

GLORIA Web Application Help File

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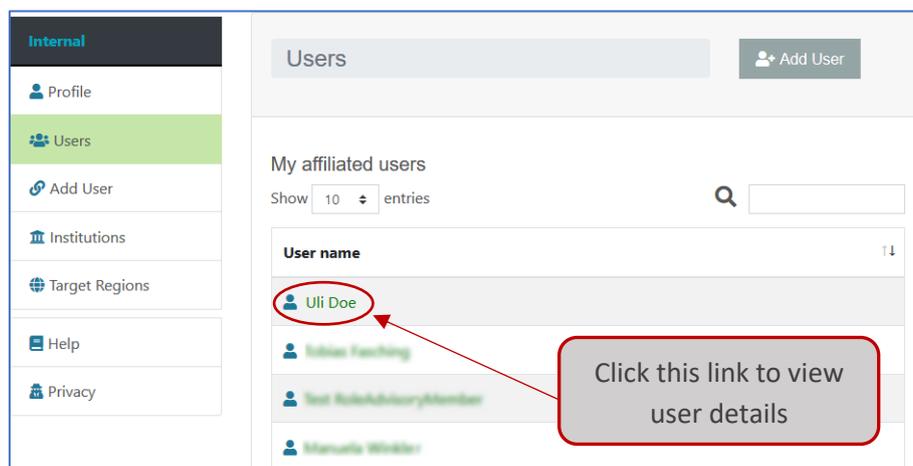
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The internal GLORIA web application builds on three main categories – Users, Institutions, Target regions.



Users

In this category you can find all GLORIA-specific users that are part of your institution. If you are affiliated to more than one relevant institution, respective users of each institution you belong to are displayed.



- You can *filter* and *search* within your list using the search field
- You can *sort* your list using the ordering icon \updownarrow in the upper right corner of the table.
- For entering a new user (team member), click the button on this site.
- An input form pops up asking for information about the new user.

In the current state of this application, please insert field worker with the role

- “*core team member*” to give them the possibility to enter field data into the database
- “*advisory team member*” if they only worked in the field but will not enter data

and assign them to your region and institution.

Assign existing user
+ Add new user

Title	<input type="text"/>
First Name *	<input type="text"/>
Last Name *	<input type="text"/>
E-mail *	<input type="text"/>
Telephone	<input type="text"/>
Mobile Phone	<input type="text"/>

Institution *	<input type="text"/>
Targetregion *	<input type="text"/>
Role *	<input type="text"/>

Assign

Information in the user page can be updated. Editable data is marked with blue dotted underlines (throughout this web application). To edit data just click into the respective field, update the information and enter your changes with the return key:

Users / Empty Uli Doe

Required fields are marked with an asterisk. Please also consider the field preceding the first name, which is intended to enter your (academic) title, Ms. or Mr., respectively (by default, as in the example above, it is filled with 'empty').

Users / Empty Uli Doe

A

B

C

	2018-09-25 09:58:32				Change password
	gloria.office@boku.ac.at	+	⊘		+ Add e-mail, phone number
	test@test.at		⊘	⊘	
	+43/555 555-555		⊘	⊘	
	+43/1 555-555-555		⊘	⊘	

new vegetation
active memberships
field work
former memberships

Region	Name	Editable until	
HSW	NE-Alps / Hochschwab (Austria)	no edit session open	Request New Vegetation Input

user data

affiliations

- A) This icon manages the login email address of a person. The email address actually used for the login process is marked green. If you want to change your login-email address, just replace it with the new email address.
- B) This icon indicates if this data line will be displayed to the internal GLORIA communication book. This is an interim feature which will be unlocked in a further version of this web application.
- C) To delete this data line, click the 'trash basket' symbol. Data will disappear from the display, but will be stored for backup reasons and will be deleted automatically from the database after the expiration of one year.

To add new contact data, click the corresponding button



- Email address(es), phone and mobile phone numbers can be entered.

If you want to change your password (this button is only visible in your own profile) click the corresponding button



Change Password

Password

Confirm Password

Minimum specifications for passwords:

Minimum characters: 8

Minimum digits: 1

Minimum lowercase characters: 1

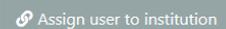
Minimum uppercase characters: 1

The tabs below indicate the current and former affiliations of the particular user and her/his participation as field worker.

Fieldworkers cannot be entered at this place of the web application, but will be fed into the database through the entry of the vegetation data.

If you want to re-activate a membership of a user: select in the sidebar 'Institution' go to the tab 'former memberships'. You can re-activate a user by clicking this symbol

- target regions
- active members
- field workers
- former members



Showing 1 to 13 of 13 entries

Name	Region	Role	since	retire user
Doe Uli	HSW	core team member	2018-07-17	
Euler Katrin	HSW	core team member	Empty	
Feuchting Tobias	HSW	developer	2018-07-17	
Friedmann Barbara	HSW	gloria coordination team	Empty	

Institutions

In this category you can find all institutions that are (or formerly were) related to the GLORIA network. Institutions to which you are affiliated to are listed on top, followed by all others.

