Food and Agriculture Organization of the United Nations

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

CGRFA/WG-PGR-10/21/REPORT

Tenth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture

22–24 June 2021

CGRFA/WG-PGR-10/21/REPORT

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

REPORT OF THE TENTH SESSION
OF THE
INTERGOVERNMENTAL TECHNICAL WORKING GROUP
ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

22-24 June 2021

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2021

The documents prepared for the Tenth Session of the Working Group on Plant Genetic Resources for Food and Agriculture of the Commission on Genetic Resources for Food and Agriculture are available on the Internet at the following address:

http://www.fao.org/agriculture/crops/core-themes/theme/seeds-pgr/itwg/10th/en/

They may also be obtained from
The Secretary of the Intergovernmental Technical Working Group
on Plant Genetic Resources for Food and Agriculture
Plant Production and Protection Division
Food and Agriculture Organization of the United Nations (FAO)
Viale delle Terme di Caracalla, 00153 Rome, Italy
ITWG-PRGFA@fao.org

TABLE OF CONTENTS

		Paragraphs
I.	Introduction	1–3
II.	Opening of the session and election of the Chair, Vice-Chairs and *Rapporteur*	4–9
III.	Implementation of the Second Global Plan of Action for Plant genetic resources for food and agriculture	10–20
IV.	Global framework for *in situ* conservation and on-farm management of plant genetic resources for food and agriculture	21–25
V.	Implementation of the Genebank Standards for Plant Genetic Resources for Food and Agriculture	26–27
VI.	Status and trends of seed policies	28–32
VII.	Preparation of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*	33–37
VIII.	Access and benefit-sharing for plant genetic resources for food and agriculture	38–45
IX.	"Digital sequence information" on plant genetic resources for food and agriculture	46–50
X.	The role of plant genetic resources for food and agriculture in mitigation of and adaptation to climate change	51–59
XI.	Review of the work on biotechnologies for the conservation and sustainable use of plant genetic resources	60–64
XII.	Options for the organization of the commission's future intersessional work	65–70
XIII.	Cooperation with international organizations and instruments	71–72
XIV.	Closing statements	73–74

Appendices

A. Agenda of the Tenth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture

B. List of documents

C. Members of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture elected at the Seventeeth Regular Session of the Commission on Genetic Resources for Food and Agriculture

I. INTRODUCTION

1. The Tenth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources (Working Group) was held from 22 to 24 June 2021. The Members and alternates of the Working Group are given in Appendix C. The list of delegates and observers is available on the website of the Working Group.[1]

2. The meeting was convened virtually, on an exceptional basis, in light of the global COVID-19 pandemic and the associated public-health concerns and constraints. This followed consultations by the Commission's Bureau on the arrangements for the holding of the meeting virtually and the endorsement of the arrangements by the Members of the Working Group.

3. Prior to beginning its deliberations, the Working Group confirmed that the virtual meeting constituted a formal regular session of the Working Group. The Working Group agreed to apply its normal rules and practices to the conduct of the meeting and to suspend any rules that may be incompatible with the virtual mode used for the purposes of the meeting. The Working Group also agreed to the application of any special procedures or amended working modalities required for the efficient conduct of the meeting. The Working Group noted that some of the documents drafted in preparation for the meeting were shared with little time to review them and conduct regional consultations and requested that documents be shared with more time in advance of meetings.

II. OPENING OF THE SESSION AND ELECTION OF THE CHAIR, VICE-CHAIRS AND *RAPPORTEUR*

4. Ms Katlyn Scholl (United States of America), Chair of the Ninth Session of the Working Group, welcomed delegates and observers.

5. Mr Jingyuan Xia, Director, Plant Production and Protection Division of the Food and Agriculture Organization of the United Nations (FAO), welcomed delegates and observers. He stressed the importance of plant genetic resources for food and agriculture (PGRFA) in delivering Agenda 2030 and highlighted that they are essential for improving the nutritional status of people as well as the resilience of production systems to environmental shocks. He noted that a systems approach must be adopted, based around two key strategies: "optimization", which means optimizing the structure, functionality and service of cropping systems by combining key components and adopting new technologies; and "minimization", which means minimizing crop losses from pest damage, residual risk from inappropriate use of chemical pesticides, and environmental contamination from overuse of chemical fertilizers. He also stressed that PGRFA are the key to unlocking the potential to feed the world and to strengthen the "optimization and minimization approaches". Mr Xia concluded by thanking Members for continuing to deliver under the challenging circumstances of the COVID-19 pandemic.

