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COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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

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I. INTRODUCTION

1. At its Eleventh Regular Session, the Commission on Genetic Resources for Food and Agriculture (the Commission) requested follow-up on a number of on-going activities. The Commission, in particular:

- requested the Secretariat to report on progress with the Facilitating Mechanism¹ at the next Session of the Commission;²
- stated that the World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture (WIEWS) should be further developed in the context of developing the Global Information System on Plant Genetic Resources for Food and Agriculture in the International Treaty;³
- requested FAO to review the relevance of the components of the Global System on Plant Genetic Resources,⁴ such as the Genebank Standards and the International Code of Conduct for Plant Germplasm Collecting and Transfer;
- requested FAO to prepare an options paper to strengthen plant breeding in developing countries [...];⁵
- encouraged FAO to continue its work to strengthen seed systems at national, regional and global levels;⁶ and
- requested that attention be given to work on crops essential for food security, including underutilized crops, and that this be considered in the context of its Multi-Year Programme of Work.⁷

2. The Commission also recommended that its Secretariat prepare an analysis of possible areas of collaboration with the Consultative Group on International Agricultural Research (CGIAR), the Global Crop Diversity Trust and the International Treaty on Plant Genetic Resources for Food and Agriculture. This analysis is given in the document, *Cooperation with the International Treaty on Plant Genetic Resources for Food and Agriculture, the Global Crop Diversity Trust and the Consultative Group on International Agricultural Research*.⁸

3. This document provides a summary of on-going work along with the recommendations resulting from the Fourth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (Working Group) and relevant decisions resulting from the Third Session of the Governing Body of the International Treaty. The Commission's guidance is requested on further development of the work indicated in the present document, noting that these areas have included in the Draft Strategic Plan 2010-2017 for the Implementation of the Multi-Year Programme of Work of the Commission.⁹

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

4. At its Eleventh Regular Session, the Commission requested the Secretariat to report on progress with the Facilitating Mechanism for the implementation of the *Global Plan of Action* at

¹ Facilitating Mechanism for the implementation of the Global Plan of Action: www.globalplanofaction.org

² CGRFA-11/07/Report, paragraph 30.

³ CGRFA-11/07/Report, paragraph 37.

⁴ CGRFA-11/07/Report, paragraph 29.

⁵ CGRFA-11/07/Report paragraph 33.

⁶ CGRFA-11/07/Report, paragraph 34.

⁷ CGRFA-11/07/Report, paragraph 28.

⁸ CGRFA-12/09/19.

⁹ CGRFA-12/09/4.

its next Session, and to report on activities carried out to the Governing Body of the International Treaty, for its consideration in the context of the Funding Strategy.¹⁰

5. FAO, together with Bioversity International and the Global Forum on Agricultural Research (GFAR), launched the Facilitating Mechanism's web-based portal in English in 2007. The portal is a facilitated access point to information on sources and availability of financial, technical and information resources on subjects related to the 20 priority activity areas of the *Global Plan of Action*. Since the last report to the Commission,¹¹ progress has mainly been booked in further implementation of information servicing through its web-based portal¹² by enriching existing content and by widening the range of potential beneficiaries. In this regard, French and Spanish versions have been added to the portal, and the number of searchable funding opportunities have been increased to a total of 714 funding programmes. The portal also provides other information relevant for the implementation of the *Global Plan of Action* and maintains a highlight section that provides news about recent publications and forthcoming events. During 2007-2009, activities were funded exclusively through the FAO Regular Programme and Budget, which amounted to US\$ 260000. No extra-budgetary resources were made available in this period. Information about the Facilitating Mechanism was also presented to the Governing Body of the Treaty at its Second Session in 2007¹³ and to its Third Session in 2009.¹⁴

6. The Working Group, at its fourth session, welcomed the progress in the development of the web portal of the Facilitating Mechanism and highlighted its importance.¹⁵ It recommended that the Commission request FAO and invite countries to contribute funding for its further maintenance, and stressed that further operation of the Facilitating Mechanism should be undertaken in synergy and complementarily with the activities undertaken to implement the International Treaty.

