

4 Standard codes

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Introduction

GLIS descriptors include a wide range of information, e.g. individuals or institutions conserving PGRFA, countries, dates, coordinates as well as attributes of the PGRFA itself such as its biological status, how it was obtained and so on.

To facilitate information exchange with other systems, as well as for translations, GLIS uses standard codes wherever they exist.

This document describes in detail the codes adopted and provides guidance about how to use them. For further details on the codes used by GLIS, please refer to the technical documentation on the registration option of your choice available at

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

FAO WIEWS organization code

To facilitate the identification of genebanks, national inventories, university and research centres involved in plant genetic resources conservation, research and development, FAO has introduced an organization code in its World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture (WIEWS: <http://www.fao.org/wiews>). The WIEWS code is composed by the ISO-3 country code and a three-digit counter. Where the number of organizations registered in a single country exceeds 999, as for the USA, a fourth digit has been added. For example, we have

USA089	Plant Pathology Department, University of Minnesota, USA
USA1003	Wheat Genetics Resource Center, USA
ITA003	Experimental Institute of Cereal Crops, Italy

GLIS uses the WIEWS code to identify the holder of the PGRFA, its provider, its collectors and its breeders, as applicable. Whenever one of such actors needs to be identified, just providing the WIEWS code is enough: name, address, country and other details are taken from the WIEWS code. This, among other things, reduces the amount of information to be provided to GLIS upon registration and improves data consistency.

The WIEWS code is not mandatory as there could be cases in which the actor is not an organization or is not registered in WIEWS. In such cases, the Easy-SMTA PID (see below) can be used and all necessary details will be obtained from the Easy-SMTA account associated to the PID. Only for those cases in which neither the WIEWS code nor the Easy-SMTA PID are available and only for actors other than the holder of the PGRFA (provider, collector(s) and breeder(s)) name, address and country can be explicitly provided.

Easy-SMTA PID

Easy-SMTA is a system developed by the Secretariat of the International Treaty to collect reports on the PGRFA transfers performed in the context of the Multilateral System through a Standard

Material Transfer Agreement (SMTA). Easy-SMTA assigns a Permanent Identifier (PID) to each registered user in the form of a 6-character code, such as 00AB40.

As Easy-SMTA users (as Provider or as Recipient of PGRFA through SMTAs) and GLIS DOI registrants are in many cases the same, it has been decided that Easy-SMTA user accounts will also be valid for GLIS, once authorized by the Secretariat to register DOIs.

Easy-SMTA PIDs can be used to identify actors when a WIEWS code is not available. In the case of the holder of the PGRFA, specifically, the PID is always available as they must be registered in Easy-SMTA as explained above.

Dates

One of the mandatory descriptors in GLIS is `M02: Date`, i.e. the date in which the PGRFA was obtained. Another date is the date of collection (`A14`). All dates in GLIS follow the ISO 8601 standard that defines a format such as `YYYY-MM-DD` i.e. 4 digits for the year, 2 for the month and 2 for the day, separated by dashes. For example, the date April 12th, 2019 is entered as `2019-04-12`. When the exact date is not known, the ISO 8601 standard allow the use of date fragments, namely `YYYY-MM` (year and month) or `YYYY` (year only); date fragments are accepted by GLIS.

For example, suppose you do not know the exact date in which a PGRFA was incorporated into your collection but you just know that it happened in March 1956. You can enter `1956-03` in descriptor `M02` and GLIS will accept it. Likewise, if only the year is known to be 1967, just enter `1967` and you will be set.

Countries

Countries are represented in GLIS by ISO 3166 alpha-3 codes. Such codes are composed by 3 (usually uppercase) letters. For example: `ITA` for Italy, `GBR` for United Kingdom or `DZA` for Algeria, `BWA` for Botswana or `KHM` for Cambodia. As you can see, the code does not necessarily coincide with the first 3 letters of the country name in English! Please make sure to use the correct code, otherwise GLIS will report an error.

There are also country codes identifying countries that do not exist anymore, such as `SUN` for the Soviet Union or `YUG` for Yugoslavia. However, for PGRFA that have a long history, the associated information may indeed include such old countries, without any further specification that would allow to specify one of the currently existing countries. GLIS accepts those historical country codes.

Beside the official country codes, the ISO 3166 standard supports of user-assigned code elements that can be used to identify countries, territories or other entities according to the meaning defined within the specific user community.

GLIS uses this option in two cases:

- geographic areas that are not better defined such as "Andes" (code `XAN`) or "Sahara" (code `XSH`)
- international institutions such as CGIAR centers like IRRI (code `XAM`) or CIAT (code `XAD`)

In the case of international institutions, the introduction of such codes allows for more accurate representation of the provenance of the PGRFA. Material produced by a breeding program in CIMMYT, for instance, does not really originate from Mexico, or any other country where the CIMMYT breeding program may be established, but rather from CIMMYT itself as an international institution. Therefore, the code to be used should be `XAE` rather than `MEX`.

Please refer to the document on batch registration or XML protocol for the complete list of codes accepted by GLIS¹.

Geographic coordinates

Geographic coordinates in GLIS can be expressed in any of the following formats:

¹ See <http://www.fao.org/plant-treaty/areas-of-work/global-information-system/techdoc>

- DDD°MM'SS"X (also known as DMS) where DDD are the degrees (± 90 for latitude and ± 180 for longitude), MM are the minutes (00 to 59), SS are the seconds (00 to 59) and X is N/S for latitude or E/W for longitude. Please note that there are no spaces in the string
- \pm DDD.XXXXX (also known as decimal coordinates) where DD are the degrees (± 90 for latitude and ± 180 for longitude) and XXXXX is the fraction of degree (from 00000 to 99999) to be added. Positive latitudes are North of the Equator, negative latitudes are South of the Equator. Positive longitudes are East of the Prime Meridian, negative longitudes are West of the Prime Meridian

GLIS prefers the decimal notation so, if you provide coordinates in the DMS notation, they will be converted into the decimal notation.

MCPD codes

Most GLIS descriptors are derived from the Multi-Crop Passport Descriptors, a standard for information exchange on plant genetic resources originally developed in 1997 by FAO and Bioversity International (IPGRI at that time) and widely used by genebanks worldwide. GLIS adopted MCPD version 2.1 and will follow the development of the standard. When there is direct correspondence between a GLIS descriptor and a MCPD descriptor that uses a code, GLIS uses the same codes defined in the MCPD. Such descriptors are:

GLIS descriptor	MCPD descriptor
R03: Biological status	SAMPSTAT
R07: MLS status	MLSSTAT
A15: Collecting source	COLLSRC

Please note that descriptor R07: MLS status uses the same codes 0 and 1 defined for MLSSTAT but also includes sub-codes for the case Included (explaining in higher detail why the PGRFA is to be considered included in the MLS) that are not accepted by MLSSTAT².

I am not fully clear on what needs to be done, please help!

Should you require further clarifications, please do not hesitate to send an email to PGRFA-Treaty@fao.org and we will be delighted to assist!

² Again, please refer to the technical documentation for the batch registration or XML protocol available at <http://www.fao.org/plant-treaty/areas-of-work/global-information-system/techdoc>