6. Ms Irene Hoffmann, Secretary of the Commission on Genetic Resources for Food and Agriculture (Commission), welcomed delegates and observers. She recalled the past achievements of the Working Group in the sustainable use and conservation of PGRFA and stressed the important role of Commission Members in assessing the global status of PGRFA and developing global policies in response to gaps and needs identified. She further highlighted the key role countries play in implementing global policies and monitoring their impact.
Ms Hoffmann invited the Working Group to provide guidance on the role of PGRFA in adaptation to, and mitigation of, climate change, and the role of biotechnologies and bioinformatics, "digital sequence information" and access and benefit-sharing (ABS) in the conservation and sustainable use of PGRFA.

7. The outgoing Chair informed the Working Group that, in line with Article III of the Statutes of the Working Group, Costa Rica, the Democratic Republic of the Congo and Sweden (instead of Jamaica, Algeria and Georgia, respectively) would participate in the session as Members.

[1] http://www.fao.org/agriculture/crops/core-themes/theme/seeds-pgr/itwg/10th/en/

8. The Working Group elected Mr Godfrey Mwila (Zambia), as Chair and Ms Aluana Gonçalves de Abreu (Brazil), Ms Neveen Abdel Fattah Hassan (Egypt), Ms Pratibha Brahmi (India), Mr Christian Eigenmann (Switzerland) and Mr Mark Freeman (United States of America) as Vice-Chairs. Mr Eigenmann was elected *Rapporteur*.

9. The Working Group adopted the agenda as given in *Appendix A*.

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

10. The Working Group considered the document *FAO activities in support of the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*[2] and took note of the information document *Strengthening cooperation among global information systems on plant genetic resources for food and agriculture*.[3] The Working Group commended FAO on its continuous support to countries in implementing the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (Second GPA). In particular, it welcomed FAO's work in partnership with diverse organizations, networks and stakeholders, and encouraged FAO to continue its support to countries through partnerships and collaboration with international organizations with relevant technical experience. The Working Group also noted the need to streamline priorities for contribution to PGRFA.

In situ conservation and on-farm management of plant genetic resources for food and agriculture

11. The Working Group complimented FAO on its initiatives to conserve and promote crop diversity, including those supported by the Global Environmental Facility and the European Union and those implemented in cooperation with numerous countries and international partner organizations.

12. Stressing that *in situ* conservation, on-farm management and *ex situ* conservation of PGRFA are complementary forms of conservation, the Working Group recommended that the Commission request FAO to provide support to countries, including in the development or revision of their national plans for the conservation and sustainable use of farmers' varieties and landraces, taking into account the Commission's *Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Landraces*.[4]

13. The Working Group recommended that the Commission request FAO and donors to continue supporting countries in their efforts to conserve PGRFA *in situ* and on-farm and to strengthen the links and complementarity between *ex situ* and *in situ* conservation. It furthermore recommended that the Commission call upon donors to increase funding for basic research on *in situ* conservation of crop wild relatives.

Ex situ conservation of plant genetic resources for food and agriculture

14. The Working Group recommended that the Commission request FAO to continue providing support to countries in their efforts to maintain genebanks for the continued collection, conservation, characterization, evaluation and distribution of crop germplasm. It noted that, in providing such support, FAO should seek cooperation with relevant international organizations.

Sustainable use of plant genetic resources for food and agriculture
Strengthening seed systems

15. The Working Group recommended that the Commission request FAO to continue assisting countries, in collaboration with relevant international organizations and working through partnerships where possible, in strengthening national seed systems, including plant breeding, for the delivery of quality seeds and planting materials, in particular to smallholder farmers.

[2] CGRFA/WG-PGR-10/21/2.
[3] CGRFA/WG-PGR-10/21/2/Inf.1.
[4] FAO. 2019. *Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Landraces*. (also avaliable at http://www.fao.org/documents/card/en/c/ca5601en).

16. It recommended that the Commission call upon donors to support countries, upon request, to review, develop and implement their national seed policies.

Strengthening plant breeding

17. The Working Group recommended that the Commission request FAO to continue supporting countries, in close coordination with the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty), and via partnerships, including through the Joint FAO/International Atomic Energy Agency (IAEA) Centre, in strengthening their crop improvement capacity and, in particular, in the implementation of the Second GPA and Article 6 of the Treaty.

Building sustainable institutions and human capacities

National strategies

18. The Working Group recommended that the Commission call for extra-budgetary funds to support countries in the implementation of the Second GPA, including through the development and implementation of national strategies for PGRFA, in close coordination with the Treaty and its Funding Strategy.

