



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

Продовольственная и
сельскохозяйственная организация
Объединенных Наций

Organización de las
Naciones Unidas para la
Alimentación y la Agricultura

منظمة
الغذية والزراعة
للأمم المتحدة

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Item 5.2 of the Provisional Agenda

Sixteenth Regular Session

Rome, 30 January - 3 February 2017

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

TABLE OF CONTENTS

	Paragraphs
I. Introduction	1 - 2
II. Country implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture	3 - 8
III. FAO activities supporting the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture	9
1. <i>In situ</i> conservation and on-farm management	10
A. Multistakeholder dialogue on <i>in situ</i> conservation and on-farm management of plant genetic resources for food and agriculture.....	11 - 13
B. Technical support	14 - 16
C. Farmers' varieties/landraces and crop wild relatives	17
2. <i>Ex situ</i> conservation	18 - 21
3. Sustainable use.....	22
A. Voluntary Guide for National Seed Policy Formulation	23 - 24
B. Strengthening seed systems.....	25 - 28
C. Rehabilitation of seed systems	29 - 33
D. Strengthening plant breeding	34 - 37

This document can be accessed using the Quick Response Code on this page;
an FAO initiative to minimize its environmental impact and promote greener communications.
Other documents can be consulted at www.fao.org



mr412

4.	Building sustainable institutions and human capacities.....	38
	A. National Strategy for PGRFA	39 - 42
	B. National Focal Points	43
	C. World Information and Early Warning System on PGRFA.....	44 - 46
IV.	Guidance sought.....	47

I. INTRODUCTION

1. In response to the *The Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture*¹, the Commission on Genetic Resources for Food and Agriculture (the Commission) agreed at its Thirteenth Regular Session, in 2011, on the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (Second GPA)², which the FAO Council adopted the same year³. According to the Second GPA “[o]verall progress on the implementation of the rolling Second GPA and the related follow-up processes will be monitored and guided by governments and other FAO Members through the Commission.”⁴ In order to discharge this function, the Commission adopted a set of indicators for monitoring the implementation of the Second GPA and agreed on a timeline.⁵ According to the timeline, an assessment of the implementation of the Second GPA should be presented to this session of the Commission.

2. In addition to presenting the key findings of the assessment of the implementation of the Second GPA (section II), this document provides information on FAO’s work in support of the implementation of the Second GPA (section III)⁶. The document seeks the Commission’s guidance with regard to the implementation and monitoring of the Second GPA, in particular:

- the completion of the first monitoring round for the Second GPA and the restructuring of the World Information and Early Warning System on plant genetic resources for food and agriculture (WIEWS);
- FAO activities supporting countries in the implementation of the Second GPA;
- the establishment of a global network on *in situ* and on-farm conservation of plant genetic resources for food and agriculture (PGRFA);
- the revised draft voluntary guidelines addressing national level conservation and use of farmers’ varieties/landraces, and those on the conservation of crop wild relatives.

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

Key findings

3. On 1 October 2015, FAO invited officially appointed National Focal Points (NFPs) to report through the WIEWS Reporting System on the status of PGRFA in their countries (as of 30 June 2014) and on activities undertaken by their countries between 1 January 2012 and 30 June 2014 to implement the Second GPA. The NFPs were asked to use the Reporting Format⁷ which is based on the indicators agreed by the Commission at its last session⁸ and requires NFPs to rate the level of achievement for each indicator. FAO also invited regional and international agricultural research centres holding PGRFA *ex situ* collections to provide information. The 11 centres of the Consultative Group on International Agricultural Research (CGIAR) conserving germplasm, as well as the World Vegetable Center provided information to FAO on the basis of an adapted version of the Reporting Format used by countries.

4. As of March 2016, 43 countries had completed the online Reporting Format (answering on average 58 percent of the questions). For one specific question and its three indicators associated with *ex situ* collection holdings, data on about 3.6 million accessions could be gathered from 71 countries

¹ Available online at: <http://www.fao.org/docrep/013/i1500e/i1500e00.htm>

² Available online at: <http://www.fao.org/docrep/015/i2624e/i2624e00.htm>

³ CL 143/REP, paragraph 43.

⁴ Second GPA, paragraph 315.

⁵ CGRFA-15/15/Report, paragraph 56.

⁶ CGRFA-15/15/Report, paragraph 50.

⁷ CGRFA-15/15/Inf.9.

⁸ CGRFA-14/13/Report, *Appendix C*.

and 12 international centres. Countries reported directly to FAO on 1.17 million accessions, while the other accessions were sourced from EURISCO and Genesys. The document *Summary assessment of the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture 2012-2014*⁹ outlines the process undertaken to prepare the assessment and the key results. A more detailed assessment of the implementation of the Second GPA is provided in the document *Assessment of the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture 2012–2014*.¹⁰

5. Overall, it should be noted that a greater number of country reports is needed to be able to draw conclusions as to the global state of implementation of the Second GPA.