7. The Governing Body of the International Treaty invited the Commission to continue monitoring progress made to develop the Facilitating Mechanism as necessary, and encourage Contracting Parties to take full advantage of the information made available through the Facilitating Mechanism.¹⁶

8. The Commission may wish to provide guidance on the maintenance of the Facilitating Mechanism web-based portal and its role in awareness-raising, linkages with the activities of the International Treaty and the Commission, as well as in the context of updating of the *Global Plan of Action*.

III. NATIONAL INFORMATION SHARING MECHANISMS ESTABLISHED THROUGH THE WORLD INFORMATION AND EARLY WARNING SYSTEM ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE (WIEWS)

9. The Commission, at its Eleventh Regular Session, expressed appreciation for the progress made in applying the new approach for monitoring the implementation of the *Global Plan of Action*.¹⁷ The Commission also stated that the World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture (WIEWS) should be further developed in the context of developing the Global Information System on Plant Genetic Resources for Food and

¹⁰ CGRFA-11/07/Report, paragraph 30.

¹¹ CGRFA-11/07/11, paragraph 7-13.

¹² www.globalplanofaction.org

¹³ IT/GB-2/07/Report, paragraph 78.

¹⁴ IT/GB-3/09/Inf. 7, paragraph 9-12.

¹⁵ CGRFA-12/09/7, paragraph 23.

¹⁶ IT/GB-3/09/Report, Appendix A.7.

¹⁷ CGRFA-11/07/Report, paragraph 31.

Agriculture in the International Treaty. It expressed its willingness to work with the Governing Body of the International Treaty for this purpose.¹⁸

10. At present, as a result of the efforts to apply the new monitoring approach, sixty-four countries have established,¹⁹ or are in the final steps to establish,²⁰ their National Information Sharing Mechanism (NISM). Over 1000 national stakeholders, mainly governmental institutions and research centres, civil society organizations and the private sector have actively contributed to the establishment of NISM's. Of the twenty-seven countries that had established their NISM in 2007, eight countries have either undertaken a second iteration of the data-gathering process, or partially updated their databases. Through the ongoing regional project in Asia funded by the Government of Japan, which began in March 2009, an additional six countries will establish their NISM, while seven countries from South and South-East Asia will update their databases.

11. WIEWS is a component of the Global System through which web access to all NISMs is provided. In view of the rapid growth in the number of countries that established their mechanism, and in light of the volume of information stored in their databases, a thorough restructuring of the global monitoring information system stored under WIEWS began in January 2009. The information system has been improved in terms of data query and delivery efficiency, and has been fully operational since June 2009. The latest version, released in June 2009, operates in twenty-one languages,²¹ as does the web version under WIEWS.²²

12. FAO, together with Bioversity International, has provided technical assistance to countries in undertaking the new monitoring approach for the *Global Plan of Action*. National experts from more than fifteen countries shared their direct experience by helping about twenty-five neighbouring countries to establish their NISM. Financial support for technical assistance activities was provided through the FAO Regular Programme, for about US\$ 485000, and with extra-budgetary resources provided by the Governments of Canada, Italy, Japan, the Netherlands, Norway and Spain, totalling approximately US\$ 2053000, since 2003.²³ In most countries, the financial support only partially covered the costs for the establishment of the NISM and national coordinating and participating institutions provided the remaining necessary financial resources and in-kind support.

13. The Working Group acknowledged the efforts undertaken in applying the new monitoring approach and noted the importance of country commitment towards maintaining the NISM. The Working Group recommended that the Commission recognize the need for extra-budgetary resources to apply the new monitoring approach in the maximum number of countries, and considered that the indicators and reporting format for monitoring the implementation of the *Global Plan of Action* may need to be revised, when the Commission has adopted the updated *Global Plan of Action*.²⁴

14. The Governing Body of the International Treaty, at its Third Session, welcomed the efforts underway to coordinate and improve information systems that document plant genetic

¹⁸ CGRFA-11/07/Report, paragraph 37.

