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United Nations



**The International Treaty**  
ON PLANT GENETIC RESOURCES  
FOR FOOD AND AGRICULTURE

## Item 15.1 of the Provisional Agenda

### EIGHTH SESSION OF THE GOVERNING BODY

Rome, 11 – 16 November 2019

**Report from the Secretariat of the  
Commission on Genetic Resources for Food and Agriculture, including  
on FAO activities related to the supporting components of the  
International Treaty**

### Executive Summary

The Secretary of the Commission on Genetic Resources for Food and Agriculture reports regularly to sessions of the Treaty on the implementation of relevant components of the Commission's Multi-Year Programme of Work, in particular the supporting components of the Treaty that are under the Commission's aegis, including *The State of the World's Plant Genetic Resources for Food and Agriculture* and the Second Global Plan of Action for Plant Genetic Resources for food and Agriculture.

This report, prepared in close collaboration with the responsible technical departments of FAO, focusses on activities relevant to plant genetic resources for food and agriculture and the supporting components of the Treaty carried out since the Seventh Session of the Governing Body.

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## I. INTRODUCTION

1. According to the *Joint Statement* regarding the Cooperation between the International Treaty and the Commission on Genetic Resources for Food and Agriculture (Commission), “the Secretary of the Commission will report regularly to sessions of the Treaty on the implementation of relevant components of the Commission’s Multi-Year Programme of Work, in particular regarding the supporting components of the Treaty that are under its aegis, including *The State of the World’s Plant Genetic Resources for Food and Agriculture* and the Global Plan of Action.”<sup>1</sup>
2. This report has been prepared in close collaboration with the responsible technical departments of FAO, for information of the Governing Body. It focusses on major outcomes of the Ninth Session of the Commission’s Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (Working Group), held from 25 to 27 June 2018 and the Commission’s Seventeenth Regular Session, held from 18 February to 22 February 2019, as well as on activities carried out since the Seventh Session of the Governing Body that are relevant to plant genetic resources for food and agriculture (PGRFA) and the International Treaty.
3. Information on developments in the cooperation between the Governing Body and the Commission and on-going or possible future joint activities in specific areas of common interest is provided in the document, *Cooperation with the Commission on Genetic Resources for Food and Agriculture*.<sup>2</sup>

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

4. As explicitly stated in Article 14 of the International Treaty, “the rolling Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture is important to this Treaty [and] Contracting Parties should promote its effective implementation, including through national actions and, as appropriate, international cooperation to provide a coherent framework, inter alia, for capacity-building, technology transfer and exchange of information, taking into account the provisions of Article 13.” The Global Plan of Action is a “supporting component” of the International Treaty.
5. In 2011, the FAO Council adopted the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (Second GPA), prepared under the aegis of the Commission. The Second GPA updates the Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture and lays out a series of agreed priority areas and actions that can protect the rich portfolio of PGRFA, while ensuring a sustainable flow of improved varieties.
6. The implementation of the Second GPA contributes to the Organization’s *Strategic Programme 2, Make agriculture, forestry and fisheries more productive and sustainable* and *Strategic Programme 5, Increase the resilience of livelihoods to threats and crises through reducing vulnerability to drought and other impacts of climate change*. FAO’s Strategic Framework<sup>3</sup> aligns its work with the Sustainable Development Goals (SDGs).<sup>4</sup> In particular, the implementation of the Second GPA contributes to SDG 2 on Zero Hunger<sup>5</sup> with FAO being the

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<sup>1</sup> *Joint Statement of Intent for Cooperation between the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture and the Commission on Genetic Resources for Food and Agriculture*, see CGRFA-12/09/Report, Appendix H; IT-GB-2/07/Report, Appendix E.

<sup>2</sup> IT/GB-8/19/15.1.

<sup>3</sup> <http://www.fao.org/3/a-ms431reve.pdf>

<sup>4</sup> <https://sustainabledevelopment.un.org/sdgs>

<sup>5</sup> Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture; Target 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and

custodian United Nations agency for its Indicator 2.5.1 on *ex situ* conservation of plant and animal genetic resources for food and agriculture. In implementing the Second GPA, countries also address essential components of the Strategic Plan for Biodiversity 2011–2020, including the Aichi Biodiversity Targets<sup>6</sup> adopted under the Convention on Biological Diversity (CBD).<sup>7</sup>

7. Further, the implementation of the Second GPA contributes to achieving countries' commitments under the Paris Climate Accord,<sup>8</sup> especially the Nationally Determined Contributions (NDCs),<sup>9</sup> to implement the related Sendai Framework for Disaster Risk Reduction<sup>10</sup> and the Koronivia Joint Work on Agriculture.<sup>11</sup> Increasing access of farmers to diverse nutrient-dense crops and varieties, the implementation of the Second GPA also contributes to the attainment of the aims of the ICN2 Framework of Action<sup>12</sup> and the United Nations Decade of Action on Nutrition (2016–2025).<sup>13</sup>

8. Regional objectives may also benefit from the implementation of the Second GPA. In Africa, for instance, work on the conservation and sustainable use of PGRFA contributes to the achievement of aims set out in the Comprehensive Africa Agriculture Development Programme (CAADP) and to the implementation of the strategy and roadmap of the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods with its “Commitment to Ending Hunger in Africa by 2025”.

