Food and Agriculture Organization of the United Nations

The International Treaty ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

GLIS and DOIs for PGRFA

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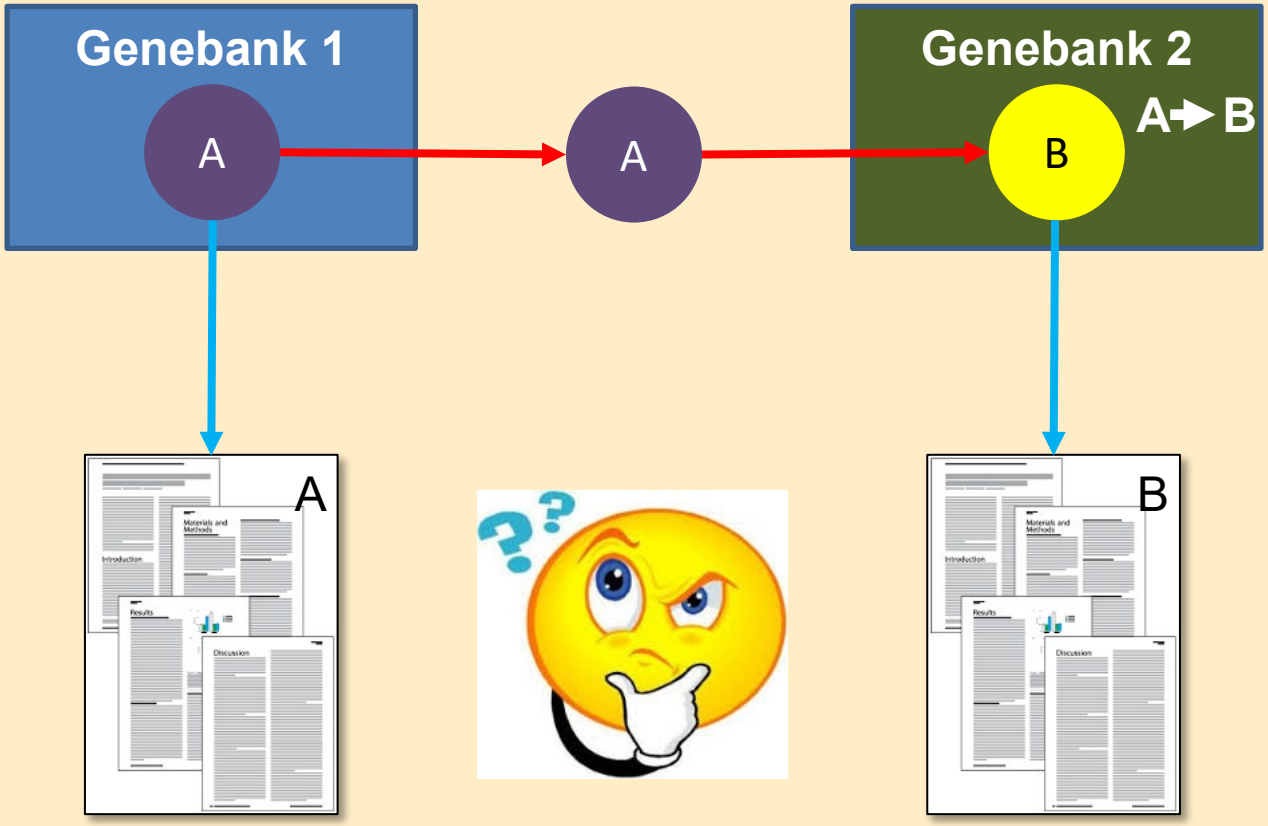
Secretariat of the International Treaty

Why do we need Permanent Unique IDentifiers (PUIDs)?



Connection of Recipient's AN to Provider's AN is at best recorded in the Recipient's documentation system

The request

The community agreed on the need of accurately and permanently identifying PGRFAs in the increasingly critical global context.

The Treaty Secretariat was asked to provide guidance on which type of PUID was best for PGR.

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

What does a DOI look like?

10.18730/M9SNT

DOI System prefix	GLIS prefix	Unique value assigned by GLIS

- Fully **opaque**, important!
- Very compact
- Guaranteed unique
- Never changes

GLIS DOIs are free-of-charge!