Conservation

The assessment seems to indicate that in many countries *ex situ* conservation receives often more attention and tends to be better integrated into the PGRFA management cycle than *in situ* conservation. Overall progress on *ex situ* conservation was rated higher than progress on *in situ* conservation. Nevertheless, this relatively high satisfaction with the overall progress made on *ex situ* conservation should not obscure the fact that a high number of accessions is due for regeneration and the budget necessary for regeneration is in many cases not available, even in the case of some collections of global importance. The insufficient level of safety duplication makes the lack of funding for regeneration all the more worrisome. The Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (Working Group) expressed concern about the high number of accessions due for regeneration but without the necessary budget coverage and recommended that the Commission continue monitoring the issue closely.¹¹

NFP ratings show a mixed picture with regard to *in situ* conservation and on-farm management. The ratings clearly indicate low progress on *in situ* conservation and management of crop wild relatives and wild food plants and therefore underscore the need for their adequate integration into national programmes. On the other hand, relatively good progress was reported on specific activities, such as surveying and inventorying of PGRFA and on-farm management of farmers' varieties/landraces.

Sustainable use

Activities in support of sustainable use of PGRFA have been given the second highest rating. Activities reported include the characterization and evaluation of accessions, the management and distribution of collections, pre-breeding and breeding, seed systems and promotion of the diversification of crop production and increase of crop diversity on-farm. There were variations in the ratings provided for the different Priority Activities (PAs) of the Second GPA: supporting seed production received the highest average rating. Promoting diversification actions received the lowest average rating.

Building sustainable institutional and human capacities

On a positive note, progress in building institutional and human capacities was rated highest. The PA 13, *Building and Strengthening National Programmes*, received the highest rating of all PAs. On the other hand, PA 16, *Developing and strengthening systems for monitoring and safeguarding genetic diversity and minimizing genetic erosion*, scored lowest among the PAs of this area.

Next steps

6. The Working Group at its Eighth Session took note of the results of the assessment and recognized the potential of the monitoring framework to provide a synthetic view of the global status of the conservation and use of PGRFA if implemented by a sufficiently greater number of

⁹ CGRFA-16/17/Inf.17.1.

¹⁰ CGRFA-16/17/Inf.17.2.

¹¹ CGRFA-16/17/15, paragraph 13.

Commission Members. The relatively low level of participation in the first monitoring round raises the question as to how country monitoring and reporting can be improved.

7. Based on experiences gained during the first assessment, it can be concluded that NFPs and other reporting institutions require, at least initially, assistance and guidance in providing data on the implementation of the Second GPA. This and subsequent “quality checks” of the information provided require considerable human resources from FAO’s side. There is therefore at least for some time to come a need for FAO to provide technical support to NFPs in completing the Reporting Format. The Working Group also expressed concern about the high level of details required by the WIEWS Reporting System and recommended its simplification for the next reporting period.¹² There is therefore a need to consider simplifications, including clarifications, to the current Reporting Format. However, simplifications, which may require changes to the indicators adopted by the Commission, may make it difficult to reliably measure the impact of the Second GPA over time.

8. Given the low number of responses in the first monitoring round, the Working Group recommended that the Commission give countries more time to report and invite them to provide, through the WIEWS Reporting System, information on their implementation of the Second GPA between 2012 and 2014 as soon as possible and in no case later than 31 December 2017.

III. FAO ACTIVITIES SUPPORTING THE IMPLEMENTATION OF THE SECOND GLOBAL PLAN OF ACTION FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

9. This section reflects the structure of the Second GPA. It covers: *in situ* and *ex situ* conservation of PGRFA; sustainable use of PGRFA; and institutional and human capacities for PGRFA conservation and use.

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

10. The Commission emphasized the importance of *in situ* conservation and on-farm management on many occasions.¹³ At its last session, it considered the issue of establishing a global network for *in situ* conservation and on-farm management of PGRFA as well as draft guidelines for the national level conservation of farmers’ varieties/landraces and crop wild relatives.

A. Multistakeholder dialogue on *in situ* conservation and on-farm management of plant genetic resources for food and agriculture

11. The Commission, at its Fifteenth Regular Session, took note of the concept note for *Global networking on in situ conservation and on-farm management of plant genetic resources for food and agriculture*. It requested FAO to convene before the Eighth Session of the Working Group an informal multistakeholder dialogue to discuss options for networking for *in situ* conservation and on-farm management, its functions, governance and budgetary requirements, in particular to ensure its long-term funding¹⁴. The Commission requested FAO to revise the concept note in the light of the outcomes of the multistakeholder dialogue, for consideration by the Commission at this session.