9. Overall progress in the implementation of the Second GPA is guided by FAO Members through the Commission and monitored through the World Information and Early Warning System on PGRFA (WIEWS), the information system established by FAO in 1993 for the preparation of periodic, country-driven global assessments of the status of conservation and use of PGRFA. Key findings of an assessment of the implementation of the Second GPA covering the period of 1 January 2012 to 30 June 2014 were made available to the last session of the Governing Body.<sup>14</sup> The Commission, at its last session, invited countries to report on activities undertaken between 1 July 2014 and 31 December 2019 in the course of 2020. These reports will also contribute to the preparation of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (see below, section IV).

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

10. During the reporting period, FAO continued to support countries in strengthening their capacities for the implementation of the Second GPA, in close collaboration with its partners. The Commission, at its Seventeenth Regular Session, following up on recommendations from its Working Group, pursued initiatives and activities relating to the four main groups of Priority Activities of the Second GPA, namely: *in situ* conservation and management; *ex situ* conservation; sustainable use; and building sustainable institutional and human capacities.

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international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.

<sup>6</sup> <https://www.cbd.int/sp/>

<sup>7</sup> <https://www.cbd.int/2011-2020/>

<sup>8</sup> [http://unfccc.int/files/home/application/pdf/paris\\_agreement.pdf](http://unfccc.int/files/home/application/pdf/paris_agreement.pdf)

<sup>9</sup> <http://unfccc.int/focus/items/10240.php>

<sup>10</sup> <https://www.unisdr.org/we/coordinate/sendai-framework>

<sup>11</sup> [https://unfccc.int/files/meetings/bonn\\_nov\\_2017/application/pdf/cp23\\_auv\\_agri.pdf](https://unfccc.int/files/meetings/bonn_nov_2017/application/pdf/cp23_auv_agri.pdf)

<sup>12</sup> <http://www.fao.org/3/a-mm215e.pdf>

<sup>13</sup> <http://www.who.int/nutrition/decade-of-action/workprogramme-2016to2025/en/>

<sup>14</sup> 4 IT/GB-7/17/Inf.23, paragraphs 7–12.

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

### A. Symposium: *In Situ* Conservation and On-Farm Management of Plant Genetic Resources for Food and Agriculture

11. The Commission, at its last session, reviewed, at the request of its Working Group<sup>15</sup>, proposals for two international symposia on: (i) *in situ* conservation of crop wild relatives and wild food plants;<sup>16</sup> and (ii) on-farm management of farmers' varieties/landraces.<sup>17</sup> It requested FAO to hold, subject to the availability of extra-budgetary resources, the symposia in cooperation with the Secretariat of the Treaty and to make the outcomes available to the Working Group, the Commission and the Governing Body of the Treaty well in advance.<sup>18</sup> A symposium addressing both *in situ* conservation and on-farm management and development of PGRFA is tentatively foreseen for May 2020.

### B. Voluntary Guidelines: Farmers' Varieties/Landraces and Crop Wild Relatives

12. At its Seventeenth Regular Session, the Commission endorsed the *Voluntary Guidelines on National Level Conservation and Sustainable Use of Farmers' Varieties/Landraces*. It requested FAO to publish and disseminate them and encouraged countries to use them in planning and implementing efforts to conserve and sustainably use farmers' varieties/landraces.<sup>19</sup> On the occasion of the Eighth Session of the Governing Body, the Voluntary Guidelines will be presented at a side event.

13. The *Voluntary Guidelines for the Conservation and Sustainable Use of Crop Wild Relatives and Wild Food Plants*, endorsed by the Commission at its Sixteenth Regular Session, are available in print and electronic formats.<sup>20</sup>

### C. Technical Support

14. Since the last session of the Commission, FAO continued to provide technical support to countries in the implementation of the Second GPA. More detailed information on these activities is provided in documentation presented to its Working Group at its last meeting.<sup>21</sup>

## 2. *EX SITU* CONSERVATION

### A. Genebank Standards for Plant Genetic Resources for Food and Agriculture

15. The Commission, at its Seventeenth Regular Session, requested FAO to continue providing support to national genebanks in their efforts to collect, conserve, regenerate, multiply, characterize and evaluate crop germplasm<sup>22</sup>.

16. At its Fifteenth Regular Session, the Commission had requested FAO to propose a mechanism to monitor the application of the *Genebank Standards for Plant Genetic Resources for Food and Agriculture* (Genebank Standards)<sup>23</sup>, which the Commission had endorsed in 2013<sup>24</sup>. In response to the Commission's request, FAO undertook a global survey on the use of the Genebank Standards and organized an expert consultation in conjunction with the Global Crop Diversity Trust.<sup>25</sup> Based on the findings of the survey, the expert consultation as well as written

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<sup>15</sup> CGRFA-17/19/9.1, paragraphs 10–11.

<sup>16</sup> CGRFA-17/19/9.2/Inf.4.

<sup>17</sup> CGRFA-17/19/9.2/Inf.3.

<sup>18</sup> CGRFA-17/19/Report/, paragraph 62.

<sup>19</sup> CGRFA-17/19/Report/, paragraph 64.

<sup>20</sup> FAO. 2017. *Voluntary Guidelines for the Conservation and Sustainable Use of Crop Wild Relatives and Wild Food Plants*. Rome (available online at: <http://www.fao.org/3/a-i7788e.pdf>).

<sup>21</sup> CGRFA/WG-PGR-9/18/2 Rev.1, paragraphs 16–19.

