs and seed security assessments. Along with national authorities, FAO is collaborating with a number of local and regional seed associations, regional economic communities and CGIAR centres, bringing together public institutions and private companies to strengthen seed systems.

¹⁶ FAO, 2010. *Promoting the Growth and Development of Smallholder Seed Enterprises for Food Security Crops*. Case Studies from Brazil, Cote d'Ivoire and India. Plant Production and Protection Paper 201.

¹⁷ Cameroon, Nigeria, Mali, Guinea, The Gambia, Morocco, Kenya, Uganda, Mozambique and Madagascar.

¹⁸ FAO, 2010. *Promoting the Growth and Development of Smallholder Seed Enterprises for Food Security Crops: Best Practices and Options for decision making*.

¹⁹ Harmonization of seed rules and regulations completed in CEMAC countries in Central Africa; Seed rules and regulations harmonization ongoing for ECO region in Central Asia and expected to get under way for Central America.

²⁰ Central Asia: Afghanistan, Azerbaijan, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Pakistan Tajikistan, Turkmenistan and Uzbekistan; Central America: Belize, El Salvador, Honduras, Costa Rica, Guatemala, Panama and Nicaragua; West Africa: Mauritania, Mali, Senegal, Niger and Côte d'Ivoire; Latin America: Ecuador, Peru and Bolivia.

19. During 2009-2010, a number of knowledge tools, best practices and guidelines on seed sector development have been published to assist seed system development and strengthen linkages within the overall framework of sustainable use of PGRFA. These cover topics including quality declared standards for planting materials,²¹ biosafety capacity building,²² Crop Calendar,²³ and a handbook for seed relief and emergencies.²⁴ A guide for seed policy is currently under development.

VI. ON-FARM MANAGEMENT AND *IN SITU* CONSERVATION

20. The Commission, at its last session, urged that greater attention be given to crops that are essential for food security and requested FAO to prepare an option paper that addresses issues of on-farm management of plant genetic resources for food and agriculture, and *in situ* conservation of crop wild relatives (CWR) and wild plants for food, particularly in developing countries. It requested the Working Group to review this paper.²⁵

21. The SoWPGR-2 underlined the need for and importance of on-farm management of PGRFA, *in situ* conservation of CWR and underutilized species especially in the face of emerging environmental challenges and demographic pressures. It noted that although there has been some advancement in increasing awareness about on-farm management or the potential value of CWR, however, there are major conservation, management, and research gaps that require attention to increase their sustainable utilization.²⁶

22. The document, *Options to promote food security: on-farm and in situ management of plant genetic resources for food and agriculture*²⁷, provides an analysis of the issues, options and associated challenges in on-farm management of plant diversity and *in situ* conservation of CWR, particularly in developing countries. At the national level, development of national strategies is an option, while taking into account local needs and farmers' local and indigenous knowledge, and providing the necessary resources for long-term commitment. A national network of conservation sites can be an option to maintain landrace and CWR diversity. The call to establish a global network for *in situ* conservation of the CWR diversity of major food security crops is reiterated recognising that the Commission has on a number of occasions, discussed the development of a network of *in situ* areas, as part of its global system.²⁸ The need to develop improved indicators of diversity, genetic erosion and vulnerability that can be applied to establish national, regional and global baselines for locating and monitoring diversity, and changes in diversity over time in emphasised.

23. In collaboration with national, regional and international partners and institutions²⁹, FAO is initiating a project to develop an illustrated Atlas of African agro-biodiversity focused on promising and endangered, underutilised fruits and vegetables. The project will draw on available

²¹ FAO, 2010. *Quality declared planting material Protocols and standards for vegetatively propagated crops*. Plant Production and Protection Paper 195.

²² FAO, 2009. *Building Biosafety Capacities FAO's experience and outlook*.

²³ Crop Calendar – Africa: <http://www.fao.org/agriculture/seed/cropcalendar/welcome.do>

²⁴ FAO, 2011. *Seeds In Emergencies: A technical handbook*. Plant Production and Protection Paper 202.

²⁵ CGRFA-12/09/Report, paragraphs 32-33.

²⁶ FAO 2010, *The State of the World's Plant Genetic Resources for Food and Agriculture*, pp. 31- 44.