 **Institutions**

My affiliated GLORIA institutions

Institution names
GLORIA Coordination Office

Other GLORIA institutions

Other GLORIA institutions
Academy of Sciences of the Kyrgyz Republic; Institute for Biology and Soil, Lab. of Flora
Agenzia Regionale per la Protezione dell'Ambiente della Valle d'Aosta / Italy
Altaysky Biosphere Reserve

If you click on the institution you are affiliated with, the following overview appears. You can edit data that are marked with blue dotted underlines.

Institutions / GLORIA Coordination Office

 Homepage	www.gloria.ac.at
 Acronym	Empty
 Address	Street: Silbergasse Streetnumber: 30/3 PO-Box: Empty Country: <input type="text" value="AT"/> CityCode: 1190 City: Wien

 target regions
 active members
 field workers
 former members

Showing 1 to 1 of 1 entries

Region ↑↓	Name ↑↓
 HSW	NE-Alps / Hochschwab (Austria)

institution data

affiliations

target regions active members field workers former members

Assign user to institution

Showing 1 to 13 of 13 entries

Name	Region	Role	since	retire user
Doe Uli	HSW	core team member	2018-07-17	
Euler Karin	HSW	core team member	Empty	
Fesching Tobias	HSW	developer	2018-07-17	
Friedmann Barbara	HSW	gloria coordination team	Empty	

All current GLORIA members of an institution and their assigned target regions are listed in the tab 'active members'. Every member has a GLORIA-specific role in their institution and target region (for the definition of roles see below under 'Management of data access rights'). Different membership configurations to target regions and institutions are possible.

A) To change a role just use the drop-down button

B) Use this button to add an 'existing person' in the database to a new institution and/or target region.

To find a person in the database you have to search her or his email first.

Add User

Assign existing user + Add new user

Email address
gloria.office@boku.ac.at

Search

Member
Uli Doe

Institution *

Targetregion *

Role *

Assign

C) To sign off a user's membership in an institution use this button . You can re-active any user in the tab 'former members' using this symbol

If a user is signed off from all memberships in the GLORIA database, the person is automatically blocked from login!

If you want to grant a former member still the rights to read data, assign the role 'advisory team member'. See section 'management of data access rights' in this document.

The tab 'former members' contains all users that once worked within this institution and were signed off through the symbol  in the tab 'active members'.

target regions active members field workers former members

Showing 1 to 6 of 6 entries

Name	Region	Role	since	until	activate user
 <i>Löffler Michael</i>	 HSW	core team member	Empty 	Empty 	
 <i>Schneeweißner Daniela</i>	 HSW	core team member	Empty 	Empty 	

A) You can re-activate all user in the tab 'former members' using the symbol . Users will then be listed in the tab 'active members' again.

The tab 'field workers' contains data that are only fed into the database through the entry of vegetation data.

target regions active members field workers former members

Field worker derive from the moc's vegetation input data and cannot be edited manually

Name	Region
 <i>Hermann Stockinger</i>	 AT-HSW

Target regions

In this category you can find all target regions that are part of the GLORIA network, with those you are assigned to on top.

Target regions

My GLORIA regions

Region name	Country	Code	Established	Nr. of surveys
NE-Alps / Hochschwab (Austria)	AT - Austria	HSW	2001	3

Other GLORIA regions

Showing 1 to 165 of 165 entries

Region name	Country	Code	Established	Nr. of surveys
Altai / Tigirekskiy Nature Reserve	RU - Russian Federation	TIG	2010	
Altai/Katunsky Biosphere Reserve (Rep. Altai, Russia)	RU - Russian Federation	AKA	2005	2
Altayskiy Biosphere Reserve (Russia)	RU - Russian Federation	ABR	2011	

If you click on your target region, the following overview appears. All institutions related to the target region are listed in the first tab 'institutions'.

Regions / HSW

Request New Vegetation Input

Affiliations | Description | GHK | WEK | ZAK | ZIK



NE-Alps / Hochschwab (Austria)
Established: 2001
Surveys (MOCYs) in database: 3

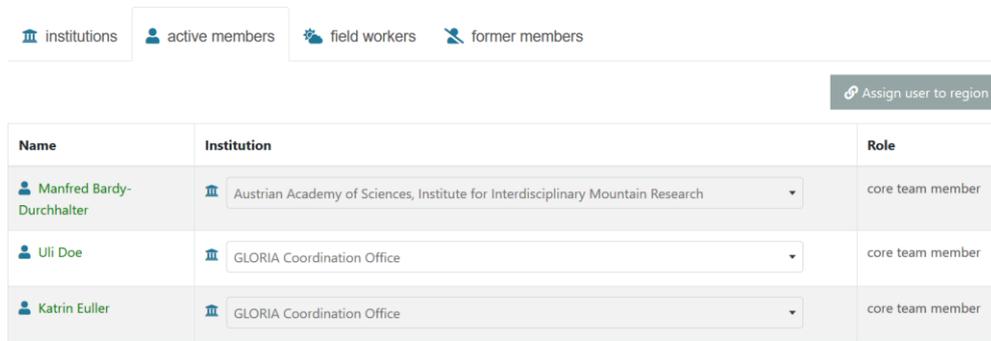
Institutions | active members | field workers | former members

