Toolbox for Sustainable Use of PGRFA

User Guide

2023
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Why the Toolbox?

Recognizing the need to increase and enhance activities relevant to the goals of Article 6 of the International Treaty, and to address specific constraints identified as negatively affecting the capacity of national and regional programmes for its effective implementation, the Governing Body of the International Treaty, requested the development of a toolbox to assist countries in designing and implementing measures to promote sustainable use of plant genetic resources for food and agriculture (PGRFA). Hence the: Toolbox for Sustainable Use of PGRFA was developed.

What is the Toolbox?

The Toolbox is an online database of resources on the sustainable use of PGRFA. It contains publications, reports, research and studies, and other relevant information resources from various organizations and bodies worldwide, including research and academic institutions, intergovernmental bodies, and national and international agricultural research institutions.

The Toolbox contains two different repositories of resources relevant to the sustainable use of PGRFA: technical resources and policy resources.

What can we do with the Toolbox?

- Searching for technical and policy resources, in particular about sustainable use of PGRFA
- Submitting new information resources
- Providing feedback on the use of the Toolbox
How to access to the Toolbox?

The Toolbox is accessible in the International Treaty website in three different ways.

1. **Through the *Tools* menu**

   ![Figure 1](image1.png)

   *Figure 1. Access the Toolbox through the “Tools” menu in International Treaty website*

2. **Through the theme “Conservation and Sustainable Use”**

   ![Figure 2](image2.png)

   *Figure 2. Access to the Toolbox in GLIS portal*
Then the databases are reachable by clicking on these links:

Figure 3. Access through the Toolbox's webpage on the International Treaty's website
3. **Through the GLIS portal**

**Figure 4. Access to the GLIS portal through the International Treaty’s website**

**Figure 5. Access to the Toolbox through the GLIS portal**
How to Navigate?

1. Language

The Toolbox user interface is available in English, French, Spanish and Arabic. The user can choose the interface language through the pull-down menu placed at the top right of the home page (see below).

![Language selection](image)

Resource titles and descriptions may not be available in all languages. If a resource title or description are not available in the desired language, the Toolbox displays the English version. It is worth mentioning that the language in which the resource is described (title, description, and various other attributes) and the resource language itself can be different. For instance, a title and description in English can point to a resource available in Spanish.

The Toolbox makes extensive use of controlled vocabularies (predefined lists of terms) that can be associated to a resource to describe it and, as the terms are translated in all Toolbox languages, make it more easily findable, regardless of the user’s language.

2. Technical and policy resources

The Toolbox resources are classified into two categories: technical and policy resources. This classification is due to the different description required for each category. When entering the Toolbox, the user is asked to first choose the category of resource: Technical Resources or Policy Resources.

The Technical repository contains technical resources related to crop diversity, plant breeding techniques and approaches, training, or capacity building, crop wild relatives and farming systems.

The Policy repository contains policy framework on legislation and policies, agreements, principles, declarations, strategies, and Action Plans, miscellaneous.

3. Searching for resources

Choosing one of the resource themes (Technical or Policy) leads the user to the corresponding search form, shown below.
On the same page, under the “search field” or “search box”, a list of matching resources is displayed. If more than 5 resources are found matching the search parameters, a pager control appears at the bottom of the page (see below).

The number of resources matching the search criteria entered in the form is displayed on the right of the blue strip.

Please keep in mind that entering text or selecting values in two or more controls will be interpreted as “AND”, i.e. the resources found will have to comply, at the same time, with all criteria entered in different search form controls. As explained above instead, choosing two or more items in the same control finds resources that are associated to one or more of them. For instance, if we type “crop production” in the Free text search control and then choose “Africa” and “Asia” in the Regions control, the search will find all resources that have the characters “crop production” in the title or in the description and are associated to Africa or to Asia or both.
Figure 9. List of found resources

The search form consists of fields and controls allowing the user to precisely define the resources. Below, a brief description of the controls is provided.
4. **Refine your search**

**Include results in other languages**

This control, checked by default, also finds resources available in languages other than the user’s one. For instance, searching for resources applicable to Europe could result in resources available in French or Spanish that will not be displayed if the user’s language is English, and this control is not checked.

**Free text search**

Entering some text into this box will look for resources containing that text in their title or description. The text is compared as is. For instance, entering “global” would find resources containing “global”, “globally”, “globality” and so on in their title or description. If two or more words are type into this box, the entire content will be used. For instance, typing “food system” will also find “food systems” but not “food shortage” or “global system”.

![Figure 10. Free text research to refine the search](image)

**Keywords, Subjects (or Categories) and Regions**

These are drop-down lists allowing the user to choose one or more terms from the corresponding list. Clicking in the box next to the label will display a scrollable list of terms that can be selected by clicking on a specific term. To reduce the number of items displayed it is possible to type some characters in the “Select a ….” text box at the top. Repeating the process adds a new term to the list displayed in the box. To remove one term from the box, click the little “x” next to it. To empty the box, click the “x” on the far right. Terms added to the control will be searched in “OR”, i.e. the resources found will be associated to one or more terms. For instance, choosing regions “Europe” and “Africa” will find resources associated to Europe, Africa or both.

