

April 2021



**Food and Agriculture
Organization of the
United Nations**



The International Treaty
ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE

INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

FOURTH MEETING OF THE SCIENTIFIC ADVISORY COMMITTEE ON THE GLOBAL INFORMATION SYSTEM

20–21 April 2021

REPORT ON PARTNERSHIPS AND COLLABORATION

I. INTRODUCTION

1. Resolution 3/2015, by which the Governing Body adopted the Vision and the Programme of work on the Global Information System, emphasizes the importance of partnerships and collaboration for effective implementation.
2. This document provides an overview of the major partnerships and collaboration that the Secretariat engaged in for the implementation of the Programme of Work of the Global Information System (GLIS) since the last Session of the Governing Body.
3. Most of the documents prepared for this meeting contain references to ongoing partnerships and collaboration with a wide range of organisations, initiatives and entities. In order to facilitate a more focused consideration by the Committee, this document summarises those activities, provides information on partnerships not explicitly addressed in other documents and information on other ongoing or potential activities with relevant organisations and entities.¹

II. RELEVANT PARTNERSHIPS AND COLLABORATION

Preferential partners for the GLIS Portal

4. The Secretariat has continued the collaboration with FAO's Early Warning System on Plant Genetic Resources for Food and Agriculture (WIEWS) and with Genesys, as relevant sources of PGRFA information for ex situ material. Since the collaboration commenced, the Global Information System has exchanged over seven million messages with Genesys and over 800 000 records with WIEWS. Both systems are prominently highlighted as ex situ sources of PGRFA in the new directory of links of the GLIS Portal and in other sections of the Portal.
5. Managed by the Global Crop Diversity Trust, Genesys was the first system for which integration protocols were completed to exchange data. In cases where stakeholders publish or update new records in Genesys with Digital Object Identifiers (DOIs), Genesys automatically registers itself as one of the links associated with the DOI in GLIS. Moreover, when receiving a link registration request, GLIS queries Genesys and updates the corresponding DOI record. This provides users with a convenient way of keeping both systems up to date while minimizing duplication of efforts. The activities related to Genesys and GLIS are jointly discussed at planning sessions every year by the heads of both organizations and relevant staff.
6. The Secretariat participated in the virtual meeting of the Steering Committee of Genesys in 2020 and in the subsequent work through electronic means. The Steering Committee discussed

¹ Most partners and their systems and initiatives are referred to in the new GLIS Portal <https://ssl.fao.org/glis/>

and approved the vision and mission of Genesys, which includes relevant elements of its relationship with the GLIS.²

7. The collaboration with the Crop Trust also extends to other areas of work, including the participation in activities related to taxonomy and documentation of crop wild relative materials. Scientific collaboration is ongoing for the preparation of joint information and knowledge products, in the form of reports and statistics and through the update of the crop strategies.

8. Under the umbrella of the Memorandum of Understanding signed with the European Cooperative Programme for Plant Genetic Resources (ECPGR), the Secretariat has continued collaborating with the European Search Catalogue for Plant Genetic Resources (EURISCO). The Secretariat has also participated in online consultations and identified activities for future collaboration, such as documentation of PGRFA, in particular the development of crop descriptor lists for crops of interest to ECPGR members and the International Treaty. EURISCO is integrated with GLIS and able to register DOIs on behalf of its members. So far, this functionality has been used to register DOIs for genebanks in Azerbaijan and Romania. The Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) in Germany has also used this option to record into GLIS over 142 000 DOIs that IPK had assigned directly itself. A similar process is ongoing with French National Research Institute for Agriculture, Food and the Environment (INRAE) that has also assigned over 80 000 DOIs independently and is exploring options to record them in GLIS.

Commission on Genetic Resources for Food and Agriculture (CGRFA)

9. The Secretariat has also continued the close collaboration with the Commission on Genetic Resources for Food and Agriculture (CGRFA) and the technical services of FAO to facilitate the interactions between GLIS and WIEWS for ex situ PGRFA. The WIEWS system provides access to accession-level information for material conserved in long-term conditions, which are of relevance to the users of GLIS, as well as other information made available by countries for the monitoring of *the Global Plan of Action*. In the context of the development of the GLIS Portal, additional links have been published, pointing to relevant content in WIEWS, e.g., organizations holding PGRFA material in long-term conditions.

