GFBI DMS (Data Management System)

User Manual

Version: 0100

Date: 01/10/2020

Control Sheet

Organization	GFBI		
Project	GFBI DMS (Data Management System)		
Delivery	Guide User		
Author	GFBI Data Center		
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0100	Versión inicial	Juan Carlos Álvarez Montull	01/10/2020

DISTRIBUTION CONTROL

Name and surname
Juan Carlos Álvarez Montull

INDEX

1 SYSTEM DESCRIPTION

1.1 Object

The purpose of this document is to provide the necessary instructions so that a user can easily use the GFBI DMS application, understand the policies applied to the data and the necessary flows for the transfer of this data.

1.2 Range

Description of the scope of this document:

- To inform end users of the characteristics and ways of operating the system.
- Provide the user with the information necessary to use the GFBI DMS.
- Facilitate the registration of requests for use of the service and fault reports.
- Know how to use a system, through a detailed description and illustrated through options.

1.3 Funcionality

Brief description of the functionality of the system for users of the manual.

Through this application, any registered user can:

- Contribute new tree-level data to the GFBI global database.
- Request forest data at the parcel level from around the world for a specific research purpose.
- Manage the response to requests about your data.
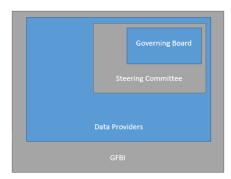
2   SYSTEM MAP

2.1 Logic Model

At this point, a description of the system will be made using diagrams.

Description of the operating model for the institution in order to explain the protocols.
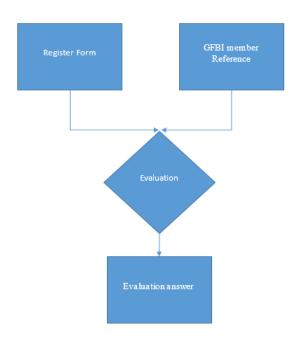
The GFBI is made up of the following command groups:

- Data Providers: All GFBI members who have contributed data.

- Steering Committee: They are the members with the capacity to decide on the acceptance of requests

- Governing Board: They are the members with the capacity to evaluate discrepancies of the steering committee.

Protocol to be a member of the GFBI

To become a member, you must send your data, with the form (http://gfbinitiative.com/registration), including the reference of a GFBI member. The request will be evaluated and, if positive, an email will be sent with the necessary data to access the GFBI DMS.
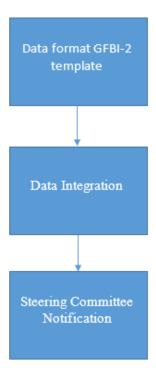
Add New Dataset Process Flows

A good practice to be able to add new data sets is to use the GFBI-2 template (http://gfbinitiative.com/data) for the structure of your data, in this way the integration process will be much easier.

The data integration process requires a series of specific information for its cataloguing and registration, as well as checks on possible errors in the data.

Once the integration process has been successfully completed, the members of the steering committee will be informed by mail.
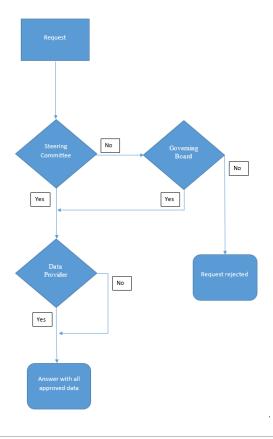
Data Request Process Flows

1. When a data request occurs, all members of the Steering Committee are informed to evaluate the request, the maximum established time for this process is 15 days. According to the decisions made there are two possible ways.

    - All members of the steering committee approve the request.

      In this case, the request will go to the data providers involved (step 2).

    - One or more members of the steering committee reject the request.

      In this case, the petition will go to the governing board, they review the discrepancy and can definitively reject the petition (step 4) or approve it (step 2).