12. In response to the Commission’s request, FAO and the French Agricultural Research Centre for International Development (CIRAD) co-organized an informal multi-stakeholder dialogue from 6 to 7 June 2016 at FAO headquarters. A summary of the outcomes of the dialogue was presented to the Working Group by its Chair during the session.¹⁵ The document *Global networking on in situ conservation and on-farm management of plant genetic resources for food and agriculture – Revised concept note*¹⁶ takes into account the outcomes of the multi-stakeholder dialogue, the

¹² CGRFA-16/17/15, paragraph 13.

¹³ CGRFA-15/15/Report, paragraph 51; CGRFA-14/13/Report, paragraph 96; CGRFA-13/11/Report, paragraph 41.

¹⁴ CGRFA-15/15/Report, paragraph 51.

¹⁵ CGRFA-16/17/Inf.21.

¹⁶ CGRFA-16/17/Inf.20.

recommendations of the Working Group and written comments received by FAO from Canada and Germany.

13. The Working Group recommended that the Commission request FAO to continue strengthening national and regional PGRFA conservation networks, including through capacity building activities and facilitating partnerships. It further recommended that the Commission request FAO to support countries, including through the call for extra-budgetary resources, in their efforts to conserve PGRFA including crop wild relatives, through complementary *ex situ*, *in situ* and on farm conservation programmes.

B. Technical support

14. In response to the Commission's request, FAO continued supporting, in collaboration with international and local partners, several activities on *in situ* conservation and on-farm management of PGRFA. In Moldova, FAO's support resulted in better coordination of efforts amongst partners, improved efficiency in the conservation of PGRFA and enhanced exchange of materials, knowledge and experience among stakeholders¹⁷.

15. FAO supported Albania's efforts aimed at the sustainable management of local crop varieties through strengthening Albania's capacity in surveying and collecting PGRFA, and for the characterization and evaluation of target crops¹⁸. Ecuador, with FAO's technical support as the implementing agency of a project funded by the Global Environment Facility, mainstreamed crop diversity conservation and use into public policies and plans, including those related to land use. The resulting 'Participatory Guarantee Systems' ensures compliance of products with good agricultural practices¹⁹. Crop diversity was promoted for pest and disease management, and linkages to value chains were fostered for incorporating products into local markets and agro-tourism initiatives.

16. FAO, in collaboration with Bioversity International and other partners, continues to provide support to Mauritius, South Africa and Zambia in the conservation and sustainable use of crop wild relatives (CWR) through strengthening of capacities in areas, such as predictive characterization of CWR and their use in pre-breeding. Leveraging FAO's *Guidelines for Developing a National Strategy for Plant Genetic Resources for Food and Agriculture*²⁰, the three countries are currently developing National Strategic Action Plans for *in situ* conservation and sustainable use of CWR.

C. Farmers' varieties/landraces and crop wild relatives

17. The Commission, at its Fifteenth Regular Session, invited the Working Group to review and revise two draft guidelines, *National level conservation and use of landraces* and *National level conservation of crop wild relatives* (Guidelines), considering inputs received from Members and stakeholders, such as smallholders and indigenous peoples and local communities²¹. The Working Group reviewed the Guidelines and agreed to invite Commission Members and observers to submit further comments. It recommended to expand the Guidelines by adding information on capacity building with a view to better support Members in the conservation and sustainable use of farmers' varieties/landraces and crop wild relatives. The Working Group also recommended that the voluntary nature of the two Guidelines be clearly expressed in their titles and that the titles reflect the terminology used in the Second GPA for these materials.²² The documents, *National level*

¹⁷ TCP/MOL/3504 *Support to the development of a National Programme for Plant Genetic Resources for Food and Agriculture in Moldova*.

¹⁸ TCP/ALB/3401 *Development of an improved and resilient system for managing local crop varieties in place, which contributes directly to sustainable crop production intensification*.

¹⁹ GCP/ECU/086/GFF *Mainstreaming the use and conservation of agrobiodiversity in public policy through integrated strategies and in situ implementation in four Andean Highlands provinces*.

²⁰ <http://www.fao.org/publications/card/en/c/20217930-4d14-4e87-b144-8e0adb6828a7/>

²¹ CGRFA-15/15/Report, paragraph 51.

²² CGRFA-16/17/15, paragraph 17.

*conservation and use of farmers' varieties/landraces – Revised Draft Voluntary Guidelines*²³ and *National level conservation of crop wild relatives – Revised Draft Voluntary Guidelines*²⁴, were revised in the light of comments received and are provided for consideration of the Commission.

2. *EX SITU* CONSERVATION

18. At its Fifteenth Regular Session, the Commission requested FAO to continue supporting countries in the implementation of the *Genebank Standards for Plant Genetic Resources for Food and Agriculture*²⁵. The Genebank Standards are also used by the Global Crop Diversity Trust, a supporting organization to the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty), in support to the CGIAR genebanks.