<sup>22</sup> CGRFA-17/19/Report, paragraph 65

<sup>23</sup> CGRFA-15/15/Report, paragraph 51.

<sup>24</sup> CGRFA-14/13/Report, paragraph 102.

<sup>25</sup> CGRFA/WG-PGR-9/18/Inf.3.

comments received, and in line with the recommendations of the Working Group, the Commission, at its last session, requested FAO to prepare practical guides to the use of the Genebank Standards, for review by the Working Group and the Commission, at their next sessions.<sup>26</sup>

## **B. Technical Support**

17. FAO continues to provide support to countries in their efforts to maintain genebanks for the continued collection, conservation, characterization and evaluation of crop germplasm.<sup>27</sup> During the reporting period FAO supported various *ex situ* conservation activities in a number of countries, including Armenia,<sup>28</sup> Azerbaijan<sup>29</sup> and the Philippines.<sup>30</sup>

## **3. SUSTAINABLE USE**

18. At its Seventeenth Regular Session, the Commission requested FAO to continue assisting countries in strengthening national seed systems for the delivery of quality seeds and planting materials, in particular to smallholder farmers<sup>31</sup>. It requested FAO to continue supporting countries in the development and revision of their national seed policy and legislation, taking into account the Commission's *Voluntary Guide for National Seed Policy Formulation*<sup>32</sup>. It requested FAO to develop methodologies for improving the coherence between responses to seed insecurity and the development of sustainable seed systems.<sup>33</sup>

19. The Commission, at its Seventeenth Regular Session, requested FAO to continue supporting countries, in close coordination with the Treaty, in strengthening their crop improvement capacity, including through the Global Partnership Initiative for Plant Breeding Capacity Building (GIPB), the Joint Programme of FAO and the International Atomic Energy Agency (IAEA) and, in particular, in support of the implementation of the Second GPA and Article 6 of the Treaty.<sup>34</sup>

## **A. Status and Trends of Seed Policies**

20. In line with the Commission's Multi-Year Programme of Work, FAO prepared a *Review of the status and trends of seed policies and seed laws*.<sup>35</sup> The Commission, at its last session, took note of the review and requested FAO to carry out, in coordination with the Treaty and in consultation with the International Union for the Protection of New Varieties of Plants (UPOV), in-depth case studies for consideration by the Commission at its Eighteenth Regular Session. These case studies should address the effects of seed policies, laws and regulations on: (i) on-farm diversity of PGRFA; (ii) smallholders' access to sufficient, affordable, diversified and locally adapted PGRFA, including farmers' varieties/landraces; and (iii) food security and nutrition under the different seed systems. The Commission requested FAO to clarify the terms "farmers' seed systems", "informal seed systems", "formal seed systems" and "integrated seed systems", taking into account submissions by Members and observers.<sup>36</sup>

<sup>26</sup> CGRFA-17/19/Report, paragraph 65.

<sup>27</sup> CGRFA-17/19/9.1, paragraph 15.

<sup>28</sup> TCP/ARM/3503 Grape Genetic Resources Conservation and Sustainable Use in Armenia.

<sup>29</sup> GINC/AZE/001/AZE The FAO Azerbaijan Partnership Programme.

<sup>30</sup> GCP/PHI/062/GFF – Dynamic conservation and sustainable use of Agricultural biodiversity to ensure food security and ecosystems services and resiliency.

<sup>31</sup> CGRFA-17/19/Report, paragraph 59.

<sup>32</sup> <http://www.fao.org/3/a-i4916e.pdf>

<sup>33</sup> CGRFA-17/19/Report, paragraph 59.

<sup>34</sup> CGRFA-17/19/Report, paragraph 60.

<sup>35</sup> See documents CGRFA-17/19/9.3 and CGRFA-17/19/9.3/Inf.1.

<sup>36</sup> CGRFA-17/19/Report, paragraph 67.

## B. Strengthening Seed Systems

21. Over the current reporting period, 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 in developing countries through a combination of Technical Cooperation Projects (TCPs) and Trust Fund projects. FAO supported during the reporting period Armenia, Lao People's Democratic Republic, Mali, Mongolia and Uzbekistan in reviewing and updating national seed policies or laws.<sup>37</sup>

22. FAO also implemented initiatives aimed at strengthening the seed delivery value chain, including by promoting increased access to quality seeds and planting materials of well-adapted varieties, in more than 20 countries. The foci of these initiatives included: the enhanced adoption of crop varieties, including bio-fortified ones; community-level seed production and delivery systems; pre-basic and basic seed production and supply; capacity development for seed testing laboratories; provision of seed processing equipment and related training and strengthening of seed certification systems.

23. FAO also supported the establishment of small- and medium-size seed enterprises for community-level seed delivery systems through strengthening the management skills of seed producers and improved access to markets. In order to enhance the resilience of crop production systems to climate change, FAO promoted access of smallholder farmers to quality seeds of drought- and flood-tolerant crop varieties. More detailed information was provided to the Working Group at its Ninth Session.<sup>38</sup>

## C. Rehabilitation of Seed Systems

24. An underlying principle of FAO's support to countries in the re-building of agricultural production systems post disasters and strife has been to ensure that the provision of emergency seed relief forms part of the overall seed sector development in the long term. The supply of seeds and other inputs are typically accompanied with training and support to enhance farmers' capacities to adopt more climate-smart agricultural production practices. As part of rehabilitation efforts, farmer groups have been supported to produce quality seeds and planting materials of adapted crop varieties. For instance, in Haiti, Artisanal Seed Production Groups were established across the country,<sup>39</sup> while decentralized seed production groups have been supported in South Sudan.<sup>40</sup>