2. The request reaches the data providers.

    The request must be answered by all providers before giving access to the data, for this process there is a maximum established time of 21 days. After that time an automatic response occurs depending on the policy applied on their data. (step 3)

3. At the end of this process, an email is sent to the data requestor, informing of the data available to him and the way in which he can access them.

4. If the request is rejected, an email is sent to the data requestor informing him of the decision and the request is closed.

2.2 Navegation

At this point, the navigation through a window graph will be described.

This diagram represents the windows system, the navigations between them are represented by arrows. The most significant paths have been represented.

3   SYSTEM DESCRIPTION

This section describes the graphical interface with the main features of the application.
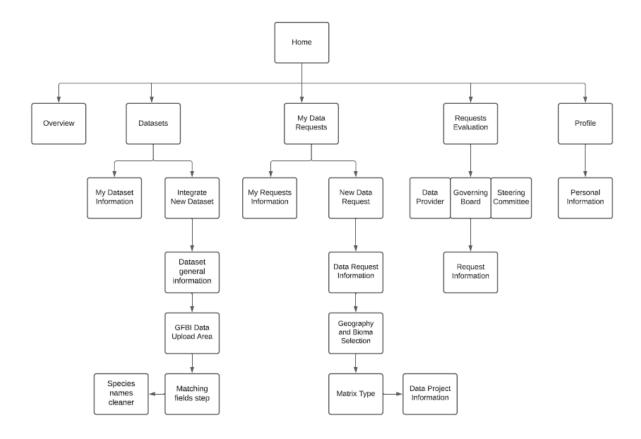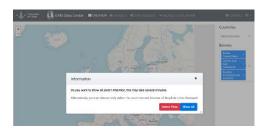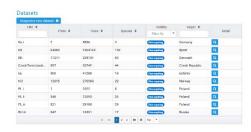
- **Overview**

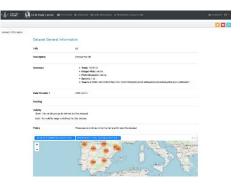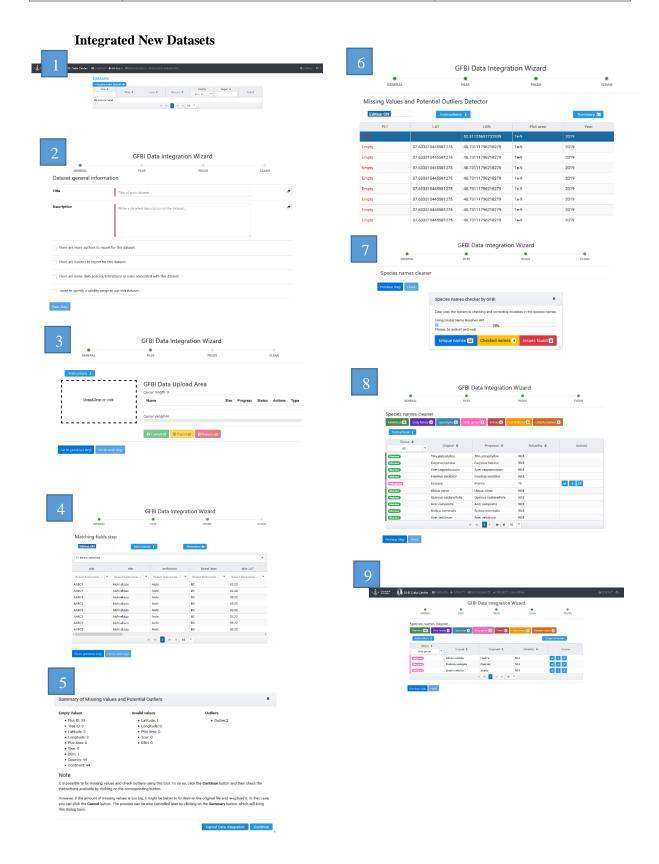- **Datasets**

    Datasets overview

Integrated New Datasets

1

2

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Dataset general information

Title — Title of your dataset

Description — Write a detailed description of the dataset...