19. FAO provided during the reporting period support to the establishment of field genebanks for germplasm, including of CWR, of apricot and grape in Armenia, a centre for genetic diversity for both plants²⁶. Certain germplasm accessions of Armenian origin were repatriated from other countries.

20. Somalia received support from FAO in the training of genebank personnel and the characterization and evaluation of germplasm accessions. Safety duplications of important PGRFA of Somali origin were deposited in genebanks of the CGIAR, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), the International Institute of Tropical Agriculture (IITA) and the International Center for Tropical Agriculture (CIAT) and the Genetic Resources Research Institute of Kenya (formerly the National Genebank of Kenya)²⁷.

21. Through FAO support in the collection, characterization and evaluation of germplasm of 15 regionally important crops, 210 new accessions were added to the collection of the National Germplasm Bank of Ecuador²⁸.

3. SUSTAINABLE USE

22. The Commission, at its Fifteenth Regular Session, reaffirmed the need for technical support in the area of crop improvement and for plant breeding capacity and seed systems' development in support of the implementation of the Second GPA and the Treaty, taking into account the work of the Treaty²⁹. During the reporting period, FAO continued and intensified its technical support to crop improvement, seed delivery and better coordination between the two as well as its support to the development of related policies.

A. Voluntary Guide for National Seed Policy Formulation

23. The Commission, at its last session³⁰, endorsed the *Voluntary Guide for National Seed Policy Formulation*³¹ (Voluntary Guide) which is currently available in English, French and Spanish, with translations in other languages pending. Since its publication, the Voluntary Guide has received considerable attention and is being used by an increasing number of policy makers and administrators. FAO presented the Voluntary Guide at an international conference on *Seeds: the solution to current and future food challenges*, co-organized in October 2015 by the French Groupement National

²³ CGRFA-16/17/Inf.18.

²⁴ CGRFA-16/17/Inf.19.

²⁵ CGRFA-15/15/Report, paragraph 51.

²⁶ TCP/ARM/3502 *Support for the Establishment of Apricot Collection Orchards for the Purpose of Genetic Fund Preservation - Phase II* of TCP/ARM/3302; TCP/ARM/3503. *Grape Genetic Resources Conservation and Sustainable Use in Armenia*.

²⁷ OSRO/SOM/516/EC *Improving the genetic quality of seeds in Somalia*.

²⁸ GCP/ECU/086/GFF *Mainstreaming the use and conservation of agrobiodiversity in public policy through integrated strategies and in situ implementation in four Andean Highlands provinces*.

²⁹ CGRFA-15/15/Report, paragraph 53.

³⁰ CGRFA-15/15/Report, paragraph 52.

³¹ Available online from: <http://www.fao.org/publications/card/en/c/272c15fb-0949-479d-aba9-72d918891fc5/>

Interprofessionnel des Semences et Plants (GNIS) and FAO under the auspices of the Expo 2015 that was held in Milan, Italy under the theme "Feeding the Planet, Energy for Life". The Voluntary Guide has since been presented to various stakeholders and expert forums, including an expert meeting, co-organized by the Third World Network, South Centre and Oxfam Novib in March 2016. It has so far been used by several countries, such as Costa Rica, Guinea Bissau and Haiti in establishing their National Seed Policy.

24. In light of the progress on national seed policy development, including through the technical assistance provided by FAO and the Voluntary Guide, it is proposed to undertake a review of the status and trends of national seed policies, for consideration by the Commission at its next session.³²

B. Strengthening seed systems

25. In 2015, FAO continued to provide support to the strengthening of seed systems in various countries, including through partnerships at national, regional and international levels dedicated to the provision of quality seeds and planting materials. Relevant seed sector activities have been implemented especially in developing countries through a combination of Technical Cooperation Projects (TCPs) and Trust Fund projects. Countries supported by FAO in the development or revision of seed legislation include: Azerbaijan³³, Benin³⁴, Burkina Faso, Chad³⁵, Ecuador³⁶, Georgia³⁷, Guinea³⁸, Guinea Bissau³⁹, Haiti⁴⁰ and Nicaragua.

26. FAO also continued to support community-level seed delivery systems, especially through the creation of an enabling environment for the establishment of small- and medium-size seed enterprises. In Honduras, for example, small- and medium-size enterprises contributed to a significant increase in the production of maize, beans, rice and sorghum by making available quality seeds materials of well-adapted crop varieties to about 300 000 mainly smallholder farmers, including indigenous peoples.⁴¹ Similar support was provided in Ecuador⁴². In Somalia, landraces of maize, sorghum and cowpea were purified, bulked and distributed to farmers with the support of FAO⁴³. In Georgia, FAO helped to improve significantly the overall seed delivery system by strengthening the national capacity for seed certification and, in addition, increasing the capacity of farms to multiply early generation seeds, i.e. breeder and foundation seeds⁴⁴.