¹⁹ Sixty countries have finalized: Algeria; Argentina; Armenia; Azerbaijan; Bangladesh; Benin; Bolivia; Burkina Faso; Cameroon; Chile; Congo, Rep. of; Congo, Dem. Rep. of; Costa Rica; Cuba; Czech Republic; Dominican Republic; Ecuador; Egypt; El Salvador; Ethiopia; Fiji; Georgia; Ghana; Guatemala; Guinea; India; Jamaica; Jordan; Kazakhstan; Kenya; Kyrgyzstan; Lao PDR; Lebanon; Malawi; Malaysia; Mali; Morocco; Nicaragua; Niger; Nigeria; Oman; Pakistan; Papua New Guinea; Paraguay; Peru; Philippines; Portugal; Senegal; Sri Lanka; Tajikistan; Tanzania, United Rep. of; Thailand; Togo; Turkey; Uganda; Uruguay; Uzbekistan; Venezuela, Rep. Bol. of; Vietnam; Zambia.

²⁰ Four countries are in the process of finalizing: Angola; Côte d'Ivoire; Mozambique; Yemen.

²¹ Arabic; Armenian; Azeri; Chinese; Czech; English; French; Georgian; German; Indonesian, Italian; Lao; Malay; Norwegian; Portuguese; Russian; Slovak; Spanish; Thai; Turkish; and Vietnamese.

²² <http://www.pgrfa.org>

²³ This budget figure covers only costs for the establishment of NISM's and does not include costs for the preparation and publication of country reports.

²⁴ CGRFA-12/09/7, paragraphs 24-25.

resources for food and agriculture, based on existing information systems, which should build the basis of the Global Information System, foreseen in Article 17, consistent with Article 12.3b of the International Treaty. It stressed the importance of assisting developing countries in this process bilaterally, or through existing multilateral frameworks, such as the Joint Capacity-building Programme between the FAO, the Secretariat of the International Treaty and Bioversity International.²⁵

15. The Governing Body of the International Treaty requested its Secretary to continue to collaborate with FAO and other relevant stakeholders on information technologies to facilitate their contribution to the continuous development of the global information system in the context of Article 17 of the Treaty, and also requested its Secretariat to develop a vision paper to be presented to the Fourth Session of the Governing Body to take stock of existing information systems and to outline a process for the development of this global information system.²⁶

16. The Commission may wish to consider the recommendations of its Working Group. It may also wish to reiterate the need to strengthen collaboration with the International Treaty to ensure that the further development of National Information Sharing Mechanisms provide a cost effective support for building the Global Information System, and to avoid duplication of efforts.

IV. GENE BANK STANDARDS

17. The Commission adopted Genebank Standards in 1993, providing an international benchmark.²⁷ The genebank standards have not undergone any formal revision since then. The Working Group, at its third session, recommended that the Commission continue to monitor and update the Genebank Standards, as required, in particular, for the collections of the CGIAR and other international institutions. Updating these standards, in coordination with the Commission, International Agricultural Research Centres (IARCs), the Global Crop Diversity Trust and other relevant organizations would be useful in ensuring that plant genetic resources are conserved under conditions that meet recognized and appropriate standards, based on current and available technological and scientific knowledge.²⁸

18. The Governing Body of the International Treaty invited the Commission to commence and coordinate the process for the revision of the genebank standards, in collaboration with competent institutes, including the IARCs, the Global Crop Diversity Trust and other relevant organizations, taking into account relevant ongoing work and initiatives. The Governing Body also requested its Bureau to coordinate with the Bureau of the Commission the agendas of the respective bodies for the purpose of discussing modalities for such revision and the ways and means for input of the Governing Body in the process.²⁹

19. The Commission may wish to recommend that FAO, in cooperation with the International Treaty, the CGIAR and other relevant international institutions, undertake a review of the Genebank Standards, for consideration by the Intergovernmental Technical Working Group which may wish to recommend further steps necessary to update the Genebank Standards.