Why opacity is important

Opacity is a critical property of PUIDs and is defined as

the impossibility of deriving any property of the object by just looking at the PUID associated to it

10.18730/M9SNT

Somebody proposed to build a PUID ("the Triple") as follows

WIEWS code of the Holder : Genus : Accession Number

PHL001:Oryza:IRGC12345

But the Triple did not work because ***it is not opaque!***

- WIEWS codes change (think of the Soviet Union or Yugoslavia!)
- Genera also change (from time to time they are merged or split)

Change pressure occurs when the meaning embedded in the identifier is no longer correct. There is the pressure to change to identifier to restore the correct meaning

GLIS DOI landing page

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Home Login

PGRFA doi:10.18730/9KYC

CIP INTERNATIONAL POTATO CENTER A CGIAR RESEARCH CENTER

Citation: https://doi.org/10.18730/9KYC

Main descriptors | Acquisition | DOI info

Location	Centro Internacional de la Papa Av. La Molina Nª 1895 - La Molina Lima Peru WIEWS code: PER001 [Details] Easy-SMTA PID: 00AD19	**Biological status**	Traditional cultivar/landrace
		Names	
		Other identifiers	
		MLS status	Included
		Historical	No
Local identifier	CIP 703314		
Date	1976		
Creation method	Acquisition		
Taxon	Solanum stenotomum Juz. & Bukasov subsp. Stenotomum (Juz. & Bukasov) Hawkes		
Common name	Potato		

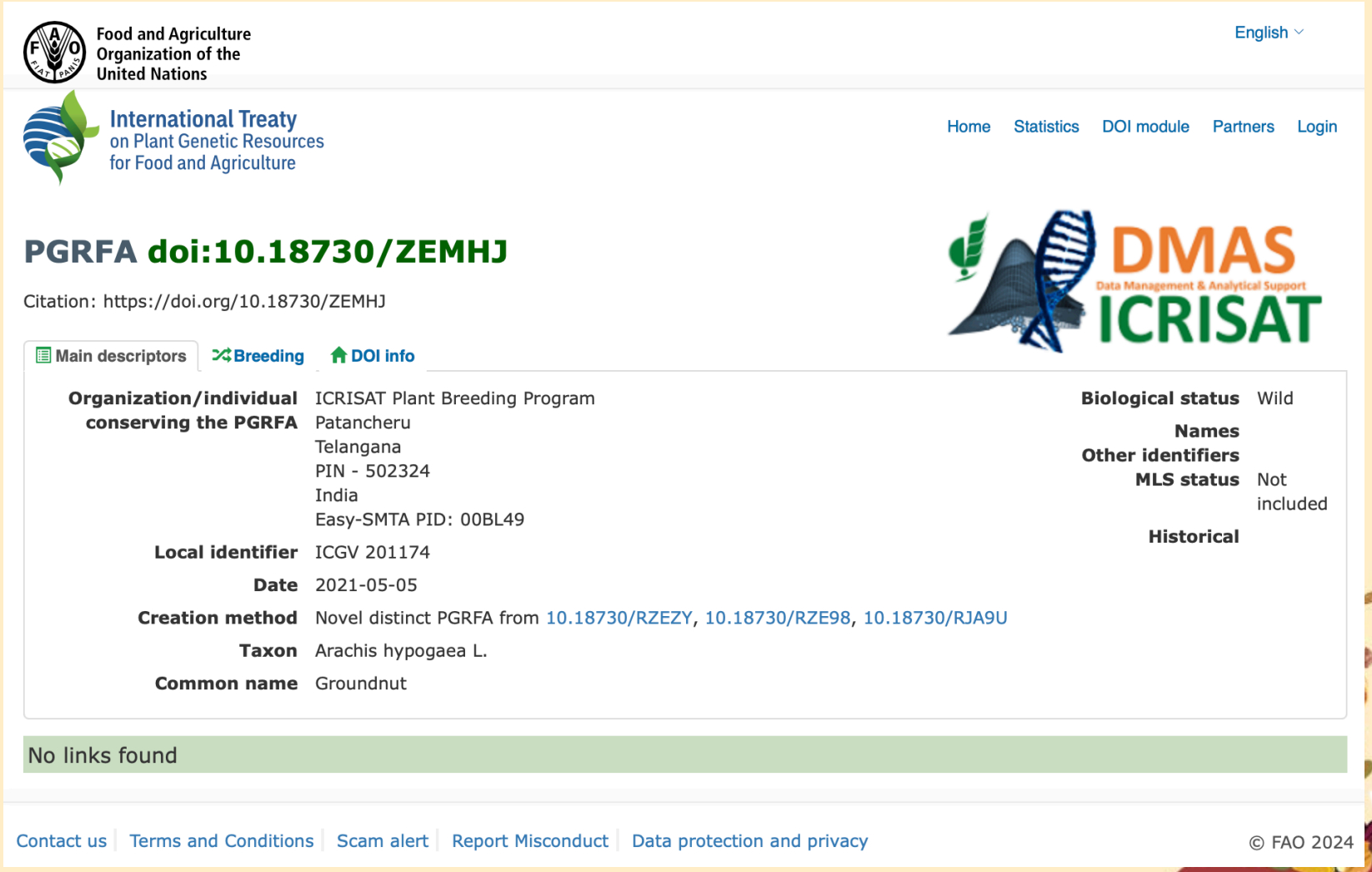
Links to associated information (1-2 of 2)