Name

- University of Natural Resources and Life Sciences Vienna, Department of Integrative Biology and Biodiversity Research
- Austrian Academy of Sciences, Institute for Interdisciplinary Mountain Research
- GLORIA Coordination Office

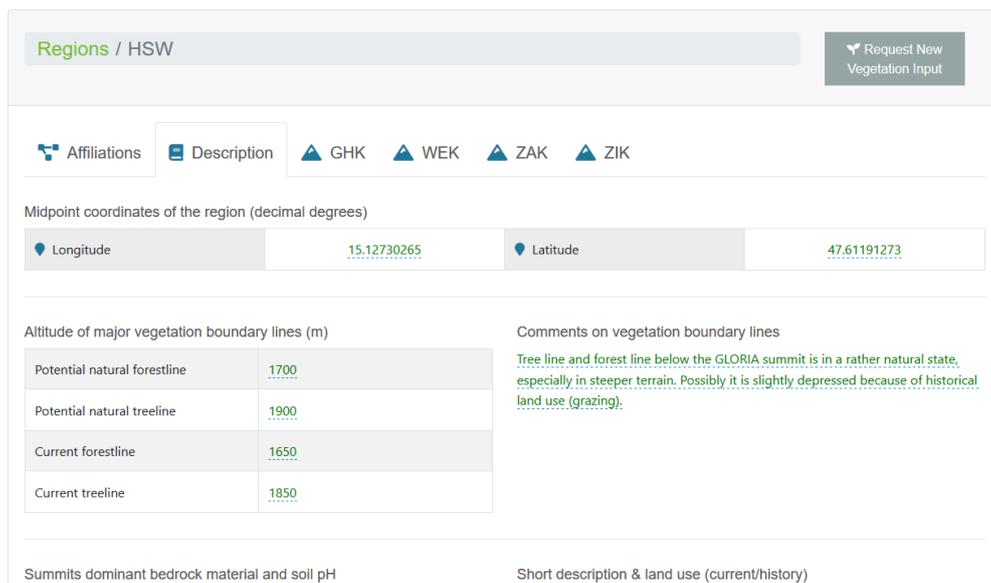
All current members of a target region are listed in the tab 'active members'. Every member has a GLORIA-specific role in their institution and target region. If you are member of more than one institution, you can add an institution to a target region (the institutions you are affiliated to can be selected through the drop-down button).

The user's role is linked to the institution. User roles therefore only can be changed in the institution category! Follow the link  for a quick access to the corresponding institution.



Name	Institution	Role
 Manfred Bardy-Durchhalter	 Austrian Academy of Sciences, Institute for Interdisciplinary Mountain Research	core team member
 Uli Doe	 GLORIA Coordination Office	core team member
 Katrin Euller	 GLORIA Coordination Office	core team member

In tab 'Description' you can add or edit data which are marked with blue dotted underlines.



Regions / HSW Request New Vegetation Input

Affiliations **Description** GHK WEK ZAK ZIK

Midpoint coordinates of the region (decimal degrees)

Longitude	<u>15.12730265</u>	Latitude	<u>47.61191273</u>
-----------	--------------------	----------	--------------------

Altitude of major vegetation boundary lines (m)

Potential natural forestline	<u>1700</u>
Potential natural treeline	<u>1900</u>
Current forestline	<u>1650</u>
Current treeline	<u>1850</u>

Comments on vegetation boundary lines

Tree line and forest line below the GLORIA summit is in a rather natural state, especially in steeper terrain. Possibly it is slightly depressed because of historical land use (grazing).

Summits dominant bedrock material and soil pH Short description & land use (current/history)

In each summit tab (in the example target region HSW these are 'GHK', 'WEK', 'ZAK' and 'ZIK'), you can add or edit general summit meta-data which are marked with blue dotted underlines. The measurement data of plot position and size for each summit are also located here.

 Affiliations  Description  GHK  WEK  ZAK  ZIK

 General  Measurement Points  Intersection Lines  Calculations

Geogr. coordinates

 Longitude	15.1315202713012700	 Latitude	47.6138916015625000
---------------------------------------------------------------------------------------------	-------------------------------------	--------------------------------------------------------------------------------------------	-------------------------------------

Altitude (m)

[2214](#)

Vegetation zone

lower/upper alpine ecotone ▾

General comments

[Measurement values from 1998 \(except 10m points and intersections\), some points were measured again: the 1998 values were: p5m-N31: 24.35, E11: 20.34, E31: 20.33, E33: 17.44, E13: 17.38, S31: 21.4, W31: 22.69;](#)

[Photos Gottfried \(+Pauli, +Sonycam\): first photos of the HSP have wrong labels: AU instead of AT correct or cancel;](#)

Management of data access rights

ONLY the GLORIA Coordination Office can assign ...

