

BEXIS 2 User Guide

For SPP 2089



Foreword

This guide was created upon request to provide guidance on how to collect research data in the SPP 2089 project. Because the BEXIS 2 Help files are not associated with the SPP 2089 user requirements and there are several options on every scenario available, we wanted to create a special and efficient guide to use by the SPP 2089 researchers. The guide has tried to suggest the easiest way to do any action. Nevertheless, any suggestions for improving and developing this guide are more than welcome. Please send feedback to Nafiseh.navabpour@ufz.de.

Contents

How do I register?	5
How do I login?	7
I forgot my password!	9
I forgot my Username!	10
How do I start?	11
First of all: Log In	11
Untick “ <i>public only</i> ”	11
What does a Data Type mean?	13
How do I create a Data Type	13
How do I create a Unit of measurement?	14
What is a Variable Template?	20
How do I create a Variable Template?	20
What does a Data Structure mean?	24
How do I create a Data Structure?	25
How do I edit a Data Structure?	28
How do I download a Data Structure?	30
How do I work with an Excel Template?	32
What does a Dataset mean?	33
How do I find a dataset?	34
Can I download a dataset?	35
How do I create a Dataset?	36
How do I upload data to a dataset?	40
Upload Data – File format	41
Upload Data – Tabular format	42
Upload XLSX	42
Upload XLSM	43
Upload TXT, CSV or TSV	44
How do I set Permissions?	46
How do I delete a dataset?	46
How do I download a dataset?	47
How do I access BEXIS 2 data via R?	50
Get the API key	50

Prepare the R environment	50
Data access functions.....	53
How do I update a File format dataset?	54
How do I edit a tabular dataset?.....	57
How do I add rows to a tabular dataset?.....	61
How do I add columns to a tabular dataset?	64
How do I Make a copy of a Data Structure?	65
How do I edit an existing Data Structure?	66
How do I create a copy of a dataset?.....	67
How do I add/remove attachments?	68
How do I edit the metadata?	69

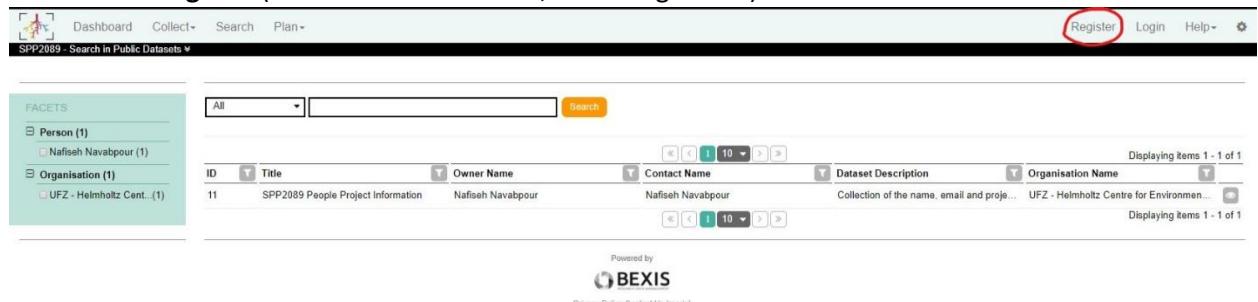
How do I register?

1. Open the BEXIS2 instance from [here](#) (or copy and paste “<https://SPP2089.ufz.de:4433>” in your internet browser).



The screenshot shows the BEXIS2 search interface. The top navigation bar includes 'Dashboard', 'Collect', 'Search', 'Plan', 'Register', 'Login', and 'Help'. The search bar is empty. The results table shows one dataset: 'SPP2089 People Project Information' with owner 'Nafiseh Navabpour'. The facets on the left show 'Person (1)' and 'Organisation (1)'. The footer includes the BEXIS logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

2. Click on the **Register** (Find it in the menu bar, on the right side).



The screenshot is identical to the previous one, but the 'Register' button in the top right menu bar is circled in red to indicate it should be clicked.

3. Fill the registration form.

There is no specific password restriction.

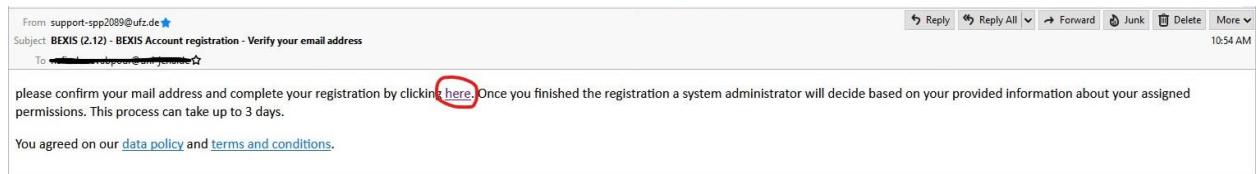
Accept the *Terms and Conditions* and the *Privacy Policy*.



The screenshot shows the registration form. It includes fields for 'User Name', 'Email', 'Password', and 'Confirm password'. Below these are two checkboxes: 'I accept Terms and Conditions.' and 'I accept Privacy Policy.'. A large orange 'Register' button is at the bottom.

4. Click on orange button **Register**.

5. Open your email address which you entered in the registration formula.
6. Open received email from support-spp2089@ufz.de.
(The title would be “BEXIS (2.12) - BEXIS Account registration - Verify your email address”)
7. Click on the confirmation link.



8. The BEXIS2 instance will open in your default browser. You are seeing your user name on the menu bar in the right side, close the Help.
Enter your information in the formula.

Registration

* Account type: Person

* FirstName

* LastName

Phone

Mobile

Email

Address

Role

Save

9. Click on orange button **Save**.
10. Looking forward an email from nafiseh.navabpour@ufz.de to inform you about completeness of your registration process.

How do I login?

1. Open the BEXIS2 instance from [here](#) (or copy and paste "SPP2089.ufz.de:4433" in your internet browser).



The screenshot shows the BEXIS2 search interface for the SPP2089 instance. The top navigation bar includes 'Dashboard', 'Collect', 'Search', 'Plan', 'Register', 'Login', 'Help', and a gear icon. The left sidebar, titled 'FACETS', shows 'Person (1)' with 'Nafiseh Navabpour (1)' and 'Organisation (1)' with 'UFZ - Helmholtz Cent... (1)'. The main search area has a search bar with 'All' selected and a 'Search' button. Below the search bar is a table with columns: ID, Title, Owner Name, Contact Name, Dataset Description, and Organisation Name. One item is listed: '11 SPP2089 People Project Information Nafiseh Navabpour Nafiseh Navabpour Collection of the name, email and project information of the people involved in the project. UFZ - Helmholtz Centre for Environment and Energy Research'. The bottom of the page includes a 'Powered by BEXIS' logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

2. Click on the **Login** (Find it in the menu bar, on the right side).



The screenshot shows the BEXIS2 search interface after logging in. The top navigation bar now includes 'Register', 'Login' (which is circled in red), 'Help', and a gear icon. The left sidebar shows 'Person (0)' and 'Organisation (0)'. The main search area shows a table with 'No records to display.' The bottom of the page includes a 'Powered by BEXIS' logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

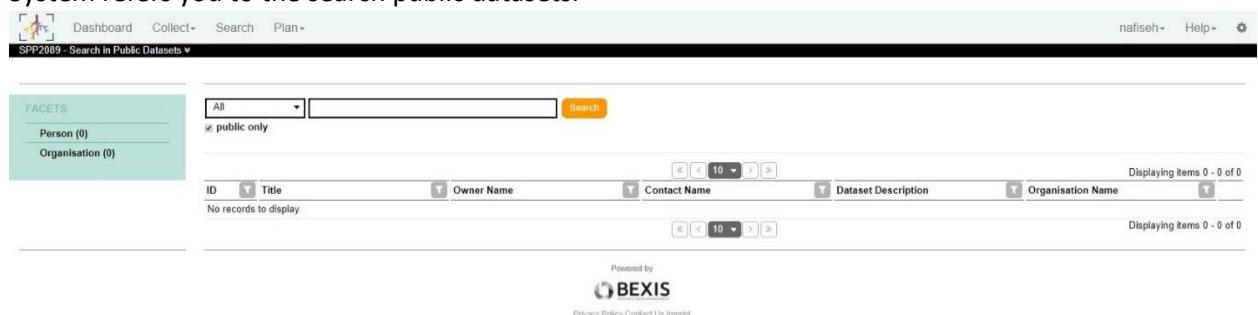
3. Enter your user name and password in the right places.



The screenshot shows the BEXIS2 login form. The top navigation bar includes 'Dashboard', 'Collect', 'Search', 'Plan', 'Log in', 'Register', 'Login', 'Help', and a gear icon. The main form has fields for 'User Name' (containing 'nafiseh') and 'Password' (containing '.....'). Below these are 'Log in' (orange button), 'Remember me' (checkbox), 'Forgot your password?', and 'Register as a new user'. The bottom right of the page says 'Einen anderen Dienst zum Anmelden verwenden.' and shows an 'Ldap' button.

4. Click on orange button **Log in**.

5. System refers you to the search public datasets.



The screenshot shows the BEXIS2 search interface after logging in. The top navigation bar includes 'nafiseh', 'Help', and a gear icon. The left sidebar shows 'Person (0)' and 'Organisation (0)'. The main search area has a search bar with 'All' selected and a 'Search' button. Below the search bar is a table with columns: ID, Title, Owner Name, Contact Name, Dataset Description, and Organisation Name. The table shows 'No records to display.' The bottom of the page includes a 'Powered by BEXIS' logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

6. Please check your **Dashboard**. If your access to the Dashboard is denied, please contact me (Nafiseh.navabpour@ufz.de).

Dataset

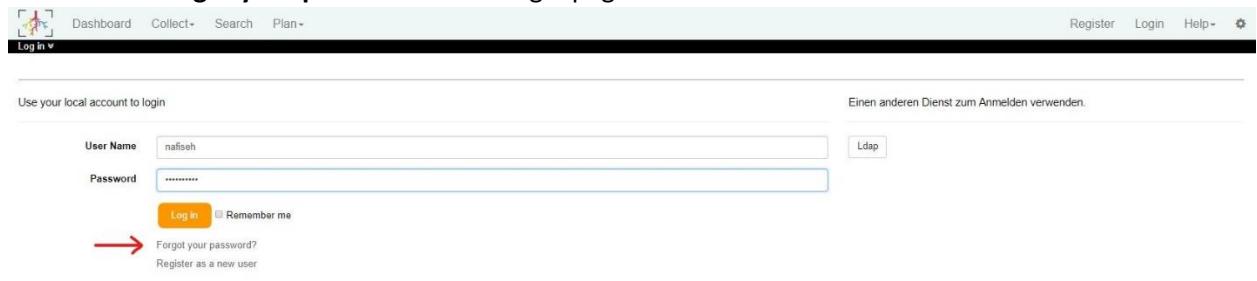
- My Datasets
- Requests
- Decisions

ID	Title	Description	Read	Download	Write	Delete	Grant	Actions
11	SPP2089 People Projec...	Collection of the name,	✓	✓	✓	✓	✓	
12	PSD for Sand	PSD values for sand	✓	✓	✓	✓	✓	
13	PSD for Loam	PSD values for sand	✓	✓	✓	✓	✓	
14	Loam/Sand fitted param...	Test dataset from Maxime	✓	✓	✓	✓	✓	
15	Test data from Rüger	Small part of a data sa...	✓	✓	✓	✓	✓	
16	Soil water retention		✓	✓	✓	✓	✓	
17	test publish		✓	✓	✓	✓	✓	
18	test upload txt		✓	✓	✓	✓	✓	
19	SPP 2089 people/Projec...		✓	✓	✓	✓	✓	

Displaying Items 1 - 9 of 9

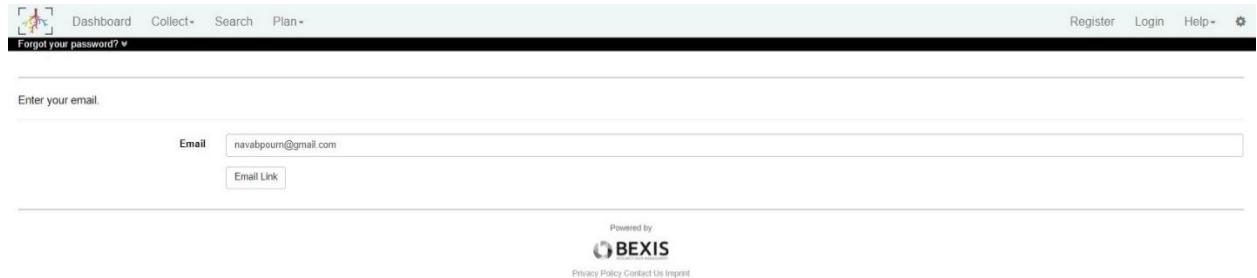
I forgot my password!

1. Click on the **Forgot your password** in the Login page.



The screenshot shows the BEXIS 2 login interface. At the top, there is a navigation bar with links for Dashboard, Collect, Search, Plan, Register, Login, Help, and a gear icon. Below the navigation bar, there is a form for logging in with fields for User Name (containing 'nafiseh') and Password. There is also a 'Ldap' button. Below the password field, there is a 'Remember me' checkbox. At the bottom of the form, there are two buttons: 'Log in' (highlighted with a red arrow) and 'Forgot your password?'. A red arrow also points to the 'Forgot your password?' link.