☐ There are more authors to report for this dataset.

☐ There are funders to report for this dataset.

☐ There are some data policies/restrictions or rules associated with this dataset.

☐ I want to specify a validity range to use this dataset.

Next Step

3

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Instructions ℹ

GFBI Data Upload Area
Queue length: 0

Drag&Drop or click.

| Name | Size | Progress | Status | Actions | Type |

Queue progress:

⬆ Upload all   ⊘ Cancel all   🗑 Remove all

Go to previous step   Go to next step

4

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Matching fields step

Edition ON   Instructions ℹ   Metadata 👁

17 items selected

plot	site	prefecture	forest_type	plot_LAT
AI BC1	Aichi akazu	Aichi	BC	35.22
AI BC1	Aichi akazu	Aichi	BC	35.22
AI BC1	Aichi akazu	Aichi	BC	35.22
AI BC1	Aichi akazu	Aichi	BC	35.22
AI BC1	Aichi akazu	Aichi	BC	35.22
AI BC1	Aichi akazu	Aichi	BC	35.22
AI BC1	Aichi akazu	Aichi	BC	35.22
AI BC1	Aichi akazu	Aichi	BC	35.22

Go to previous step   Go to next step

5

Summary of Missing Values and Potential Outliers ✕

Empty Values
- Plot ID: 34
- Tree ID: 0
- Latitude: 0
- Longitude: 0
- Plot Area: 0
- Year: 0
- DBH: 1
- Country: 44
- Continent: 44

Invalid values
- Latitude: 1
- Longitude: 0
- Plot Area: 0
- Year: 0
- DBH: 0

Outliers
- Outlier:2

Note

It is possible to fix missing values and check outliers using this tool. To do so, click the **Continue** button and then check the instructions available by clicking on the corresponding button.

However, if the amount of missing values is too big, it might be better to fix them in the original file and re-upload it. In that case, you can click the **Cancel** button. The process can be also cancelled later by clicking on the **Summary** button, which will bring this dialog back.

Cancel Data Integration   Continue

6

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Missing Values and Potential Outliers Detector

Edition ON   Instructions ℹ   Summary 🗔

PLT	LAT	LON	Plot area	Year
Empty	0	52.51125607732939	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019
Empty	37.6333154455812175	48.73111796218279	1e-9	2019

7

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Species names cleaner

Previous Step   Finish

Species names checker by GFBI ✕

Dear user, the system is checking and correcting mistakes in the species names.

Using Global Name Resolver API
70%
Please, be patient and wait.

Unique names 20   Checked names 4   Issues found 0

8

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Species names cleaner

Matched 18   Only family 0   Synonyms 0   Only genus 1   Errors 0   Corrections 0   Undetermined 0

Instructions ℹ

Status ▼ All	Original ▼	Proposed ▼	Reliability ▼	Actions
Matched	Tilia platyphyllos	Tilia platyphyllos	98.8	
Matched	Carpinus betulus	Carpinus betulus	98.8	
Matched	Acer cappadocicum	Acer cappadocicum	98.8	
Matched	Fraxinus excelsior	Fraxinus excelsior	98.8	
Only genus	Cerasus	Prunus	75	✔ ℹ ✎
Matched	Ulmus minor	Ulmus minor	98.8	
Matched	Quercus castanefolia	Quercus castanefolia	98.8	
Matched	Acer campestre	Acer campestre	98.8	
Matched	Sorbus torminalis	Sorbus torminalis	98.8	
Matched	Acer velutinum	Acer velutinum	98.8	

Previous Step   Finish

9

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN — EFFECT

Species names cleaner

Matched 165   Only family 0   Synonym 0   Only genus 3   Errors 0   Corrections 0   Undetermined 0