- ... new target regions
- ... new institutions to target regions

If you establish a new target region or if a new institution gets involved with your existing target region, please send a mail to gloria.office@boku.ac.at

The following roles are currently implemented:

<i>Role Name</i>	<i>Description</i>	<i>Login</i>	<i>View</i>		<i>Edit</i>	
			<i>local</i>	<i>global</i>	<i>local</i>	<i>global</i>
advisory team member	former members	✓	✓	✗	✗	✗
field worker	only manageable by database system	✗	✗	✗	✗	✗
core team member	target region team member	✓	✓	✗	✓	✗
vice head of target region		✓	✓	✗	✓	✗
head of target region	Responsible for a target region	✓	✓	✗	✓	✗
gloria coordination team	Core team in Vienna	✓	✓	✓	✓	✓

- Every registered core team- and (vice)head-user of a 'target region team' can see and edit all team members of the respective target region AND institution
- For any other institution and target region (to which you are not affiliated/assigned to) only basic information will be displayed, which excludes information about current and former members or fieldworkers and data are not editable.

Request input of new species/vegetation data

If you login on the Webpage you will start in your user profile page.

Users / Empty Uli Doe

📧	gloria.office@boku.ac.at	➕	🗑️
📧	test@test.at		🗑️
📞	+43/555 555-555		🗑️
📞	+43/1 555-555-555		🗑️

new vegetation | active memberships | field work | former memberships

Region	Name	Editable until	
📍 HSW	NE-Alps / Hochschwab (Austria)	📅 no edit session open	Request New Vegetation Input

If you will start to enter new species/vegetation data you need to request a new vegetation input. Following the Link (A) you are directed to your region page where the button (B) will inform you about the required data to finish the request.

Regions / HSW

Affiliations | Description | GHK | WEK | ZAK | ZIK

Request New Vegetation Input

Request New Vegetation Input

Currently there is no open entry to add new vegetation survey data.

Please send an e-mail to gloria.office@boku.ac.at for requesting to enter new vegetation data, with the brief content:

- GLORIA target region AT-HSW
- number of vegetation survey [NUMBER]
- conducted in [YYYY]
- requested time slot for data entry: from [DD.MM.YYYY] to [DD.MM.YYYY]

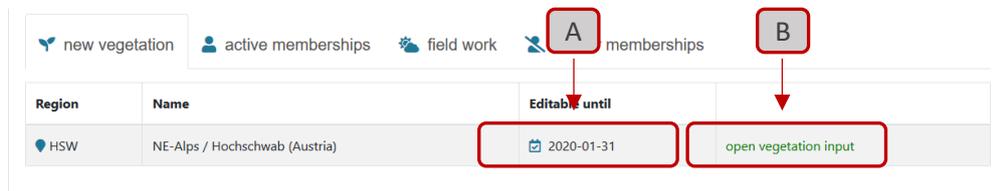
The GLORIA coordination team.

Close

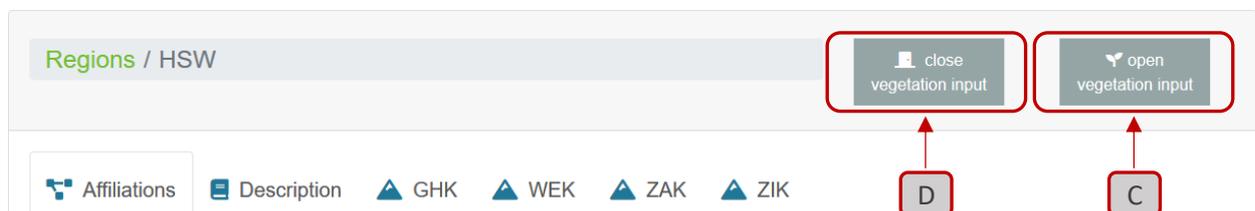
Send the data (target regions code, number of survey, year, time slot needed for data entry) to gloria.office@boku.ac.at. Clicking on this email in the popup window may already open your email browser with a prepared text. Upon this email, the GLORIA coordination will unlock your site for data entry.

Input of new species/vegetation data

When your input session is unlocked by the coordination team, your user profile view will show (A) a date until which data can be entered (i.e. the date you indicated in your email request; after this date, the application automatically will close your input session) and (B) a shortcut to the editable region.



Your region view shows two new buttons: “open vegetation input” (C) and “close vegetation input” (D).



CAUTION: ‘Close vegetation input’ locks the application from further data input and will inform the coordination team via mail that your data session is finished. The GLORIA coordination team will check all new taxa names for consistency and synonymy in order to achieve an unambiguous GLORIA-wide list, which usually requires consultation with the field team.