²⁵ IT/GB-3/09/Report, Appendix A.4.

²⁶ IT/GB-3/09/Report, Appendix.A.7, para 22.

²⁷ <http://www.fao.org/nr/cgrfa/cgrfa-global/cgrfa-codes/en/>

²⁸ For instance, Bioversity International, the International Livestock Research Institute, the Technical Centre for Agricultural and Rural Cooperation, and FAO jointly developed a “Manual of Seed Handling in Genebanks”, for genebank curators and others working in genebanks.

²⁹ IT/GB-3/09/Report, Appendix A.7.

V. INTERNATIONAL CODE OF CONDUCT FOR PLANT GERMPLASM COLLECTING AND TRANSFER

20. The International Code of Conduct for Plant Germplasm Collecting and Transfer was adopted by the FAO Conference in 1993.³⁰ The Commission, at its Tenth Regular Session, endorsed the recommendations of the Working Group, that the Code of Conduct did not need to be updated at that time, in light of other priorities in the work of the Commission and in the development of the International Treaty, while consideration of the Code should remain on its agenda.³¹

21. The Commission may wish to consider if and when to begin updating of the Code of Conduct and accordingly schedule this work within its MYPOW. Should the Commission consider updating necessary at this time, the Commission may wish to invite the Governing Body to participate in or contribute to the revision of the Code of Conduct, in the context of Article 12.3.h of the International Treaty, and in light of the potential relevance of the Code of Conduct to the implementation of the Treaty and in order to avoid duplication of efforts.

VI. UNDERUTILISED CROPS, *IN SITU* CONSERVATION AND ON-FARM MANAGEMENT OF PLANT GENETIC RESOURCES

22. The Commission at its Eleventh Regular Session, requested that attention be given to work on crops essential for food security, including underutilised crops, and that this be considered in the context of its MYPOW.³²

23. Recognition of the importance of underutilised crops and their genetic diversity and *in situ* conservation of crops essential for food security has come to the forefront due to widespread food insecurity and the multiple impact of climate change (including extreme weather events), land-use change, water scarcity, transboundary plant pests and disease, and increasing demands for biofuels. FAO, together with Bioversity International and other partners, is involved in several initiatives for promoting *in situ* conservation, including crop wild relatives and use of genetic diversity for addressing climate change. The FAO Interdepartmental Working Group on Bioenergy is preparing studies on species such as *Jatropha* to understand the role of underutilised species in biofuel production, especially in rural areas.³³

24. On a number of occasions, the Commission discussed the development of a network of *in situ* areas, but no practical applications have yet been developed. A study on the status and needs of *in situ* conservation of crop wild relatives will be made available as Background Study Paper No. 41.

VII. PLANT BREEDING CAPACITY BUILDING

25. At its Eleventh Regular Session, the Commission confirmed the importance of strengthening capacity in plant breeding, including through a participatory approach, and strengthening capacities in biotechnologies as well as in seed systems, and initiatives such as the Global Partnership Initiative for Plant Breeding Capacity Building (GIPB). The Commission requested FAO to prepare an options paper to strengthen plant breeding in developing countries, identifying new opportunities for effective partnerships between the public and the private sector,

³⁰ C 1993/REP, Appendix E (<http://www.fao.org/nr/cgrfa/cgrfa-global/cgrfa-codes/en/>)

³¹ CGRFA-10/04/REP, paragraph 31.

³² CGRFA-11/07/Report, paragraph 28.