25. Since October 2017, FAO distributed quality seeds worth over USD 66 million to farmers in 94 countries. Most of these distributions were part of FAO's emergency response activities for farming communities that face seed insecurity due to natural hazards, such as cyclones in Mozambique<sup>41</sup> or drought and flooding in The Gambia.<sup>42</sup> FAO also continued to implement large-scale seed interventions to safeguard agricultural livelihoods in countries facing complex crises. In Afghanistan, for example, emergency responses have reached over 1 million people in 2018-19, providing seeds of wheat, forage and vegetable crops to support recovery from drought.<sup>43</sup>

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<sup>37</sup> CGRFA-17/19/9.2, paragraph 18.

<sup>38</sup> CGRFA/WG-PGR-9/18/2 Rev.1, paragraphs 33–37.

<sup>39</sup> OSRO/HAI/901/CHA Emergency Agricultural Assistance to Family Farmers Affected by Drought in the Departments of Northeast, North and Southeast of Haiti.

<sup>40</sup> OSRO/SSD/705/NET Improving seed production, availability and access for crisis-affected populations in South Sudan.

<sup>41</sup> OSRO/MOZ/905/USA Emergency Livelihood Support to Most Vulnerable Populations Affected by Tropical Cyclone Idai.

<sup>42</sup> UNJP/GAM/039/EC Post-Crisis Response to Food and Nutrition Insecurity in the Gambia.

<sup>43</sup> <http://www.fao.org/emergencies/fao-in-action/stories/stories-detail/en/c/1187153/>; multiple projects include OSRO/AFG/808/SWE, OSRO/AFG/807/FRA, OSRO/AFG/810/ROK, and OSRO/AFG/904/CHG.

26. FAO is increasingly adopting the use of input trade fairs (ITFs) as an alternative to seed distribution. Through ITFs, beneficiaries use the cash or vouchers provided to them through the intervention to procure their choice of seeds and planting materials from assembled suppliers. This enhances the diversity of crops and varieties available to farmers.

27. The interventions driven by FAO also seek to use better methodologies for the assessment of seed system security as the basis for both the immediate responses and for devising the seed sector development strategies that reflect the prevailing national contexts. During the reporting period, FAO, in collaboration with partners, carried out seed security assessments in various countries. More detailed information on FAO's support to the rehabilitation of seed systems was presented to the Working Group at its last session.<sup>44</sup>

28. FAO continued to foster and strengthen partnerships with relevant regional and international organizations with seed sector development related mandates. These include the 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**

29. 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.<sup>45</sup>

30. The Joint Division of FAO and the International Atomic Energy Agency (IAEA) for Nuclear Techniques in Food and Agriculture (AGE) implemented 77 crop improvement-related TCPs in 70 countries. The outputs encompassed human capacity-building, technology transfer, infrastructure upgrade and technical advice for the efficient use of mutation breeding in crop improvement. Additionally, through the Coordinated Research Projects (CRP) mechanism of the IAEA, AGE networked with researchers from more than 40 countries to collaborate on five crop improvement-themed collaborative projects. Over the reporting period, 534 trainees were supported to acquire enhanced relevant skills. Overall, about 3 275 mutant crop varieties have been released for cultivation in different countries of the world.

### **4. BUILDING SUSTAINABLE INSTITUTIONS AND HUMAN CAPACITIES**

31. During the reporting period, FAO continue to support the strengthening of human and institutional capacities for the conservation and sustainable use of PGRFA especially in developing countries.<sup>46</sup>

#### **A. National Strategy for PGRFA**

32. FAO continues to support the on-going development of national strategies and action plans for PGRFA that address capacity needs and link conservation to sustainable use, for example in Angola, Mauritius, Namibia, Swaziland, South Africa and Zimbabwe.<sup>47</sup>

33. FAO developed a Regional Rice Strategy in the Asia Pacific Region.<sup>48</sup> This provides the guidelines for member countries to review and formulate their National Rice Strategies. Through the ongoing Regional Rice Initiative, FAO has provided support for the application of environmentally friendly rice farming systems in Asia. In Bhutan, for example, the capacities of extension services personnel, technical staff and smallholder farmers have been strengthened in

<sup>44</sup> CGRFA/WG-PGR-9/18/2 Rev.1, paragraphs 38–43.

<sup>45</sup> CGRFA-17/19/9.2, paragraph 27.

<sup>46</sup> See CGRFA-17/19/9.2, paragraph 31.

<sup>47</sup> TCP/SFS/3601 (16/VI/SFS/11) Support for the development of national capacities for conservation and sustainable utilization of plant genetic resources for food and agriculture.

<sup>48</sup> <http://www.fao.org/asiapacific/perspectives/regional-rice/en/>

order to improve yield and productivity of rice in three different agro-ecological zones.<sup>49</sup> This work included the strengthening of seed support systems (breeder's seed, basic seed, foundation seed, certified seed and seed certification schemes) to increase the availability of quality seeds and planting materials for farmers.