World Information and Early Warning System

19. The Working Group recommended that the Commission request FAO to continue elaborating, on an annual basis through the World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture (WIEWS), the status of implementation of the plant component of Target 2.5 of the Sustainable Development Goals (SDGs) and to share results with the Working Group and the Commission.

20. The Working Group welcomed the report clarifying the respective roles of the three global information systems on PGRFA, WIEWS, the Global Information System (GLIS) and Genesys, and recommended that the Commission invite FAO to continue developing the WIEWS portal while strengthening cooperation with the other information systems to avoid duplication of efforts and facilitate reporting by countries.

IV. GLOBAL FRAMEWORK FOR *IN SITU* CONSERVATION AND ON-FARM MANAGEMENT OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

21. The Working Group considered the document *Towards a global framework for* in situ *conservation and on-farm management of plant genetic resources for food and agriculture*.[5] It took note of the *Draft report of the First International Multi-Stakeholder Symposium on Plant Genetic Resources for Food and Agriculture*.[6] The Working Group congratulated FAO on the successful hosting of the Symposium and the quality of the presentations.

22. The Working Group recommended that the Commission request FAO to finalize, publish and distribute the report of the Symposium. It also recommended that the Commission request FAO to hold, subject to the availability of resources, online symposia on *in situ* conservation and on-farm management of PGRFA at regular intervals, in collaboration with the Treaty and the International Union for Conservation of Nature (IUCN). The Working Group further recommended that FAO include in the meeting report: (i) the importance of payments for ecosystem services as a possible tool for recognizing and rewarding the contribution of farmers to PGRFA conservation and the maintenance of crop diversity; (ii) the need for adequate frameworks and policies for sustainably financing of *in situ* and on-farm conservation; and (iii) the importance of community seedbanks.

23. The Working Group recommended that future symposia and webinars respond to the lack of information on the taxonomy, reproductive biology and economically important traits of many crop wild relative species. Future symposia may also be held virtually, and could also make constructive contributions to addressing the loss of PGRFA due to natural disasters and other

[5] CGRFA/WG-PGR-10/21/2.1.
[6] CGRFA/WG-PGR-10/21/2.1/Inf.1.

stresses, in particular of crop wild relatives and wild food plants in protected areas, and the need to safeguard these resource in *ex situ* conservation facilities.

24. The Working Group recommended that the Commission request FAO to elaborate on possible measures to address the information gap on crop wild relatives for enhancing effective *in situ* conservation, including the possibility of supporting countries in the development of national inventories for crop wild relatives, at their request. The Working Group recommended that the Commission request FAO to evaluate the use of the *Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Land*races[7] and the *Voluntary Guidelines for the C*onserva*tion and Sustainable Use of Crop Wild Relatives and Wild Food Plants*[8] by practitioners, and how their relevance and use can be further promoted.

25. The Working Group recommended that the Commission request FAO to organize a series of webinars in support of the implementation of the Second GPA and Articles 5 and 6 of the Treaty.

V. IMPLEMENTATION OF THE GENEBANK STANDARDS FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

26. The Working Group considered the document *Implementation of the Genebank Standards for Plant Genetic Resources for Food and Agriculture*.[9] It also considered the information document *Draft Practical Guides for the Application of the Genebank Standards for Plant Genetic Resources for Food and Agriculture*.[10] The Working Group recognized the importance of the three draft Practical Guides for enhancing *ex situ* conservation in genebanks. It requested FAO to take into consideration further written comments, to be submitted to the Secretariat by 15 August 2021, and revise the Practical Guides for consideration by the Commission.

27. The Working Group recommended that the Commission request FAO to publish the three finalized Practical Guides for the Application of the Genebank Standards and distribute them to decision-makers, practitioners and other relevant stakeholders. It also requested FAO to develop further additional stand-alone Practical Guides, especially for the conservation in genebanks of species producing recalcitrant seeds, and for cryopreservation.

VI. STATUS AND TRENDS OF SEED POLICIES

28. The Working Group considered the document *Effects of seed policies, laws and regulations*[11] and took note of the study on *Impact of implementation of seed legislation on diversity of plant genetic resources for food and agriculture*.[12]

29. The Working Group recognized the co-existence of different types of seed systems, commonly referred to as "formal" and "informal" or "farmers'" seed systems, in many countries. It also noted that a clear distinction between these systems is not always possible, as there is a continuum between them.