10. Recently, the Secretariat of the International Treaty has engaged with FAO's Plant Production and Protection Division (NSP) to draft a document for the Tenth Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture, explaining the role, functions, synergies and collaborations between WIEWS, GLIS and Genesys.³

11. In addition to the collaboration on WIEWS, the International Treaty and the CGRFA Secretariats collaborate in the following GLIS-related areas:

(a) the preparation of the Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture (Third Report) and the consideration of the Third Global Plan of Action for Plant Genetic Resources for Food and Agriculture;⁴

(b) the monitoring and implementation of *the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture* (Second GPA), including the dissemination of the *Draft Voluntary Guidelines for the Conservation and Sustainable Use of Farmers' Varieties and Landraces* and global networking on in situ conservation and on-farm management of PGRFA;⁵

² See <https://www.genesys-pgr.org/content/about/vision-and-mission>

³For its Tenth Session in June 2021. The document will be made available at <http://www.fao.org/agriculture/crops/core-themes/theme/seeds-pgr/itwg/10th/en/>

⁴ See the notification "NCP GB9-06- CSL- Third Report SoW PGRFA" <http://www.fao.org/plant-treaty/notifications/detail-events/en/c/1278126/>

⁵ Available at <http://www.fao.org/3/ca5601en/ca5601en.pdf>

- (c) access and benefit-sharing;
- (e) global targets and indicators.

12. As mandated by Resolution 9 /2019, the Secretariats of the Treaty and the Commission collaborated, together with NSP and the Global Crop Diversity Trust, on the organization of the “*First International Multi-Stakeholder Virtual Symposium on Plant Genetic Resources for Food and Agriculture - Technical Consultation on In Situ Conservation and On-Farm Management of PGRFA*” in March 2021.⁶

13. The symposium provided an open-ended forum for the exchange of information and experiences among experts, practitioners and other stakeholders. It also contributed to an increased understanding of the role and importance of in situ conservation of crop wild relatives and wild food plants and on-farm management of farmers’ varieties/landraces and help to identify the needs of different stakeholders involved in *in situ* conservation and/or on-farm management of farmers’ varieties/landraces.

14. Coordination with the CGRFA will continue on a range of other issues of common interest and areas of interface, including the ongoing negotiations for the post-2020 Global Biodiversity Framework.

Office of Climate Change, Biodiversity and Environment (OCB)

15. It is to be noted that in early 2020, the Secretariat was moved, within the FAO structure, to the Office of Climate Change, Biodiversity and Environment (OCB) together with the CGRFA and other technical groups and policy bodies. Since then, the Secretariat has been exploring opportunities for collaboration with other units of the Office. Recent developments include the joint participation with the Climate Change Unit in a project proposal of the Horizon 2020 Programme of the European Union, which would guide a policy development campaign that enables large-scale, cross-boundary scale up of landscape restoration through sustainable agricultural practices of agrobiodiversity, including crop germplasm.

16. The Secretariat is also collaborating with the Climate Change Unit in the implementation of the programme Scaling up Climate Ambition on Land Use and Agriculture through the Nationally Determined Contributions and National Adaptation Plans.⁷ The objective of the collaboration is to find synergies in the national planning processes related to crop germplasm, agriculture and climate change.

Other relevant regional and national collaborations on *ex situ* conservation

17. The collaboration with the SADC Plant Genetic Resources Centre in Zambia has focused on the registration of material, the provision of support on the documentation of PGRFA to its members and the organization of online training events. The training activities will continue up to 2022. The regular participation in the meetings of the SADC Network has also facilitated the identification of other areas of interest like the documentation of crop wild relatives conserved in situ, the identification of gaps and prospects for future resource mobilization efforts.⁸

18. The Secretariat has also collaborated with the Brazilian Agricultural Research Corporation (EMBRAPA) in the context of the assignation of DOIs to their collections. In the first round, 27 913 DOIs have been assigned to the rice and bean collections. The process of extending registration to the other collections is ongoing.

19. Additional, the National Agriculture and Food Research Organization (NARO) in Japan, the Centre for Genetic Resources (CGN) in the Netherlands, the National Genebank of Tunisia

⁶ <http://www.fao.org/about/meetings/multi-stakeholder-symposium-on-pgrfa/en/>

⁷ <http://www.fao.org/climate-change/programmes-and-projects/detail/en/c/1273079/>

⁸ See document IT/GB-9/SAC-GLIS-4/21/2 for additional details on the collaboration on the Web-SDIS genebank management system.

