

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

## STRUCTURAL ELEMENTS OF THE GLIS PORTAL

### I. INTRODUCTION

1. At its Eighth Session, the Governing Body requested the Secretary, subject to availability of resources, to establish infrastructural elements in the Global Information System (GLIS) Portal linking to information related to plant genetic resources for food and agriculture (PGRFA), such as methods, standards, actors, capacity building and legal issues, in accordance with national and/or local legislation, as appropriate.

2. The Resolution, by which the Governing Body adopted the Vision and the Programme of Work in 2015, contains seven objectives and anticipates some of the conceptual elements for the development of the Portal and the overall architecture of GLIS as illustrated by the diagram of Figure 1 below.

3. This document describes the initial steps undertaken to translate the figure below into structural elements that leads to a workable interface for users, taking into account the Master Plan prepared at the third meeting of the Scientific Advisory Committee. It also identifies gaps where additional work may be needed and suggests several pathways for addressing them.

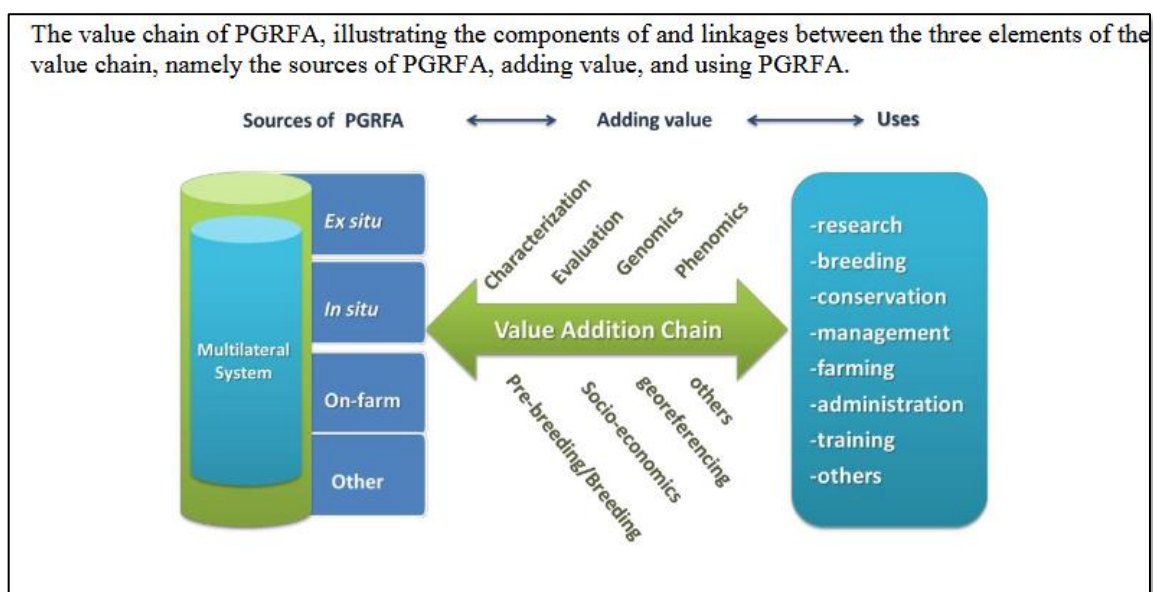


Figure 1: GLIS Vision

## II. STRUCTURE OF THE GLIS PORTAL

4. The latest version of the GLIS Portal presents several new elements derived from the GLIS Vision and Programme of Work and the Master Plan, in particular:
  - i. The "SOURCES OF PGRFA", which includes a directory of links to *ex situ*, *in situ*, on-farm and others related Portal and databases.
  - ii. The "ADDED VALUE CHAIN", which provides access to a directory of sources related to genomics, phenomics, breeding and other useful information.
  - iii. The "USERS' THEMES" section with links to portals and websites on breeding, policy, farmers' networks, research and other resources and themes.
  - iv. The "SEARCH" function, which links to the first module developed under the Portal and as an access point to PGRFA by crop, as well as to organizations conserving PGRFA and PGRFA holders.
  - v. The "DOCUMENTATION" section provides a link to technical documentation, descriptors (including descriptors for Digital Object Identifiers, for crop wild relatives conserved *in situ*, other global descriptors and specific crop descriptors,) taxonomic information and featured tools, ontologies and selected publishing and metadata initiatives.
5. The revised home page of the GLIS Portal is presented in Fig. 2 below.<sup>1</sup>