2. In the following page enter your email address you already registered with.

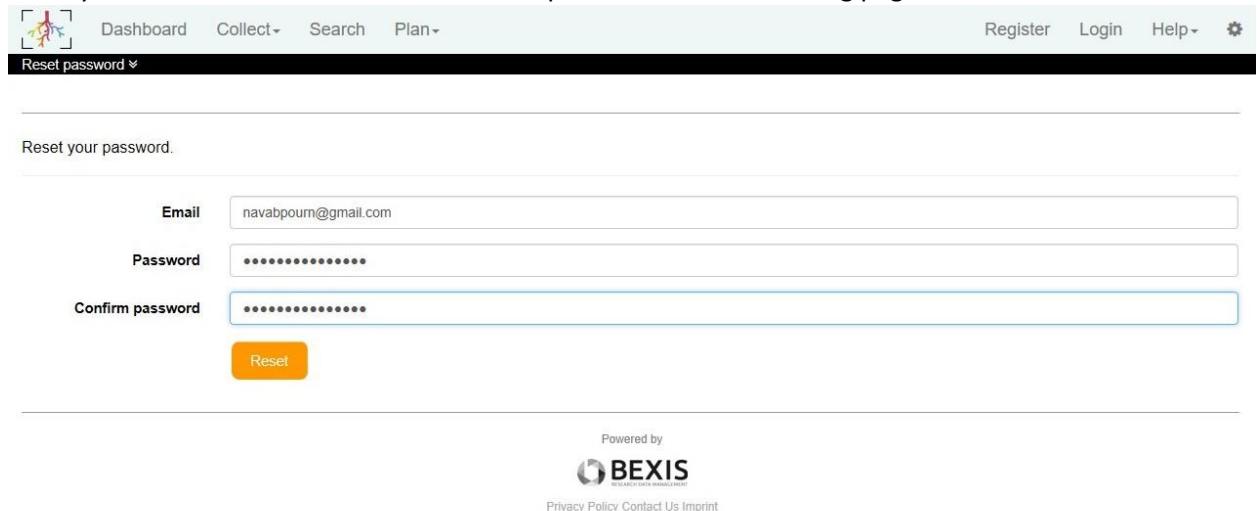


The screenshot shows the 'Forgot your password?' page. At the top, there is a navigation bar with links for Dashboard, Collect, Search, Plan, Register, Login, Help, and a gear icon. Below the navigation bar, there is a field labeled 'Enter your email.' containing 'navabpour@gmail.com'. Below this field is a button labeled 'Email Link'.

3. Click on the *Email Link* button.
4. Open your email account and find the email from support-spp2089@ufz.de.
The subject should be "BEXIS (2.12) – Reset Password".
5. Click on the link provided in the email for recovering your password.

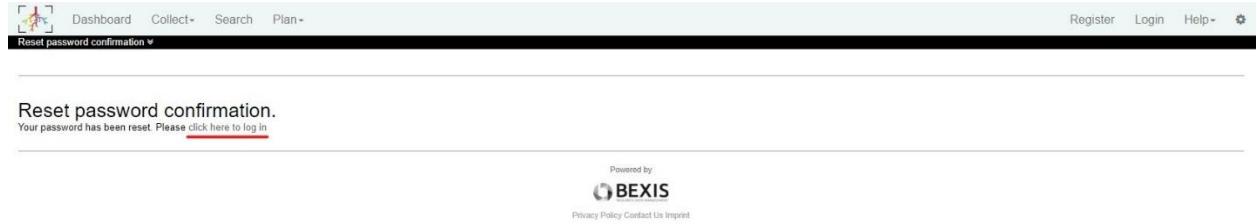


6. Enter your e-mail address and twice the new password in the following page.



The screenshot shows the 'Reset password' page. At the top, there is a navigation bar with links for Dashboard, Collect, Search, Plan, Register, Login, Help, and a gear icon. Below the navigation bar, there is a field labeled 'Email' containing 'navabpour@gmail.com'. Below this is a 'Password' field with several dots. Below the password field is a 'Confirm password' field with the same pattern of dots. At the bottom of the form is a 'Reset' button.

7. Click on orange button **Reset**.
8. A confirmation message will appear. Click on the provided link and log in with the new password.



The screenshot shows a BEXIS 2 interface. At the top, there is a navigation bar with icons for Dashboard, Collect, Search, Plan, and a user profile. To the right of the profile are links for Register, Login, Help, and a gear icon. Below the navigation bar, a black banner displays the text "Reset password confirmation". The main content area has a light gray background. It displays the message "Reset password confirmation. Your password has been reset. Please [click here to log in](#)". At the bottom right, there is a "Powered by" section with the BEXIS logo and links for Privacy Policy, Contact Us, and Imprint.

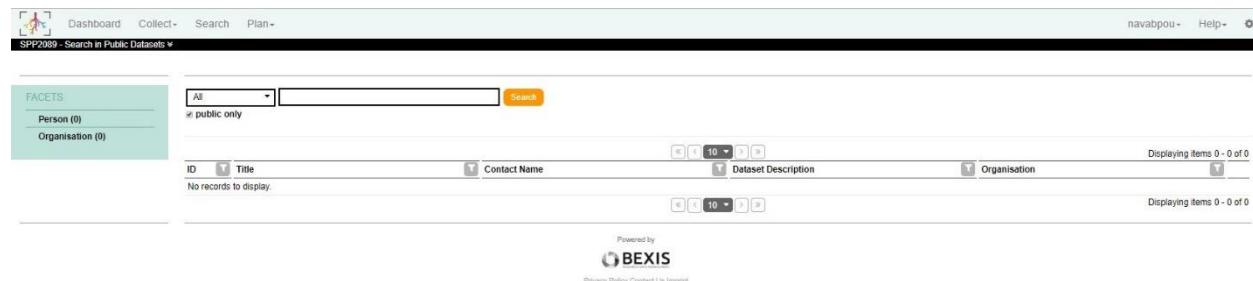
I forgot my Username!

You are not able to login to the BEXIS 2 if you have forgotten your username. Please send an email to the BEXIS 2 system manager (Nafiseh.navabpour@ufz.de). Your username will be found in the system and sent to you very soon.

How do I start?

The page that opens after login to the BEXIS 2 application is the Search page.

Please note that the different BEXIS 2 instances work separately. If you are working with the SPP 2089 BEXIS 2 instance (<https://spp2089.ufz.de:4433>), you will only be able to see datasets that have been uploaded to the instance by the registered users.



The screenshot shows the BEXIS 2 search interface. The top navigation bar includes 'Dashboard', 'Collect', 'Search', 'Plan', and 'Help'. The main search bar has 'All' selected and contains the text 'public only'. Below the search bar are facets for 'Person (0)' and 'Organisation (0)'. The search results table has columns for 'ID', 'Title', 'Contact Name', 'Dataset Description', and 'Organisation'. Both the 'Dataset Description' and 'Organisation' columns have a count of '0 of 0'. The bottom of the page includes a 'Powered by BEXIS' logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

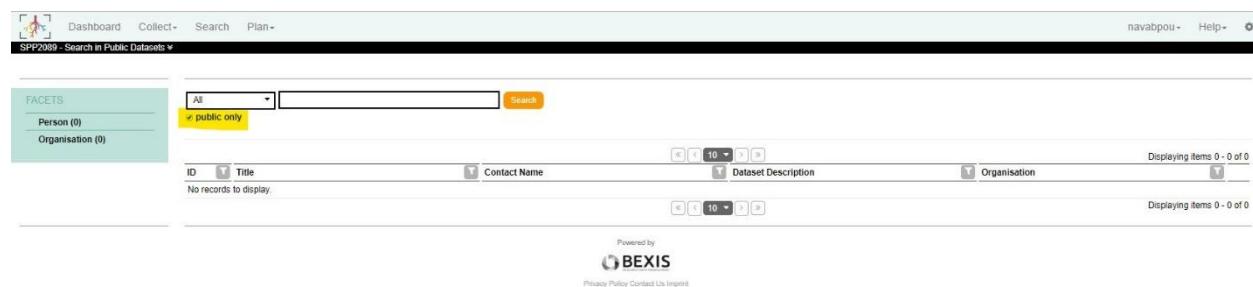
First of all: Log In

To have access to a list of uploaded datasets, you should first login to the SPP 2089 BEXIS 2 instance via <https://spp2089.ufz.de:4433>.

You would be able to login just if you have successfully registered.

Untick “public only”

To see a list of datasets, untick the option **public only**.



The screenshot shows the BEXIS 2 search interface, identical to the previous one but with the 'public only' filter removed. The search bar now shows 'All' and an empty text field. The facets for 'Person (0)' and 'Organisation (0)' are still present. The search results table shows the same columns and counts as the previous screenshot. The bottom of the page includes a 'Powered by BEXIS' logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

Then you will see more options. In the left pane you can find lists of people and organizations. A list of datasets is in the middle.

BEXIS 2 User Guide for SPP 2089 - Last update: 10/4/2019

SPP2089 - Search 

Dashboard Collect Search Plan 

navabpour Help 

Facets

- Person (7)**
 - Nafiseh Navabpour (9)
 - Eva Lippold (3)
 - Maxime Phalempin (2)
 - Doris Vetterlein (1)
 - Nafiseh (1)
 - [more](#)
- organisation (1)**
 - UFZ - Department Soil System Science (4)

public only

Displaying items 1 - 15 of 15

ID	Title	Contact Name	Dataset Description	Organisation
12	PSD for Sand	Nafiseh Navabpour	PSD values for sand	UFZ - Department Soil System Science
13	PSD for Loam	Nafiseh Navabpour	PSD values for sand	UFZ - Department Soil System Science
14	Loam/Sand fitted parameters	Maxime Phalempin	Test dataset from Maxime	UFZ - Department Soil System Science
16	Soil water retention	Maxime Phalempin		UFZ - Department Soil System Science
19	SPP 2089 people/Project Information	Nafiseh Navabpour		
20	Test Column Experiment	Susanne Schreiter	This test is created by Susanne	
21	P01_SPE_20181206	Nafiseh Navabpour		
31	P01_SPE_20190110	Eva Lippold		
37	Master_soil analysis_WP1_2016.02.05_su.xlsx			
38	P01_SPE_20181206	Nafiseh Navabpour		
44	P01_SPE_20190307	Eva Lippold		
52	P01_SPE_20190110_1	Eva Lippold		
61	P01_SPE_20191115	Doris Vetterlein	taken on 29th of november 2018 in Bad Lauchstädt out of t...	
62	Test - File Format Dataset	Nafiseh Navabpour		
66	Dataset/Owner Information	Nafiseh	Information about uploaded datasets	

Displaying items 1 - 15 of 15

What does a Data Type mean?

A data type is a particular kind of data item, as defined by the variables it can take. While creating a data structure, you need to know the exact type of each variable. For example, you need to specify how you want to store the length of an event. You may store it in different ways like "3-4", "10cm", "15" or "13.8". Note that the data type you choose for a variable must be consistent with all data associated with it.

The following describes data types that are most commonly used in data collections.

String

A string variable is a normal text. It could be any combination of characters (a-z and A-Z) and numbers (0-9). The name of species or places are the most popular variables in string format.

Number

A number in the BEXIS2 data type system is a whole number which is not a fraction. It can be positive, negative, or zero. For example, 21, 4, 0, and -2048 are numbers, while 0.23 and -4/3 are not. The range of values that can be stored as number is from - 65,535 to 65,535.

Integer

An integer is a number but in a bigger range from -2,147,483,648 to 2,147,483,647.

Double

Double Types are probably the most normally used data type for real values, except handling money. It contains 15-16 digits like 12.6, 0.74667 or -345.4.

Decimal

Decimal can accurately represent any number within the precision of the decimal format. It could contain 28-29 significant digits.

The main difference between double and decimal is that decimals have much higher precision and are usually used within monetary (financial) applications that require a high degree of accuracy. But in performance wise computing decimals are slower than double types.

How do I create a Data Type

Creating a data type is not recommended. If you require a new data type, please contact the Data Manager. Consultation with the working group is required.

How do I create a Unit of measurement?

From two gateways is **Manage Units** available. One link is under the Plan menu item and other is under the gear button.