27. FAO contributed, through a project for seed sector development funded by the Government of Turkey⁴⁵, to the development of a Regional Seed Agreement and a related implementation strategy,

³² CGRFA-16/17/22.

³³ TCP/AZE/3503 *Support to Seed Sector Development in Azerbaijan.*

³⁴ TCP/BEN/3402 *Projet d'Appui au Développement de la Filière Semence Maïs (PADFSM).*

³⁵ TCP/CHD/3403 *Appui à l'élaboration d'une politique semencière au Tchad.*

³⁶ TCP/ECU/3502 *Apoyo al fortalecimiento en los procesos de fomento de servicios especializados del Ministerio de Agricultura, Ganadería, Acuacultura y Pesca (MAGAP) en el ámbito de la innovación tecnológica y producción de semillas.*

³⁷ GCP/GEO/004/AUT *Capacity Development of the Ministry of Agriculture of Georgia: Improved Policy Making and Effective Implementation of the Strategy for Agricultural Development (contribution to ENPARD Georgia Programme).*

³⁸ TCP/GUI/3402 *L'objectif global du projet est de contribuer à améliorer la sécurité alimentaire et l'état nutritionnel de la population par une augmentation durable de la production et de la productivité des cultures vivrières.*

³⁹ TCP/GBS/3503 *Appui au développement durable d'un secteur semencier performant en Guinée Bissau.*

⁴⁰ UTF/HAI/033/HAI *Appui à la relance du secteur semencier.*

⁴¹ TCP/HON/3501 *Desarrollo de las Capacidades de Gestión Empresarial y Competitividad de las Redes de Empresas de Producción de Semilla.*

⁴² TCP/ECU/3502 *Apoyo al fortalecimiento en los procesos de fomento de servicios especializados del Ministerio de Agricultura, Ganadería, Acuacultura y Pesca (MAGAP) en el ámbito de la innovación tecnológica y producción de semillas.*

⁴³ OSRO/SOM/516/EC *Improving the genetic quality of seeds in Somalia.*

⁴⁴ GCP /GEO/003/AUS *National programme for rehabilitation of seed production system in Georgia.*

⁴⁵ GCP /INT/123/MUL *Seed Sector Development in Countries of the Economic Cooperation Organization.*

aiming at facilitating seed trade in the ECO region consisting of Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Turkmenistan, Turkey and Uzbekistan.

28. In partnership with the World Food Programme (WFP) and the International Fund for Agricultural Development (IFAD), FAO currently supports efforts to improve crop production in Mozambique by making available quality seeds and establishing Farmer Field Schools⁴⁶. Through the South-South Cooperation mechanism and in collaboration with the government of Venezuela, FAO also supports the strengthening of capacities in the rice production of ten countries in Africa (Benin, Cameroon, Côte d'Ivoire, Guinea, Kenya, Mali, Nigeria, Senegal, the United Republic of Tanzania and Uganda⁴⁷).

C. Rehabilitation of seed systems

29. In order to ensure that emergency seed relief interventions form part of the overall seed sector development in the long term, FAO supports the use of better seed system security assessment methodologies in countries that are affected by, or prone to, natural disasters and conflicts. FAO carried out seed security assessments and seed relief operations in collaboration with partners in Chad, Mali and Uganda, with further activities planned for Ethiopia, Kenya, Somalia and South Sudan. In partnership with WFP, FAO provides agricultural inputs and assets to approximately 125 000 at-risk households in Nepal following the April 2015 earthquake⁴⁸.

30. To mitigate the effects of economic turmoil caused by insurgency and natural catastrophes in Pakistan, FAO currently supports the restoration of cropping systems, including by improving access to quality inputs (seed and fertilizers) and the rehabilitation of fruit orchards⁴⁹. In response to similar pressures, Madagascar received assistance in the development of a new agricultural extension system and the rehabilitation of seed systems⁵⁰ while the Democratic People's Republic of Korea received similar support in response to the significant decreases in harvest following the severe drought of 2014⁵¹.