(BNG), the International Center for Biosaline Agriculture (ICBA), the Lebanese Agricultural Research Institute (LARI) and several universities in Italy, Portugal, Ghana and Peru have also registered their collections or registered new materials.

CGIAR

20. The CGIAR, which is a critical partner in the implementation of the International Treaty, is currently transitioning to a new institutional structure. The One CGIAR is a dynamic reformulation of CGIAR's governance, partnerships, knowledge, assets, and global presence, aiming for greater integration and impact in the face of interdependent challenges.

21. One CGIAR may offer new opportunities and challenges for GLIS, which interfaces with the genebanks, the breeding programmes, the Big Data Platform, and the policy and IPRs modules.

22. During this period, the Secretariat has maintained the close collaboration already established with the above work streams. It has also collaborated with the ICRISAT Plant Breeding Program. Following the corporate decision of assigning DOIs to any material made available for distribution, regardless of whether it is a genebank accession or a breeding line, ICRISAT has developed a tool for breeders to assign DOIs to the materials. This collaboration could be the subject of a case study in the course of 2021.

23. Following the advice provided by the Scientific Advisory Committee, the Secretariat has collaborated with CIMMYT to facilitate the development of a tool by GRIN-Global to implement GLIS interfaces for assigning DOIs. The Secretariat is currently supporting users with the customization of the tool and the export of data. As reported above, at least two genebanks, in Poland and in Romania, have already reported SMTAs and/or registered DOIs using this new option.

24. The Secretariat has collaborated with the Big Data Platform and other partners on the workshop "Towards responsible data linkage: global challenges for food security and governance" organized by the University of Exeter and held remotely in four weekly sessions in March 2021. The collaboration has focussed on possible ways to advance on PGRFA data exchange through the development of interoperability tools.

Benefit-Sharing Fund Projects

25. The Secretariat has continued supporting the projects funded by the Benefit-sharing Fund with the publication of their PGRFA related records, ensuring they are available online and discoverable through the GLIS and other platforms and tools. So far, approximately 10 000 DOIs have been assigned by the implementing entities involved in the BSF projects.

26. In addition to the assignation of DOIs to the PGRFA they work with, the partners in those projects also benefit from advice on PGRFA documentation from the Secretariat. The projects, which are implemented in developing countries and collaborate with hundreds of local organizations and entities, are currently producing a diverse range of knowledge products, including relevant scientific papers and publications. The Secretariat envisages broader support actions for the ongoing fourth cycle to improve the information quality and accessibility in such knowledge products.

Research Projects – Pulses and Underutilized Crops

27. The Secretariat has been involved in two projects funded under the Horizon 2020 Programme of the European Union, which deal with pulses and underutilized crops. The project "Intelligent Collections of Food Legumes Genetic Resources for European Agrofood Systems" (INCREASE) comprises a Citizen Science Experiment, with a mobile application able to support users with the use of the SMTA and the assignation of DOIs.⁹ At the time of publication of this

⁹ For for information, visit <https://www.pulsesincrease.eu>

document, a consortium Agreement is being finalized for the implementation of the project “ReAlising DynamIc vAlue NeTworks for underutilized crops”(RADIANT).¹⁰ Under the project, the Secretariat will support the use of the SMTA and policy and awareness-raising actions for promoting PGRFA research and use.

International Union for the Protection of New Varieties of Plants (UPOV)

28. At its Eighth Session, the Governing Body encouraged UPOV to explore possibilities for free access to and use of the information in the PLUTO database, including downloading information, for example, by linking PLUTO to GLIS.¹¹

29. UPOV has published the new modalities for accessing PLUTO, which now differentiates between free and premium services. According to the information provided on the website, the free service allows users to search the database and displays results with some limits, while the premium service has no restrictions on the amount of data that can be downloaded.¹²

30. The Secretariat has linked to the Pluto database from the directory of the GLIS Portal and invited the UPOV Secretariat to further discuss the links with GLIS.

Digital Sequence Information/Genetic Sequence Data (DSI/GSD)¹³

31. The Secretariat provides information on relevant partnerships and collaboration in this area in the document, IT/GB-9/SAC-GLIS-4/21/5.

Global Open Data for Agriculture and Nutrition Initiative (GODAN)

32. The Secretary collaborated with FAO’s Legal Office in formulating and commissioning a study on agricultural data policy and management, undertaken in partnership with the Global Open Data for Agriculture and Nutrition Initiative (GODAN) and the University of Ottawa.