Instructions ℹ   Accept all shown

Status ▼ Only genus	Original ▼	Proposed ▼	Reliability ▼	Actions
Only genus	Adina cordifolia	Haldina	98.8	✔ ℹ ✎
Only genus	Boehinia variegata	Bauhinia	98.8	✔ ℹ ✎
Only genus	Acacia catechu	Acacia	98.8	✔ ℹ ✎

Previous Step   Finish

- **Data Requests**

My Request Information

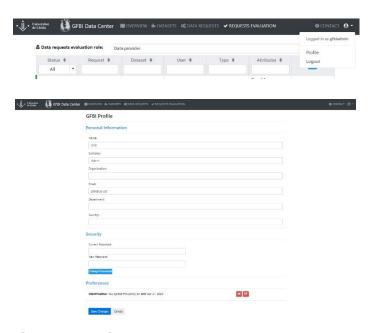|	GFBI DMS (Data Management System) User Guide	GFBI Data Center

New Data Requests

- **Requests Evaluation**
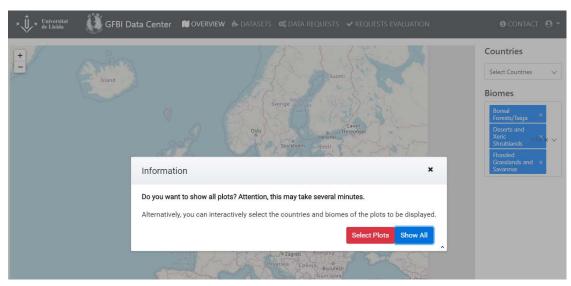
- **Profile**

3.1 Overview Subsystem

This subsystem shows the information, on a map, of the plots that we can access from the platform.
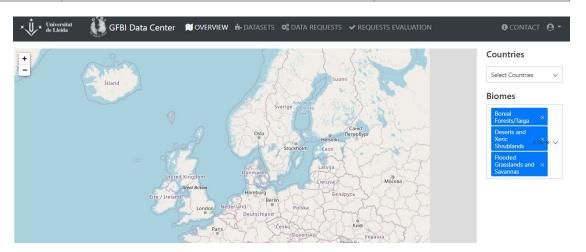
Overview Screen

When accessing this page, we find the option to show all the plots or only those that we want to select.

If we choose to make a selection of plots, it can be filtered by country and by type of biome.
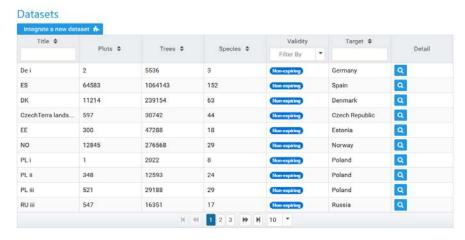
3.2 Datasets subsystem

This subsystem allows the revision of the data sets that have been entered and also to add new data sets.

Datasets Screen

My Datasets Information

When accessing the Datasets section, we will have a summarized view of the datasets that we have integrated.
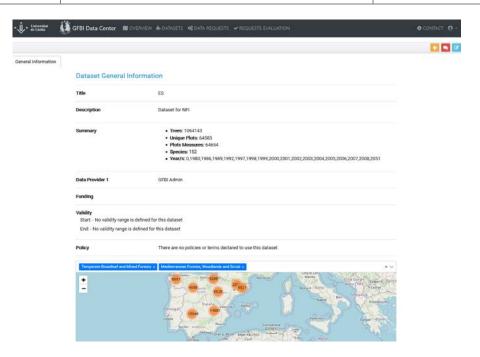
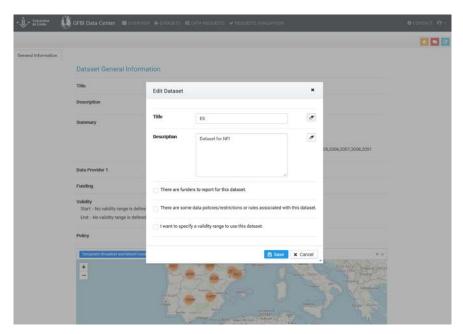You can filter the datasets by country and also by the type of validation.