31. Other emergency-related seed interventions in 2015 included support provided to: (i) farmers in the Philippines affected by civil unrest and natural disasters⁵²; (ii) over 15 000 smallholder farmers in Ethiopia affected by drought in 2015 caused by El Niño⁵³; (iii) vulnerable farming households affected by Hurricane Fred in Cape Verde in 2015; (iv) 2 400 vulnerable Syrian households affected by snow storms and unusually low temperatures in January 2015⁵⁴; (v) farmers affected by severe

⁴⁶ GCP /MOZ/111/EC *National Programme on Food security - (EU-MDG Initiative - Agriculture, food security, rural development and natural resource management.*

⁴⁷ GCP/RAF/489/VEN *Partnership for Sustainable Rice Systems Development in Sub-Saharan Africa.*

⁴⁸ OSRO/NEP/504/CAN *Restoring agricultural-based livelihoods of vulnerable earthquake-affected smallholder farmers in Sindhupalchowk, Nuwakot, Dhading, Gorkha, Rasuwa and Dolakha; OSRO/NEP/501/BEL Emergency assistance for the restoration of earth affected agricultural system in central Nepal for food and livelihood security; TCP/NEP/3504 (E) Emergency response to restore the rural livelihoods of earthquake affected farmers.*

⁴⁹ OSRO/PAK/502/JPN *Project for Assistance to the Recovery and Development of the Agricultural Economy in Federally Administered Tribal Areas.*

⁵⁰ GCP /MAG/081/EC *Actions Intégrées en Nutrition et Alimentation.*

⁵¹ TCP/DRK/3505 (E) *Support to vulnerable farmers to mitigate the impact of drought in North and South Hwanghae provinces of the DPR Korea.*

⁵² TCP/PHI/3504 (E) *Emergency response to restore the livelihoods of conflict affected communities in the Autonomous Region in Muslim Mindanao (ARMM) and in Region XII.*

⁵³ TCP/ETH/3504 (15/XII/ETH/232) *Emergency assistance for vulnerable smallholder households affected by El Niño-induced drought in eastern Amhara and southern Tigray Regions.*

⁵⁴ TCP/SYR/3502 *Emergency assistance to restore the livelihoods of vulnerable greenhouse vegetable crop producers affected by the snow storm.*

flooding in Malawi⁵⁵ and Ghana⁵⁶ in December 2014 and June 2015, respectively; and (vi) farmers affected by the ongoing civil strife in Yemen who received quality seeds⁵⁷.

32. FAO also supported Sudan⁵⁸ and South Sudan⁵⁹ through enhancing their capacities to adopt climate smart agricultural production systems. In Sudan, this included the procurement and distribution of quality seeds and planting materials.

33. FAO continued to foster and strengthen partnerships with relevant regional and international organizations with seed sector development related mandates. These include especially the Africa Seed Trade Association, International Seed Federation (ISF), International Seed Testing Association (ISTA), OECD Seed Schemes, and the Union for the Protection of New Plant Varieties (UPOV).

D. Strengthening plant breeding

34. The Commission, at its last session, reaffirmed the need for technical support in the area of crop improvement and plant breeding capacity.⁶⁰ During the reporting period, FAO continued to implement several regular programme and trust fund activities to strengthen capacities for developing well-adapted crop varieties that are most suited to local agro-ecologies and farming systems:

- With FAO's support, root and tuber crops value chains are being strengthened in Benin, Cameroon, Côte d'Ivoire, Ghana, Malawi, Rwanda, and Uganda⁶¹. The interventions include strengthening capacities for the development, handling and dissemination of disease-free planting materials for cassava, yam and potatoes.
- In Bangladesh, FAO assists national partners in developing capacity for crop variety development and adaptation, and in defining the best framework for quality assurance, in partnership with the private sector and seed producers⁶².
- In Zambia, FAO supports efforts to genetically improve rice⁶³. The interventions include the production of enhanced breeder and foundation seeds.
- FAO, together with other organizations, also promotes crop diversification in Ethiopia through integration of adaptable crops and new varieties into the existing farming systems⁶⁴. The focus is on nutrition-based agriculture building on nutritionally rich crops and varieties, post-harvest management and loss reduction.

35. As contribution to enhanced nutrition, FAO also continued to build upon the success of the International Year of Quinoa by promoting the production, evaluation, management, utilization, and

⁵⁵ OSRO/MLW/502/BEL *Emergency assistance for resuming smallholder crop production in flood affected districts of Malawi.*

⁵⁶ TCP/GHA/3506 *Restoration of productive capacities of flood affected agricultural households in Ghana.*

⁵⁷ TCP/YEM/3503 *Emergency livelihood support to Internally Displaced People (IDPs) and vulnerable host communities living in conflict affected areas of Al Dhale Governorate.*

⁵⁸ OSRO/SUD/506/ITA *Integrated Food Security and Livelihoods Project (IFSLP) in Eastern Sudan; OSRO/SUD/507/CHA *Life-saving food assistance and livelihood support to IDPs and vulnerable households affected by conflict in North Darfur State.**

⁵⁹ TCP/SSD/3405 *Emergency livelihood support to Internally Displaced Persons (IDPs) and vulnerable host community families affected by the recent crisis.*

⁶⁰ CGRFA-15/15 Report, paragraph 53.