30. In the view of the Working Group, the study tended to suggest that various seed systems could contribute to PGRFA diversity. The Working Group therefore recommended that the Commission invite countries to develop seed systems in an integrated and inclusive manner, with the objective of conserving and sustainably using PGRFA.

31. The Working Group further recommended that the Commission request FAO to continue to support countries in the development or revision of their national seed policies, as appropriate

[7] FAO. 2019. *Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties/Landraces*. (also avaliable at http://www.fao.org/documents/card/en/c/ca5601en).
[8] http://www.fao.org/3/a-i7788e.pdf
[9] CGRFA/WG-PGR-10/21/2.2.
[10] CGRFA/WG-PGR-10/21/2.2/Inf.1.
[11] CGRFA/WG-PGR-10/21/3.
[12] CGRFA/WG-PGR-10/21/3/Inf.1.

and according to their specific situations, taking into account the Commission's *Voluntary Guide for National Seed Policy Formulation*.[13]

32. The Working Group noted that multiple factors may affect the diversity of PGRFA directly or indirectly and recommended that future research should focus on these different factors, as they impact the ability of farmers to access sufficient, affordable and diversified locally adapted varieties, including farmers' varieties and landraces.

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

33. The Working Group considered the document *Preparing The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*[14] and took note of the information document *Preparation of Country Reports for The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*.[15]

34. The Working Group reviewed and revised the revised list of proposed thematic background studies as given in *Appendix I* of document CGRFA/WG-PGR-10/21/4 CORR.1, for consideration by the Commission. It recommended that the summaries of the proposed thematic background studies be revised to indicate more clearly to which of the chapters of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (Third Report) each of them contributes. In addition, each summary should be re-structured into three sections: purpose, content and contribution to the Third Report. The Working Group further recommended that the scope of the thematic background studies on climate change and nutrition be narrowed to specific technical aspects with practical implication for PGRFA, in a way that complements information submitted by countries and avoids duplication of work in relation to other multilateral organizations and instruments. The Working Group discussed the possible inclusion of thematic background studies on scientific findings related to the contribution of PGRFA to sustainable food systems and on non-monetary benefit-sharing arising from the utilization of PGRFA.

35. The Working Group noted that, in contrast to the previous two global assessments of PGRFA, the number of countries that had completed the reporting for the Third Report was still insufficient to ensure the assessment has adequate country coverage. The Working Group recommended that the Commission request FAO to continue to support countries in reporting for the Third Report and extend the deadline for country reporting to 31 December 2021. The Working Group also recommended that the Commission consider significant simplifications of the WIEWS reporting format once the Third Report has been completed.

36. The Working Group requested that, based on the findings of the Third Report, and following regional consultations, the Second GPA be reviewed and revised, as appropriate, for consideration by the Working Group and subsequently the Commission at its Twentieth Regular Session.

37. The Working Group recommended that the Commission invite donors to continue supporting FAO through the provision of extra-budgetary resources needed for the finalization and publication of the Third Report and the review process of the Second GPA.

VIII. ACCESS AND BENEFIT-SHARING FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

38. The Working Group considered the document *Access and benefit-sharing for genetic resources for food and agriculture: Review and outlook*[16] and took note of the *Draft survey of ABS country measures accommodating distinctive features of genetic resources for food and*

[13] FAO. 2015. *Voluntary Guide for National Seed Policy Formulation*. (also available at http://www.fao.org/3/ai4916e.pdf).
[14] CGRFA/WG-PGR-10/21/4 CORR.1.
[15] CGRFA/WG-PGR-10/21/4/Inf.1.
[16] CGRFA/WG-PGR-10/21/5.

agriculture and associated traditional knowledge[17] (Draft Survey) and the *Inputs by Members on access and benefit-sharing for genetic resources for food and agriculture.*[18]

39. The Working Group commended the Commission's work on ABS for genetic resources for food and agriculture (GRFA) and its role in raising awareness of the distinctive features of GRFA and their different subsectors relevant to ABS. The Working Group took note of developments under other international agreements and instruments and emphasized the need to avoid duplication of work and ensure consistency with the work in other relevant fora.

40. The Working Group considered the Draft Survey a comprehensive compilation of existing ABS measures accommodating the distinctive features of GRFA. It noted that, according to the Draft Survey, countries have broad scope to accommodate the distinctive features of GRFA within their ABS frameworks. It further noted the lack of research, as identified by the Draft Survey, into the positive or negative effects of ABS measures, as implemented in practice, on the conservation and sustainable use of GRFA and associated traditional knowledge.