1. Open the **Manage Units**.

2. Be sure that the Unit is not existed in the list of units.

ID	Name	Abbreviation	Dimension Name	Measurement System	Associated Data Types	Description
148	ddd	sssss	dimensionless	Unknown	decimal	
150	μs/cm	μs/cm	speed	Metric	real number, text	micro second per centimeter
8	m²	m²	area	Metric	real number	square meter
13	%	%	dimensionless	Unknown	real number	percentage
22	m	m	length	Metric	real number	meter
29	kg	kg	mass	Metric	real number	kilogram
34	kg/kg	kg/kg	mass ratio	Unknown	real number	mass ratio
46	s	s	time	Metric	real number	second
49	m³	m³	volume	Metric	real number	cubic meter
51	m³/m³	m³/m³	volume ratio	Unknown	real number	volume ratio
72	cm	cm	length	Metric	real number, text, whole number	centimeter
77	cm³/cm³	cm³/cm³	volume ratio	Metric	real number	cubic centimeter ratio
85	g/kg	g/kg	mass ratio	Metric	real number	gram kilogram ratio
97	l	l	volume	Metric	real number	liter
112	mm	mm	length	Metric	real number	millimeter
145	1/cm	1/cm	amount	Natural	bool, decimal, number, real number, string,...	amount per centimeter

3. Click on the **Create Unit**. A modal window will open and help you to create a new unit.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

4. Enter a **meaningful name** for the Unit.

Create Unit

Name *	<input type="text" value="redacted"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

5. Enter a **related abbreviation**.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

6. Write a **short description** in a few words.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

7. Select a **dimension** for the unit.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

8. If you are not familiar with the **Dimension Specification**, please don't change this field.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

9. Select a **Measurement System** for the unit of measurement.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

10. Select at least one Data Type from the table of data types.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

11. Click on the **Save** button and the created Unit should appear in the list.

Create Unit

Name *	<input type="text"/>
Abbreviation *	<input type="text"/>
Description	<input type="text"/>
Dimension Name *	<input type="text" value="Select or Enter"/>
Dimension Specification	<input type="text" value="L(0,0)M(0,0)T(0,0)I(0,0)Θ(0,0)N(0,0)J(0,0)"/>
Measurement System	<input type="text" value="Unknown"/>

Id	Name	System Type	Description
2	decimal	Decimal	Decimal
3	date	DateTime	DateTime
4	datetime	DateTime	DateTime
7	number	Int16	An 16 bit integer number
8	bool	Boolean	A boolean value
9	text	String	For a long text
...

Save **Cancel**

What is a Variable Template?

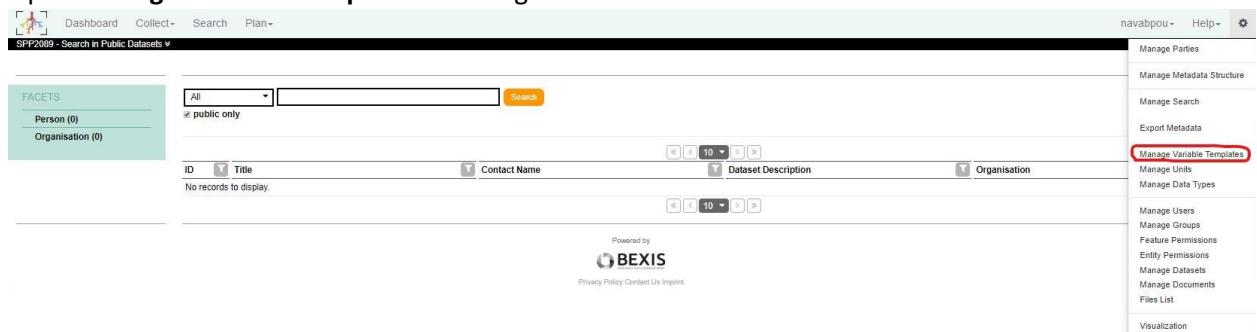
A Variable Template is a reusable Variable. It simply means you don't need to create a variable several times to use in different datasets. You are able to use an existing variable template and change its properties based on your needs or favorites. For example the variable template "ID_Text" exists. You can use this whenever you want to add a variable to your data structure which is an identifier. For example if you have "Species" in your dataset, it is enough that you add the "ID_Text" variable to your data structure instead to create a new variable template, and change only the name of variable template in your data structure to the "Species". This way of using variable templates is very fast and easy. Therefore, please take a look at the list of variable templates, before create a new one.

A list of Variable Templates is available in the **Manage Variable Templates** under the gear button.

How do I create a Variable Template?

Follow the steps below to create a variable template. Please note that each variable template can be used by other users. It would be nice if you chose a descriptive name and a short description to explain the goal of creating a variable template.

1. Open **Manage Variable Templates** via the gear button.



The screenshot shows the BEXIS 2 interface with a search bar and a table for managing variable templates. The sidebar menu on the right has 'Manage Variable Templates' highlighted.

2. Be sure that any of Variable Templates is not suitable with your favorite variable.
3. Click on the **Create Variable Template**. A modal window will open and help you by creating a new variable template.

Create Variable Template

Name *	<input type="text"/>	Description	<input type="text"/>
Short Name	<input type="text"/>		
Unit	<input type="text"/> %		
Data Type	<input type="text"/> real number		
Constraints ▾			
Save Cancel			

4. Enter a **Name** for the variable template.

Create Variable Template

Name *	<input style="background-color: red; color: red; border: 1px solid black;" type="text"/>	Description	<input type="text"/>
Short Name	<input type="text"/>		
Unit	<input type="text"/> %		
Data Type	<input type="text"/> real number		
Constraints ▾			
Save Cancel			

5. Enter a **Short Name**.

It is recommended to enter the same words under Name and Short Name.

Create Variable Template

Name *	<input type="text"/>	Description	<input type="text"/>
Short Name	<input style="background-color: red; color: red; border: 1px solid black;" type="text"/>		
Unit	<input type="text"/> %		
Data Type	<input type="text"/> real number		
Constraints ▾			
Save Cancel			

6. Write a short **Description** in a few words.

Create Variable Template

Name *	<input type="text"/>	Description
Short Name	<input type="text"/>	
Unit	<input type="text" value="%"/>	
Data Type	<input type="text" value="real number"/>	

Constraints ↴

Save **Cancel**

7. Select a **Unit** for the variable template.

Create Variable Template

Name *	<input type="text"/>	Description
Short Name	<input type="text"/>	
Unit	<input type="text" value="%"/>	
Data Type	<input type="text" value="real number"/>	

Constraints ↴

Save **Cancel**

8. Select a **Data Type**.

Create Variable Template

Name *	<input type="text"/>	Description
Short Name	<input type="text"/>	
Unit	<input type="text" value="%"/>	
Data Type	<input type="text" value="real number"/>	

Constraints ↴

Save **Cancel**

9. Define **Constraints** if you want to set limitation.

Create Variable Template

Name *	<input type="text"/>	Description	<input type="text"/>
Short Name	<input type="text"/>		
Unit	<input type="text"/> %		
Data Type	<input type="text"/> real number		
Constraints 			
Save Cancel			

10. Click on the **Save** button and you will find the variable template in the list.

Create Variable Template

Name *	<input type="text"/>	Description	<input type="text"/>
Short Name	<input type="text"/>		
Unit	<input type="text"/> %		
Data Type	<input type="text"/> real number		
Constraints 			
Save Cancel			

What does a Data Structure mean?

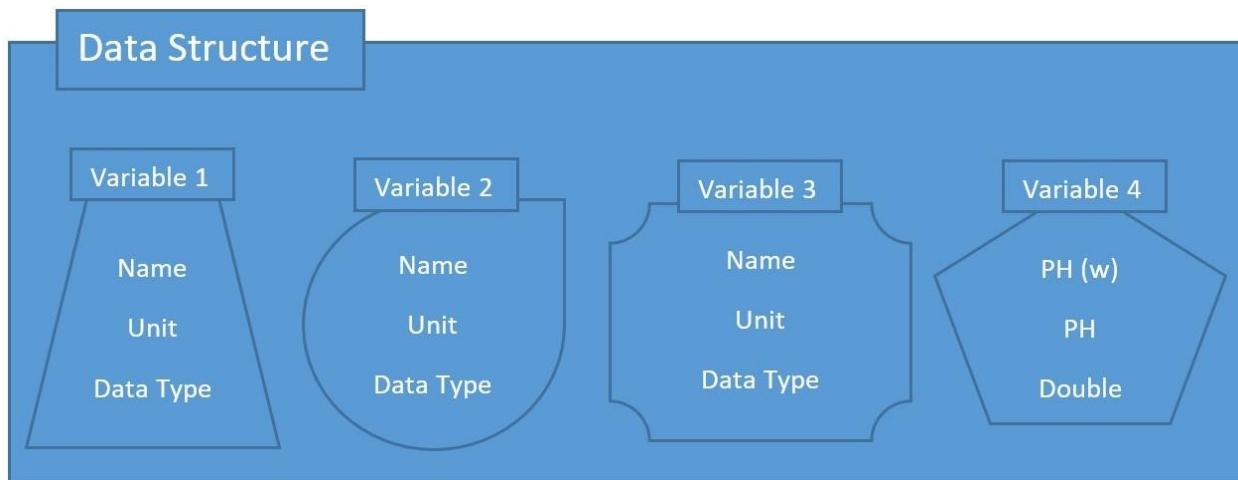
In BEXIS2 data is stored and managed as part of a dataset. A dataset may be anything, e.g. a word document, a zip file, images or a collection of millions of records and multiple variables. The maximum file size per upload is 1G. To store large datasets such as CT images, we have agreed to store only information about the images and their storage in BEXIS2.

Each dataset may have an individual structure of “File” or “Tabular”. A “File” Data Structure makes you able to store your files. The search engine of BEXIS2 provides no indexing for such datasets, but for the “Tabular”. A “Tabular” Data Structure contains one or more Variables based on variable templates. Each Variable is defined by its Unit, a Data Type, and a unique name. So defining Data Types and Units would be the first step which would be done, if they are not available yet.

One example of a **variable template** could be “Variable 4” which is used for the measure of the acidity. PH is the **unit** of variable which is measured as a double number. Double is the **data type** of the variable template. The **variable name** is up to the user. It is “PH (w)” in this example.

You can edit a Data Structure later. Note that a Data Structure freezes once it is connected to a Dataset. In this case, you must create, edit and associate a copy of the Data Structure with a new dataset.

It make sense to think about creating a Data Structure before collecting data.



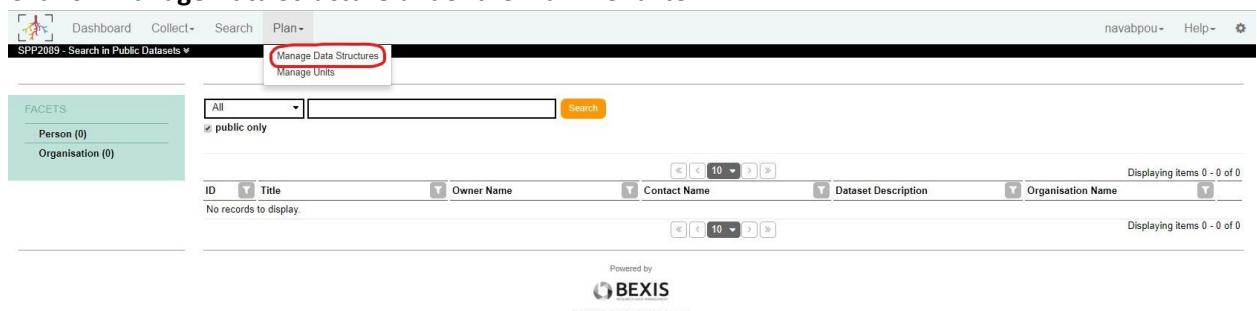
How do I create a Data Structure?

1. Be sure that you are logged in. Check if your username is written close the *Help* menu item.



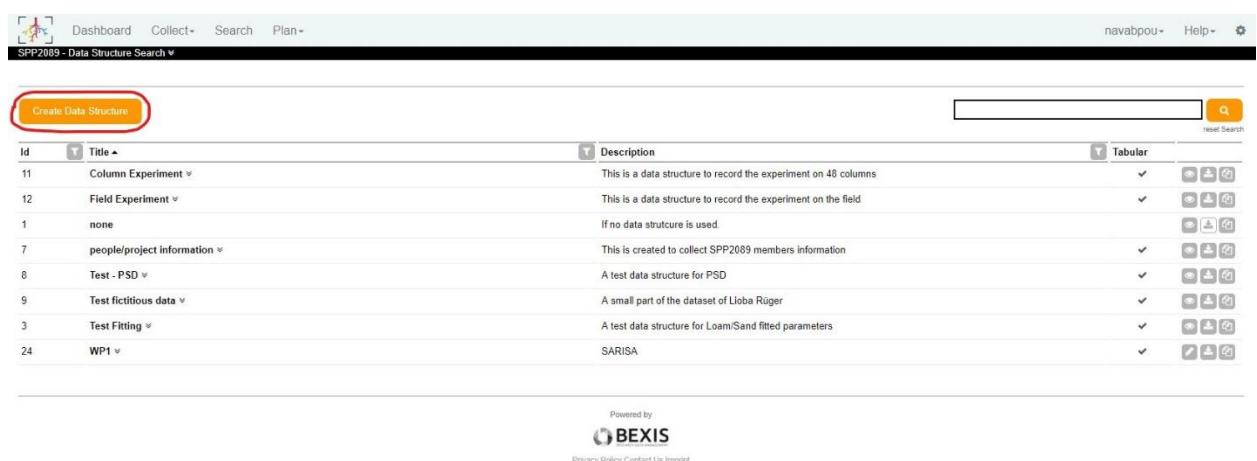
The screenshot shows the BEXIS 2 interface with a top navigation bar. The 'Help' menu item is circled in red. The main area shows a search interface with facets for 'Person (0)' and 'Organisation (0)'. The search results table is empty, showing 'No records to display.' The footer includes the BEXIS logo and links to Privacy Policy, Contact Us, and Imprint.

2. Click on **Manage Data Structure** under the **Plan** menu item.



The screenshot shows the BEXIS 2 interface with a top navigation bar. The 'Plan' menu item is circled in red, and the 'Manage Data Structures' option is highlighted. The main area shows a search interface with facets for 'Person (0)' and 'Organisation (0)'. The search results table is empty, showing 'No records to display.' The footer includes the BEXIS logo and links to Privacy Policy, Contact Us, and Imprint.

