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COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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IMPLEMENTATION OF THE SECOND GLOBAL PLAN OF ACTION FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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I. INTRODUCTION

1. The Commission on Genetic Resources for Food and Agriculture (Commission), at its Nineteenth Regular Session, considered FAO's activities in support of the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (Second GPA).[1] The Commission formulated several recommendations,[2] which the Council subsequently endorsed.[3]

2. This document provides information on actions taken by FAO in response to the Commission's recommendations and on other relevant work initiated or completed since its last session, for consideration by the Commission. It requests the guidance of the Commission on further work in these areas.

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

A. Conservation and sustainable use of crop wild relatives/wild food plants and farmers' varieties/landraces

3. In response to the Commission's request,[4] FAO conducted a survey addressed to National Focal Points (NFPs) and relevant stakeholders on the use of the Voluntary Guidelines for the Conservation and Sustainable Use of Crop Wild Relatives and Wild Food Plants (CWR/WFP Guidelines)[5] and the Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Landraces (FV/LR Guidelines).[6] Responses were received from a total of 31 countries for both Guidelines.

4. Results of the survey showed that the CWR/WFP Guidelines had been used in 18 of the 31 reporting countries (58 percent). These Guidelines mainly helped activity planning (in 48 percent or 15 countries) and implementation (35 percent or 11 countries). The existence of policies and activities already in place were the most commonly reported reason for the lack of use of the guidelines. Other reasons included lack of awareness of the Guidelines among stakeholders. NFPs from seven countries provided suggestions for the further development of the CWR/WFP Guidelines, including more detailed guidance on monitoring CWR and WFP populations *in situ*.

5. A total of 20 of 31 countries (65 percent) reported that they used the FV/LR Guidelines. The Guidelines were consulted mainly for activity planning (in 48 percent or 15 countries) and implementation (45 percent or 11 countries). Most countries not using the Guidelines had either relevant policies and activities already in place or were not aware of the Guidelines. NFPs from nine countries provided suggestions for the further development of the Guidelines, including an increased focus on best practices for the registration of FV/LR.

6. A webinar on on-farm management of plant genetic resources for food and agriculture (PGRFA) was held on 29 April 2024 in collaboration with the International Treaty on Plant Genetic Resources for Food and Agriculture to raise awareness of the relevance of PGRFA for food security and nutrition, and showcased national and international initiatives with the aim of sharing knowledge and best practices.[7]

B. Direct support to Members

7. During the reporting period FAO continued to support several activities in collaboration with international and local partners, related to *in situ* conservation and on-farm management of PGRFA,

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[1] FAO. 2011. *Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*. Rome. https://www.fao.org/4/i2624e/i2624e00.htm

[2] CGRFA-19/23/Report, paragraphs 48–57.

[3] CL 174/REP, paragraph 112.

[4] CGRFA-19/23/Report, paragraph 50.

[5] FAO. 2017. V*oluntary Guidelines for the Conservation and Sustainable Use of Crop Wild Relatives and Wild Food Plants*. Rome. https://openknowledge.fao.org/handle/20.500.14283/i7788en

[6] FAO. 2019. *Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Landraces*. Rome. http://www.fao.org/3/ca5601en/ca5601en.pdf

[7] Recording available from: https://www.fao.org/plant-production-protection/resources/multimedia/video-detail/on-farm-management-of-farmers--varieties-landraces/en

including through projects funded by the Global Environment Facility (GEF) in multiple countries. Many of these activities are cross-cutting, with inter-related components, including: developing and strengthening of policies; value chain development; increased technical capacities; stakeholder participation; gender mainstreaming; and improved knowledge management.

8. Over the reporting period, FAO continued to support strengthening the operation of community seed banks (CSBs) in various countries under the GEF's Dryland Sustainable Landscapes Impact Program in Southern Africa. Capacity-development plans are being prepared and implemented with the aim of supporting communities to establish and manage community seed banks and to carry out ecogeographical surveys, seed fairs and diversity wheels for crops and varieties. These include learning and exchange visits to existing CSBs in the region.[8]