Keywords	URL
Characterization, Passport data	http://genebank.cipotato.org/gringlobal/accessiondetail.aspx?id=21805
Passport data	https://www.genesys-pgr.org/10.18730/9KYC

Publications and datasets citing this PGRFA (1-1 of 1)

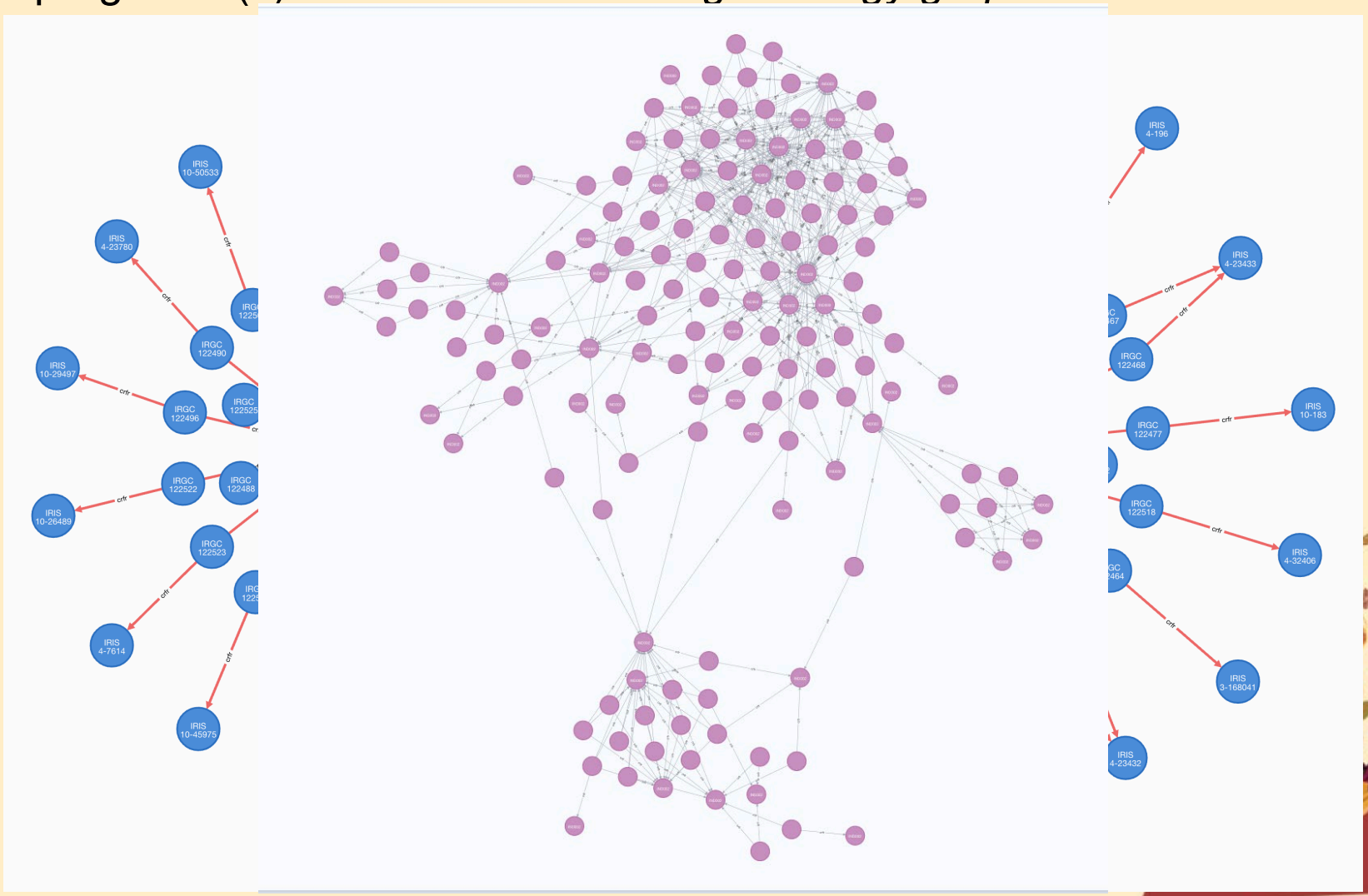
Type	Title	Published	Journal	Authors	Publisher
Paper	Genetic identity in genebanks: application of the SolCAP 12K SNP array in fingerprinting and diversity analysis in the global in trust potato collection	2018-05-24	Genome	D. Ellis, O. Chavez, J. Coombs, J. Soto, J. Coombs, R. Gomez, D. Douches, A. Panta, R. Silvestre, N.L. Anglin	NRC Research Press