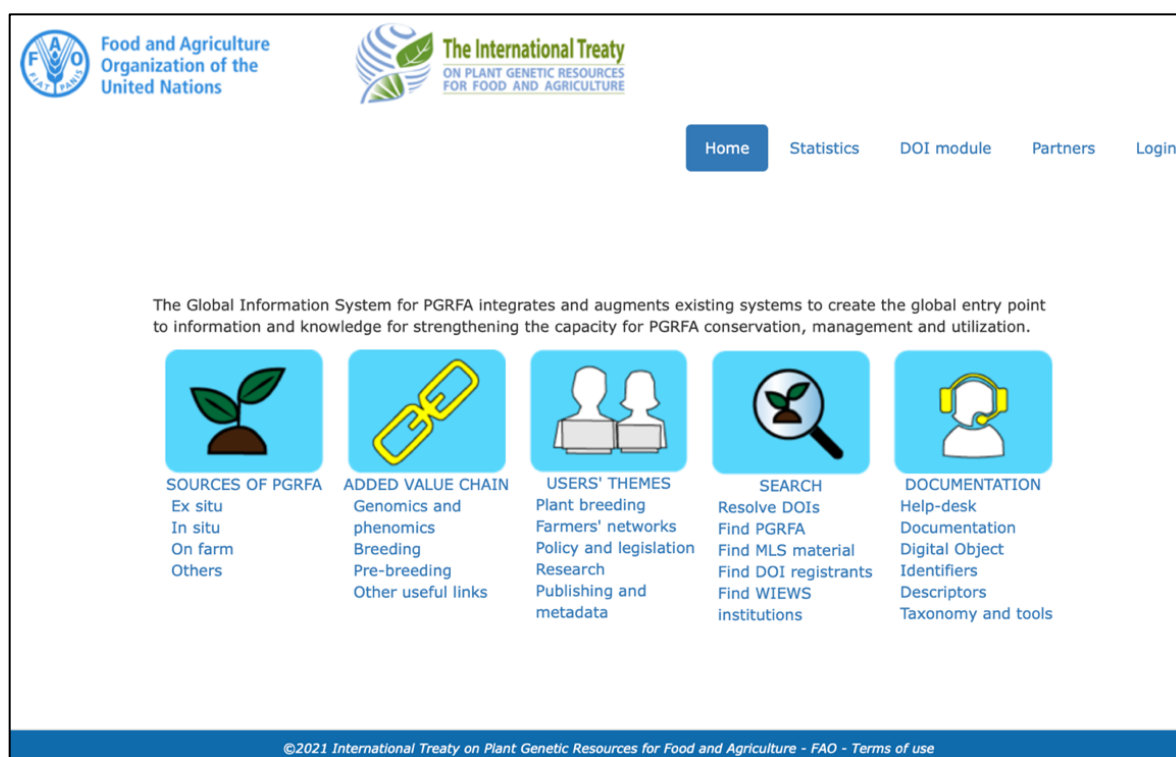


Figure 2: GLIS Portal home page

6. The icons identify the main "information channels" offered to users and closely match the architecture presented in Figure 1 above. Clicking a channel icon, or the title just beneath it, leads to a static page where the corresponding list of links is made available. An example of such page is shown in Figure 3 below.

<sup>1</sup> Some of the graphic elements are currently under revision.

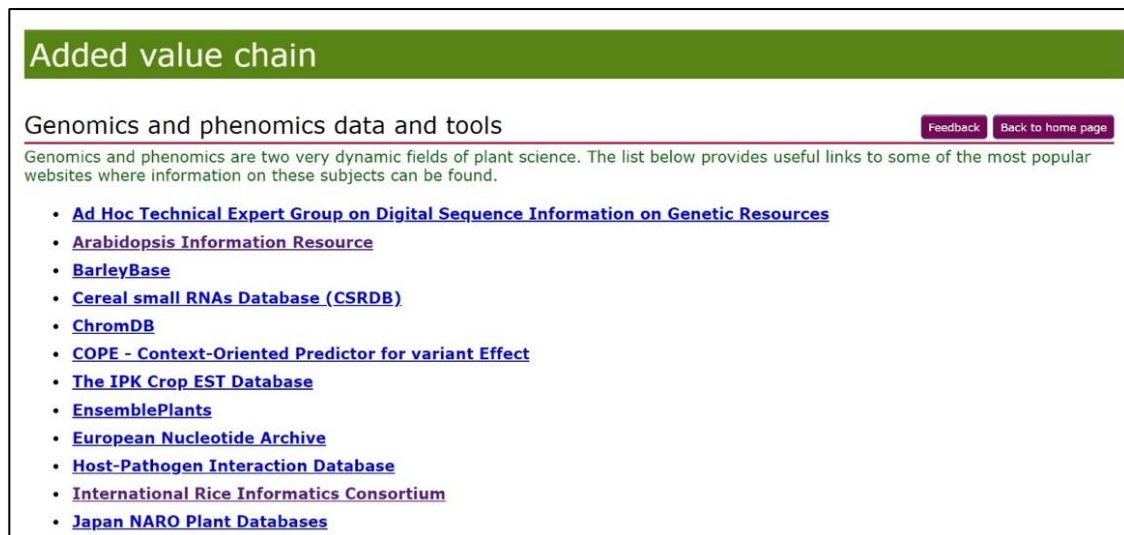


Figure 3: Example page for the "Added value chain" channel

7. The page contains sections corresponding to the subtitles listed under the channel icon. The "Feedback" button allows users to suggest improvements or additional links via email. The "Back to home page" button returns the user to the home page of Figure 2.
8. The Digital Object Identifier (DOI) Module, which was the first module developed under the Portal, is available from the top-right menu of the home page, as a separate section, see Figure 4 below



Figure 4: DOI Module home page

9. The "Partners" link at the top of the home page (Figure 2) leads to a page listing key institutions and information systems that have contributed to the development of the GLIS Portal and whose contribution and collaboration has been noted by the Scientific Advisory Committee.
10. The Master Plan and the guidance received from the Scientific Advisory Committee suggested that a section be added on policy and related projects and initiatives. Some of their entry points are included in Figure 5.