34. FAO supported the building of capacity for the development of a National PGRFA Programme in Moldova in order to strengthen the linkages between the national stakeholders involved in PGRFA conservation and its sustainable use.<sup>50</sup> Similar initiatives aiming at strengthening institutional and technical capacity in PGRFA management and the upgrade of the infrastructure of the national genebanks were recently undertaken in Belarus<sup>51</sup> and Madagascar.<sup>52</sup>

35. In addition, FAO supported Uzbekistan in improving legislation and strengthening institutional capacities of the national stakeholders for variety testing, registration and protection, seed quality control and certification,<sup>53</sup> while Georgia<sup>54</sup> was supported in the establishment of a seed law and national seed certification scheme. Similarly, in Armenia, capacities were strengthened for the production of phylloxera-resistant certified grape-planting materials by supporting national certification services and capacities for producing *in vitro* planting materials.<sup>55</sup>

36. Following the FAO International Symposium on the Role of Agricultural Biotechnologies in Sustainable Food Systems and Nutrition in 2016,<sup>56</sup> FAO continued to provide member countries with a platform for the exchange of knowledge and the sharing of experiences on biotechnologies. Two regional meetings, for Asia and the Pacific (RAP)<sup>57</sup> and sub-Saharan Africa (RAF),<sup>58</sup> were organized in 2017. Topics discussed ranged from medium-technology applications, such as tissue culture, to relatively high-technology use of molecular markers in germplasm characterization and plant breeding.

## B. National Focal Points

37. The Commission on a periodical basis invites countries to nominate or to confirm a National Focal Point (NFP) for reporting on the implementation of the Second GPA.<sup>59</sup> In response to this request, the nomination of 120 NFPs has been notified to FAO. This reflects the high level of commitment for reporting on the state of conservation and sustainable use of PGRFA. Beyond the periodic reporting on the implementation of the Second GPA and on SDG Indicator 2.5.1, the NFPs play critical roles in the implementation of the Second GPA and the preparation of country reports for *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*.

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<sup>49</sup> TCP/BHU/3602 Improving rice productivity in Bhutan to enhance rice self-sufficiency- importing fruit scion and rootstock cultivars.

<sup>50</sup> TCP/MOL/3504 Support to the development of a National Programme for Plant Genetic Resources for Food and Agriculture in Moldova.

<sup>51</sup> TCP/BYE/3601 Strengthening National PGR Program in Belarus for Conservation and Use of Plant Genetic Resources.

<sup>52</sup> TCP/MAG/3605 RPGAA aux bénéfiques des populations locales - Stratégie Nationale RPGAA et Symposium International.

<sup>53</sup> TCP/UZB/3602 Support to improvement of the national seed, plant variety protection and phytosanitary legislation.

<sup>54</sup> 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).

<sup>55</sup> TCP/ARM/3601 Development of a new certification system for grape planting materials.

<sup>56</sup> <http://www.fao.org/about/meetings/agribiotechs-symposium/en/> <http://www.fao.org/africa/events/detail-events/en/c/1035227>

<sup>57</sup> <http://www.fao.org/asiapacific/events/detail-events/en/c/1440/>

<sup>58</sup> <http://www.fao.org/africa/events/detail-events/en/c/1035227>

<sup>59</sup> CGRFA-15/15/Report, paragraph 18.

### C. World Information and Early Warning System on PGRFA

38. The World Information and Early Warning System on PGRFA (WIEWS) is the information system established by FAO in 1993 for the preparation of periodic, country-driven global assessments of the status of conservation and use of PGRFA. Since October 2014, WIEWS, through its online Reporting Tool, has also been used for country reporting on the implementation of the Second GPA. Since December 2016, WIEWS serves as platform for reporting annually on the plant component of SDG Target 2.5.

39. With its 2014, 2016, 2017 and 2018 datasets, WIEWS is presently the largest source of data for monitoring over time the status of the global diversity of PGRFA conserved in genebanks. The 2018 dataset alone includes detailed information on over 5.32 million accessions of 7.0 thousand genera and their 51.7 thousand species secured under medium- or long-term conditions in 652 national genebanks and 17 regional and international centres.<sup>60</sup> Compared to May 2016, the WIEWS data coverage of *ex situ* conservation has increased by 41 percent in terms of reporting countries (29 additional reporting countries) and 47 percent in terms of accessions (an additional 1.7 million accessions documented).<sup>61</sup>

40. The Commission, at its Seventeenth Regular Session, endorsed the revised reporting format proposed for monitoring the implementation of the Second GPA,<sup>62</sup> for use during the next reporting cycle in 2020.<sup>63</sup> The Commission requested FAO to complete the restructuring of WIEWS, reflect the revised reporting format in the on-line Reporting Tool and make a comprehensive list of frequently asked questions available to facilitate its use. It invited FAO to continue elaborating, based on country reporting, the status of implementation of SDG Target 2.5 and share the results with the Commission. It also requested FAO to continue developing the WIEWS portal and strengthening cooperation with the Global Information System (GLIS) and Genesys to avoid duplication of efforts. In addition, it requested a report clarifying the specific roles of these databases to streamline country reporting to the Commission and the Treaty.