Clicking  you enter a view where you manage your region’s vegetation data:

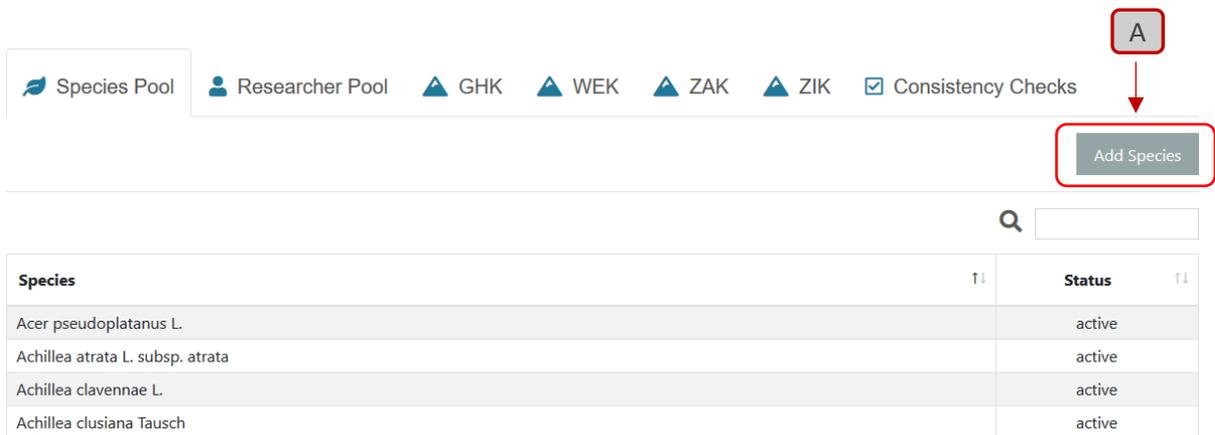


- 1) Species pool: only species listed here can be selected for your plot-based data entry. It is highly recommendable to check the completeness of your species list prior to the entry of vegetation data. If your data entry is from a re-survey, all species/taxa entered from your preceding surveys will be displayed and only newly found taxa need to be added. See below for entering species data. *(In the case that you encounter species names in your list that do not exist in your region, please contact the GLORIA coordination).*
- 2) Researcher pool: only persons listed here can be selected as researchers in your input forms of plot metadata. It is recommendable to enter all fieldworkers involved in your campaign prior to the entry of vegetation data. See below for entering researchers (field workers). *(Please contact the GLORIA coordination team if your list contains researcher names unknown to you.)*
- 3) Summits of your region: by selecting a summit you can enter the corresponding data from your field forms 2, 3, and 4 as well as 5 and 6 (if applicable).

- 4) Consistency checks help you to find gaps and inconsistencies in your entered data
Please check and repair your data consistency before you close your edit session ('close vegetation input').

(1) Species pool

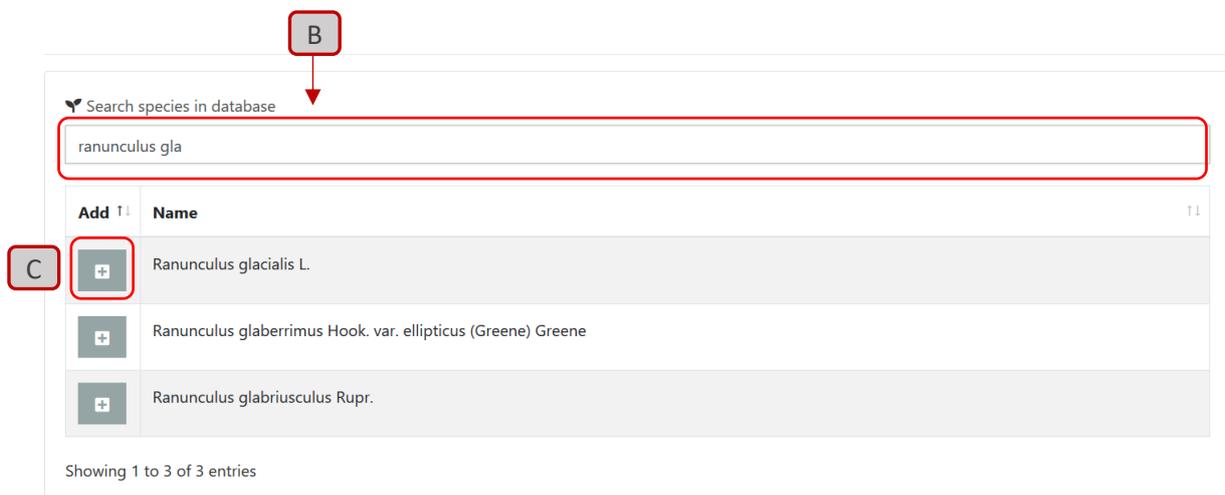
Add existing species from the GLORIA Database to your region's Species Pool



Species	Status
Acer pseudoplatanus L.	active
Achillea atrata L. subsp. atrata	active
Achillea clavennae L.	active
Achillea clusiana Tausch	active

To add a species from the GLORIA database to your region, click the “Add Species” (A) button on the top right. This will open a search box (B). Here you can type in the name of the species, which you want to add to this region. Below the search box, a list will appear containing the results from the database search. To add a new species to your region, click the plus button positioned left to the species name. (C)

If you enter a known synonym into the search field, the result will automatically present the accepted GLORIA species name!