41. The Working Group recommended that the Commission request the Secretariat to develop a stand-alone document that could be annexed to the *Elements to Facilitate Domestic Implementation of Access and Benefit-Sharing for Different Subsectors of Genetic Resources for Food and Agriculture – with explanatory notes* (ABS Elements),[19] reflecting specific examples of ABS country measures that accommodate the distinctive features of GRFA and/or traditional knowledge associated with genetic resources for food and agriculture (TKGRFA), which may include measures that address "digital sequence information" for GRFA, for review by the Working Groups and the Commission.

42. The Working Group further recommended that the Commission consider, at some point, the preparation of a report on the application of ABS country measures to the different subsectors of GRFA in practice, with a view to identifying the effects of ABS measures on the utilization and conservation of the different subsectors of GRFA and TKGRFA and the fair and equitable sharing of benefits. The report should be based on a pre-tested questionnaire through which information should be sought from countries and relevant stakeholders. The Working Group noted that the same questionnaire could include questions on the usefulness of the ABS Elements for the development and implementation of ABS measures for the different subsectors of GRFA, with the aim of identifying and addressing gaps and weaknesses in the ABS Elements.

43. The Working Group further recommended that the Commission encourage FAO, regional networks and collaborative partnerships to raise awareness of, and enhance capacity to deal with, matters related to ABS and to share information on experiences with the implementation of ABS measures.

44. The Working Group further recommended that the Commission request the Secretariat to investigate, in collaboration with the Treaty and the Convention on Biological Diversity (CBD), means of assembling relevant information about non-monetary benefit-sharing, within their respective mandates and existing frameworks, and present the results of this investigation for consideration by the Working Groups and the Commission.

45. The Working Group further recommended that the Commission consider work to document examples where traditional knowledge contributes to sustainable management of PGRFA.

IX. "DIGITAL SEQUENCE INFORMATION" ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

46. The Working Group considered the document, *"Digital sequence information" (DSI) on genetic resources for food and agriculture: Innovation opportunities, challenges and*

[17] CGRFA/WG-PGR-10/21/5/Inf.2.
[18] CGRFA/WG-PGR-10/21/5/Inf.1.
[19] FAO. 2019. *ABS Elements: Elements to Facilitate Domestic Implementation of Access and Benefit-Sharing for Different Subsectors of Genetic Resources for Food and Agriculture with Explanatory Notes.* Rome. 84 pp. Licence: CC BY-NC-SA 3.0 IGO. (also available at http://www.fao.org/3/ca5088en/ca5088en.pdf).

implications[20] and reviewed the actual and potential applications of "DSI" for the conservation and sustainable use of PGRFA given in Table 2 of the document. It noted that some of the applications listed are relevant to all subsectors of GRFA and could therefore be compiled in a general section of the table. It recommended that the table distinguish between applications related to characterization, sustainable use and conservation. The Working Group further noted that Members could still submit comments on and inputs to Table 2 of the document in writing after the completion of the Working Group session, and requested the Secretariat to revise and consolidate the table in the light of comments received, for review by the Commission at its next session.

47. Noting that a multilaterally agreed definition of "DSI" will be important in order to make further progress in addressing "DSI", the Working Group recommended that the Commission request FAO to consider the observed effects of existing national measures or approaches for ABS for "DSI" on research and development in the food and agriculture sector, for review by the Working Groups and the Commission.

48. The Working Group further recommended that an intersessional workshop be held, in collaboration with relevant instruments and organizations, to raise the awareness of relevant stakeholders regarding the role of "DSI" in research and development related to genetic resources and regarding the challenges involved in accessing and making full use of "DSI".

49. The Working Group recommended that the Commission request FAO to support countries in building the necessary technical, institutional and human capacity to utilize "DSI" on GRFA for research and development of GRFA.

50. The Working Group recommended that the Commission continue monitoring developments relevant to "DSI" in other fora.

X. THE ROLE OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE IN MITIGATION OF AND ADAPTATION TO CLIMATE CHANGE

51. The Working Group considered the document *Climate change and genetic resources for food and agriculture*[21] and took note of the information documents *The role of genetic resources for food and agriculture in climate change adaptation and mitigation*[22] and *FAO activities on climate change.*[23]

52. The Working Group welcomed the scoping study on the role of GRFA in adaptation to, and mitigation of, climate change. It noted that Members may submit comments on and inputs to the study in written form after the Working Group session. It further recommended that the Commission request FAO to publish the revised version of the study.

53. The Working Group welcomed the draft revised Multi-Year Programme of Work (MYPOW) workstream on climate change, as contained in *Appendix I* to the document CGRFA/WG-PGR-10/21/7. It recommended that the review of the work on climate change and GRFA be moved from 2029 to 2027.

