Food and Agriculture Organization of the United Nations

The International Treaty ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

The International Treaty
Update on the Global Information System

15th ECPGR Steering Committee

Francisco Lopez
Technical Officer, the International Treaty on PGRFA,
Food and Agriculture Organization of the United Nations

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- **International agreement:** The Treaty is an international agreement that ensures that farmers and plant breeders access, easily, the raw genetic material needed to develop new crop varieties, including those with higher yields and those that are resilient to climate change.

- **Global solution:** It provides a global solution to the challenges of crop diversity loss and climate change adaptation through mechanisms such as the Multilateral System and Benefit-sharing Fund.

- **World-wide membership:** 144 countries are Contracting Parties of the International Treaty, almost 30 which are from Asia and the South West Pacific.

What are the Treaty's objectives?

- The conservation and sustainable use of plant genetic resources for food and agriculture
- The fair and equitable sharing of benefits derived from their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security

The Multilateral System

- Global Genepool of the Treaty
- 144 countries + Int‘ Centres + Other users
- Operating since January 2007
- 2,3 million PGRFA today have been notified
- More than 4,3 million PGRFA has been transferred
- The material is transferred with an standard agreement (SMTA)

What is the SMTA?

The Standard Material Transfer Agreement (SMTA) is a private contract with standard terms and conditions ensuring that the relevant provisions of the International Treaty are followed by providers and recipients when transferring plant genetic material that is included in the Multilateral System of the International Treaty.

The obligations of the Provider

- the Provider of material has to report a minimum amount of information;
- resolution 5/2009 (GB3, Tunis, 2009);
- within a period of two years since the signature or acceptance of the SMTA.

What is Easy-SMTA?

- The Standard Material Transfer Agreement (SMTA) made easy!

  This System has been developed by the Secretariat of the International Treaty to assist users with:

  - compiling and generating SMTAs in the six official languages of the International Treaty;
  - reporting on SMTAs concluded in accordance with the instructions given by the Governing Body of the International Treaty.

The Global Information System

The vision

- The Global Information System for PGRFA integrates and augments existing systems to create the global entry point to information and knowledge for strengthening the capacity for PGRFA conservation, management and utilization.

The vision for GLIS involves

- strengthening existing systems and, where gaps remain, establishing new systems and initiatives;
- promoting inter-connectivity among systems; and
- providing overarching mechanisms to ensure ready access to the information and services provided.

7 Objectives - 1

- 1-To create a web-based platform with use-oriented entry points to PGRFA information;
- 2-To provide a comprehensive overview and facilitate access to sources of PGRFA and associated information;
- 3-To promote and facilitate interoperability among existing systems by providing clear principles, technical standards and appropriate tools to support their operations in accordance to the principles and rules of the Treaty

7 Objectives (2)

4-To promote transparency on the rights and obligations of users for accessing, sharing and using PGRFA associated information and to establish ways to exercise those rights and obligations within the Global Information System;

5-To create and enhance opportunities for communication and international and multidisciplinary collaboration to increase knowledge about and add value to PGRFA;

7 Objectives (3)

- 6-To provide capacity development and technology transfer opportunities for the conservation, management and use of PGRFA and associated information and knowledge paying special attention to the needs of developing countries;
- 7-To create a mechanism to assess progress and monitor effectiveness of the Global Information System.

ECPGR and the DOIs

- The focus on the development of a Permanent unique identifier came from ECPGR Inf. and documentation meeting in Prague in 2014
- A global approach for unique identifiers is needed and the Treaty Secretariat should be asked to organize a meeting to recommend a standard solution that EURISCO will have to adopt.

Why DOIs?

The Governing Body of the International Treaty and the community agreed on the need of accurately and permanently identifying PGRFAs

- The Secretariat conducted:
  - a study on available technologies
  - a survey among over 200 experts worldwide
  - a validation study involving 23 selected experts
- The outcome of the process was the endorsement of Digital Object Identifiers (DOIs) by the Scientific Advisory Committee (SAC) on the Global Information System

DOI's main facts

- International DOI Foundation created in 1996 by the three major international publishing trade associations
- ISO 26324 standard
- About 145 Million DOIs registered so far, with an annual growth rate of 16%
- IDF maintains the Global DOI System (network of redundant servers worldwide)