3. Click on the **Create Data Structure** button in the following window.



The screenshot shows the 'Data Structure Search' window. The 'Create Data Structure' button is circled in red. The main area displays a table of data structures with columns for Id, Title, Description, and Tabular. The table includes entries such as 'Column Experiment', 'Field Experiment', and 'WP1'. The footer includes the BEXIS logo and links to Privacy Policy, Contact Us, and Imprint.

ID	Title	Description	Tabular
11	Column Experiment	This is a data structure to record the experiment on 48 columns	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12	Field Experiment	This is a data structure to record the experiment on the field	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1	none	If no data structure is used	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7	people/project information	This is created to collect SPP2089 members information	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8	Test - PSD	A test data structure for PSD	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9	Test fictitious data	A small part of the dataset of Loiba Rüger	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3	Test Fitting	A test data structure for Loam/Sand fitted parameters	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
24	WP1	SARISA	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

4. Enter a name and a descriptive description for your Data Structure in opened modal window and click on the **Save** button.

Choose a **Data Format** compatible with your data structure. **Tabular** is for a data table and **File** is for non-structured data.

5. If you have created a Tabular data structure, system refers you to the next page where you are able to build your data structure by adding variables.
Click on the right arrow close a variable template and add it to your data structure.
Searching, sorting and filtering are available when you are looking for a variable template.

You are able to change the name of a variable in your Data Structure.
Optional variable means that the data table must not contain any data for this variable.
Click on the trash icon to delete the variable from your structure.
Click on the down arrows to have access to edit the description of a variable.

The screenshot shows the SFP2089 Data Structure Edit interface. On the left, the 'Variable Templates' section is displayed, featuring a search bar and a table of variables with columns for Id, Name, Unit, Data Type, and various edit buttons. A 'Create Variable Template' button is at the bottom. On the right, the 'Test Experiment (26)' section is shown, containing a 'Name' field with 'Test Experiment', a 'Description' field with 'This is a Data Structure for a test experiment.', and a detailed view of a variable 'remark' with an 'Optional' checkbox circled in red. At the bottom are buttons for 'Download Excel Template', 'Delete', 'Save', and 'Save as'.

Variable Templates

Test Experiment (26)

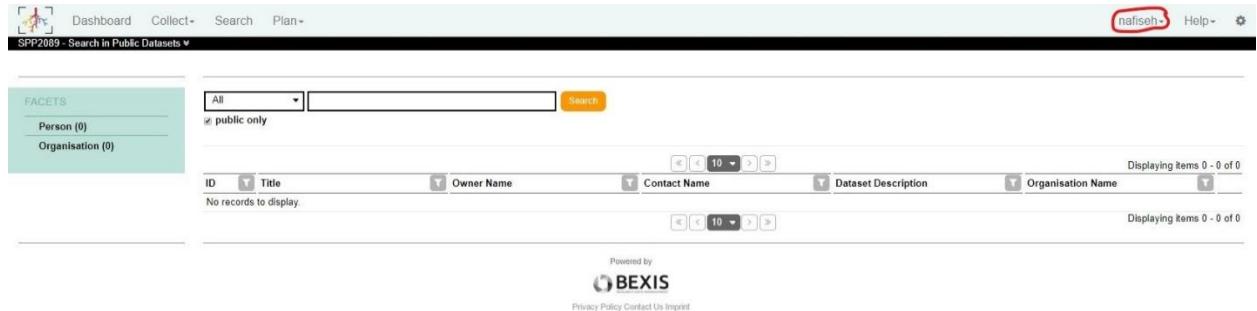
Variable Template

Download Excel Template Delete Save Save as Cancel

6. Click on the **Save** button to save the data structure.

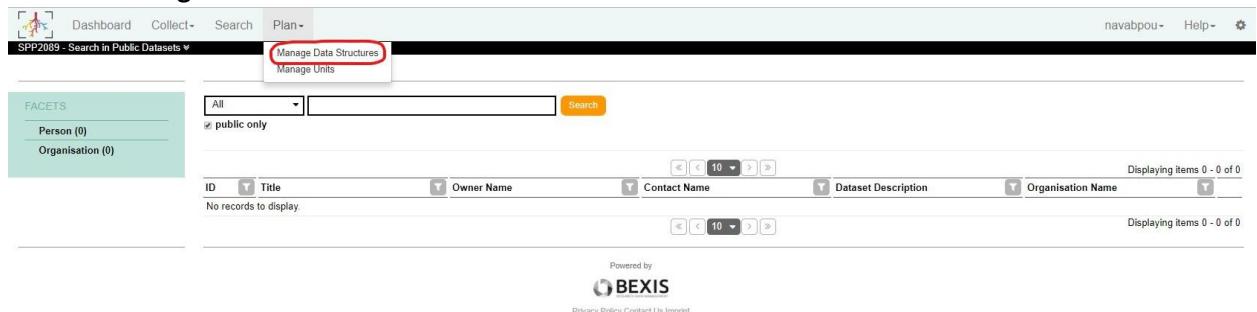
How do I edit a Data Structure?

1. Be sure that you are logged in. Check if your username is written close the *Help* menu item.



The screenshot shows the BEXIS 2 interface with a top navigation bar. The 'Help' menu item is circled in red. The main area displays a search interface for 'Public Datasets'. On the left, there is a 'FACETS' sidebar with 'Person (0)' and 'Organisation (0)' options. The main search area has a search bar with 'All' selected and a 'Search' button. Below the search bar are filter options: 'Title', 'Owner Name', 'Contact Name', 'Dataset Description', and 'Organisation Name'. The results table shows 'No records to display'. At the bottom, there is a footer with the BEXIS logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

2. Click on **Manage Data Structure** under the **Plan** menu item.

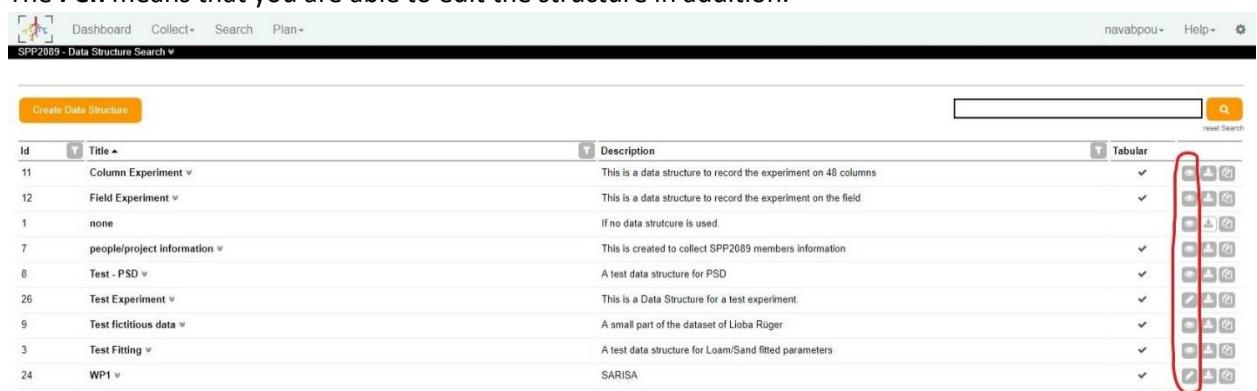


The screenshot shows the BEXIS 2 interface with a top navigation bar. The 'Plan' menu item is circled in red, and it has a dropdown menu with 'Manage Data Structures' and 'Manage Units' options. The main area displays a search interface for 'Data Structure Search'. On the left, there is a 'FACETS' sidebar with 'Person (0)' and 'Organisation (0)' options. The main search area has a search bar with 'All' selected and a 'Search' button. Below the search bar are filter options: 'Title', 'Owner Name', 'Contact Name', 'Dataset Description', and 'Organisation Name'. The results table shows 'No records to display'. At the bottom, there is a footer with the BEXIS logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

3. In the following page you can see different buttons close data structures.

The **Eye** means that you are able to edit only the name and the description of a data structure.

The **Pen** means that you are able to edit the structure in addition.



The screenshot shows the BEXIS 2 interface displaying a list of data structures. The table has columns for 'Id', 'Title', 'Description', and 'Tabular'. The 'Title' column is sorted by 'Title'. The 'Description' column contains brief descriptions of each data structure. The 'Tabular' column contains a series of icons, with a red box highlighting the icons for the last two entries (IDs 24 and 25). The top of the page shows a search bar and a 'Create Data Structure' button.

Create Data Structure			
Id	Title	Description	Tabular
11	Column Experiment	This is a data structure to record the experiment on 48 columns	
12	Field Experiment	This is a data structure to record the experiment on the field	
1	none	If no data structure is used	
7	people/project information	This is created to collect SPP2089 members information	
8	Test - PSD	A test data structure for PSD	
26	Test Experiment	This is a Data Structure for a test experiment.	
9	Test fictitious data	A small part of the dataset of Lioba Rüger	
3	Test Fitting	A test data structure for LoamSand fitted parameters	
24	WP1	SARISA	

Note: A data structure is not editable means that it is connected to a dataset.

Clicking the **Copy Data Structure** button next to a data structure creates a copy of the data structure. You should just change the name to be unique.

Create Data Structure		Search	
Title		Description	Tabular
11	Column Experiment	This is a data structure to record the experiment on 48 columns	<input checked="" type="checkbox"/>
12	Field Experiment	This is a data structure to record the experiment on the field	<input checked="" type="checkbox"/>
1	none	If no data structure is used	<input checked="" type="checkbox"/>
7	people/project information	This is created to collect SPP2089 members information	<input checked="" type="checkbox"/>
8	Test - PSD	A test data structure for PSD	<input checked="" type="checkbox"/>
26	Test Experiment	This is a Data Structure for a test experiment.	<input checked="" type="checkbox"/>
27	Test Experiment2	This is a Data Structure for a test experiment.	<input checked="" type="checkbox"/>
9	Test fictitious data	A small part of the dataset of Loba Rüger	<input checked="" type="checkbox"/>
3	Test Fitting	A test data structure for Loam/Sand fitted parameters	<input checked="" type="checkbox"/>
28	Test Fitting2	A test data structure for Loam/Sand fitted parameters	<input checked="" type="checkbox"/>
24	WP1	SARISA	<input checked="" type="checkbox"/>

4. Edit the data structure and click on the **Save** button.

Variable Templates

Id	Name	Unit	Data Type
161	dateTime as string	none	string
183	volume	cubic meter	double
138	precipitation amount	millimeter	double
164	remark	none	string
166	identifier, code based	none	string
121	mass	kilogram	double
136	temperature celsius scaled	degree celsius	double
140	percentage	percentage	double
308	Plot	none	string
329	h [cm]	centimeter	double
327	pf [-]	none	double
		Unit	Data Type

Test Experiment (26)

Name: Test Experiment

Description: This is a Data Structure for a test experiment.

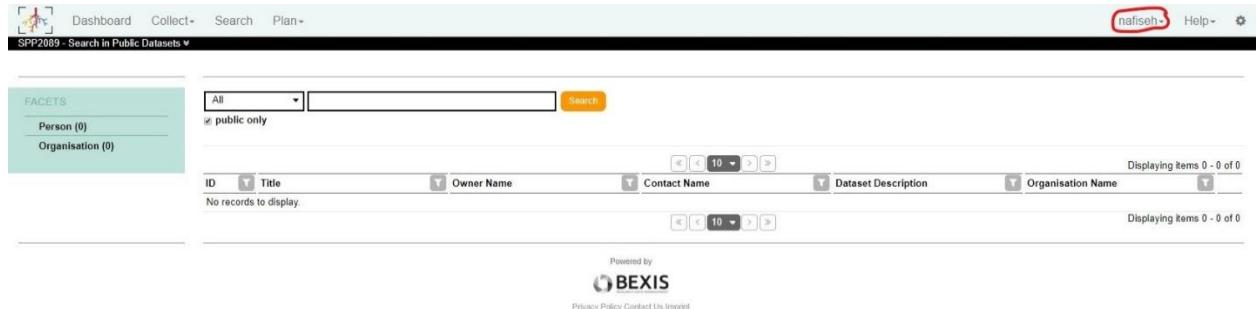
Variable Template:

123	Name: remark	Unit: none	Data Type: string	Optional: <input checked="" type="checkbox"/>
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Buttons: Download Excel Template, Delete, Save, Save as, Cancel

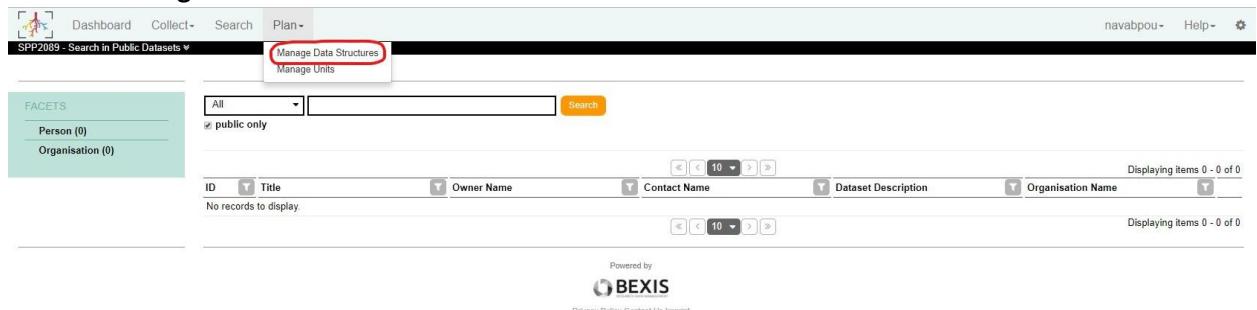
How do I download a Data Structure?