³³ <http://www.fao.org/multidisciplinary/interdepartmental-working-groups/bioenergy/en/>

with the involvement of the Centres of the Consultative Group on International Agricultural Research (CGIAR).³⁴

26. Under the framework of GIPB, FAO has continued to assess national plant breeding and associated biotechnology capacity worldwide to support the priority activities of the *Global Plan of Action* and the implementation of Article 6 of the International Treaty. At present, information on the status of national plant breeding capacities is available for eighty countries.³⁵ Regional consultations, including through e-conferences, have been organised for the South-East Asia sub-region (2008), and Latin America and the Caribbean region (2009), to develop regional/ sub-regional strategies for strengthening plant breeding capacities.³⁶ Similar consultations are being planned for the Sub-Saharan Africa region (2009) and the North-Africa and West Asia sub-regions in 2010.

27. During 2007-2009, GIPB, in collaboration with the CGIAR, national programmes and other partners, also organized and supported training courses on pre-breeding and related topics for participants from Africa, South-East Asia and Latin America and the Caribbean.³⁷ GIPB supports six projects in plant breeding through a competitive grant system, in concert with the Global Crop Diversity Trust and the CGIAR's Generation Challenge Programme. The GIPB website has been redesigned³⁸ and receives about 2500 visits a month. A number of technical publications³⁹ and awareness-raising information materials on, among other topics, climate change and food security have been produced during the period.

28. Financial support for these activities has been provided through the FAO Regular Programme and through extra-budgetary resources provided by the Global Crop Diversity Trust, the Secretariat of the International Treaty and the Governments of the Netherlands and Norway for a total of about US\$ 2700000 since 2007. For most activities, this support only partially covered the costs, and the national participating institutions provided financial contributions and in-kind support. A business plan for GIPB⁴⁰ has been developed through a multi-stakeholder consultative process. The business plan provides the basis for the paper with options to strengthen plant breeding that identifies new opportunities for effective partnerships to sustain plant breeding for crop production and use of plant genetic resources.⁴¹

VIII. STRENGTHENING SEED SYSTEMS

29. The Commission, at its Eleventh Regular Session, encouraged FAO to continue its work to strengthen seed systems, at the national, regional and global levels and recommended that a gap analysis be prepared considering in a balanced way, both the formal and informal seed sectors, as well as the relationship between breeding and seed systems.⁴²

30. FAO continues to be involved in strengthening national seed systems to ensure sustainable use of plant genetic resources, providing direct benefits to the livelihoods of agricultural communities. Currently, many farmers in developing countries do not fully benefit from improved seeds due to a combination of factors such as weak seed production and distribution systems, poor seed quality assurance systems, lack of access to and credit for inputs,

³⁴ CGRFA-11/07/Report, paragraph 33.

³⁵ Plant Breeding Surveys available at <http://km.fao.org/gipb/pbbc>

³⁶ http://km.fao.org/gipb/index.php?option=com_content&task=view&id=380&Itemid=271

³⁷ "Marker-assisted selection: current status and future perspectives in crops, livestock, forestry and fish"., FAO, 2007. Editors Guimaraes, E.P.; Ruane, J.; Sherf, B.D; Sonnino, A.; and Dargie, J.D. and "Biotechnology tools for conservation and use of plants: a chooll play for senior students", FAO, 2007.

³⁸ <http://km.fao.org/gipb>

³⁹ "Plant breeding and farmers participation". Editors Ceccarelli, S.; Guimaraes, E.P.; and Weltzien, E. in press.

⁴⁰ The GIPB Business Plan http://km.fao.org/gipb/images/pdf_files/GIPB_BusinessPlan_2009_2013.pdf.

⁴¹ CGRFA -12/09/ Inf. 19, *Identifying new opportunities and partnerships for plant breeding: options and challenges*.