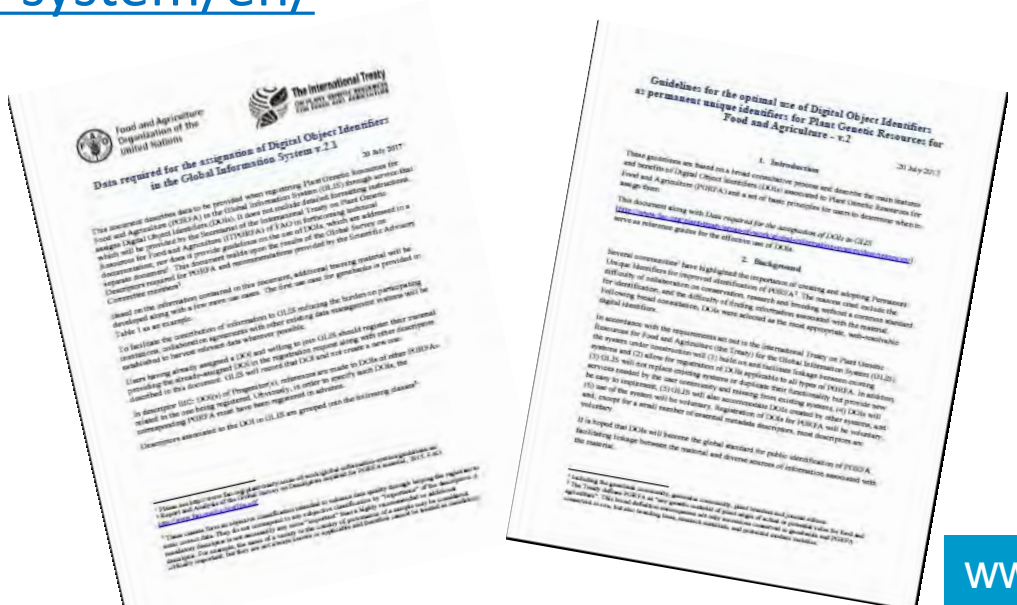
What's in it for users?

- Facilitated access to information
  - providers are not aware of outcomes of research carried out by recipients
  - recipients struggle to find information on the material received
  - information is dispersed over many systems
- Improved and more homogeneous data quality
- Support of formats and protocols for machine access to information
- Better integration among genebanks, breeders and other user communities
- Easier compliance with SMTA stipulations on information sharing
- Access to tools and systems to address local shortcomings

Descriptors and Guidelines for DOIs

- Background information on descriptors required to obtain DOIs, and guidelines for its optimal use are available in different languages at:

http://www.fao.org/plant-treaty/areas-of-work/global-information-system/en/



Documentation published online

- **GLIS Descriptors associated to the DOI for germplasm**
  - Based on Multi Crop Passport Descriptors with some extensions
  - Mandatory: Holder, species, method, date, local identifier
  - Recommended: Biological status, MLS status, links to websites etc.
  - Additional: Information on collecting, breeding, etc.
- **Guidelines with concrete use cases to help integrate DOIs in existing genebank workflows**
  - Working on more areas (e.g. in-situ and breeding)
- **Formats and protocols for registration, update and transfer notification**
- **Documentation available at http://www.fao.org/plant-treaty/areas-of-work/global-information-system**

