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The International Treaty
ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE

INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

SECOND MEETING OF THE SCIENTIFIC ADVISORY COMMITTEE ON THE GLOBAL INFORMATION SYSTEM OF ARTICLE 17 OF THE TREATY

Rome, Italy, 13 – 14 June 2017

REPORT

I. OPENING OF THE MEETING

1. The second meeting of the Scientific Advisory Committee on the Global Information System of Article 17 of the Treaty (Committee) was co-chaired by Mr Axel Diederichsen (North America Region) and Mr Kuldeep Singh (Asia Region), who were elected at the first meeting of the Committee. They opened the meeting, and welcomed the participants. The full list of participants will be issued as an information document and made available on-line.
2. In his opening statement, the Secretary, *ad interim*, of the International Treaty on Plant Genetic Resources for Food and Agriculture, Mr Kent Nnadozie, recalled that the value of plant genetic resources is in the information that is conveyed to breeders and farmers. He emphasized that exchange of information through the Global Information System (GLIS) is an effective means of concretizing one of the components of non-monetary benefit-sharing in the Multilateral System of Access and Benefit-Sharing.
3. In Mr. Nnadozie's views, ensuring that the necessary information reaches developing countries and farmers is an objective of paramount importance to the International Treaty community. In thanking the members of the Committee for the guidance provided to the Secretariat at the first meeting, Mr. Nnadozie expressed the full commitment by the Secretariat to keep Contracting Parties informed of developments that would occur at this second meeting of the Committee, in order to guide the further implementation of GLIS through partnerships and collaborations as well as to prepare for the Seventh Session of the Governing Body.

II. ADOPTION OF THE AGENDA

4. The Committee adopted the Agenda as contained in the *Appendix* to this Report.

III. OPERATIONS AND IMPLEMENTATION OF THE PROGRAMME OF WORK

5. The Secretariat introduced document IT/GB7/SAC-2/17/3, *Report on the Operations of the Programme of Work*. The document provided an overview of the major activities undertaken under the Programme of Work (PoW) of the GLIS since the first meeting of the Committee.
6. The Committee recalled that the development of the PoW in line with the adopted Vision was a priority for the effective implementation of Article 17 and that it was essential to add value to existing PGRFA information for the benefit of the community.

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7. The Committee took note of the development of the web-based Platform to assign Digital Object Identifiers (DOIs) to PGRFA and of the progress made in the development of the Integration Toolkit in the context of the Benefit-sharing Fund project led by Indonesia. In this context, the Committee noted that GLIS also facilitates the registration of PGRFA material through other methods, including Excel tables and manual data entry.

8. The Committee advised the Secretary to interact with a broad range of user categories in order to define user-oriented entry points, and with existing databases and systems to facilitate the adoption of DOIs. It further advised the Secretary to explore further synergies, including through memoranda of understanding or other practical arrangements, for connection with other systems and databases and in order to avoid duplication, in particular Genesys, GRIN-Global, WIEWS and the monitoring system for the Global Plan of Action on PGRFA.

9. Regarding the relationship with DivSeek, the Committee noted that the initiative was still searching for a hosting arrangement or a legal entity that would give it the legal persona to operate. Regarding the on-going discussions for the establishment of a Memorandum of Understanding with DivSeek under the guidance of the Bureau, the Committee advised the Secretary to take into account that DivSeek could act as a collaborator to GLIS in relation to: the identification of sources of information on research collections; the identification of non-confidential research and breeding data, including from DivSeek Partners; and the screening of additional sources of germplasm through available publications.

10. The Committee identified other issues that would benefit from further discussions within the Committee in the future, should the Governing Body decide to reconvene it at its next Session, in particular to meet the needs of users regarding the documentation and exchange of information and knowledge associated to PGRFA for the conservation and sustainable use of on-farm and *in situ* germplasm.

11. The Committee advised the Secretariat to develop a document describing the functionalities of GLIS and the required interactions with partner information systems. This document will allow priority setting regarding the future programme of work. A few prioritized projects within the programme of work should be clearly identified, then model elements of the system be developed and made available to subsets of users for testing and generating feedback regarding utility and functionality. In other words, define priority needs, start small, incorporate learning and then build up.

IV. REVIEW OF THE GUIDELINES FOR DIGITAL OBJECT IDENTIFIERS

12. The Secretariat introduced document IT/GB7/SAC-2/17/4, *Review of the Guidelines for Digital Object Identifiers*. The document reported on the organization of an online consultation to get user inputs on a revised version of the Guidelines, which the Secretariat developed following the advice of the Committee at its first meeting. The document provided an analysis of the major considerations highlighted by the users and a subsequent version of the Guidelines, which the Secretariat prepared based on the results of the on-line consultation, for the consideration of the Committee.