We can also see the expanded information of the datasets by clicking on the magnifying glass.

From this page, we can also modify some data and suggest modifications or errors in them, using the control buttons located in the upper right corner. The edit button is blue, the one for suggestions is red.

Integrate new dataset

To integrate a new dataset, the subsystem must be accessed through the button "Integrate a new dataset".

The first page is used to describe the data set, the providers, the associated restrictions or policies, and the length of time the data can be used.

The next page is used to upload the data to the platform, you can also include specific documents for the transfer of that data, such as additional policies. The type of file to be uploaded must be specified in the "Type" section.

The data files can be excel or csv, these must comply with a certain structure and format to guarantee a standard and the homogeneity of the information. A template can be found at the following address, http://gfbinitiative.com/wp-content/uploads/2018/07/GFB2_Template_Jan2017.xlsx
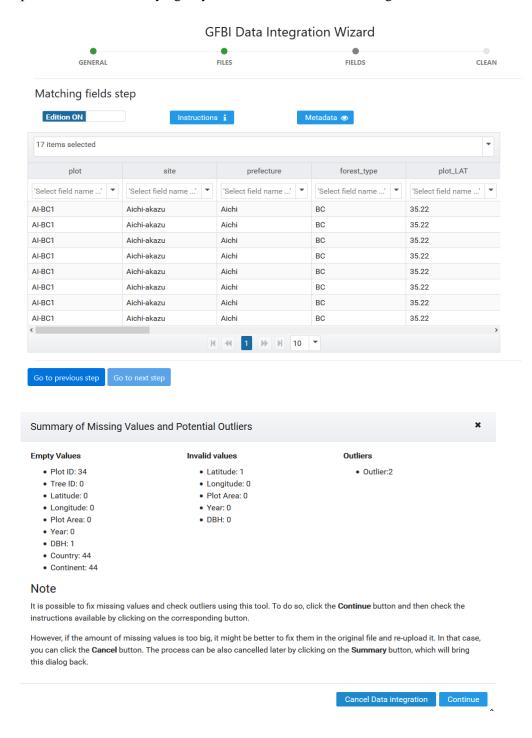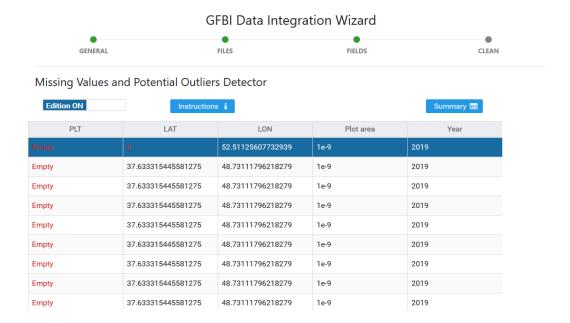
On the next page, the platform shows in a table the set of data that has been imported, for the integration to be done correctly they must match the proposed data types.

To finish the process, the edit button must be deactivated, in this step the system checks for possible outliers. In the case of finding any, it will report the problem, but you can continue the process, without modifying, if you deactivate the edit button again.
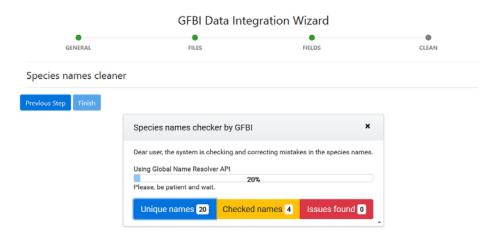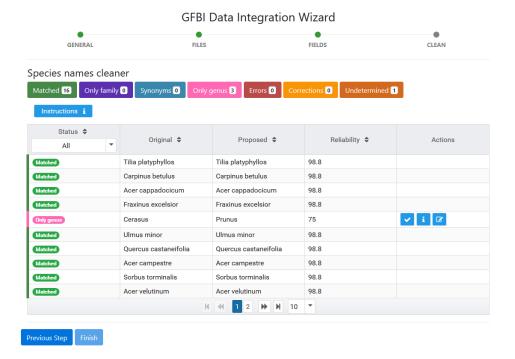
GFBI Data Integration Wizard