⁶¹ GCP/RAF/448/EC *Strengthening linkages between small actors and buyers in the Roots and Tubers Sector in Africa.*

⁶² UTF/BGD/044/BGD *Integrated Agricultural Productivity Project Technical Assistance and Capacity Development Component.*

⁶³ TCP/ZAM/3501 *Strengthening Rice Seed Production and Enhancing Extension Services to Increase Rice Production in Zambia.*

⁶⁴ GCP /ETH/085/MUL *Increase the production and productivity of poor and vulnerable smallholder farmers and hence increase the availability of diversified livelihood through increased production in crop and livestock products for household consumption as well cash generation from market sales of these products.*

marketing of the crop under diverse farming systems and agro-ecological regions in 26 countries across Africa, the Near East and Asia.

36. In February 2016, the FAO International Symposium on *The Role of Agricultural Biotechnologies in Sustainable Food Systems and Nutrition* was held in Rome at FAO headquarters⁶⁵. The symposium's objective was to explore the application of biotechnologies for the benefit of family farmers. Over 400 participants took part in the symposium, which highlighted successful case studies for the application of biotechnologies in developing sustainable food systems and improved nutrition. Intellectual Property Rights, funding and scientific and technical capacities were identified as important factors in the adoption of diverse agricultural biotechnologies.

37. The Joint Division of FAO and the International Atomic Energy Agency (IAEA) for Nuclear Techniques in Food and Agriculture (AGE) supported 99 countries in the implementation of 72 crop-improvement related TCPs. Additionally, through the Coordinated Research Projects mechanism of the IAEA, AGE networked with researchers from 44 different countries to collaborate on six crop improvement-themed collaborative projects. These efforts have resulted in the development of about 4 241 mutant lines in 17 different crops in 32 countries and 64 publications. 337 trainees acquired enhanced relevant skills both at AGE's Agricultural and Biotechnology Laboratory in Seibersdorf, Austria and other advanced training facilities around the world. An updated version of the Mutant Variety Database, which is a searchable online tool for over 3 200 officially released mutant crop varieties worldwide, became available in May 2015⁶⁶.

4. BUILDING SUSTAINABLE INSTITUTIONS AND HUMAN CAPACITIES

38. PGRFA activities are carried out by public entities, private companies, nongovernmental organizations, botanic gardens, farmers, indigenous and local communities, and individuals from the agriculture, environment, research and development sectors. The integration of such different actors in the framework of a unified and coherent national programme provides the opportunity to add value to their diverse efforts so that the whole becomes bigger than the sum of its parts.⁶⁷ The Commission therefore assists countries in building sustainable institutions and structures for PGRFA governance.

A. National Strategy for PGRFA

39. The Commission, at its last session, endorsed as a voluntary reference tool *Guidelines for Developing a National Strategy for Plant Genetic Resources for Food and Agriculture*. These guidelines have been published and are available in English, French and Spanish, with translations in other languages pending⁶⁸.

40. Increasingly, regions develop strategies for the conservation and sustainable use of PGRFA. Examples include the *Strategic action plan to strengthen conservation and use of Mesoamerican plant genetic resources in adapting agriculture to climate change* (SAPM) 2014-2024. In the Near East, FAO worked with four countries (Egypt, Lebanon, Jordan and Iran) on the development of national PGRFA strategies that identify priority activities for the conservation and sustainable utilization of PGRFA in the countries⁶⁹.

41. Efforts are underway in Moldova to establish a national programme for the long-term conservation and sustainable utilization of the diversity of PGRFA. The work addresses the four main areas of the Second GPA: *in situ* conservation, *ex situ* conservation, sustainable use and institution and capacity building.

⁶⁵ Symposium website <http://www.fao.org/about/meetings/agribiotechs-symposium/en/>

⁶⁶ Available online from: <http://mvd.iaea.org/#!/Home>

⁶⁷ Second GPA, paragraph 214.

⁶⁸ Available online from: <http://www.fao.org/publications/card/en/c/20217930-4d14-4e87-b144-8e0adb6828a7/>

⁶⁹ TCP/SNO/3401 *Optimizing the Use of Plant Genetic Resources for Food and Agriculture for Adaptation to Climate Change*.

42. To develop a cooperative framework that accelerates cross-border flow of PGRFA among Asian countries, FAO in collaboration with the Treaty, supported capacity development in 15 countries, namely Bangladesh, Bhutan, Cambodia, India, Indonesia, Lao, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam⁷⁰.

B. National Focal Points

43. The Commission, at its last session, invited all countries that have not yet done so to nominate a NFP for reporting on the implementation of the Second GPA⁷¹. In response to this request, a total of 100 NFPs have been officially appointed for monitoring the implementation of the Second GPA and for the preparation of country reports for *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*. This might reflect both, a strong commitment by countries to the implementation of the Second GPA and a common interest of countries in the status and trends of the conservation and sustainable use of PGRFA.