GLIS Module : DOIs online

https://ssl.fao.org/glis/

More than 600.000 accessions worldwide and 27.000 from Europe

First European DOIs

Food and Agriculture Organization of the United Nations

The International Treaty on Plant Genetic Resources for Food and Agriculture

Home Login

10.18730/12BQ4

Found PGRFA (1-20 of 18540) Go back to the search form

DOI	Sample ID	Taxonomy	Common name	Owner	Biological status	MLS status
10.18730/12BQ4	841443	Triticum aestivum L. group Spelta	wheat	Centre for Genetic Resources, The Netherlands (CGN)	Traditional cultivar/landrace	Included
10.18730/HTNCQ	110301	Lactuca sativa L. group Cutting Lettuce	lettuce	Centre for Genetic Resources, The Netherlands (CGN)	Advanced or improved cultivar	Not included
10.18730/HTNJX	170002	Lactuca sativa L.	lettuce	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Not included
10.18730/HTNKY	922396	Solanum lycopersicum L.	tomato	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Not included
10.18730/HTNMZ	922543	Solanum lycopersicum L.	tomato	Centre for Genetic Resources, The Netherlands (CGN)	Advanced or improved cultivar	Not included
10.18730/HTNN*	951408	Solanum lycopersicum L.	tomato	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Not included
10.18730/18NX-	852283	Triticum aestivum L. group Aestivum	wheat	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Included
10.18730/10GNX	000167	Lolium perenne L.	lolium	Centre for Genetic Resources, The Netherlands (CGN)	Wild	Included
10.18730/16WKF	861163	Sinapis alba L. group White Mustard	cruciferae	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Included
10.18730/HTNAN	100312	Solanum pimpinellifolium L.	tomato	Centre for Genetic Resources, The Netherlands (CGN)	Wild	Not included
10.18730/18NVM	843340	Hordeum vulgare L. subsp. vulgare	barley	Centre for Genetic Resources, The Netherlands (CGN)	Traditional cultivar/landrace	Included
10.18730/14C7-	844246	Hordeum vulgare L. subsp. vulgare	barley	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Included
10.18730/16MA9	860486	Avena sativa L.	oats	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Included
10.18730/14C8*	844245	Hordeum vulgare L. subsp. vulgare	barley	Centre for Genetic Resources, The Netherlands (CGN)	Breeding/research material	Included
10.18730/11CNW	849855	Triticum aestivum L. group Aestivum	wheat	Centre for Genetic Resources, The Netherlands (CGN)	Traditional cultivar/landrace	Included
10.18730/1H3NA	926825	Lactuca sativa L. group Butterhead Lettuce	lettuce	Centre for Genetic Resources, The Netherlands (CGN)	Advanced or improved cultivar	Not included
10.18730/155AK	842506	Hordeum vulgare L. subsp. vulgare	barley	Centre for Genetic Resources, The Netherlands (CGN)	Advanced or improved cultivar	Included
10.18730/1605A	851099	Pisum sativum L.	peas	Centre for Genetic Resources, The Netherlands (CGN)	Advanced or improved cultivar	Included
10.18730/19GV1	865473	Triticum aestivum L.	wheat	Centre for Genetic Resources, The Netherlands (CGN)	Advanced or improved cultivar	Included
10.18730/10ZFZ	090915	Lactuca sativa L. group Butterhead Lettuce	lettuce	Centre for Genetic Resources, The Netherlands (CGN)	Advanced or improved cultivar	Not included

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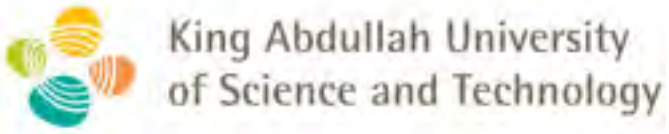
Partnerships

- **FAO CIO, WIEWS, AGP, OPC**
- **CGIAR Genebank and Plant Breeding Platforms**
- **Genesys**
- **ECPGR and EURISCO**
- **USDA-ARS**
- **GODAN**
- **FAO**
- **SDIS**
- **CBD**
- **CAPFITOGEN**
- **Grin-GLOBAL**
- **IRRI B4R**

Pioneer DOI registrants



Capacity building

A three-year project funded by Germany is underway to:

- **Promote the adoption of DOIs**
- **Contribute to the development and hosting of GLIS in FAO**
- **Provide capacity building support in NENA and SADC regions**
- **Strengthen existing networks based on the EURISCO model**

Other Regions need support:

- **Indonesia-IRRI project funded by the Benefit-sharing Fund to create capacity for the registration of rice accessions in GLIS and SMTA reporting in Easy-SMTA**
- **GRULAC has requested support for the adoption of DOIs and the connection of existing systems to GLIS**

In collaboration with FAO's OPC:

- **Background webinar on DOIs**
- **Webinar on application of DOIs to PGRFA and GLIS**
- **Other meetings on ITPGRFA website**

Near East and North Africa

Scientific Advisory Committee

SDAC + in Africa

The Role of Eurisco in the DOI Assignation Process

- ECPGR members could benefit from their reporting to Eurisco to get DOIs
- A proposal is being develop to create synergies with the current reporting
- The DOIs could help to improve the visibility and the use of the material in genebanks
- DOIs can be instrumental in adding value to the material

Recap

- Memorandum of 2016
- Meetings on the implementation of the Programme of Work on Sustainable Use
- Advisory Group for Private Public Partnerships
- External Advisory Board of GenRes Bridge
- Farmer´s Pride

Resolutions on GLIS

- Implementation of Resolution 5/2017 – further promotion of DOIs
- The role of the SAC (20-21 June 2018) is expanded to include consideration of scientific and technical issues of relevance to genetic sequence information and their implications for the implementation of the International Treaty.
- Better connections with Genesys and WIEWS
- Development of a Masterplan for the GLIS Portal
- Integrate the elements on the relationship with DivSeek
- Call for resources to implement the POW
- Progress report at the Eighth Session, based on the recommendations of the Scientific Advisory Committee.

- HELP DESK for MLS and GLIS:

PGRFA-TREATY@FAO.ORG

Thank you!

Thank you!

Q & A

http://www.fao.org/plant-treaty

PGRFA-Treaty@fao.org