GENERAL · FILES · FIELDS · CLEAN

Matching fields step

Edition ON   Instructions ⓘ   Metadata 👁

17 items selected

plot	site	prefecture	forest_type	plot_LAT
'Select field name ...' ▾	'Select field name ...' ▾	'Select field name ...' ▾	'Select field name ...' ▾	'Select field name ...' ▾
AI-BC1	Aichi-akazu	Aichi	BC	35.22
AI-BC1	Aichi-akazu	Aichi	BC	35.22
AI-BC1	Aichi-akazu	Aichi	BC	35.22
AI-BC1	Aichi-akazu	Aichi	BC	35.22
AI-BC1	Aichi-akazu	Aichi	BC	35.22
AI-BC1	Aichi-akazu	Aichi	BC	35.22
AI-BC1	Aichi-akazu	Aichi	BC	35.22
AI-BC1	Aichi-akazu	Aichi	BC	35.22

|◁ ◁◁ 1 ▷▷ ▷| 10 ▾

Go to previous step   Go to next step

Summary of Missing Values and Potential Outliers ✖

Empty Values
- Plot ID: 34
- Tree ID: 0
- Latitude: 0
- Longitude: 0
- Plot Area: 0
- Year: 0
- DBH: 1
- Country: 44
- Continent: 44

Invalid values
- Latitude: 1
- Longitude: 0
- Plot Area: 0
- Year: 0
- DBH: 0

Outliers
- Outlier:2

Note

It is possible to fix missing values and check outliers using this tool. To do so, click the **Continue** button and then check the instructions available by clicking on the corresponding button.

However, if the amount of missing values is too big, it might be better to fix them in the original file and re-upload it. In that case, you can click the **Cancel** button. The process can be also cancelled later by clicking on the **Summary** button, which will bring this dialog back.

Cancel Data integration   Continue

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Missing Values and Potential Outliers Detector

Edition ON   Instructions ℹ️   Summary 🖩

PLT	LAT	LON	Plot area	Year
Empty	0	52.51125607732939	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019
Empty	37.633315445581275	48.73111796218279	1e-9	2019

In the next page, possible errors related to the name of the species are checked and corrected.

GFBI Data Integration Wizard

GENERAL — FILES — FIELDS — CLEAN

Species names cleaner

Previous Step   Finish

Species names checker by GFBI   ✕

Dear user, the system is checking and correcting mistakes in the species names.

Using Global Name Resolver API

20%

Please, be patient and wait.

Unique names 20   Checked names 4   Issues found 0

Successful matches are marked in green and those to be reviewed are marked in other colours.

Before the data integration process can be completed, all species-related problems must be resolved.

To do this, you must click on the button corresponding to each type of error and correct them. The correction can be carried out one by one or all at once using the "Accept all shown" button.
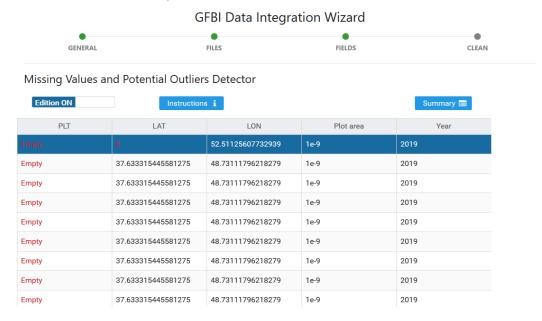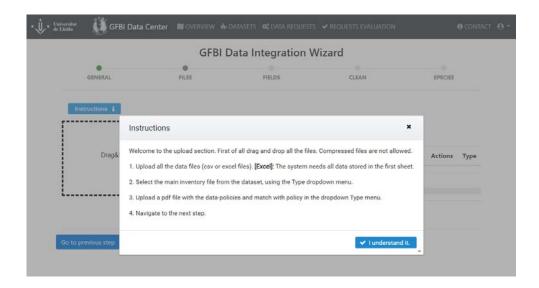
Error message