Add	Name
<input type="checkbox"/>	Ranunculus glacialis L.
<input type="checkbox"/>	Ranunculus glaberrimus Hook. var. ellipticus (Greene) Greene
<input type="checkbox"/>	Ranunculus glabriusculus Rupr.

Showing 1 to 3 of 3 entries

Add a 'completely' new species to the GLORIA Database

New species/taxa not yet included in the entire GLORIA species list can be added.

Carefully check by using the search box (B), if the species/taxon is definitely not in the GLORIA list. If so, use the "Add new species" (D) button which will appear on the right side below the search box.

Species Pool Researcher Pool GHK WEK ZAK ZIK Consistency Checks

Dismiss search

Search species in database

new species

D

Add new species

Add	Name
No data available in table	

Showing 0 to 0 of 0 entries

When clicked, a new window opens where you can type in the information for the new species you want to add to this region:

Add new species to database

Species name new species

Plant type E

Species rank F

Family

Genus

Species

Taxon

Reference

Synonyms

Comments

New Family

G

Close Add new species

For entering the plant family the species belong to, there is a dropdown menu (E), where you can select from the respective family name. If this menu doesn't contain a suitable family name for your

species, you can add a new one by pressing the “New Family” (F) button right of the dropdown menu. This will change the dropdown menu to a text field, where you can enter the new family type:

Family ⓘ Back to selection

When all required information is entered, you can finish the action by pressing the “Add new species” (G) button to the bottom right.

(2) Researcher Pool: Add new persons to your region’s field team

The screenshot shows the 'Researcher Pool' tab selected. At the top right, there is a search bar and a 'Consistency Checks' checkbox. A red box labeled 'A' highlights the 'Add Researcher' button. Below this is a table with columns for 'First Name' and 'Last Name'. The first row contains 'Uli' and 'Doe'. A search icon is visible to the right of the table.

Similar to the species section you can add a researcher (usually a field worker) by clicking the “Add Researcher” (A) button on the top right side of the list. This will open a search box (B). Here you need to enter the researcher’s email address. Now click the “Search” (C) button on the button left of the search box. When the E-Mail address was correctly entered the Name of the researcher will appear in the “Member” field (D). To finally add the researcher, click the “add” (E) button on the bottom right of the member field.

The screenshot shows the search interface. A search box (B) contains the email address 'gloria.office@boku.ac.at'. A 'Search' button (C) is to its right. Below the search box, the 'Member' field (D) displays 'Uli Doe'. An 'Add' button (E) is located at the bottom right of the member field. A 'Dismiss' button is visible at the top right of the search area.

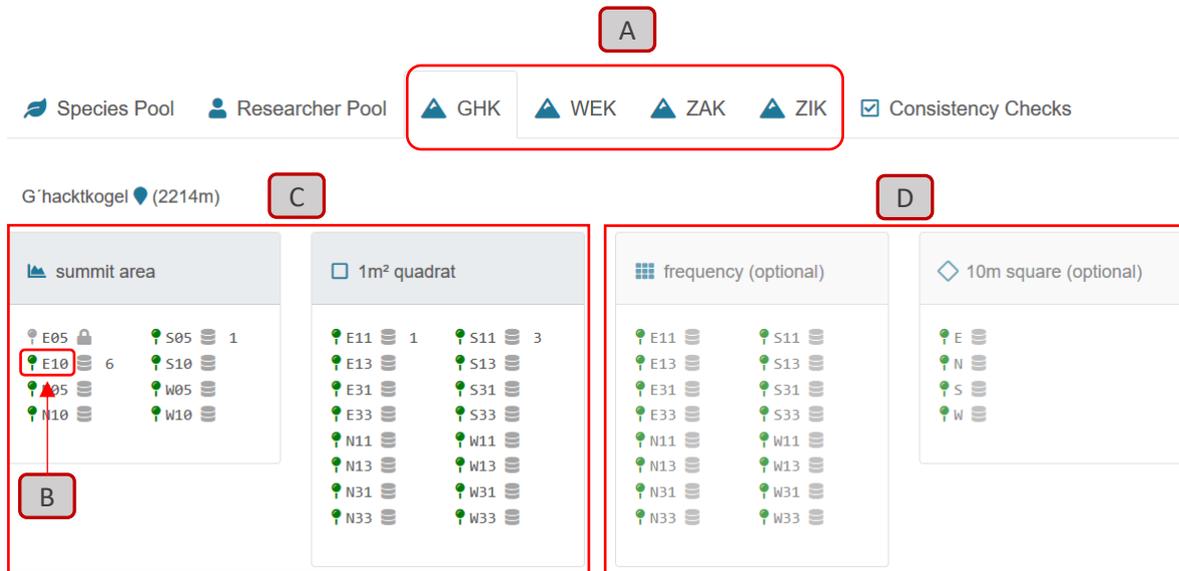
To remove a researcher from the pool simply click on the icon (F) in the corresponding row:

The screenshot shows the 'Researcher Pool' table. The first row contains 'Uli' and 'Doe'. A red box labeled 'F' highlights the person icon in the third column of this row.