54. The Working Group welcomed the country survey on climate change and GRFA, as contained in *Appendix II* to the document CGRFA/WG-PGR-10/21/7. The Working Group recommended that a shorter version of the survey, taking into consideration the similarities and differences across the different sectors, be developed for subsequent inclusion in future questionnaires for the monitoring of the implementation of sectoral global action plans and the preparation of future State of the World reports. It emphasized the need to test any questionnaire before dissemination.

55. The Working Group recommended the addition of climate-related questions in future questionnaires for the monitoring of the implementation of sectoral global action plans and the

[20] CGRFA/WG-PGR-10/21/6.
[21] CGRFA/WG-PGR-10/21/7.
[22] CGRFA/WG-PGR-10/21/7/Inf.1.
[23] CGRFA/WG-PGR-10/21/7/Inf.2.

preparation of future State of the World reports on sectoral GRFA, while noting the need to reduce the reporting burden on countries by streamlining the reporting processes.

56. The Working Group recommended that the Commission request FAO to increase capacity-building and training programmes on climate change adaptation and mitigation with respect to GRFA. It further noted the need for the development of sector-specific guidelines to assist stakeholders in the management of GRFA in view of climate change.

57. The Working Group emphasized that the future work of the Commission on climate change should build on the current work on GRFA and be complementary to the work of other organizations and instruments, such as the Koronivia Joint Work on Agriculture.[24]

58. The Working Group recommended that the Commission request FAO to review the *Voluntary Guidelines to Support the Integration of Genetic Diversity into National Climate Change Adaptation Planning*,[25] and to suggest changes, as appropriate, for consideration by the Working Groups and the Commission.

59. The Working Group further recommended that the Commission continue to focus on GRFA in its future work on climate change.

XI. REVIEW OF THE WORK ON BIOTECHNOLOGIES FOR THE CONSERVATION AND SUSTAINABLE USE OF PLANT GENETIC RESOURCES

60. The Working Group welcomed the document *Review of the work on biotechnologies for the sustainable use and conservation of genetic resources for food and agriculture*[26] and took note of the information document *Recent developments in biotechnologies relevant to the characterization, sustainable use and conservation of genetic resources for food and agriculture*.[27]

61. The Working Group highlighted that biotechnologies, among other innovations and production approaches, such as agroecology or organic agriculture, are critical for the achievement of food security and nutrition and other SDGs. It stressed that, in plant breeding, biotechnologies may allow improved input-use efficiency, yield increases and resistance to biotic and abiotic stresses.

62. The Working Group recalled that many so-called "low" or "traditional" technologies, such as tissue culture, micropropagation or cloning, continue to play a significant role, and that also "modern" genomic technologies depend on phenotypes and breeding organization and infrastructure. It noted that national education systems and capacity-development efforts should cover all relevant biotechnologies, as appropriate. Furthermore, it noted that countries may apply a wide range of biotechnologies for a variety of production methods and systems, and that biotechnologies may become important in promoting adaptation or assisting mitigation in the face of climate change.

63. The Working Group recommended that the Commission request FAO to strengthen the national and regional capacities of developing countries to apply and develop appropriate biotechnologies for the characterization, sustainable use and conservation of GRFA, taking into consideration relevant benefits and risks, relevant national and regional laws and regulations, and international instruments, including those related to risk assessment.

64. The Working Group further recommended that the Commission request FAO to regularly assemble and disseminate, through its existing databases, networks and newsletters, updated factual information on the role of biotechnologies in the characterization, sustainable use and conservation of GRFA and on infrastructure and capacity requirements for the implementation of such biotechnologies. Additionally, it noted the need to explore mechanisms for future

[24] http://www.fao.org/koronivia/en/
[25] FAO. 2015. *Voluntary Guidelines to Support the Integration of Genetic Diversity into National Climate Change Adaptation Planning*. Rome. (also avaliable at http://www.fao.org/3/i4940e/i4940e.pdf).
[26] CGRFA/WG-PGR-10/21/8.
[27] CGRFA/WG-PGR-10/21/8/Inf.1.

cooperation with relevant international organizations, including for fostering North−South, South−South and triangular cooperation, in promoting appropriate biotechnologies for the characterization, sustainable use and conservation of GRFA.