In the case of finding an outlier, it will report the problem by activating the "Edit" button again, but if it considers that the data is correct, it can continue the process, without modifying, if you deactivate the edit button again.

Contextual aids

In all the pages of the data integration process, you will find a button "Instruction i" that will show you information about the process.
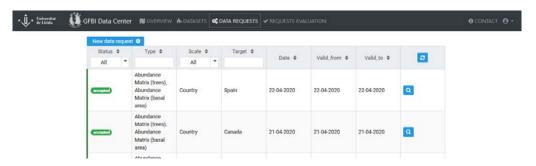
3.3   Data Request subsystem

This subsystem allows the review of data requests that have been requested and also to make new requests.
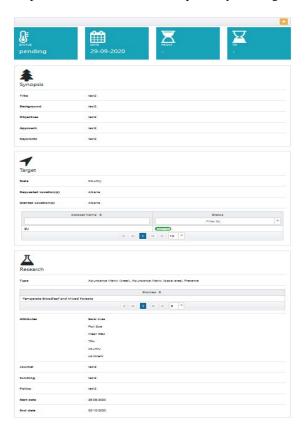
Data Request Screen

My Request Information

When the "Data Requests" section is accessed, a summary view of all the data requests that have been requested appears.

We can also see the expanded information of the requests by clicking on the magnifying glass.

New Data Requests

To make a new data request, the subsystem must be accessed through the "New Data Request" button.

On the first page, you request a description of the project for which you need the data.

On the next page, after entering the project information, the geographic scale of the data and the biome must be selected.
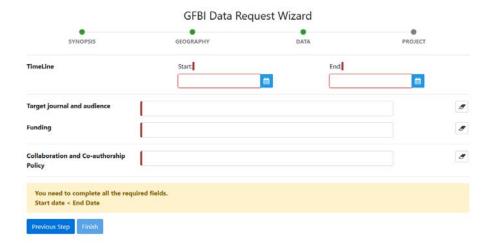
On the next page it asks you to select the type of array and it will show you a short description of the attributes that will be displayed.

In the last step, you must inform about the use of the requested data, such as: the time the data will need, the objectives of the project for which you request it and the collaborators in the project.

Error message

All the options marked in red are an essential requirement.

For a correct evaluation it is recommended to make a description as detailed as possible of the project and its objectives.

3.4   Request Evaluation subsystem
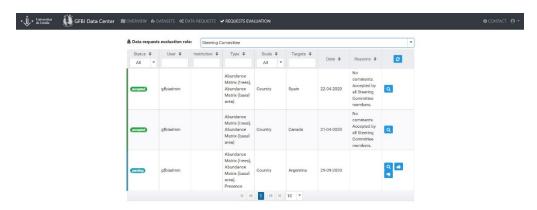
This subsystem allows the evaluation of the data requests that have been made, as well as the review of their status and access to the requested data if they have accepted the request.

Request Evaluation Screen

All requests have to be evaluated.

The first evaluation is carried out by the steering committee, which is in charge of evaluating the suitability of the data request for the exposed project. If the evaluation is affirmative, each data provider, affected by the request, must evaluate the request for their own data.

All requests are notified to the different members of the GFBI by email, access to the evaluations can be done from the link in the email or by accessing the "request Evaluation" section.