41. In addition to providing information on the plant component of SDG indicator 2.5.1, which is now linked to GLIS through DOI, WIEWS provides access to information on three Higher-order Composite Indices (HCI) and 62 additional indicators for monitoring the implementation of the 18 priority activities of the Second GPA, as agreed by the Commission. A synthetic graphical representation of the HCI and indicators showing progress toward the implementation of the Second GPA can be accessed through WIEWS.<sup>64</sup> In addition, data on the Second GPA indicators can be retrieved in tabular and graphical formats through the FAOSTAT-like interface with customizable data search and export functions.<sup>65</sup>

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

42. At its Seventeenth Regular Session, the Commission agreed on the approach for the preparation of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*.<sup>66</sup>

43. The Commission requested National Focal Points to report through WIEWS between January and December 2020 on the implementation of the Second GPA for the period of July 2014 to December 2019. In addition, it invited the Focal Points to provide a summative narrative of the progress made (between January 2012 and December 2019) and the remaining gaps and

<sup>60</sup> <http://www.fao.org/wiews/data/ex-situ-sdg-251/overview/en/> accessed on 24/09/2019.

<sup>61</sup> CGRFA-16/17/Inf.17.1, paragraph 13.

<sup>62</sup> CGRFA-17/19/9.2/Inf.2, Annex I.

<sup>63</sup> CGRFA-17/19/Report, paragraph 66.

<sup>64</sup> <http://www.fao.org/wiews/data/domains/monitoring-framework/en/>

<sup>65</sup> <http://www.fao.org/wiews/data/domains/domains-list/en/>

<sup>66</sup> CGRFA-17/19/Report, paragraph 69.

constraints. In the summative narratives, National Focal Points could provide a short description of the national genebank(s) and report on efforts to achieve complementarity between the on-farm management and *in situ* conservation of PGRFA on the one side and the *ex situ* conservation on the other. Countries that provided information through the Online Reporting System of the Treaty should be able to cross-reference this information in the summative narratives to avoid duplicative reporting.

## V. AQUATIC GENETIC RESOURCES FOR FOOD AND AGRICULTURE

44. The farming of seaweeds and freshwater macrophytes to produce chemicals for the food and other industries, as well as products for direct consumption as human food at over 30 million tonnes, accounts for over 25% of global annual aquaculture production.<sup>67</sup> There is also a small volume of production of microalgae. The genetic resources of these important aquatic plants are covered by three thematic background studies: *Genetic Resources for Farmed Seaweeds*; *Genetic Resources for Farmed Freshwater Macrophytes: A review*; and *Genetic resources for microorganisms of current and potential use in aquaculture*.<sup>68</sup> which complement the first report on *The State of the World's Aquatic Genetic Resources for Food and Agriculture* that was published and launched in August 2019.<sup>69</sup>

45. The Commission, at its last session, considered options for follow-up to *The State of the World's Aquatic Genetic Resources for Food and Agriculture* and recognized the need to maintain momentum following the preparation of the report. It requested FAO to review the proposed objectives, overall structure and list of follow-up strategic priorities and prepare a draft Global Plan of Action for Aquatic Genetic Resources for Food and Agriculture for consideration by the Working Group and the Commission at their next sessions.<sup>70</sup>

46. The Commission agreed that the Global Plan of Action should be prepared upon consultation with the regions and in collaboration with the Committee on Fisheries and its relevant subsidiary bodies. It was noted that the Global Plan of Action should be voluntary and collaborative and be implemented in line with the needs and priorities of Members.<sup>71</sup>

47. FAO is also developing a prototype information system for farmed types of aquatic genetic resources which will include varieties of aquatic plants, including seaweeds, microalgae and vascular aquatic plants for food and agriculture. A series of regional consultations on the development of a registry of farmed types will take place between November 2019 and June 2020.

## VI. FOREST GENETIC RESOURCES

48. The Commission, at its last session, considered the status of implementation of the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources and took note of the *First Report on the Implementation of the Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources*<sup>72</sup>. It invited countries to continue implementing the Global Plan of Action. It also encouraged them to address the findings of the report, as appropriate.

49. The Commission further encouraged all Members to nominate a National Focal Point on forest genetic resources and to report on their countries' efforts to implement the Global Plan of Action in the future. The Commission adopted a Funding Strategy for the Implementation of the

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<sup>67</sup> <http://www.fao.org/state-of-fisheries-aquaculture>

<sup>68</sup> <http://www.fao.org/aquatic-genetic-resources/activities/sow/background-studies/en/>  
<http://www.fao.org/3/CA3065EN/ca3065en.pdf>

<sup>69</sup> <http://www.fao.org/3/CA5256EN/CA5256EN.pdf>

<sup>70</sup> CGRFA-17/19/Report, paragraph 55.

<sup>71</sup> CGRFA-17/19/Report, paragraph 56.

<sup>72</sup> CGRFA-17/19/10.2/Inf.3.

Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources and encouraged countries to actively mainstream forest genetic resources into larger and holistic actions on sustainable forest management, including agroforestry and forest strategies, and forest-based climate change adaptation and mitigation measures, as well as to identify needs for specific and strategic actions on forest genetic resources.

50. The Commission endorsed Voluntary Guidelines for Preparing a National Strategy for Forest Genetic Resources<sup>73</sup> and noted the importance of countries having a national or subnational strategy for forest genetic resources in place in view of climate change.

51. The Commission also considered the preparation of *The Second Report on the State of the World's Forest Genetic Resources* and took note of the draft guidelines for the preparation of country reports for the report. It adopted the outline and timeline for the preparation of the Second Report, as well as the reporting guidelines. It encouraged countries to initiate the collection of information and data for the preparation of their country reports and called upon them to submit their country reports for the preparation of the Second Report by 30 June 2020.