(3) Summits: Entry of plot vegetation data

All summit sites of a target region (usually four summits) are displayed with their 3-digit summit code (example form AT-HSW, Hochschwab, Northeast Alps).

For each summit, two mandatory sets of plot types ('summit area' and '1m² quadrat') and two additional optional ones ('frequency' and '10m square') are available for data entry.



Each plot is displayed with four elements: E10 5

- A green pin denotes that the plot is available for data entry, whereas a grey one indicates a restricted status.
- 3-digit plot code, e.g. E05
- The database symbol shows that the plot is now open for data entry. If there is a lock symbol instead of the database symbol, another user is currently editing this plot. A plot can only be edited by one user at the same time, but more than one user can enter data concurrently as long as they work on different plots.
- Species count: The number on the right shows how many species currently are entered in this plot. A missing number usually means that the plot is still unworked.

If you want to edit a plot, for example in 'summit area', simply click on the respective plot code, e.g. E10 (B).

Adding Metadata to plot

Clicking on a plot code will redirect you to the 'metadata' part of that plot. Here you can enter all necessary data for the selected plot such as date/time, top cover, researchers and comments:

Metadata
Vegetation

Date/Time

Date: 2008-02-01

start time: 15:00

end time: 18:00

Researcher(s)

call

Top Cover

Type	%
Vascular	10.00
Rock	20.00
Scree	30.00
Lichens	10.00
Bryophytes	10.00
Ground	10.00
Litter	10.00
Sum	100

Comments (general)

[sample comment](#)

comments (landuse)

[sample comment](#)

Adding researchers to plots

When adding researchers, you need to click the select dropdown and then pick a researcher (A). After the first researcher is added as “call”, a second dropdown list will appear, where you can choose someone as “scribe” (B), if applicable. After that the last dropdown list shows, so the user can select one more additional researcher (C), which would be an exceptional case. Commonly, only one research is doing the plot survey. Adding researchers only works in this order: Call → Scribe → Add

Researcher(s) A

call

- Researcher 1
- Researcher 2
- Researcher 3
- Researcher 4
- Researcher 5

Researcher(s) B

call

scribe

- Researcher 1
- Researcher 2
- Researcher 3
- Researcher 4
- Researcher 5

Researcher(s) C

call

scribe

add

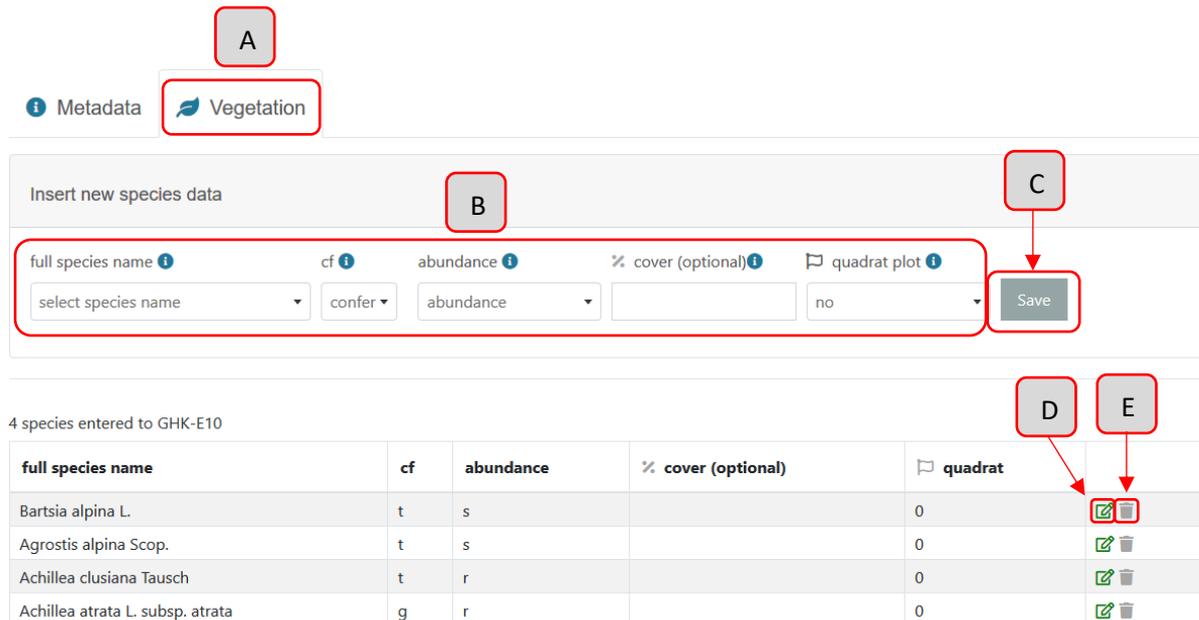
- Researcher 1
- Researcher 2
- Researcher 3
- Researcher 4
- Researcher 5

Remove researchers from plot

Remove a researcher by clicking on the trash basket icon.  Removing researchers only works in the opposite adding order: Add → Scribe → Call

Enter species data of a plot

To insert species data, click the “Vegetation” tab (A). After selecting the necessary information (species name, cf., abundance, ...) (B), you can click the “Save” button (C) to add the species data to the plot.