In this section you can switch between the different roles, if you have more than one, by using the drop-down at the top of the grid.
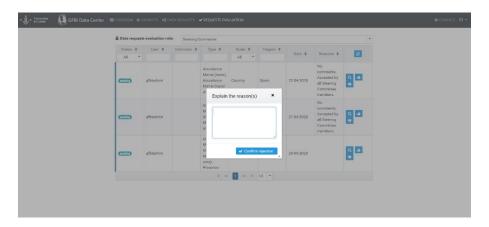

Description of the actions that can be carried out:

   Accept the request

   Reject the petition

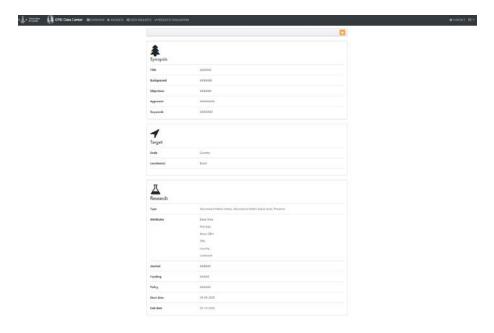   Review the complete details of the request

The acceptance of the requests does not involve any other action, on the contrary, rejecting the request must be done by justification, for this a pop-up will open in which you can describe the problem for which you are rejecting it.

Using the magnifying glass, you will be able to review the request data in more detail.

Error message

In case there are multiple roles within the GFBI, data provider, steering committee, etc., you can access the requests for each role through the drop-down located at the top of the grid.

3.5 Profile Subsystem

This subsystem allows the editing of some data that GFBI has about the user. In this section you can also review and approve the "Silent Negative" policy that was implemented for the transfer of data.
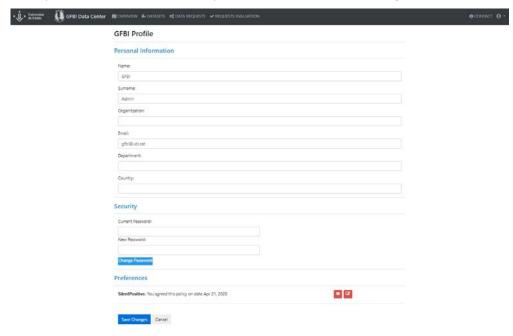
Profile Screen

To access this section, you must click on the user's image, located in the upper right corner and later in the menu displayed in the "Profile" section.

Once inside, you can review the personal data shown in the boxes, you can also modify the access password in the security section. In the preferences section you will find the information regarding the "Silent Negative" policy and accept it or not.

Finally, to save the modifications, you must click the "Save Changes" button.

4 FAQ

- **How long does it take to obtain the data of the Data Request?**

  It must be taken into account that the process of accepting a petition has two phases:

  The petition approval phase is evaluated by the steering committee; a 15-day response policy has been established

  data providers phase, providers can accept or refuse to include their data for each project, a response policy of 21 days has been established.

- **What kind of data can be integrated into the GFBI DMS?**

  The GFBI DMS has been prepared to be able to integrate first level data, that is, data at the tree level.

- **Once the data has been integrated can I modify it?**

  We can only modify some parts such as: the title, the description, the funders or the data transfer time. If you need to make any more profound modifications, on the same Dataset revision page you can find a button to send the notification to the GFBI DC.

- **How can I access the GFBI DMS?**

  In order to access the GFBI DMS you must be a member of the GFBI.

- **How can I become a member of the GFBI?**

  To become a member of the GFBI, you must complete the form that you will find in the following link http://gfbinitiative.com/registration/, in addition, in the petition you must include the reference of an active member of the GFBI, so that you can verify the identity.

- **What is the GFBI and what does it do?**

  For more information about the Global Forest Biodiversity Initiative, you can consult the web https://www.gfbinitiative.com.

5 GLOSSARY

Word	Description
GFBI	Global Forest Biodiversity Initiative
GFBI DMS	GFBI Data Management System (data management application)
GFBI DC	GFBI Data Center (department in charge of the management and administration of the GFBI DMS)