GLIS DOI landing page, cont'd



Method of creation and relationships among PGRFA

Knowing how the PGRFA was obtained and the DOI(s) of the progenitor(s) allows GLIS to build *genealogy graphs*



GLIS DOIs for Crop Wild Relatives conserved *in situ* (CWRI)

Descriptors document released (see Treaty and GLIS websites)

Specific set of descriptors

- Population identifier
- Manager
- Observation date
- Ex situ copy holder
- Observation location
- Protection and conservation details

We invite partners to provide their datasets for uploading to GLIS

GLIS Query API

Access to all DOI information in GLIS using content negotiation for:

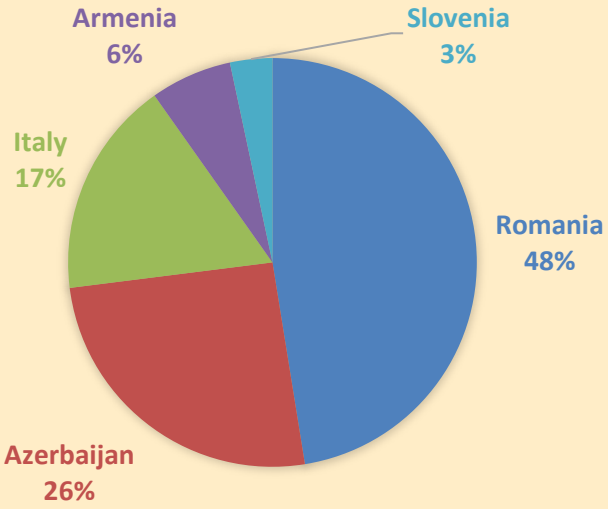
- XML
- JSON
- JSON-LD
- DarwinCore Archive
- BrAPI v1.3

We welcome parties interested in testing the Query API

Integration between EURISCO and GLIS

GLIS offers an XML-based integration protocol that allows to register new DOIs and update already registered DOIs

- EURISCO implemented the protocol in 2019
- The protocol is also used by GRIN-Global, GG-CE and Web-SDIS
- So far, a total of 32,830 DOIs have been registered



We are happy to support EURISCO promoting DOIs to member genebanks

OK, I've got DOIs, now what?

Use the DOIs you received from EURISCO/GLIS:

- **in publications**
  - list the DOIs of the materials as bibliographic references
- **in datasets**
  - enter the DOIs of the materials in the metadata submitted for registration of the dataset
- **in the SMTAs you issue**
  - list the DOIs in Annex 1 to the SMTA

Thank you!

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