XII. OPTIONS FOR THE ORGANIZATION OF THE COMMISSION'S FUTURE INTERSESSIONAL WORK

65. The Working Group considered the document *Possible re-organization of the Commission's future intersessional work*.[28] It welcomed with appreciation the progress made in the Commission's intersessional work in implementing its broadened mandate, based on inputs from its subsidiary bodies, its Bureau and National Focal Points/Coordinators, and Members' submissions.

66. It stressed the need to address, in a coherent, integrated and consistent way, biodiversity for food and agriculture and micro-organism and invertebrate genetic resources, to streamline the work of the Commission's Working Groups on cross-sectoral matters to enhance efficiency, coordination and communication among the Commission's Working Groups and among National Focal Points/Coordinators.

67. The Working Group provided guidance on the future organization of the Commission's intersessional work. It recommended that the Commission consider, in its deliberations on the re-organization of its intersessional work, the limited resources available to countries and the Secretariat.

68. The Working Group considered the advantages and disadvantages of the various options for the re-organization of the Commission's subsidiary bodies. It recommended that the options be analysed and discussed further before a decision is made. The Working Group did not express preference for a specific option and recommended that other options be presented to the Commission, to be elaborated in consultation with the Bureau.

69. The Working Group welcomed the initiative taken to harmonize the core tasks of National Focal Points/Coordinators, noting that their implementation is subject to national priorities and capacity. It stressed that the main task of National Focal Points/Coordinators is communication between the Commission and countries, and that they may delegate tasks to country teams for specific tasks.

70. The Working Group welcomed the new technical possibility of holding virtual and hybrid webinars, consultations or regional workshops for National Focal Points/Coordinators, taking into account inclusiveness.

XIII. COOPERATION WITH INTERNATIONAL ORGANIZATIONS AND INSTRUMENTS

71. The Working Group took note of the document *Cooperation with international organizations and instruments*.[29] It thanked the Global Crop Diversity Trust, the International Seed Federation, the Treaty and the International Union for the Protection of New Varieties of Plants (UPOV) for reporting on their recent activities on the conservation and sustainable use of PGRFA.[30] The Working Group reiterated the importance of enhancing synergies and strengthening collaboration between the Commission and its partner organizations.

72. The Working Group recommended that the Commission continue receiving reports from relevant organizations and instruments to facilitate its work on PGRFA. It invited organizations, such as the CBD and the centres of the Consultative Group on International Agricultural Research, to provide regular reports on their activities relating to the conservation and use of PGRFA.

XIV. CLOSING STATEMENTS

73. Mr Dan Leskien, Senior Liaison Officer, Secretariat of the Commission, congratulated the Working Group for the rich and fruitful discussions, and the spirit of collaboration and collegiality. He highlighted that the state of the world reports are flagship publications for the

[28] CGRFA/WG-PGR-10/21/9.
[29] CGRFA/WG-PGR-10/21/10.
[30] CGRFA/WG-PGR-10/21/10/Inf.1.

Commission and of high importance for FAO. Furthermore, he noted the high reporting burden these publications place on National Focal Points and expressed his appreciation and gratitude for their work and commitment. In addition, he underscored that WIEWS is an example of the important accomplishments of the Commission and its Working Groups, as it is an essential contribution to the global sustainable development agenda. In concluding, he thanked the Governments of Canada, Germany, Norway, Spain and Switzerland for their ongoing support.

74. The Chair thanked all delegates and the *Rapporteur* for their contributions to the success of the session and noted that the Working Group had accomplished a great deal. He concluded by noting that he looked forward to future interactions with the Commission and all the meeting participants.

APPENDIX A

AGENDA OF THE TENTH SESSION OF THE INTERGOVERNMENTAL TECHNICAL WORKING GROUP ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

1. Election of the Chair, Vice-Chair(s) and *Rapporteur*
2. Adoption of the agenda and timetable
3. Implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture
    - 3.1 *In situ* conservation and on-farm management of plant genetic resources for food and agriculture
    - 3.2 Implementation of the Genebank Standards for Plant Genetic Resources for Food and Agriculture
4. Status and trends of seed policies
5. Preparation of *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*
6. Access and benefit-sharing for plant genetic resources for food and agriculture
7. "Digital sequence information" on plant genetic resources for food and agriculture
8. The role of plant genetic resources for food and agriculture in mitigation of and adaptation to climate change
9. Review of the work on biotechnologies for the conservation and sustainable use of plant genetic resources for food and agriculture
10. Options for the organization of the Commission's future intersessional work
11. Reports from international organizations and instruments
12. Other business
13. Adoption of the Report