13. The Committee agreed that:

- i) The use of DOIs and the Guidelines should be voluntary;
- ii) The proposed DOI system is a central element of the GLIS, linking existing information systems;
- iii) A core function of the DOI system is to provide pointers to PGRFA-related information in existing systems;
- iv) The inclusion of mandatory metadata, as described in the Guidelines, is appropriate for the registration of material;

- v) Pointers to DOIs of related PGRFA are desirable, and indeed necessary for some of the envisioned functionality, but should not be made mandatory;
- vi) The text on “method of creation”, “date of creation” and “target” needs clarification, as does the term “holder” in the case of *in situ* material;
- vii) Development of the DOI system should continue with a view to making it available to users by September 2017;
- viii) Consultations are required to define additional use cases scenarios, in particular with plant breeders including those from universities and the private sector, as envisioned in the Programme of Work adopted by the Governing Body at its Sixth Session, for future implementation;
- ix) Broader consultation is desirable with the on-farm and *in situ* conservation communities, and with the broader GRFA community.

14. The Committee took note of the views of users that the DOI system could be used for all plant genetic resources and genetic resources for food and agriculture more generally.

15. The Committee acknowledged that many holders of PGRFA are not currently able to provide access to their PGRFA-related information through any existing information system. In the future, the Committee may discuss mechanisms and processes to promote the participation of all PGRFA holders.

16. The Committee asked the Secretariat to consider any additional written comments on the Guidelines, received within two weeks since the adoption of this report.

V. ACCESS AND USE OF PGRFA INFORMATION THROUGH THE GLOBAL INFORMATION SYSTEM

17. The Secretariat introduced document, IT/GB-7/SAC-2/17/5, *Access and use of PGRFA information through the Global Information System*. In the document, the Secretariat reported on developments related to objective 4 of the PoW, which deals with promoting transparency of the rights and obligations of users for accessing, sharing and using PGRFA associated information as well as with establishing ways to exercise those rights and obligations within the GLIS. With a view to facilitating dialogue between the Committee and the *Ad Hoc* Open-Ended Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit-sharing (Working Group), the document summarized developments that occurred within the Working Group and within the Convention on Biological Diversity (CBD) in relation to genomic information. Furthermore, the document contained a report on interactions with users having legal implications, and criteria for developing terms of access and use for the GLIS web-based Platform.

18. The Committee discussed the issue of genetic sequence information¹ but was unable to reach consensus about how to deal with this issue and would welcome further guidance from the Governing Body.

19. In recognition of the importance of access to genomic information to the GLIS vision and functions, the Committee also suggested that the Governing Body invite Contracting Parties and relevant stakeholders to provide views and information to on-going processes, including in the CBD and the Commission on Genetic Resources for Food and Agriculture. This was to ensure that the multilateral nature of the Treaty and its approaches to information exchange for PGRFA would be taken into account in the consideration of relevant issues under those processes.

20. In relation to the elaboration of a legal disclaimer and related provisions for the GLIS web-based Platform, the Committee endorsed the principles and criteria that the Secretariat

¹ This would be without prejudice to on-going and future discussion in all relevant fora, of issues related to the technical scope, and the legal and scientific implications of existing terminology.

proposed in paragraphs 18 and 19 of document, IT/GB-7/SAC-2/17/5, subject to further consultations within FAO. These included:

- a) A public domain type of license on copyright-protected content of the Platform;
- b) Disclaimers as to the quality and accuracy of data and information;
- c) No ownership claims to user contributed content, individual items of metadata and associated DOIs acquired through the use of the DOI system;
- d) Exclusion of FAO's liability with reference to external links (targets);
- e) Holding of DOI name data and metadata for the exclusive purposes of resolution and discovery;
- f) Development and publication of usage statistics and information on the aggregate activity of the DOI system.

21. The Committee also advised the Secretariat to consider the conditions of access and use of information contained in external databases linked through the DOI system, and their implications for future possible GLIS standards for access and use of information.

VI. PARTNERSHIPS AND COLLABORATIONS

22. The Secretariat introduced document, IT/GB-7/SAC- 2/17/6, *Partnerships, Collaborations and Capacity Development*. The document contained summary updates on activities for the strengthening and development of partnerships for the GLIS web-based Portal and joint opportunities for capacity development activities with a focus on developing countries. In addition to the content of the document, the Co-Chairs invited selected organizations to deliver presentations at the meeting on their ongoing programs and activities of relevance to GLIS with a view to highlighting areas for partnerships and collaboration.

23. Mr. Stefano Diulgheroff (FAO) presented WIEWS and the reporting system for the Second Global Plan of Action on Plant Genetic Resources for Food and Agriculture (GPA). Mr. Diulgheroff highlighted the role of indicators for the Second GPA and of composite indexes for *ex situ* and *in situ* conservation. Mr. Diulgheroff explained that all data and information are relevant for Articles 5, 6 and 9 of the International Treaty and would be utilized to develop the Third Report of State of the World's Plant Genetic Resources for Food and Agriculture. The Committee took note of the developments related to: i) the direct reporting to WIEWS from countries on *ex situ* collection with regard to the Second GPA monitoring and the Sustainable Development Goal 2.5.1 (PGRFA-related indicators); and ii) harvesting data from information systems such as Genesys and Eurisco. He also highlighted the unique value of the GPA reporting format for *ex situ*, on-farm, and *in situ* materials.