1. Be sure that you are logged in. Check if your username is written close the **Help** menu item.



The screenshot shows the BEXIS 2 interface with a top navigation bar. The 'Help' menu item, which contains the user's name 'nafiseh', is circled in red. Below the navigation bar is a search bar and a facets sidebar. The main content area shows a table with columns for ID, Title, Owner Name, Contact Name, Dataset Description, and Organisation Name. The table is empty, showing 'No records to display'. At the bottom, there are links for 'Powered by BEXIS' and 'Privacy Policy Contact Us Imprint'.

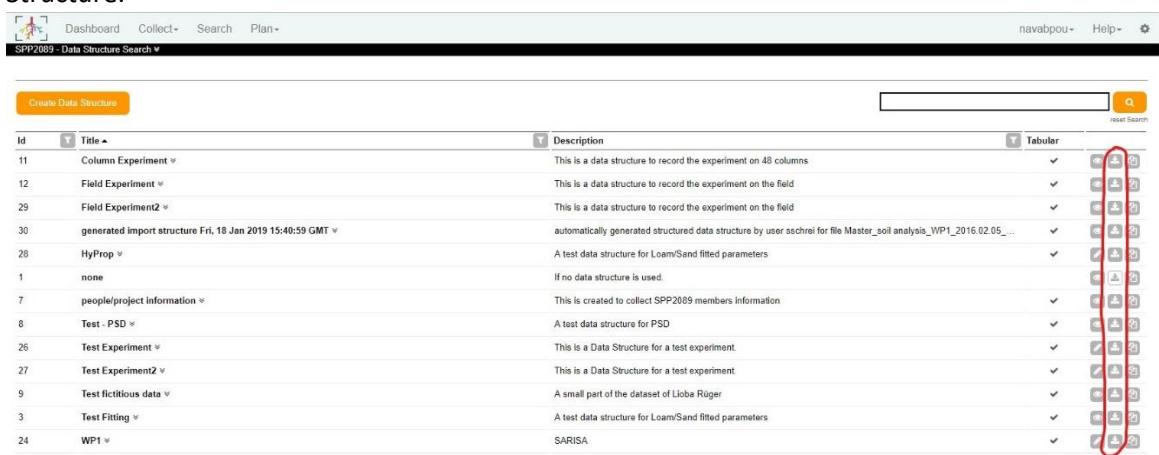
2. Click on **Manage Data Structure** under the **Plan** menu item.



The screenshot shows the BEXIS 2 interface with a top navigation bar. The 'Plan' menu item, which contains the 'Manage Data Structures' option, is circled in red. Below the navigation bar is a search bar and a facets sidebar. The main content area shows a table with columns for ID, Title, Owner Name, Contact Name, Dataset Description, and Organisation Name. The table is empty, showing 'No records to display'. At the bottom, there are links for 'Powered by BEXIS' and 'Privacy Policy Contact Us Imprint'.

3. You are able to download a Data Structure in two ways.

- a. In the Data Structure management page, click on the **Download** button next to a Data Structure.



The screenshot shows the BEXIS 2 interface with a top navigation bar. Below the navigation bar is a search bar and a 'Create Data Structure' button. The main content area shows a table of data structures. The table has columns for Id, Title, Description, and Tabular. The 'Title' column shows entries like 'Column Experiment', 'Field Experiment', 'Field Experiment2', etc. The 'Description' column provides a brief description of each structure. The 'Tabular' column contains a grid of checkboxes. The 'WP1' row is circled in red, and its 'Download' button is also circled in red.

Create Data Structure			
		Search	
		New Search	
Id	Title	Description	Tabular
11	Column Experiment	This is a data structure to record the experiment on 48 columns	<input checked="" type="checkbox"/>
12	Field Experiment	This is a data structure to record the experiment on the field	<input checked="" type="checkbox"/>
29	Field Experiment2	This is a data structure to record the experiment on the field	<input checked="" type="checkbox"/>
30	generated import structure Fri, 18 Jan 2019 15:40:59 GMT	automatically generated structured data structure by user aschrei for file Master_soil analysis_WP1_2016.02.05...	<input checked="" type="checkbox"/>
28	HyProp	A test data structure for Loam/Sand fitted parameters	<input checked="" type="checkbox"/>
1	none	If no data structure is used.	<input checked="" type="checkbox"/>
7	people/project information	This is created to collect SPP2089 members information	<input checked="" type="checkbox"/>
8	Test - PSD	A test data structure for PSD	<input checked="" type="checkbox"/>
26	Test Experiment	This is a Data Structure for a test experiment.	<input checked="" type="checkbox"/>
27	Test Experiment2	This is a Data Structure for a test experiment.	<input checked="" type="checkbox"/>
9	Test fictitious data	A small part of the dataset of Lieba Röger	<input checked="" type="checkbox"/>
3	Test Fitting	A test data structure for Loam/Sand fitted parameters	<input checked="" type="checkbox"/>
24	WP1	SARISA	<input checked="" type="checkbox"/>

- b. In the Edit Data Structure page, click the **Download Excel Template** button. BEXIS2 creates an Excel Template from the current Data Structure.

The screenshot shows the BEXIS 2 Data Structure Edit interface. On the left, there is a list of 'Variable Templates' with columns for ID, Name, Unit, and Data Type. On the right, there is a detailed view of a 'Field Experiment' structure with 12 fields, each with a Name, Unit, Data Type, and Optional status. Buttons for 'Download Excel Template', 'Delete', 'Save', 'Save as', and 'Cancel' are visible at the bottom.

Variable Template	Name	Unit	Data Type
161	dateTime as string	none	string
183	volume	cubic meter	double
138	precipitation amount	millimeter	double
121	mass	kilogram	double
136	temperature celsius scaled	degree celsius	double
164	remark	none	string
166	identifier, code based	none	string
140	percentage	percentage	double
308	Plot	none	string
329	h [cm]	centimeter	double
327	pF []	none	double
	Name	Unit	Data Type

Field Experiment (12)					
Name	Field Experiment				
Description	This is a data structure to record the experiment on the field				
58	ID	Unit	none	Data Type	integer
59	Column Number	Unit	none	Data Type	string
60	substrate	Unit	none	Data Type	string
61	genotype	Unit	none	Data Type	string
62	replicates	Unit	none	Data Type	string
68	Treatment	Unit	none	Data Type	string
64	DEPTH	Unit	none	Data Type	string
65	C-total (g/kg)	Unit	gram kilogram ratio	Data Type	double
66	N-total (g/kg)	Unit	gram kilogram ratio	Data Type	double

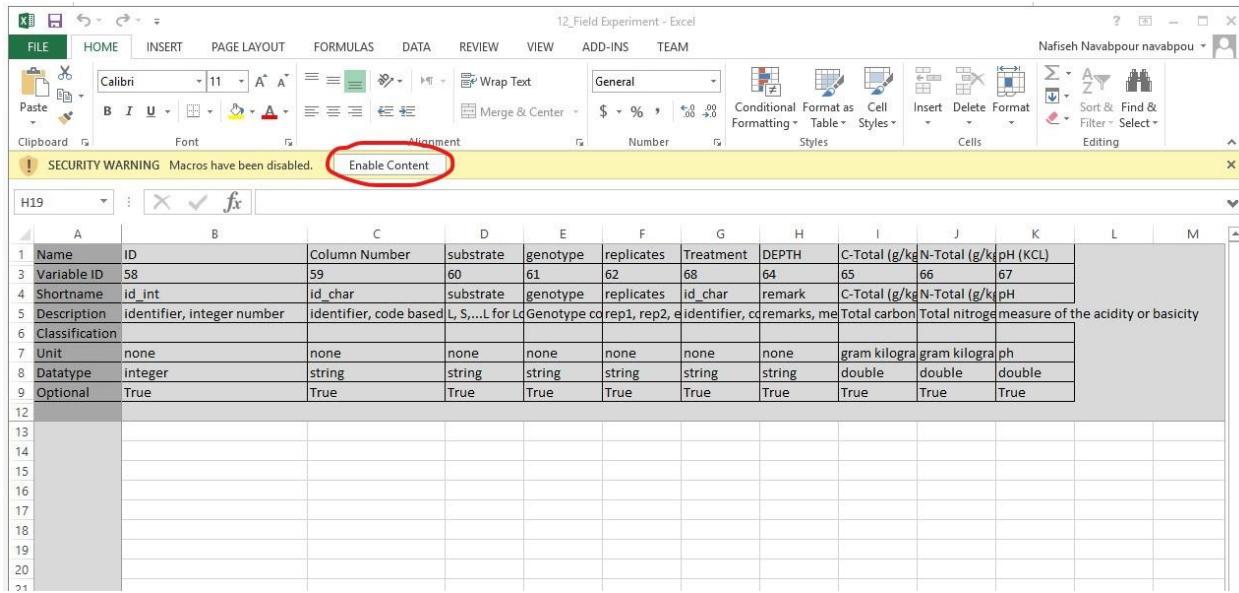
Buttons: Download Excel Template, Delete, Save, Save as, Cancel

Save the Excel Template to your preferred location on your computer.

How do I work with an Excel Template?

Excel Template is an excel file created by the BEXIS2 based on a Data structure. The header contains information about variables, their units, data types and more. The Excel Template can examine the quality of the data based on the Data Type and Optional definition.

To work with an Excel Template, You must first enable macros. Macros automate frequently-used tasks, in our case quality control of the data table. Enabling or disabling macros varies depending on the version of Microsoft you are using. Macro security settings are generally located in the *Trust Center*.



The screenshot shows an Excel spreadsheet titled "12_Field Experiment - Excel". The ribbon menu is visible with tabs like FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, and VIEW. The HOME tab is selected. The status bar at the bottom left shows "H19". A yellow banner at the top of the ribbon area displays a "SECURITY WARNING" message: "Macros have been disabled." with a "Enable Content" button, which is circled in red. The main content of the spreadsheet is a table with the following data:

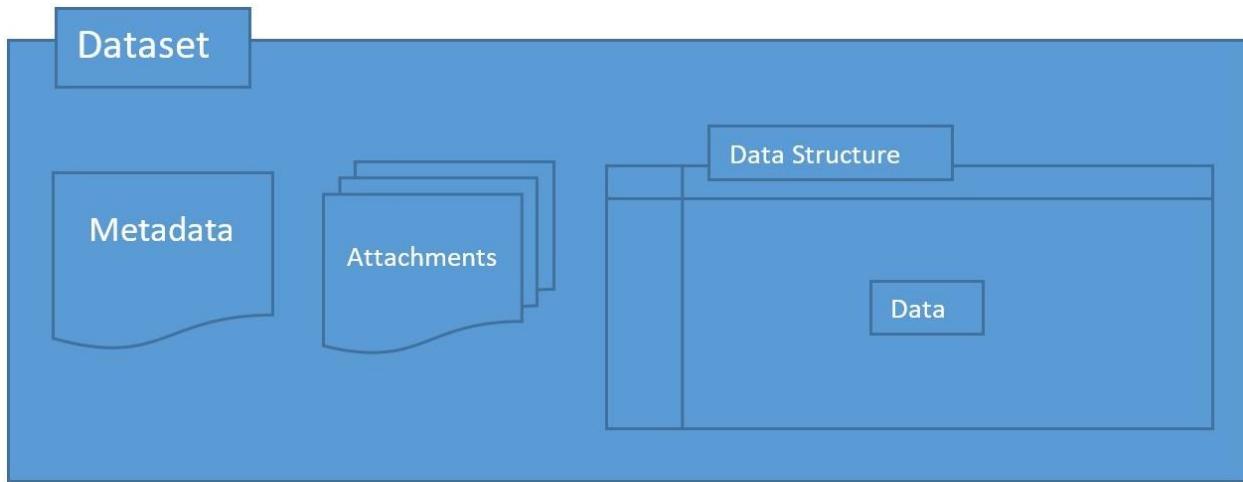
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	ID	Column Number	substrate	genotype	replicates	Treatment	DEPTH	C-Total (g/kg)	N-Total (g/kg)	pH (KCL)		
3	Variable ID	58	59	60	61	62	68	64	65	66	67		
4	Shortname	id_int	id_char	substrate	genotype	replicates	id_char	remark	C-Total (g/kg)	N-Total (g/kg)	pH		
5	Description	identifier, integer number	identifier, code based	L, S,...L for L	Genotype code	rep1, rep2, e	identifier, code	remarks, me	Total carbon	Total nitrogen	measure of the acidity or basicity		
6	Classification												
7	Unit	none	none	none	none	none	none	none	gram kilogra	gram kilogra	ph		
8	Datatype	integer	string	string	string	string	string	string	double	double	double		
9	Optional	True	True	True	True	True	True	True	True	True	True		
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													

What does a Dataset mean?

A dataset may be anything from a single record up to a collection of millions of records and multiple variables.

Each dataset may have an individual structure given by the number of variables and their properties.

In BEXIS2 data is stored and managed as part of a dataset.