APPENDIX B

LIST OF DOCUMENTS

DOCUMENTS

Provisional Agenda	**CGRFA/WG-PGR-10/21/1**
Provisional annotated agenda and timetable	**CGRFA/WG-PGR-10/21/1 Add.1 Rev.1**
Statutes of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture, and Members Elected by the Seventeenth Regular Session of the Commission	CGRFA/WG-PGR-10/21/1/Inf.1
List of Documents	CGRFA/WG-PGR-10/21/1/Inf.2 Rev.1
FAO activities in support of the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture	**CGRFA/WG-PGR-10/21/2**
Strengthening cooperation among global information systems on plant genetic resources for food and agriculture	CGRFA/WG-PGR-10/21/2/Inf.1
Towards a global framework for *in situ* conservation and on-farm management of plant genetic resources for food and agriculture	**CGRFA/WG-PGR-10/21/2.1**
Draft Report of the First International Multi-stakeholder Symposium on Plant Genetic Resources for Food and Agriculture	CGRFA/WG-PGR-10/21/2.1/Inf.1
Implementation of the Genebank Standards for Plant Genetic Resources for Food and Agriculture	**CGRFA/WG-PGR-10/21/2.2**
Draft Practical Guides for the Application of the Genebank Standards	CGRFA/WG-PGR-10/21/2.2/Inf.1
Effects of seed policies, laws and regulations	**CGRFA/WG-PGR-10/21/3**
Impact of implementation of seed legislation on diversity of plant genetic resources for food and agriculture	CGRFA/WG-PGR-10/21/3/Inf.1

Preparing the Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture	**CGRFA/WG-PGR-10/21/4**
Preparation of Country Reports for The Third Report on the State of The World's Plant Genetic Resources for Food and Agriculture	CGRFA/WG-PGR-10/21/4/Inf.1
Access and benefit-sharing for genetic resources for food and agriculture: Review and outlook	**CGRFA/WG-PGR-10/21/5**
Inputs by Members on access and benefit-sharing for genetic resources for food and agriculture	CGRFA/WG-PGR-10/21/5/Inf.1
Draft survey of access and benefit-sharing country measures accommodating the distinctive features of genetic resources for food and agriculture and associated traditional knowledge	CGRFA/WG-PGR-10/21/5/Inf.2
"Digital Sequence Information" on genetic resources for food and agriculture: Innovation opportunities, challenges and implications	**CGRFA/WG-PGR-10/21/6**
Climate change and genetic resources for food and agriculture	**CGRFA/WG-PGR-10/21/7**
The role of genetic resources for food and agriculture in climate change adaptation and mitigation	CGRFA/WG-PGR-10/21/7/Inf.1
FAO activities on climate change	CGRFA/WG-PGR-10/21/7/Inf.2
Review of the work biotechnologies for the sustainable use and conservation of genetic resources for food and agriculture	**CGRFA/WG-PGR-10/21/8**
Recent developments in biotechnologies relevant to the characterization, sustainable use and conservation of genetic resources for food and agriculture	CGRFA/WG-PGR-10/21/8/Inf.1
Possible re-organization of the Commission's future intersessional work	**CGRFA/WG-PGR-10/21/9**
Cooperation with international organizations and instruments	**CGRFA/WG-PGR-10/21/10**
Submissions from international organizations and instruments	CGRFA/WG-PGR-10/21/10/Inf.1

APPENDIX C

MEMBERS OF THE INTERGOVERNMENTAL TECHNICAL WORKING GROUP ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE ELECTED AT THE SEVENTEENTH REGULAR SESSION OF THE COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Composition (no. of countries per region)		*Country*
Africa		Algeria
(5)		Cameroon
		Eritrea
		Senegal
		Zambia
	First Alternate	Malawi
	Second Alternate	Morocco
Asia		Bangladesh
(5)		India
		Indonesia
		Japan
		Thailand
	First Alternate	Malaysia
	Second Alternate	Bhutan
Europe		France
(5)		Georgia
		Netherlands
		Russian Federation
		Switzerland
	First Alternate	Bosnia and Herzegovina
	Second Alternate	Sweden
Latin America and the Caribbean		Brazil
(5)		Chile
		Ecuador
		Jamaica
		Peru
	First Alternate	Costa Rica
	Second Alternate	Cuba
Near East		Egypt
(3)		Kuwait
		Sudan
		Yemen
	First Alternate	Saudi Arabia
	Second Alternate	United Arab Emirates
North America		Canada
(2)		United States of America
Southwest Pacific		Cook Islands
(2)		Samoa
	First Alternate	Tonga
	Second Alternate	Fiji