III. *EX SITU* CONSERVATION

A. Application of the Genebank Standards for Plant Genetic Resources for Food and Agriculture

9. In the light of comments received from the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (Working Group), FAO finalized two draft practical guides assisting in the application of the *Genebank Standards for Plant Genetic Resources for Food and Agriculture*.[9] They are contained in the documents: *Draft Practical Guide for the Application of the Genebank Standards for Plant Genetic Resources for Food and Agriculture: Conservation in genebanks of species producing non-orthodox seeds*[10] and *Draft Practical Guide for the Application of the Genebank Standards for Plant Genetic Resources for Food and Agriculture: Conservation through cryopreservation*.[11]

B. Direct support to Members

10. During the reporting period, FAO supported various *ex situ* conservation activities in several countries. Interventions included assessments of the status of the tissue culture facilities and identifying areas in need of strengthening and capacity development, the development of targeted mobilization plans as well as support to the selection, characterization and passport data documentation at a national field genebank.[12]

IV. SUSTAINABLE USE

A. Review of status and trends of seed policies

11. The Commission, at its last session, reviewed and revised a draft concept note for further research, and recommended that FAO, in collaboration with the International Treaty, carry out further work on the effects of seed policies, laws and regulations, based on the revised concept note.[13] The document, *Effects of seed policies, laws and regulations*[14] provides more information on the status of implementation of the concept note.

B. Strengthening seed systems

12. Over the reporting period, FAO continued to support Members in strengthening their seed systems. Relevant seed-sector activities have been implemented, especially in developing countries, through a combination of Technical Cooperation Projects (TCPs) and Trust Fund Projects. In this regard, initiatives aimed at strengthening the seed delivery value chain were implemented in various

[8] For more information, see CGRFA/WG-PGR-12/24/4.1.
[9] FAO. 2014, *Genebank Standards for Plant Genetic Resources for Food and Agriculture*. Rome. https://www.fao.org/4/i3704e/i3704e.pdf
[10] CGRFA-20/25/9.3.1/Inf.1.
[11] CGRFA-20/25/9.3.1/Inf.2.
[12] For more information, see CGRFA/WG-PGR-12/24/4.1.
[13] CGRFA-19/23/Report, paragraphs 60–61.
[14] CGRFA-20/25/9.4.

countries.[15] These interventions included: support for the enhanced adoption of crop varieties; community-level seed production and delivery systems; pre-basic and basic seed production and supply; capacity development for seed-testing laboratories and international accreditation; training and provision of seed processing equipment; and strengthening seed-certification systems.

C. Rehabilitation of seed systems

13. FAO continued to assist countries during the reporting period, in partnership with other organizations, to restore agricultural production systems after disasters and conflict, including through the provision of emergency seed relief, and seed-security assessments in countries that restart crop production following crises.

14. During the reporting period, FAO, alongside national and international partners, made use of seed-security assessments to guide seed programme development in several countries[16], as well as implemented rapid assessments on the seed-security impacts caused by severe drought related to El Niño in 2023–24 across Southern Africa[17].

15. The remarkable expansion of scope of emergency responses involving seeds and planting materials has continued through the reporting period. Seeds and planting materials valued at USD 90 million were procured in 2023, with USD 64 million procured in 2024 up to 20 September. This compares with USD 83 million in 2022, USD 50 million in 2021, and USD 42 million in 2020.[18]

D. Strengthening plant breeding

16. The Joint FAO/IAEA Centre for Nuclear Techniques in Food and Agriculture (CJN), through its Plant Breeding and Genetics subprogramme, continues to support Members in designing and implementing innovative plant-breeding programmes that utilize radiation-induced mutation – such as gamma and X-ray irradiation – to increase genetic diversity and develop new crop varieties resilient to biotic and abiotic stresses. These efforts aim to enhance global food security and promote sustainable crop production systems.

17. Currently, the subprogramme is involved in the design and implementation of 61 national and regional TCPs related to crop improvement, benefitting over 100 countries. The subprogramme's outputs include human capacity building, technology transfer, infrastructure upgrades, and technical guidance to ensure the effective use of mutation breeding in crop improvement. Additionally, through the Coordinated Research Projects (CRPs) mechanism, CJN facilitates collaboration among researchers from over 50 institutions across 42 countries within five crop-improvement-focused projects. As a result of these efforts, 87 new crop varieties have been released in Members between 2021 and 2024. As of October 2024, the FAO/IAEA Mutant Variety Database held records of 3 448 mutant varieties across 238 crop species that have been released for cultivation in 75 countries.[19]