⁴² CGRFA-11/07/Report, paragraph 34.

and inadequate seed policies. An analysis of gaps and challenges of seed systems is available to the Commission.⁴³

31. FAO collaborates with a number of regional seed associations and regional economic communities in Africa and Central Asia to develop a strategic approach and bring together public institutions and private companies to strengthen seed systems. At the sub-regional level, projects for harmonization of seed rules and regulations and improved seed policies, or revision of seed policies and seed legislations are completed or are under way in West Africa, Central Africa, East Africa, Southern Africa and West Asia and Central Asia.⁴⁴ Within the framework of the ‘Initiative on Soaring Food Prices’, FAO has prepared project proposals for more than US\$ 200 million⁴⁵ aimed at the expeditious growth of production and distribution of good quality seeds of the major food crops in over 100 countries to boost crop productivity, and thereby overcome the negative effects of high food prices. In 2009, a global initiative tentatively termed the “Seed Alliance Without Boundaries” was started in an effort to enhance the synergy of the public-private partnership among the seed sectors of developed and developing countries.

32. The Working Group, at its fourth session, noted with satisfaction the collaborative efforts led by FAO with national, regional and international organizations for strengthening capacity in plant breeding, in particular, through the GIPB, and for seed systems development. It emphasized the urgent need to strengthen efforts in these areas to meet the growing challenges of food security and climate change, and recommended that the Commission request FAO to enhance its work in strengthening plant breeding capacity and seed systems development, and stressed the need for the mobilization of greater international collaboration and commitment and necessary funds.⁴⁶

33. The draft Strategic Plan 2010-2017 for the implementation of the Multi-Year Programme of Work 2010-2017⁴⁷ (MYPow) proposes to consider future work on plant breeding, seed systems and crops essential for food security and sustainable agriculture at the Commission’s Thirteenth Regular Session. In this context, the Commission may wish to guide FAO with regard to the background information necessary to consider future work in these areas.

IX. GUIDANCE SOUGHT

34. The Commission may wish to:

- (a) Provide guidance on the maintenance of the Facilitating Mechanism web-based portal and its role in awareness-raising, linkages with the activities of the International Treaty and the Commission, as well as in the context of updating the *Global Plan of Action*;
- (b) Consider the recommendations of its Working Group to recognize the need for extra-budgetary resources to apply the new monitoring approach for the implementation of the *Global Plan of Action* in the maximum number of countries;
- (c) Reiterate the need to strengthen collaboration with the International Treaty to ensure that the National Information Sharing Mechanisms provide a cost effective support for building the Global Information System, and to avoid duplication of efforts;

⁴³ CGRFA-12/09/Inf.20, *Strengthening Seed Systems: a contribution to the preparation of the second State of the World’s Plant Genetic Resources for Food and Agriculture*.

⁴⁴ National seed policy and legislations developed and implemented in Cote d’Ivoire, Sierra Leone, The Gambia, Congo DRC and Burkina Faso. New projects are underway in Cameroon, Togo and Benin

⁴⁵ Projects under implementation through Technical Cooperation and through the EU Food Facility of the ISFP secretariat <http://www.fao.org/isfp/isfp-home/en/>

⁴⁶ CGRFA-12/09/7, paragraph 26.

⁴⁷ CGRFA-12/09/4, p. 13.

- (d) Recommend that FAO, in cooperation with the International Treaty, the CGIAR and other relevant international institutions, undertake a review of the Genebank Standards, for consideration by the Intergovernmental Technical Working Group and request the Working Group to recommend further steps to update the Genebank Standards; and recommend that its Bureau coordinate with the Bureau of the International Treaty the agendas of the respective bodies for the purpose of discussing modalities for such revision and the ways and means for input of the Governing Body in the process.
- (e) Consider reviewing and updating the International Code of Conduct for Plant Germplasm Collecting and Transfer, in the context of its MYPOW, and to invite the Governing Body of the International Treaty, the Centers of the CGIAR and other relevant international institutions to participate in this process;
- (f) Provide guidance to the Secretariat with regard to background information needed for considering of future work on plant breeding, seeds systems and crops and crop wild relatives essential for food security and sustainable agriculture, proposed in the draft Strategic Plan 2010-2017 for the implementation of the MYPOW, for the Commission's Thirteenth Regular Session.