33. The study, under preparation, seeks to develop knowledge and insights into existing legal and policy structures of agricultural data ownership, control and management, including intellectual property rights. The study has a dual focus on open data to expedite research and innovation in food and agriculture, with the case of plant germplasm examined, and equity issues related to developing country capacities and collaborations. FAO reported on the initiative to its Programme Committee in March this year.

DivSeek International Network

34. In Resolution 4/2019, the Governing Body took note of the progress made by the DivSeek International Network and requested “the Secretary to explore possible arrangements for further engagements with the Network”. Based on the request by the Governing Body, the Secretary has consulted with DivSeek’s management and discussed the conclusion of a Memorandum of Understanding (MoU).¹⁴ The draft MoU is currently undergoing internal FAO review.

¹⁰ https://www.tcd.ie/news_events/articles/new-e7-million-sustainable-crop-production-project-focuses-on-underutilised-crops/

¹¹ The Pluto: Plant Variety Database is available at <https://www.upov.int/pluto/en/>

¹³ The Governing Body has not yet decided on the official terminology for digital sequence information/genetic sequence data and therefore uses “DSI/GSD” until new terminology is agreed.

¹⁴ IT/GB-9 Bureau 1/20/4/Inf.1

35. The Secretariat attended, in an observer capacity, the annual Assembly of the DivSeek International Network in January 2021 and has jointly organised and participated in various events on the promotion of DOIs.¹⁵

Crop Descriptors Lists

36. The documents, IT/GB-9/SAC-GLIS-4/21/4.1 and IT/GB-9/SAC-GLIS-4/21/4.2, prepared under agenda item 4, provide an overview of the major partnerships and collaborations for the development of the globally agreed descriptors of crop wild relatives conserved *in situ*. In particular, they refer to the collaboration with the Alliance of Biodiversity International and CIAT regarding the project “Bridging Agriculture and Environment: The Southern African Crop Wild Relative regional network”, funded by the Darwin Initiative. The project has also been instrumental in developing a new collaboration with the Global Biodiversity Information Facility (GBIF).

37. The documents also refer to potential further collaboration with the Crop Trust and various working groups of the ECPGR, as well as with the World Agroforestry Centre and the University of Philippines.

Project and Initiatives Working on In Situ and On-farm Conservation

38. The Secretariat has collaborated with European projects and networks on *in situ* and on-farm conservation. In particular, it has collaborated with the Farmer’s Pride project working on building a network for on-site conservation of plant diversity in Europe, and with the European coordination network “Let’s Liberate Diversity”. Representatives of both initiatives have been invited to this meeting.¹⁶

39. One of the collaborations with the Farmer’s Pride project, the University of Birmingham and the National University of Colombia, has developed a new version of the CAPFITOGEN tools. Users can benefit from the ecogeographic analysis provided by the tools online, without the need of installing any software. The Secretariat is planning to continue supporting the dissemination of the tools and promoting the organization of training events, particularly in developing countries.

40. The Secretariat is exploring linkages with similar relevant networks, portals and resources in other regions based on information gathered for the setting up of the Inventory on Farmers’ Rights and the Sustainable Use tools.

III. THE CAPACITY BUILDING STRATEGY

41. At its Eighth Session, the Governing Body welcomed the initiative for a Capacity Development Strategy and requested the Secretary to develop a draft Strategy on the basis of the Draft Framework for the Capacity Development Strategy of the International Treaty (2022–2025) with inputs from stakeholders and in collaboration with relevant subsidiary bodies.

42. In response to the request of the Governing Body, the Strategy is being developed through a consultative process starting with initial exchanges from a selected group of stakeholder experts. The Secretary is preparing the first draft of the Strategy and informing the relevant subsidiary bodies about this process. Inputs by the subsidiary bodies will be sought by the first half of 2021. Accordingly, the members of the Scientific Advisory Committee will soon be invited by email to provide relevant inputs and comments.

43. Once the inputs made are reflected into a revised version of the Strategy, the Secretary will present it to the Governing Body for its consideration at the Ninth Session.

¹⁵ See <https://divseekintl.org/webinars>

¹⁶ See <http://www.farmerspride.eu/> and <https://liberatediversity.org/> respectively.

IV. ADVICE SOUGHT

44. The Committee is invited to:

- i. ***Take note*** of the information provided in this document and;
- ii. ***Provide advice*** on developing and further strengthening partnerships and collaboration, including on improving support to GLIS users, planning and organizing training and capacity building activities.