How do I find a dataset?

If you know the Id or the name of a dataset, you can find it in the list of all datasets. Otherwise, BEXIS 2 search engine provides results on the metadata. You can look for a dataset by search its Meta information, e.g. the name of the owner or keywords.

Note: don't forgot to uncheck the *public only* option.

Enter at least three characters in the search bar shows you the search keywords existing in database. Then click on the **Search** button and see the result in the search result table.

[Dashboard](#) [Collect-](#) [Search](#) [Plan-](#) navabpou - Help - 
SPP2089 - Search in Public Datasets 

Restrict your search by selecting a category, e.g. Title, from the dropdown list in front of the search bar to restrict your search.



The screenshot shows the SPP2009 search interface. At the top, there are navigation links: Dashboard, Collect+, Search, Plan+, and a user dropdown for navabpou and Help. Below the header, the URL SPP2009 - Search is visible. On the left, a sidebar titled 'FACTS' contains facets for 'Person (7)' (Nafiseh Navabpour, Eva Lipoid, Maxime Phalempin, Doris Vetterlein, Nafiseh) and 'Organisation (1)' (UFZ - Department Soil System Science). The main content area shows a search bar with 'All' selected and a 'Search' button. A table displays 15 datasets, each with columns for Contact Name, Dataset Description, and Organisation. The table includes navigation buttons for sorting and filtering. The data is as follows:

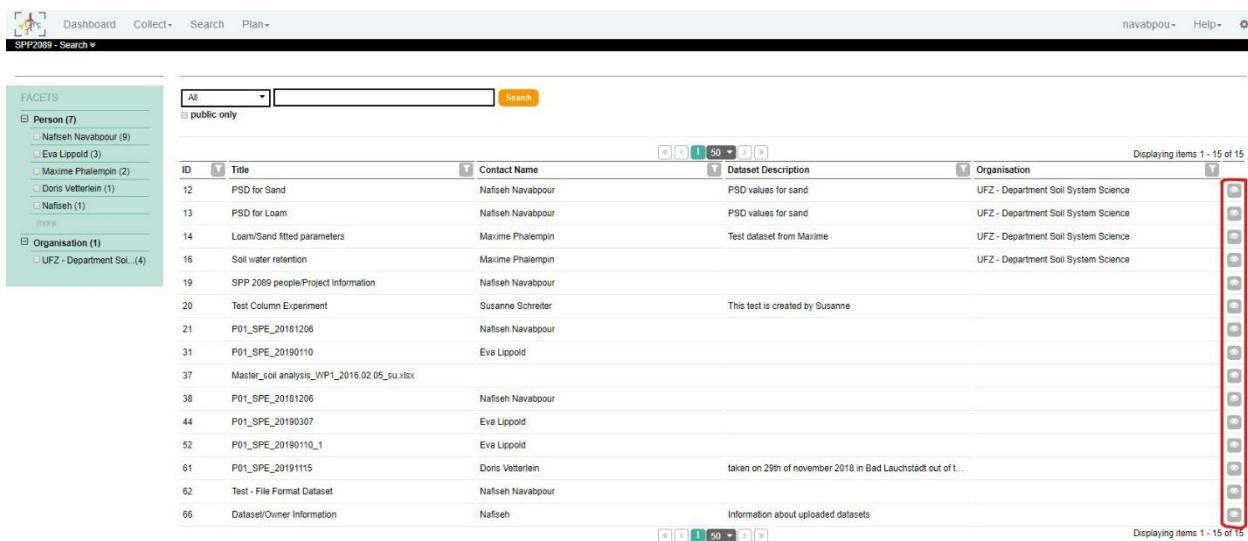
Contact Name	Dataset Description	Organisation
Nafiseh Navabpour	PSD values for sand	UFZ - Department Soil System Science
Nafiseh Navabpour	PSD values for sand	UFZ - Department Soil System Science
Maxime Phalempin	Test dataset from Maxime	UFZ - Department Soil System Science
Maxime Phalempin	UFZ - Department Soil System Science	UFZ - Department Soil System Science
Nafiseh Navabpour	UFZ - Department Soil System Science	UFZ - Department Soil System Science
Susanne Schreiter	This test is created by Susanne	
Nafiseh Navabpour		
Eva Lipoid		

The search result contains all datasets where your term was found in the metadata, e.g. *address*, or the primary data, e.g. *variable names*.

To tweak the result list you have different options:

- Click on the facets on the left pane
 - Specify a filter by clicking on the filter icon available in each column
 - Change the result order via sorting a column by clicking on a name in header

To view more details of a dataset, click the **View Details** button available in each row.



Facets

All Search

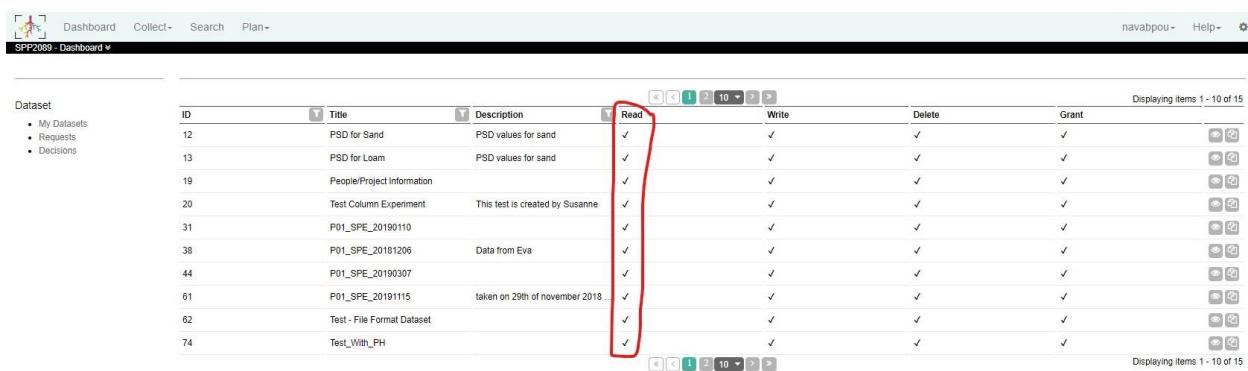
Displaying items 1 - 15 of 15

ID	Title	Contact Name	Dataset Description	Organisation
12	PSD for Sand	Nafiseh Navabpour	PSD values for sand	UFZ - Department Soil System Science
13	PSD for Loam	Nafiseh Navabpour	PSD values for sand	UFZ - Department Soil System Science
14	Loam/Sand fitted parameters	Maxime Phaletpin	Test dataset from Maxime	UFZ - Department Soil System Science
16	Soil water retention	Maxime Phaletpin		UFZ - Department Soil System Science
19	SPP 2089 people/Project Information	Nafiseh Navabpour		
20	Test Column Experiment	Susanne Schreiter	This test is created by Susanne	
21	P01_SPE_20181206	Nafiseh Navabpour		
31	P01_SPE_20190110	Eva Lippold		
37	Master_soil analysis_WP1_2016.02.05_su.xlsx			
38	P01_SPE_20181206	Nafiseh Navabpour		
44	P01_SPE_20190307	Eva Lippold		
52	P01_SPE_20190110_1	Eva Lippold		
61	P01_SPE_20191115	Doris Vetterlein	taken on 29th of november 2018 in Bad Lauchstädt out of t...	
62	Test - File Format Dataset	Nafiseh Navabpour		
66	Dataset/Owner Information	Nafiseh	Information about uploaded datasets	

Displaying items 1 - 15 of 15

Can I download a dataset?

You can check permissions in your Dashboard. If you can find the dataset in your Dashboard and see a tick in the Read column close the dataset, it means you have Read permission. If you have not this permission, you need to send a request to the dataset owner.



Dataset

- My Datasets
- Requests
- Decisions

Displaying items 1 - 10 of 15

ID	Title	Description	Read	Write	Delete	Grant
12	PSD for Sand	PSD values for sand	✓	✓	✓	✓
13	PSD for Loam	PSD values for sand	✓	✓	✓	✓
19	People/Project Information		✓	✓	✓	✓
20	Test Column Experiment	This test is created by Susanne	✓	✓	✓	✓
31	P01_SPE_20190110		✓	✓	✓	✓
38	P01_SPE_20181206	Data from Eva	✓	✓	✓	✓
44	P01_SPE_20190307		✓	✓	✓	✓
61	P01_SPE_20191115	taken on 29th of november 2018	✓	✓	✓	✓
62	Test - File Format Dataset		✓	✓	✓	✓
74	Test_With_PH		✓	✓	✓	✓

Displaying items 1 - 10 of 15

How do I create a Dataset?

1. Be sure that you are logged into the [BEXIS2](#) data management system. Check if your username is written close the *Help* menu item.

2. Click on the **Create Dataset** under the **Collect** menu item.

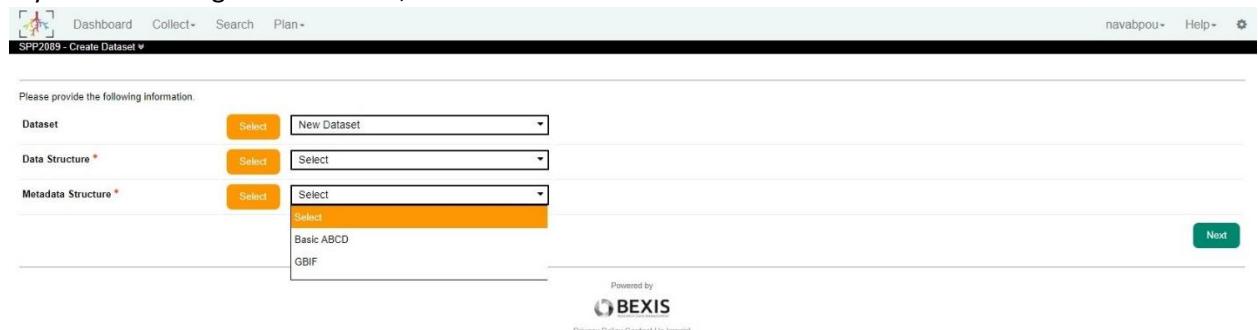
3. In the following page select a **new Dataset** if you want to create a new dataset or select an **existing dataset** in the field of **Dataset**, if you want to use the metadata of an existing dataset.

4. Select an existing **Data Structure** for your data table. If you do not yet create a data structure for your data table, first create one (check the introduction of Data Structure).

5. Select a **Metadata Structure**.

In case you select a copy of another dataset, the metadata structure is pre-selected.

If you are creating a new dataset, the **SPP 2089 Metadata** is recommended.



Please provide the following information.

Dataset	Selected	New Dataset
Data Structure *	Selected	Select
Metadata Structure *	Selected	Select

Basic ABCD
GBIF

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Next

Click on the **Next** button and system refers you to the Metadata Formula.

6. Fill at least the following fields in the ABCD metadata formula and click on the **Save** button.

- General > Title
- General > Short description
- General > Data Owner
- Contact Person > Name

* Title	<input type="text"/>
* Short description	<input type="text"/>
Sppproject number	Select, please <input type="button" value="▼"/>
* Data owner	<input type="text"/>
Last modification	<input type="text"/> <input type="button" value="calendar"/>
Remark	<input type="text"/>
* Name	<input type="text"/>
Email	<input type="text"/>
Institution	<input type="text"/>
Dataset status	Select, please <input type="button" value="▼"/>
Remark	<input type="text"/>
Missing value	<input type="text"/>
Data origin	Select, please <input type="button" value="▼"/>
Sampling date	Select, please <input type="button" value="▼"/>
Remark	<input type="text"/>
Method	<input type="text"/>
Instrument	<input type="text"/>
Remark	<input type="text"/>

Please note that

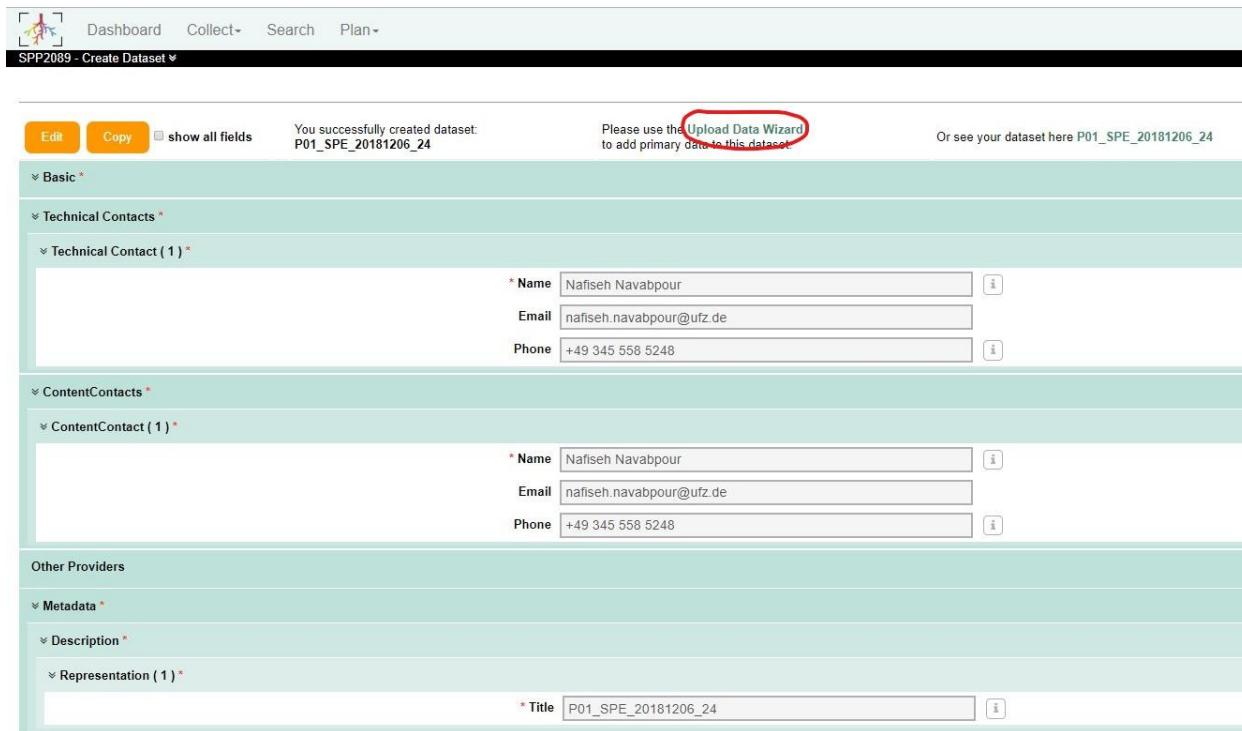
- Please change the title when copying a dataset.
- Do not enter a duplicate title.