24. Mr. Johannes Keizer presented the Global Open Data for Agriculture and Nutrition initiative (GODAN). Mr. Keizer presented GODAN's work in relation to the governance of data ownership and access as well as GODAN's initiatives for advocacy and creation of knowledge networks. He highlighted the dissemination of GLIS progress to GODAN partners as a concrete opportunity for cooperation. Ms. Imma Subirats (FAO) presented FAO's work on data sharing and information exchange standards, including in the context of the Research Data Alliance as well as on awareness raising and e-learning. Ms. Subirats noted that DivSeek was an active contributor to RDA's activities and highlighted the opportunity for GLIS work to feed into and collaborate with the RDA's working groups. The Committee took note of the two presentations and flagged interoperability and participation in on-going working groups as areas for collaboration with GLIS.

25. Mr. Luigi Guarino (Global Crop Diversity Trust) presented Genesys as the online entry point to data on crop diversity maintained *ex situ* worldwide. Mr. Guarino explained Genesys functionalities for genebanks to publish and share data, and for users to query passport data and

phenotypic data linked to accession data through metadata. He also conveyed the readiness of Genesys to adopt DOIs. Mr. Guarino also presented GRIN-Global, as the information management system of genebank workflows. The Committee positively noted the role of Genesys as the entry point for information on *ex situ* collections and the current support to national genebanks for developing the capacity to upload genebank data into Genesys. In relation to information on on-farm and *in situ* material, the Committee noted the opportunity to initiate discussions on methodological approaches and concepts for documentation and information systems, before assessing the potential for Genesys to store such information.

26. Mr. Matthew Dias (CBD Secretariat) reported on the progress made by the Convention on Biological Diversity (CBD) with the consideration of digital sequence information. In particular, Mr Dias informed on the coordinated and non-duplicative processed established in decisions taken under the COP (decision XIII/16) and COP-MOP (decision NP-2/14), to consider at their next meetings any potential implications of the use of digital sequence information on genetic resources for the three objectives of the CBD and the objectives of the Nagoya Protocol. The decisions invited the submission of views and relevant information on potential implications of the use of digital sequence information on genetic resources for the three objectives of the Convention, including information relevant to the Nagoya Protocol. Mr. Dias informed the Committee of CBD Secretariat's work to develop functionalities and encourage the population and use of the ABS Clearing-House (ABS-CH), and highlighted the opportunity of collaboration with the International Treaty Secretariat on links between GLIS and the ABS-CH. The Committee indicated the need to further elaborate how GLIS could benefit from information in the ABS-CH. It was suggested that the ABS-CH could help clarify the ABS rules applicable to PGRFA that are not in the Multilateral System.

27. Mr. David Ellis (CIP) illustrated the potential of DOIs to track both seed-based and clonal selections in the context of the CGIAR Genebank Platform. Mr. Ellis highlighted the DOI potential to provide links among breeder materials and to rectify identity errors. The Committee noted that the correct application of DOIs would be a valuable method to track the material in genebanks and those in breeding programmes across transactions.

28. Mr. Jens Riis-Jacobsen (CIMMYT) illustrated the tools, services and best practices for information management in the CGIAR Excellence in Breeding Platform. He highlighted the need for the DOI system to provide breeders with flexibility as to the status of information associated to DOIs, and for GLIS to devise multiple incentives for data sharing. The Committee took note of the objectives of the Platform and the foreseen development of an application for breeders which could benefit from the use of DOIs to track, on a voluntary basis, the exchange of germplasm and provide links to information.

29. With regard to the further development of partnerships, the Committee advised the Secretariat to follow a step-wise approach. In particular, it advised the Secretariat to prioritize Genesys and GRIN-Global and flagged the need to clarify arrangements with the Global Crop Diversity Trust, through the existing Relationship Agreement with the Governing Body or through an additional Memorandum of Understanding. The Committee also advised the Secretariat to explore ways to further collaborate with WIEWS and the GPA reporting system in order to develop efficiencies in reporting mechanisms.

30. With regard to possible future partnerships and collaboration for information on on-farm and *in situ* material, the Committee highlighted a number of other potential partners, such as FAO Globally Important Agricultural Heritage Systems (GIAHS), UNESCO World Heritage Sites and the Man & Biosphere Programme, the CBD Programme of Work on Protected Areas, IUCN Key Biodiversity Areas and the Crop Wild Relatives Specialist Group, and the European Natura 2000 Network.

31. The Committee advised that, should it be reconvened by the Governing Body at its Seventh Session, the documentation of the Committee meeting should include a draft plan of activities for collaboration with partners in the next biennium and the document outlined in paragraph 11 of this Report.

VII. OTHER MATTERS

32. The Committee thanked the Government of Germany for the generous financial contribution it made for the implementation of the PoW and encouraged other potential donors to provide additional contributions.

VIII. ADOPTION OF THE REPORT

33. The Committee adopted this Report.

Appendix

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AGENDA

1. Adoption of the Agenda
2. Operations and Implementation of the Programme of Work
3. Review of the Guidelines for Digital Object Identifiers
4. Access and use of PGRFA information through the Global Information System
5. Partnerships and collaborations
6. Other Matters
7. Adoption of the Report