Figure 5: The new structure includes a section on policy bodies and related projects and initiatives

### III. PROPOSED ARCHITECTURE

11. The most effective approach to the GLIS Portal is indeed building a database to drive the home page presentation as well as generate the channel pages. A relatively easy solution would therefore be based on the following concepts:

- i. users will be allowed to submit links through the Portal, which will be cleared by editors and tagged accordingly;
- ii. tagging would be at 2 or 3 levels, including the assignment of a channel and a section. A third level of tagging could be added, if necessary. Tagging would be used to generate the elements of the directory with a dynamic workflow and compile the channel's pages;
- iii. translations could occur in the staging area or after the link is already published, according to the design choice made. Crowd translation could be adopted by collaborating with partner institutions;
- iv. Having the information in a database would enhance user experience and facilitate the sharing of the resources with other communities.
- v. Also, if a registration function is added for general users, different from the one required to assign DOIs, it would be possible for users to define their own interest profile and receive a personalized home page, email notifications and other functions;

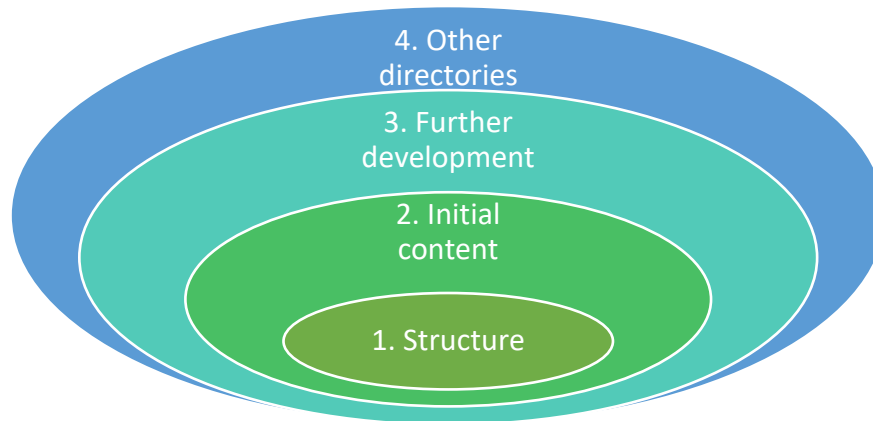
12. The development effort for the above solution would be limited but would provide an attractive environment for users, fulfilling the proposed architecture of the GLIS Portal.

### IV. GAPS AND FURTHER DEVELOPMENT OF THE DIRECTORY

13. The current structure of the GLIS Portal, once consolidated, will allow for the compilation of links in a collaborative way, their translation and their management. During the development of the structural elements, several gaps have been identified in the first section, 'Sources of PGRFA', particularly for *in situ* and on-farm sources. For the "*In situ* sources", the Portal points to some projects and initiatives, but the development of that area will require further inputs and conceptual work.

14. The development team has noted that, under the section "Added Value Chain", the possible links to be added are countless and some criteria could be developed for their publication. Additionally, it has been noted that many of the useful resources identified can be indexed under more than one category, making any static classification artificial. A more dynamic directory where all the links are classified with more than one tag, as needed, could help to resolve this limitation.

15. Although the current structure can be used to solicit link submissions and comments for its improvement, the Secretariat invites the Committee to provide additional contributions, suggestions and advice to improve its content and further development. Once the initial structure of the directory is consolidated, it could also be linked with the directories of other communities.



*Figure 6: Development of the GLIS Directory in 2021 and 2022*

16. Taking into account the limited time available during the virtual meeting, a possible way forward could be the establishment of an informal online task force, or the organization of a series of interviews with experts and stakeholders, with the aim of providing regular feedback and consolidating the structure of the Portal and the review the initial content (phases 1 and 2 of Figure 6) up to July 2021.

17. The initial content of the Portal would be then translated into French, Spanish and Arabic in the second semester of 2021 and launched before the end of the year.

## **V. ADVICE SOUGHT**

18. The Committee is invited to:

- i. Take note of the development of the structural elements described in this document;
- ii. Provide advice on the configuration of the structural elements developed so far and on the next steps, in particular in relation to sources of PGRFA for *in situ* and on-farm, and on the further content to be referred to in the section "Added Value Chain";
- iii. Provide advice on any other element the Committee may wish to consider for the rapid and effective development of the GLIS Portal.