- A field marked with a **red star** is mandatory.
- Metadata with empty mandatory fields could be saved by ignoring the warning message.
- Please ignore the red stars in the name of field groups.
- You can later **edit** a metadata formula.
- To open an info box, mark the small square on the right. Then you see more field underneath.

How do I upload data to a dataset?

Primary Data in BEXIS2 system can only upload to an existing dataset.

Once a dataset is created, the system provides a link that points you to the upload process. It calls **Upload Data Wizard**.



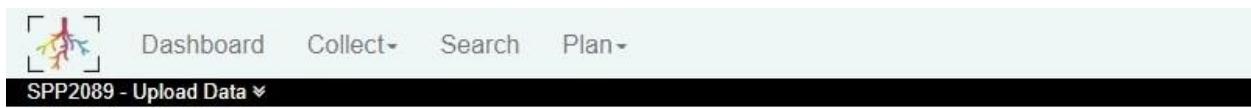
The screenshot shows the 'Create Dataset' page. At the top, there are buttons for 'Edit', 'Copy', and 'show all fields'. A message says 'You successfully created dataset: P01_SPE_20181206_24'. To the right, a note says 'Please use the [Upload Data Wizard](#) to add primary data to this dataset.' (The 'Upload Data Wizard' link is circled in red). Below this, there are sections for 'Basic', 'Technical Contacts', 'Content Contacts', and 'Other Providers'. Each section contains a 'Technical Contact (1)' or 'ContentContact (1)' with fields for Name, Email, and Phone. At the bottom, there is a 'Metadata' section with a 'Description' and 'Representation (1)' section containing a 'Title' field with the value 'P01_SPE_20181206_24'.

Another way to upload data is click on **Upload Data** under the **Collect** menu item.



The screenshot shows the 'Search in Public' page. The 'Collect' menu is open, showing 'Create Dataset', 'Upload Data' (which is circled in red), 'Import Data', and 'Push Big File'. Below the menu, there is a 'public only' checkbox. At the bottom, there is a table with columns 'ID', 'Title', and 'Contact Name', and a message 'No records to display.'

Regarding the type of your data structure, you should choose whether your data is Tabular or File. If you upload data via the Upload Data Wizard, the system jumps up from this step.



The screenshot shows the BEXIS 2 dashboard with a navigation bar at the top. The 'Dashboard' option is selected. Below the navigation bar, a black header bar displays 'SPP2089 - Upload Data'. The main content area is titled 'Add Data or Update Dataset' and contains a sub-section titled 'Upload Data – File format'. There are two buttons: 'Tabular' (highlighted in green) and 'File'.

Add Data or Update Dataset

In order to add to or update data of an existing dataset in the system, please select whether the dataset is structured or unstructured.

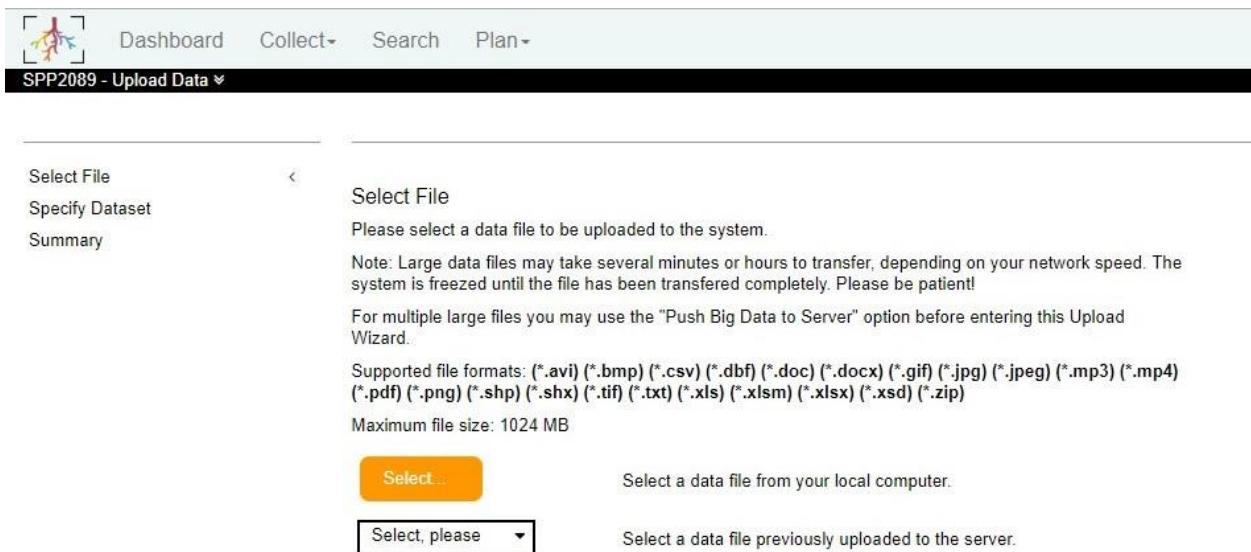
Tabular **File**

Upload Data – File format

If you save your data as a **File**, the search engine could not find the data.

BEXIS2 accepts only defined file formats under 1GB.

1. Select your file and click on the **Next** button.



The screenshot shows the 'Select File' step of the 'Upload Data Wizard'. On the left, a sidebar lists 'Select File' (highlighted in green), 'Specify Dataset', and 'Summary'. The main content area has a heading 'Select File' with the instruction 'Please select a data file to be uploaded to the system.' It includes a note: 'Note: Large data files may take several minutes or hours to transfer, depending on your network speed. The system is freezed until the file has been transferred completely. Please be patient!' Below this is a note for multiple files: 'For multiple large files you may use the "Push Big Data to Server" option before entering this Upload Wizard.' A list of supported file formats is provided: (*.avi) (*.bmp) (*.csv) (*.dbf) (*.doc) (*.docx) (*.gif) (*.jpg) (*.jpeg) (*.mp3) (*.mp4) (*.pdf) (*.png) (*.shp) (*.shx) (*.tif) (*.txt) (*.xls) (*.xlsm) (*.xlsx) (*.xsd) (*.zip)'. The maximum file size is specified as 'Maximum file size: 1024 MB'. There are two buttons: 'Select...' (highlighted in orange) and 'Select, please' with a dropdown arrow. To the right of each button is a description: 'Select a data file from your local computer.' and 'Select a data file previously uploaded to the server.'

2. Select an existing Dataset and click on the **Next** button. Note that the dataset is pre-selected through Upload Data Wizard.

Select File
Specify Dataset
Summary

Specify Dataset

Your data is stored and managed as part of a dataset. A dataset may contain one or more of your data files. But all data files within one dataset must be of the same data structure, i.e. in structured datasets the number of variables and their properties must be identical in each file.

Select ▾

Select an existing dataset to attach your file with.

3. On the next page, the system will show you a summary of your upload and the upload process is finished.
4. Click the **Finish** button. System refers you to the **Dataset View**.

Upload Data – Tabular format

Tabular data is structured data. If your data should be available on the search engine, save your data in tabular form. BEXIS2 accepts the file formats XLSM, XLSX, TXT, CSV and TSV in this process.

1. Select your data file from your computer. Click the Next button and go to the next page.

2. This page calls **Get File Information** and it differs depending on the file format.

Upload XLSX

If you have selected a regular Excel file in .xlsx format, the system will point you to a page where you can see your data table. You can change the Excel worksheet if you need.

On this page, you must specify where your column headers (variable names) are and where your data is located.

1	ID	Column Number	substrate	genotype	replicates	Treatment	DEPTH	C-Total (g/kg)	N-Tot	cm	g/kg	g/kg
2												
3												
4	FP02	L	WT	REP2	FP02_L_WT_REP2	5-10						
5	FP03	L	WT	REP3	FP03_L_WT_REP3	5-10						
6	FP04	L	WT	REP4	FP04_L_WT_REP4	5-10						
7	FP05	L	WT	REP5	FP05_L_WT_REP5	5-10						
8	FP06	L	WT	REP6	FP06_L_WT_REP6	5-10						
9	FP07	L	RTH3	REP1	FP07_L_RTH3_REP1	5-10						
10	FP08	L	RTH3	REP2	FP08_L_RTH3_REP2	5-10						
11	FP09	L	RTH3	REP3	FP09_L_RTH3_REP3	5-10						
12	FP10	L	RTH3	REP4	FP10_L_RTH3_REP4	5-10						
13	FP11	L	RTH3	REP5	FP11_L_RTH3_REP5	5-10						
14	FP12	L	RTH3	REP6	FP12_L_RTH3_REP6	5-10						
15	FP13	S	WT	REP1	FP13_S_WT_REP1	5-10						
16	FP14	S	WT	REP2	FP14_S_WT_REP2	5-10						

- First select all variables with the left click on mouse. Then click on the **Header** button.
- Select all data in the same way and click the **Data** button.
- The **Expand Selection** button allows you to expand your selection. If the data table contains many rows, select only the first row of data and click the Expand Selection. The system selects all data to the end.
- Click the **Reset** button if you need, to reset your selection.

1	A	B	C	D	E	F	G	H	I	cm	g/kg	g/kg
2												
3	FP02											
4	FP02											
5	FP02											
6	FP02											
7	FP02											
8	FP02											
9	FP02											
10	FP02											
11	FP02											
12	FP02											
13	FP02											
14	FP02											
15	FP02											

If you are sure that header and data are selected, click the **Next** button and go to the next step.

Upload XLSM

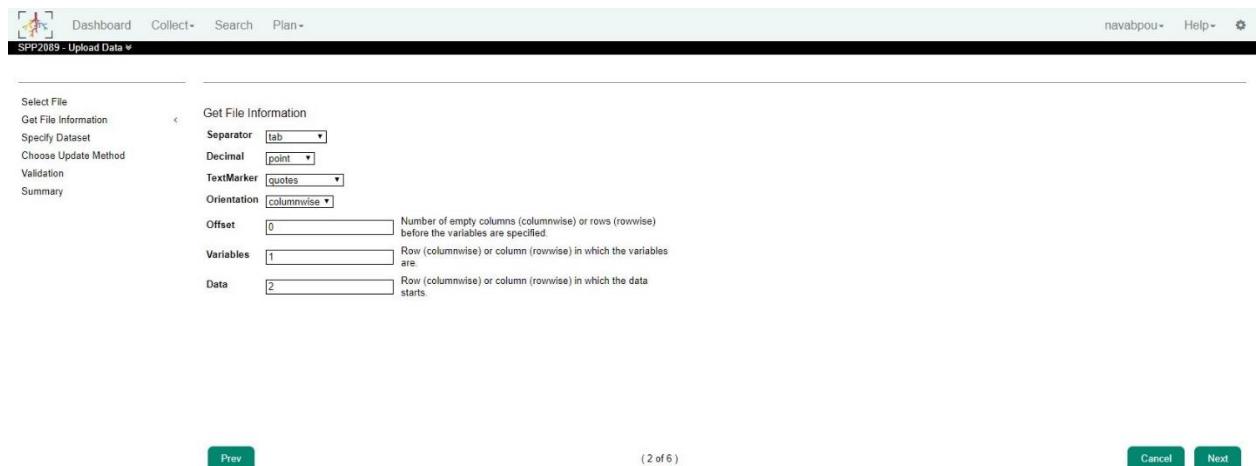
If you are working with the **Excel template** that is provided with the BEXIS2 system (Find explanation at the introduction of Data Structure), you are in this way.

By uploading an .xslm, the **system will skip** the **Get File Information** step.

Upload TXT, CSV or TSV

If your data is in a TXT, CSV or TSV format, the system will ask for the following information.

- **Separator:** Is your data separated by a tab, comma, semicolon or space?
- **Decimal:** Have your real data been specified as 3.02 with a dot (point) or 3,02 with a comma?
- **TextMarker:** Did you use quotes or double quotes as text marker?
- **Orientation:** At this point you must specify whether your data is columnwise or rowwise.
 - Data is columnwise when data related to a variable is written to a column.
 - Data is rowwise when data related to a variable is written to a row.
- **Offset:** How many empty columns (in columnwise) or rows (in rowwise) before the variables are specified.
- **Variables:** Row (in columnwise) or column (in rowwise) in which the variables are located.
- **Data:** Row (in columnwise) or column (in rowwise) in which the data starts.