52. The Commission further requested FAO to initiate the development of a new global information system on forest genetic resources, subject to the availability of extra-budgetary resources, simultaneously assuring that the new system will make data easily accessible and useable to all data providers. It noted that, prior to seeking funding, FAO should develop a plan and possible budget. It further noted that FAO should, while developing the information system on forest genetic resources, avoid duplicating efforts with the existing global information systems on PGRFA.

## VII. CROSS-SECTORAL MATTERS

53. While the different components of biodiversity for food and agriculture (BFA) have distinct characteristics, they also share common features. All contribute to meeting the basic needs of food and livelihood security and many depend on human management. The different components face both unique management challenges, as well as common threats, such as climate change.

54. The Commission remains committed to addressing cross-cutting issues that can impact any or all components of BFA, such as climate change or the issue of access and benefit-sharing. A number of international bodies deal with these issues. However, the Commission provides a permanent forum where Governments discuss all matters, including cross-sectoral matters, specifically relevant to BFA genetic resources for food and agriculture (GRFA). It follows carefully policy developments in other international fora and aims to ensure policy coherence through close collaboration with other international organizations and instruments.

### (i) Biodiversity for food and agriculture

55. Sustainably using and conserving the biodiversity that supports agriculture, forestry, fisheries and aquaculture is vital to efforts to meet humanity's growing need for food, feed, fibre and fuel while protecting the planet for future generations. BFA also provides a range of crucial ecosystem services, such as pollination, pest control, soil health, habitat provisioning and much more. Furthermore, it makes production systems and livelihoods more resilient to shocks and stresses, including climate change, through, for example, habitats important to fisheries and coastal livelihoods such as mangrove forests that protect against extreme weather, and breeds of animals and varieties of plants that are more resilient to drought.

56. The country-driven report on *The State of the World's Biodiversity for Food and Agriculture*<sup>74</sup>, launched on the occasion of the Commission's last session, is an essential step in creating a comprehensive picture of the state and use of this biodiversity, thus providing a strong

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<sup>73</sup> GRFA-17/19/10.2/Inf.3.

<sup>74</sup> <http://www.fao.org/3/CA3129EN/CA3129EN.pdf>

foundation for the design of effective interventions towards more sustainable, resilient food systems. Five years in the making, the report engaged over 175 authors and reviewers, who based their analysis on 91 country reports prepared by over 1,300 contributors.

57. The Report details the many benefits biodiversity brings to food and agriculture; examines how farmers, pastoralists, forest dwellers and fisher folk have shaped and maintained biodiversity; and identifies major drivers of change that need to be addressed. It identifies human actions that are rapidly diminishing biodiversity in food and agriculture production systems at genetic, species and ecosystem levels. Changes in land and water use, pollution, overexploitation, climate change, and growing populations are among the biggest contributors to the loss of this biodiversity. The Report gives many examples of policies and practices that are bringing results. Crucially, it highlights policies, practices and options that improve the sustainable use of BFA, and so promote food security and nutrition, functional ecosystems, productivity and sustainability, resilience and secure livelihoods. Such practices need to be scaled-up and replicated across the globe to use and conserve BFA.

58. The Commission welcomed the report as an important milestone for the Commission and the United Nations Decade on Biodiversity and as a valuable contribution to the discussion on the post-2020 global biodiversity framework. It noted that the report would contribute to raising awareness on the important role of crop and livestock farming, forestry and fisheries in the conservation and use of BFA and that it would help to strengthen collaboration and enhance communication between relevant international fora and instruments. It further noted that the country reporting process had been a good opportunity for countries to, *inter alia*, assess gaps and needs with respect to sustainable use and conservation of BFA.<sup>75</sup>

59. The Commission agreed that the report on *The State of the World's Biodiversity for Food and Agriculture*, along with developments in other fora that also point to declines in biodiversity of relevance to food and agriculture, calls for a timely and clear cross-sectoral follow-up. The Commission agreed that the follow-up product should be: actionable at country, regional and global levels; complementary to, not duplicative of, and coherent with, other processes and initiatives in FAO, such as the Commission's Global Plans of Action and FAO's Biodiversity Strategy, and in other fora; and voluntary.<sup>76</sup> Furthermore, the follow-up product should clarify terminology, take into account characteristics of diverse ecosystems and production systems, consider the special needs of developing countries, contribute to the implementation of the SDGs and the post-2020 global biodiversity framework and highlight areas for partnerships with multiple stakeholders.<sup>77</sup>

60. At the Commission's request, an open-ended meeting of the Group of National Focal Points for Biodiversity for Food and Agriculture will be held in April 2020 with a view to agree on needs and possible actions with regard to BFA, with a view to have them adopted as a Global Plan of Action by the FAO Conference at its Forty-second Session.

#### **(ii) Access and benefit-sharing**

61. The Commission, at its last session, welcomed the explanatory notes prepared by its sectoral Working Groups in collaboration with the Commission's Team of Technical and Legal Experts on Access and Benefit-sharing (ABS Expert Team). In the course of the development of the explanatory notes, the Commission and the Treaty Secretariats collaborated, *inter alia*, on the organization of the International Workshop on Access and Benefit-sharing for Genetic Resources for Food and Agriculture, which was held in Rome, Italy, from 10 to 12 January 2018.<sup>78</sup> *The Elements to Facilitate Domestic Implementation of Access and Benefit-sharing for Different Subsectors of*

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<sup>75</sup> CGRFA-17/19/Report, paragraph 39.