The screenshot shows the 'Vegetation' tab (A) with the 'Insert new species data' form (B) and a table of entered species. The form includes fields for 'full species name', 'cf', 'abundance', '% cover (optional)', and 'quadrat plot', along with a 'Save' button (C). The table below shows 4 species entered to GHK-E10, with columns for 'full species name', 'cf', 'abundance', '% cover (optional)', and 'quadrat'. Each row has a green edit icon (D) and a trash basket icon (E) in the 'quadrat' column.

full species name	cf	abundance	% cover (optional)	quadrat
Bartsia alpina L.	t	s		0
Agrostis alpina Scop.	t	s		0
Achillea clusiana Tausch	t	r		0
Achillea atrata L. subsp. atrata	g	r		0

To remove a certain data-row from the plot, click on the trash basket icon (E), either in the edit window or in the table.

(4) Consistency checks

‘Consistency checks’ give you an overview of requirements that need to be met before the vegetation input can be completed and displays plots where data are obviously missing or need revision. The consistency check of this online data input tool contains eight components. *(In case that some components cannot be solved, please send an email to the GLORIA Coordination Office explaining the issue.)*

Components of the Consistency checks:

1) Measurement points of plot positions and dimensions

- Requirement (1): All measurement points are entered for each summit

All **measurement points** are filled 

You can add and change the measurement data for a summit by going back to your Target regions’s main page. Just click the 3-digit target region code on the top of the window (A).

A

Regions / **HSW** / New Plots ↻ 2 2020-01-31

Species Pool Researcher Pool ▲ GHK ▲ WEK ▲ ZAK ▲ ZIK Consistency Checks

Requirement: All measurement points are entered for each summit

Here you need to select the corresponding Summit (B) and select "Measurement Points" (C).

C **B**

Regions / HSW close vegetation input open vegetation input

Affiliations Description **▲ GHK** ▲ WEK ▲ ZAK ▲ ZIK

General **Measurement Points** Intersection Lines Calculations

	Point	Distance (m)	Compass direction	Photo check	3x3m
N	11	22.85	34.0	<input checked="" type="checkbox"/> m ² <input checked="" type="checkbox"/> m ² +Freq.frame	
	31	24.35	28.0	<input checked="" type="checkbox"/> m ² <input checked="" type="checkbox"/> m ² +Freq.frame	
	33	22.35	22.0	<input checked="" type="checkbox"/> m ² <input checked="" type="checkbox"/> m ² +Freq.frame	<input checked="" type="checkbox"/>

2) Mandatory plots

Requirement (2): All obligatory plots in 'Summit Area Section' [8 plots] and '1m² quadrats' [16 plots] are entered

The following **obligatory plots** still require metadata

GHK -E13 WEK -E13 ZAK -E13 ZIK -E13 GHK -E10 ZAK -E10
 GHK -E31 WEK -E31 ZAK -E31 ZIK -E31 GHK -N05 ZAK -N05

The plots listed above require data entry. You can go directly to one of the plots by clicking on the plot code.

3) Percentage area of top surface types in the 'Summit Area Section'

Requirement (3): 'Summit Area Section' sum of top cover percentages must be 100%

The following plots require (more) **top cover data** of surface types

GHK -E05 GHK -W05 WEK -S05 ZAK -N05 ZIK -E05 ZIK -W05
 GHK -E10 GHK -W10 WEK -S10 ZAK -N10 ZIK -E10 ZIK -W10

Again, by clicking on a plot code, you will get to the window where you can enter the missing top cover value.

4) Metadata mandatory fields ('Date', 'Start Time', 'End time')

Requirement (4): Metadata mandatory date/time fields ['Date', 'Start Time', 'End Time'] are entered

The following plots require **date of the survey**

GHK -E31

The following plots require **start time** entries

GHK -N31

The following plots require **end time** entries

GHK -E13

All **time pairs** have been entered correctly (start time < end time) 

To edit these fields, click on a plot code to get redirected.

5) Species consistency in the 'Summit Area Section' with the corresponding quadrats

Requirement (5): '1m² quadrats' versus 'Summit Area Sections': all species in the quadrat are also listed in the corresponding 'Summit Area Section'

The following 'Summit Area Sections' miss **species** listed in the corresponding '1m² quadrats'-plots

GHK -N05

GHK -E05

6) Total top cover is 100% in the '1m² quadrats'

Requirement (6): 1m² quadrats: sum of top cover percentages must be 100%

The following plots have a **top cover sum** not equal to 100%

GHK -E11

GHK -S33

WEK -N31

ZAK -E13

ZAK -W11

ZIK -N33

GHK -E13

GHK -W11

WEK -N33

ZAK -E31

ZAK -W13

ZIK -S11

7) Sum of percentage species cover versus top cover of the surface type 'vascular plants'

Requirement (7): 1m² quadrats: Sum of %-species cover must be \geq %-top cover of the surface type 'vascular plants'

Sum of **%-species cover is \geq %-top cover** of 'vascular plants' in all plots 