²⁷ CGRFA/WG-PGR-5/11/Inf. 6.

²⁸ CGRFA-11/07/11

²⁹ PROTA, Bioversity International, ICRAF, GlobalHort, World Vegetable Center, CIRAD, INRAB, JKUAT, Kenya Museums, and NIHORT

databases and expertise including HORTIVAR³⁰ and highlight the diversity and indigenous knowledge and serve as a basis for promoting synergies between participating organizations and will encourage the development of an action plan for the promotion of African fruits and vegetables species for improved livelihoods, health and incomes of vulnerable groups.

VII. SECOND REPORT OF THE STATE OF THE WORLD'S PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE AND ITS SYNTHETIC ACCOUNT

24. The Commission, at its last session, requested the Secretariat to finalize the SoWPGR-2, taking into account the proposals submitted by the Members of the Commission. It also requested FAO to prepare a synthetic account of the SoWPGR-2 that contains its main findings and conclusions, and highlights the gaps and needs for the future.³¹

25. As requested, the SoWPGR-2 was finalized for publication together with a CD-ROM containing the Synthetic Account, Country Reports and the Thematic Background Studies. A Synthetic Account of the SoWPGR-2 was prepared to convey the key messages of the SoWPGR-2 in simple non-technical style.³² The Synthetic Account has been translated and is available in FAO official languages. The translation of the SoWPGR-2 into all FAO official languages is currently under way with resources from the Regular Programme and from the Governments of Italy, Russian Federation and Spain.

26. The SoWPGR-2 was launched by the FAO Director-General in Rome on 26 October 2010 through a press conference that was accompanied with live Web cast. Since then the publication has been widely distributed through FAO distribution channels. The SoWPGR-2, the Synthetic Account, Country Reports and Thematic Studies are available online.³³

VIII. GUIDANCE SOUGHT

27. The Working Group may wish, with regard to:

The Facilitating Mechanism

- (i) Provide further advice to the Commission on the role of the Facilitating Mechanism in the implementation of the updated *Global Plan of Action* taking into account the need for close cooperation between the Commission and the Governing Body of the International Treaty;
- (ii) Recommend that the Commission call for extra-budgetary resources to advance further the operation of the Facilitating Mechanism and encourage donor countries and agencies to make additional funds available in order to fully operationalize the Facilitating Mechanism.

National Information Sharing Mechanisms

- (i) Recommend that the Commission provide further guidance on advancing the National Information Sharing Mechanisms, including the monitoring approach, in

³⁰ HORTIVAR: FAO's georeferenced database on the performance of horticulture cultivars and platform for access and exchange of information related to the horticulture sector.

³¹ CGRFA-12/09/Report, paragraph 18.

³² http://www.fao.org/docrep/013/i1500e/i1500e_brief.pdf

³³ <http://www.fao.org/agriculture/crops/core-themes/theme/seeds-pgr/sow/sow2/en/>

- light of the updated *Global Plan of Action* taking into account the need for close cooperation between the Commission and the Governing Body of the International Treaty;
- (ii) Recommend that the Commission call for extra-budgetary resources to undertake the application of the monitoring approach in the maximum number of countries.

Strengthening Plant breeding and Seed Systems

- (i) Recommend that the Commission reaffirm the importance of further work in the areas of plant breeding, urge FAO to continue to work in collaboration with partners, in particular in support of the implementation of the updated *Global Plan of Action* and Article 6 of the International Treaty;
- (ii) Recommend that the Commission call for extra-budgetary resources to maximize country participation in plant breeding capacity building initiatives;
- (iii) Recommend that the Commission request FAO continue to strengthen national seed systems to increase the availability of high quality seed of adapted varieties for smallholder farmers to increase food production;
- (iv) Recommend that the Commission reaffirm the need for further collaboration in plant breeding capacity and seed systems development.

On-farm management and *in situ* conservation

- (i) Recommend that the Commission reaffirm the need for collaboration and coordination at national, regional and international levels to promote on-farm management and *in situ* conservation of plant diversity;
- (ii) Recommend that the Commission call for the establishment of a global network for *in situ* conservation of crop diversity.