V. BUILDING SUSTAINABLE INSTITUTIONS AND HUMAN CAPACITIES

A. Capacity-building activities

18. In response to the Commission's recommendation, FAO continued to support the strengthening of human and institutional capacities for the conservation and sustainable use of PGRFA, especially in developing countries. The strengthening of partnerships and linkages was a critical delivery mechanism for FAO's work in this regard. Work in countries was facilitated through collaboration with various partners, including within the United Nations system, especially the World Food Programme and the World Meteorological Organization, in addition to the CGIAR Centres, the Global Crop Diversity Trust, the International Seed Federation and the International Seed Testing Association.

[15] CGRFA/WG-PGR-12/24/4.1.
[16] Afghanistan, Somalia, the Syrian Arab Republic, Yemen
[17] Angola, southern Madagascar, Malawi, Mozambique, Namibia, United Republic of Tanzania, Zambia and Zimbabwe
[18] CGRFA/WG-PGR-12/24/4.1.
[19] For more information, see CGRFA/WG-PGR-12/24/4.1.

19. Networks were also key to effective collaborations among partners for implementing the Second GPA with enhanced efficiencies. Over the reporting period, FAO provided support to various networks and bodies, including the global Food Security Cluster,[20] Standards for Supporting Agricultural Livelihoods in Emergencies,[21] the Integrated Seed Sector Development Africa programme[22] and Vision for Adapted Crops and Soils.[23]

20. FAO has continued to implement several field activities with the aim of strengthening capacities in countries. FAO also conducted training programmes for enhancing capacities in nursery and field inspections, pruning, integrated pest management, and varietal selection of fruit and nut saplings (including almond, walnut, hazelnut, berry crops, apple and grape).[24]

B. National Focal Points

21. Over the reporting period, the Commission's National Focal Points on PGRFA have continued to play an important role in the work of the Commission, in the preparation of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (Third Report) and the review of the Second GPA. To date, 136 countries have nominated National Focal Points, reflecting a high level of commitment for the implementation of the Second GPA.

C. World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture

22. In line with the Commission's request and following the finalization of the Third Report and clarification of a number of issues reported by countries, data in the World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture (WIEWS) have been updated and all data are being made accessible through the portal.

VI. GUIDANCE SOUGHT

23. The Commission may wish to recommend that FAO:

(i) invite countries to further strengthen their efforts to conserve PGRFA both *in situ* and *ex situ*, and to maintain them on-farm and strengthen the links and complementarity between *ex situ* and *in situ* conservation;

(ii) provide support to countries, including in the development or revision of their national plans for the conservation and sustainable use of crop wild relatives/wild food plants and farmers' varieties/landraces, taking into account the Commission's *Voluntary Guidelines for the Conservation and Sustainable Use of Crop Wild Relatives and Wild Food Plants*[25] and the *Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Landraces*;[26]

(iii) continue providing support to countries in their efforts to conserve PGRFA *ex situ* and *in situ*, and highlight the importance of maintaining PGRFA on-farm and strengthening the links and complementarity between *ex situ* and *in situ* conservation;

(iv) finalize, publish and disseminate the two practical guides for the implementation of the Genebank Standards for Plant Genetic Resources for Food and Agriculture;

[20] https://fscluster.org/
[21] https://seads-standards.org/
[22] https://issdafrica.org/
[23] https://www.fao.org/newsroom/detail/global-partnership-for-vision-for-adapted-crops-and-soilsinitiative/en
[24] UNJP/GEO/013/EC: EU/UN innovative action for private sector competitiveness in Georgia.
[25] FAO. 2017. *Voluntary Guidelines for the Conservation and Sustainable Use of Crop Wild Relatives and Wild Food Plants.* Rome. https://openknowledge.fao.org/handle/20.500.14283/i7788en
[26] FAO. 2019. *Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Landraces*. Rome. http://www.fao.org/3/ca5601en/ca5601en.pdf

(v) continue reporting, on an annual basis, on the status of implementation of SDG Target 2.5 and share results with the Working Group and the Commission;

(vi) invite countries to validate their National Focal Points for PGRFA, as given on the Commission's website, for correctness; and

(vii) continue operating and further developing the WIEWS portal and strengthening cooperation with GLIS and Genesys to avoid duplication of efforts.