C. World Information and Early Warning System on PGRFA

44. Overall progress on the implementation of the rolling Second GPA and the related follow-up processes are monitored and guided by governments and other FAO Members through the Commission. The Commission, at its last session, welcomed the upgrading of the computer application for the National Information Sharing Mechanisms (NISMs) and its full integration with WIEWS to facilitate reporting on the implementation of the Second GPA.⁷²

45. Since 2006 countries have been using their NISMs for publishing publicly accessible information on PGRFA. In many cases NISMs turned out to be useful for monitoring the implementation of the Second GPA and the preparation of periodic global assessments of the state of the world's PGRFA. At countries' request, FAO initially agreed to host many NISMs on its web servers⁷³. Following the implementation of a new information technology policy at FAO in June 2015, the domain at which the NISM were hosted was discontinued. The NISMs have been archived and migrated to a new address under FAO domain where they will be maintained for historical reasons.⁷⁴ Effective 1 March 2017, only the archived NISM databases will be accessible while the individual country NISM portals will be discontinued on FAO's web servers. Countries wishing to keep their NISM portals are therefore requested to kindly inform FAO through their NFPs before 1 March 2017 to facilitate a smooth transition of their NISM portals to an alternative web server.

46. WIEWS is currently being restructured to serve the dual purpose of facilitating reporting on the implementation of the Second GPA by NFPs and key PGRFA stakeholders, and of making such information accessible to the general public through a user-friendly interface. Once finalized, WIEWS will provide an overview of the national, regional and global status of the conservation and use of PGRFA. It will reflect the level of progress made in the 18 Priority Areas of the Second GPA, based on the set of 63 indicators adopted by the Commission, also taking into account the ratings of NFPs. Under WIEWS the Higher-order Composite Indices showing progress towards the three PGRFA targets at national, regional and global levels will also be published.

⁷⁰ GCP/RAS/284/JPN *Enhancing Understanding and implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture in Asia*.

⁷¹ CGRFA-15/15/Report, paragraph 18.

⁷² CGRFA-15/15/Report, paragraph 56

⁷³ www.pgrfa.org

⁷⁴ www.fao.org/pgrfa-gpa-archive

IV. GUIDANCE SOUGHT

47. The Commission may wish to:

- (i) Take note of the results of the assessment of the implementation of the Second GPA and invite countries to provide, through the WIEWS Reporting System, information on their implementation of the Second GPA between 2012 and 2014 as soon as possible and in no case later than 31 December 2017;
- (ii) Express concern regarding the high number of accessions due for regeneration for which no funds are currently available, appeal to governments and relevant international organizations to make funds available to allow for regeneration of accessions and invite FAO to continue monitoring the issue closely;
- (iii) Request FAO to consult Commission Members and observers on possibilities to simplify the Reporting Format and to submit a draft proposal for a simplified Reporting Format to the next session of the Working Group, for its consideration;
- (iv) Request FAO to continue supporting NFPs in reporting through WIEWS on the status of PGRFA and the implementation of the Second GPA in their country to FAO at agreed intervals;
- (v) Request FAO to complete the restructuring of WIEWS and use it for the publication of information on the implementation of the Second GPA, and in support of the implementation of the Treaty;
- (vi) Request FAO to support countries in their efforts to conserve PGRFA *in situ* and on farm, including crop wild relatives, and in strengthening the links and complementarity between *ex situ* and *in situ* conservation;
- (vii) Request FAO to continue strengthening national and regional PGRFA conservation networks, including through capacity building activities and facilitating partnerships;
- (viii) Review the concept note for *Global networking on in situ conservation and on-farm management of plant genetic resources for food and agriculture* with a view to decide on next steps, including the convening of an inaugural session of the network prior to the next session of the Working Group;
- (ix) Review the revised draft voluntary guidelines on *National level conservation and use of farmers' varieties/landraces* and on *National level conservation of crop wild relatives* with a view to endorse them;
- (x) Request FAO to continue providing support to countries in their efforts to maintain genebanks for the continued collecting, conservation, characterization evaluation and use of crop germplasm;
- (xi) Request FAO to continue supporting countries in strengthening in an inclusive manner their crop improvement and plant breeding capacities, including through multi-stakeholder platforms and the Joint Programme of FAO and the IAEA and, in particular, in support of the implementation of the Second GPA and Article 6 of the Treaty;
- (xii) Request FAO to continue support countries in the development of national seed policies, including through the use of the *Voluntary Guide for National Seed Policy Formulation*; and
- (xiii) Call for extra-budgetary funds to support countries in the implementation and monitoring of the Second GPA, including through the development and implementation of national strategies for PGRFA, taking into account the Commission's *Guidelines for Developing a National Strategy for Plant Genetic Resources for Food and Agriculture* as appropriate.