<sup>76</sup> CGRFA-17/19/Report, paragraph 44.

<sup>77</sup> CGRFA-17/19/Report, paragraph 45.

<sup>78</sup> See IT/GB-8/19/15.1, paragraphs 11–14.

*Genetic Resources for Food and Agriculture - with Explanatory Notes*<sup>79</sup> will be disseminated widely, including to the National Focal Points of the International Treaty.

62. The Commission, at its last session, also requested its Secretary to prepare, for review by the Commission's intergovernmental technical working groups: i) a review of the Commission's past work on ABS for GRFA; ii) an up-to-date survey of existing legislative, administrative and policy approaches, including best practices, for ABS for the different subsectors of GRFA and traditional knowledge associated with GRFA held by indigenous peoples and local communities, with the aim of identifying typical approaches and lessons learned from their implementation, as well as challenges and possible solutions; iii) an overview of developments under other international agreements and instruments relevant to ABS for GRFA; and iv) a proposal for options for future work of the Commission on ABS for the different subsectors of GRFA.<sup>80</sup> The ABS Expert Team will convene to review and provide technical and legal inputs to the document, as reviewed by the Commission's Working Groups.<sup>81</sup>

### **(iii) "Digital sequence information"**

63. The Commission took note of the Background Study Paper No. 68, *Exploratory fact-finding scoping study on "digital sequence information"*<sup>82</sup> and of the submissions by Members and observers regarding the new work stream on "digital sequence information" on GRFA.

64. The Commission agreed that there is a need for further review of "Digital Sequence Information" ("DSI") on GRFA and to address, at its next session, the innovation opportunities "DSI" on GRFA offers, the challenges of capacity to access and make use of it and its implications for the conservation and sustainable use of GRFA and the sharing of benefits derived from GRFA. It requested its Working Groups to consider these matters with regard to existing subsector-specific examples related to conservation, sustainable use and development of genetic resources, food security and nutrition, food safety, and efforts to combat crop and animal pests and diseases.

65. The Commission further noted the importance of coordination with the ongoing processes under the CBD and its Nagoya Protocol and the Treaty.

### **(iv) The role of genetic resources for food and agriculture for food security and nutrition**

66. The Commission, at its last session, welcomed FAO's activities on raising awareness of the contribution of GRFA to food security and the achievement of the SDGs and requested FAO to continue conducting such activities, especially with regard to family farming, smallholders, indigenous peoples, local communities and traditional knowledge. It stressed the need for additional data collection on wild foods, underutilized species and food production, including in home gardens. The Commission took note of Background Study Paper No. 69, *Biodiversity for food and agriculture and food security – An exploration of interrelationships*, and requested the Secretariat, upon further review by countries and based on additional information, to prepare a brochure, in the official UN languages, on the contribution of GRFA to food security and to the achievement of relevant SDGs.<sup>83</sup>

### **(v) Climate change and genetic resources for food and agriculture**

67. With regard to climate change, the Commission requested FAO to prepare a scoping study on the role of GRFA in adaptation to and mitigation of climate change, including knowledge gaps, taking into account the forthcoming special reports on terrestrial and marine systems by the Intergovernmental Panel on Climate Change (IPCC) and other available relevant sources, including examples from different regions and subsectors. The Commission requested its

<sup>79</sup> <http://www.fao.org/cgrfa/topics/access-and-benefit-sharing/en/>

<sup>80</sup> CGRFA-17/19/Report, paragraph 19.

<sup>81</sup> CGRFA-17/19/Report, paragraph 21.

<sup>82</sup> <http://www.fao.org/3/CA2359EN/ca2359en.pdf>

<sup>83</sup> CGRFA-17/19/Report, paragraphs 9–10.

Working Groups to review the study and, if a global assessment of the role of GRFA is considered pertinent, to provide guidance to the Commission on its preparation.<sup>84</sup>

68. The Commission also requested the Secretariat to prepare a draft work plan, including for the preparation of a global country-driven assessment, for review by its Working Groups at their next sessions.<sup>85</sup>

### **VIII. STRATEGIC PLAN FOR THE COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

69. The Commission adopted the Strategic Plan for the Commission on Genetic Resources for Food and Agriculture (2019–2027).<sup>86</sup> It also requested its Secretary to prepare an options paper setting out different options (and their financial implications) for the future organization of the Commission's intersessional work, for consideration by the Working Groups and the Commission at their next sessions, to: (a) address in a coherent, integrated and consistent way biodiversity for food and agriculture, including micro-organism and invertebrate genetic resources; and (b) consider how to enhance coordination and communication among the Commission's Working Groups, to raise awareness on subsectoral issues and strengthen coherence on cross-sectoral matters to effectively address the Commission's mission and goals.

70. The Commission thanked the donors who had provided support to the MYPOW multi-donor trust fund and through bilateral funds, and encouraged other donors to follow their example. The Commission requested its Secretary to transmit the Strategic Plan for the Commission on Genetic Resources for Food and Agriculture (2019–2027) to the Executive Secretary of the CBD, as an early contribution to the process of developing the post-2020 global biodiversity framework and other ongoing work of the CBD, raising awareness about the contribution of agriculture sectors to biodiversity conservation and sustainable use.

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<sup>84</sup> CGRFA-17/19/Report, paragraph 29.

<sup>85</sup> CGRFA-17/19/Report, paragraph 30.

<sup>86</sup> CGRFA-17/19/Report, *Appendix F*.