The control “Subjects” for technical resources is replaced by “Categories” for policy resources and can be used in the same way.

![Figure 11. Scrollable list of terms for keywords](image)
Resource type

This control is a pull-down list from which the user can choose one term.

![Policy Resources](image)

*Figure 12. List of resource type to refine the search*

Publication year

This control is implemented as a year range. Typing a year in “Since” will restrict the search to resources published in or after that year. Typing a year in “Until” will restrict the search to resources published up to that year inclusive. Typing the same year in both will find resources published in that year. Entering a “Since” year which is earlier than the “Until” year will result in resources published in the year range, including the extremes.

![Policy Resources](image)

*Figure 13. Publication year to refine the search*

Clear the search form

Pressing this button will remove any value or selection applied to the search controls.

Search

Pressing this button will search for resources matching the controls as they are at the time. If no resource is found, “No matching resources found” is displayed.
Export as Excel

Pressing this button compiles an Excel document with the found resources and a description of the query that was used to find them.

![Export as Excel button](image)

**Policy Resources**

- Include results in other languages
- Free text search
- Keywords: Agricultural biodiversity
- Categories: Miscellaneous
- Resource type: Select a type...
- Publication year: Since [ ] Until [ ]
- Regions: Select a region...

![Search and Export as Excel buttons](image)

*Figure 14. Export as excel the search*

Displaying resource details

Clicking the resource title displays the corresponding detail page where all information available about the resource is presented (see below).

### A case for crop wild relative preservation and use in potato

Crop wild relatives (CWR) offer a critical resource to address food security needs by providing genetic diversity for crop improvement, leading to increased plasticity and productivity of farming systems. However, plant breeders typically have not developed systematic or comprehensive strategies for the characterization and use of CWR for cultivar improvement. Potato (*Solanum tuberosum L.*) provides an excellent case study for the use of CWR germplasm in addressing global food security needs. International cooperation and collaboration are critical to collect, characterize, and use CWR in anticipation of future production needs. Both ex situ and in situ preservation of wild potato species are essential to assure a comprehensive conservation plan. Top priorities include a coordinated inventory of gene bank holdings followed by re-collection of CWR and new collection where gaps exist. Access to CWR genetic diversity will continue to be critical as breeders face the challenge of developing cultivars that fit into new production systems, especially in response to climate change. With the advent of the genomics era, new visions of germplasm use strategies are emerging. In addition to filling gaps in collections, it will be important to expand efforts to characterize and use potato CWR. A systematic and integrated strategy is needed to evaluate CWR in gene banks for traits to continue breeding progress.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Technical Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>Crop wild relatives, neglected and underutilized species</td>
</tr>
<tr>
<td>Publisher</td>
<td>Crop Science</td>
</tr>
<tr>
<td>Publication year</td>
<td>2013</td>
</tr>
<tr>
<td>Regions</td>
<td>Global</td>
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<tr>
<td>Languages</td>
<td>English</td>
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<tr>
<td>Resource type</td>
<td>Publications</td>
</tr>
<tr>
<td>Resource link</td>
<td><a href="https://example.com">Link</a></td>
</tr>
<tr>
<td>Keywords</td>
<td>Agricultural biodiversity; Crop wild relatives, neglected and underutilized species; Food security; Role of germplasm</td>
</tr>
</tbody>
</table>

![Resource detail page (Technical)](image)

*Figure 15. Resource detail page (Technical)*

The detail page for Policy Resources is quite similar, with “Category” instead of “Subject”. From this detail page, clicking the “Go to resources list” brings the user back to the list of found resources, with the search form as it was, on the same page where the resource title was clicked.
Submitting resource proposals

Users and interested organizations and professionals working on sustainable use of PGRFA are invited to submit new technical and policy information resources for inclusion in the Toolbox. This can be obtained by filling in the form accessible through the link “Submit a resource!” available in the home page (see below). The same button is also available at the top right of the search page.

![Submit CSU Toolbox resource form](image)

**Figure 16. Resource submission form**

The form contains information to be filled in some of which are mandatory (those marked with a red asterisk). A Comments text box is available for any additional information or clarification. For instance, if a submitter is unsure about some aspects of the submission, they can ask the Toolbox Editor to contact them at the email provided. The “Help on this page” button provides some clarifications on the form fields.

When the form is complete, please click the “Submit” button. Once submitted, the form cannot be edited or deleted. All submissions will be validated by the Toolbox Editor before being published in the Toolbox.

Providing feedback

Users are invited to provide feedback on the Toolbox or the resources available.

Clicking on this button opens the email’s edition.
Requiring help

Some pages, such as the search form, may require some clarifications. In this case, an orange button “Help on this page” is present at the top right of the page (see on the right). Clicking the button displays a new window that can be resized and moved as appropriate. Close the window to continue.

CONTACT

Secretariat, International Treaty on Plant Genetic Resources for Food and Agriculture

Website: https://www.fao.org/plant-treaty/overview/en/

Email: PGRFA-Treaty@fao.org


Contact – pgrfa-treaty@fao.org