The screenshot shows the 'Upload Data' process in SPP 2089. The current step is 'Get File Information'. The form contains the following settings:

- Separator: tab
- Decimal: point
- TextMarker: quotes
- Orientation: columnwise
- Offset: 0
- Variables: 1
- Data: 2

At the bottom, there are buttons for 'Prev', '(2 of 6)', 'Next', 'Cancel', and 'Help'.

Click on the **Next** button and go to the next page.

3. Specify the dataset, if it is not specified by default. Click on the **Next** button and go to the next page.

4. In this step BEXIS2 system checks if your data table is compatible with the data structure. Click on **Validate** button. In the case of mismatches, red messages will be displayed on the right side and the process will be terminated there. If data in the data structure can fit well, a green message will be displayed and you can go to the next page.

5. On the last page, the upload process is finished and you will see a summary of your upload data.
 6. Click the **Finish** button. System refers you to the **Dataset View**.
- Note:** You will see your data in the **Primary Data** tab. Please don't worry if you see the red message "No data is uploaded to this dataset". Your upload must be maintained in the background. Just contact your data manager (nafiseh.navabpour@ufz.de).

How do I set Permissions?

You may want to give a user certain permissions. For example, a user must be able to download or update your dataset.

1. Open the **Dataset Permissions** tab.
2. Find the user by username or id.
3. Give permission with a checkmark.
 - a. **Read** means the user can download data.
 - b. **Write** means the user can update the dataset.
 - c. Ignore the *Delete* and *Grant* options.

Note: The group **SPP2089** contains all colleagues from SPP 2089. If you want to set permissions for all, it is sufficient to only set permissions for the group SPP2089.

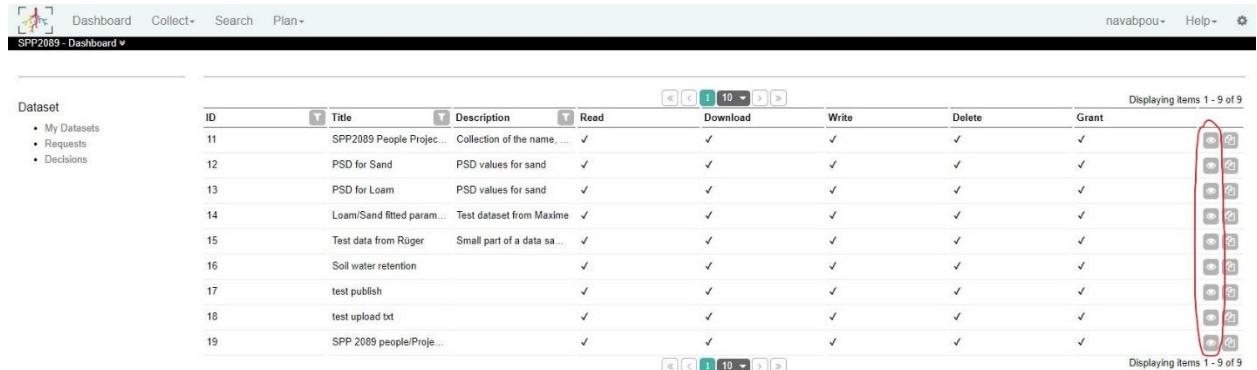
How do I delete a dataset?

You are not able to delete a dataset by yourself in the BEXIS 2. Please send the id and the name of a dataset which you want to delete to the BEXIS 2 system manager (nafiseh.navabpour@ufz.de). The dataset will be deleted very soon.

How do I download a dataset?

To **download** a dataset, you need to have the **Read** permission and go through the following steps.

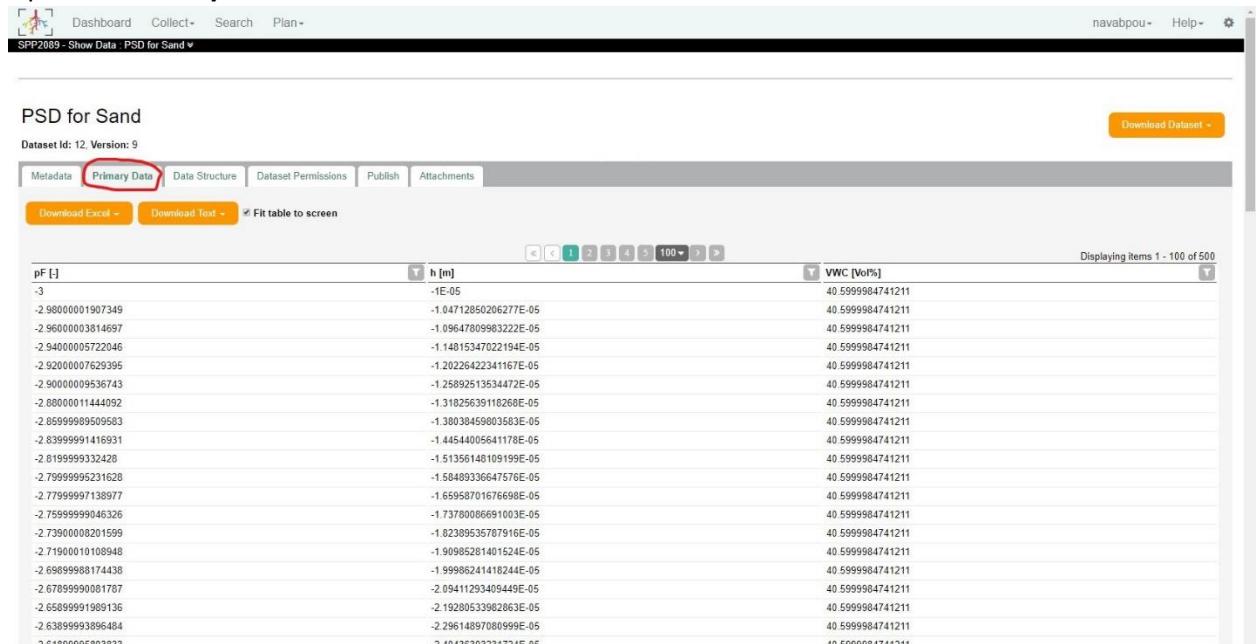
1. Click on the view icon close a dataset. The system refers you to the Dataset View.



The screenshot shows a table of datasets with the following columns: ID, Title, Description, Read, Download, Write, Delete, and Grant. The 'View' icon (a magnifying glass) is highlighted in a red circle in the 'Grant' column for the 11th dataset. The table is paginated at the bottom.

Dataset	ID	Title	Description	Read	Download	Write	Delete	Grant
• My Datasets	11	SPP2089 People Proj...	Collection of the name, ...	✓	✓	✓	✓	✓
• Requests	12	PSD for Sand	PSD values for sand	✓	✓	✓	✓	✓
• Decisions	13	PSD for Loam	PSD values for sand	✓	✓	✓	✓	✓
	14	Loam/Sand fitted param...	Test dataset from Maxime	✓	✓	✓	✓	✓
	15	Test data from Rüger	Small part of a data sa...	✓	✓	✓	✓	✓
	16	Soil water retention		✓	✓	✓	✓	✓
	17	test publish		✓	✓	✓	✓	✓
	18	test upload.txt		✓	✓	✓	✓	✓
	19	SPP 2089 people/Proj...		✓	✓	✓	✓	✓

2. Open the Primary Data tab.



The screenshot shows the 'Primary Data' tab for the 'PSD for Sand' dataset. The table has columns: pF [-], h [m], and VWC [Vol%]. The 'Primary Data' tab is highlighted in a red circle. There are download buttons for 'Download Excel' and 'Download Text' at the top of the table.

pF [-]	h [m]	VWC [Vol%]
-3	-1E-05	40.599984741211
-2.9800001907349	-1.04712850206277E-05	40.599984741211
-2.9600003814697	-1.09647809983222E-05	40.599984741211
-2.9400005722046	-1.14815347022194E-05	40.599984741211
-2.9200007629395	-1.20226422341167E-05	40.599984741211
-2.9000009536743	-1.25892513534472E-05	40.599984741211
-2.88000011444092	-1.31025635911026E-05	40.599984741211
-2.85999895095983	-1.3803455903563E-05	40.599984741211
-2.8399991416931	-1.44544005641178E-05	40.599984741211
-2.819999332428	-1.51356148109199E-05	40.599984741211
-2.7999995231628	-1.58489336447576E-05	40.599984741211
-2.7799997138977	-1.6595370176698E-05	40.599984741211
-2.7599999046326	-1.7378006691003E-05	40.599984741211
-2.73900008201599	-1.82389535767916E-05	40.599984741211
-2.71900010108948	-1.90985281401524E-05	40.599984741211
-2.6989988174438	-1.99986241418244E-05	40.599984741211
-2.6789990081787	-2.05411293409449E-05	40.599984741211
-2.6589991989136	-2.19280533982863E-05	40.599984741211
-2.6389993895484	-2.29614897080999E-05	40.599984741211
-2.6186446503833	-2.4043603291747E-05	40.599984741211

3. Download options are hidden under orange buttons.

- a. **Download Excel**

Click this button if you want to download an excel format of a dataset with or without header information.

Metadata Primary Data Data Structure Dataset Permissions Publish Attachments

Download Excel Download Text Fit table to screen

Template (.xlsm)
Excel (.xlsx)

pF [-] h [m]
-3 -1E-05
-2.98000001907349 -1.0471285020
-2.9800000000000007 4.0004700000

A freeze header in a Template contains a lot of information about variables, including units and data types, while Excel only contains variable names in the header.

See [How do I work with an Excel Template?](#)

b. **Download Text**

Click this button if you want to download a text format of a dataset. BEXIS2 system offers CSV, TSV, and TXT formats. The CSV format is comma separated, but TSV and TXT format are tab separated.

Metadata Primary Data Data Structure Dataset Permissions Publish Attachments

Download Excel Download Text Fit table to screen

Comma Separated (.csv)
Tab Separated (.tsv)
Text (.txt)

pF [-] h [m]
-3 -1E-05
-2.98000001907349 -1.0471285020
-2.9800000000000007 4.0004700000

c. **Download dataset**

Click this button if you want to download data and more information about the dataset in one compressed folder.

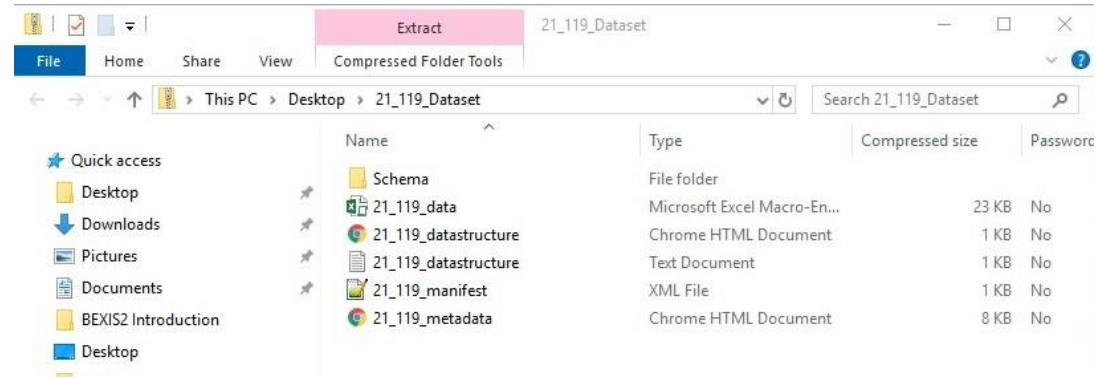
Download Dataset

... with Template
... with Excel
... with CSV
... with TSV
... with TXT

Displaying items 1 - 24 of 24

	DEPTH	C-Total (g/kg)	N-Total (g/kg)	pH (KCL)
P1	21	9.02061855670103	0.8762886597938145	
D2	21	8.555165187682345	0.8762886597938145	

You will find your data in your preferred format, two different formats of the metadata structure, two different formats of the data structure and one or more files contain information about the dataset. You do not need this option for normal use.



How do I access BEXIS 2 data via R?

BEXIS 2 APIs is a platform which provides fast and reliable data APIs to access data with no need of download a dataset. This possibility allows you to read online data. Reading online data make you sure that data is fresh and you have not lost the last updates.

To be able to use BEXIS 2 APIs, you need to find your API key and prepare the R environment.

Get the API key

The API key is a Token that you can find it by choosing the **Token** option under your profile username in the menu.



The token is a long characterized code. It is used when you want to set the options in the R program.



Prepare the R environment

To be able to exchange data between R statistics and BEXIS 2 instance, installing and loading following packages is required.

```
install.packages ("usethis")
library (usethis)
install.packages ("devtools")
library (devtools)
install.packages ("httr")
```

```
library(httr)
install.packages("jsonlite")
library(jsonlite)
install.packages("XML")
library(XML)
```

To reach data uploaded in BEXIS 2 via R a specific package calls “rBExIS” is needed. Installing this package is possible only if you download the package on your computer. The folder “rBExIS” you will find in the page Data Management in the SPP 2089 intranet. It also exist on GitHub.

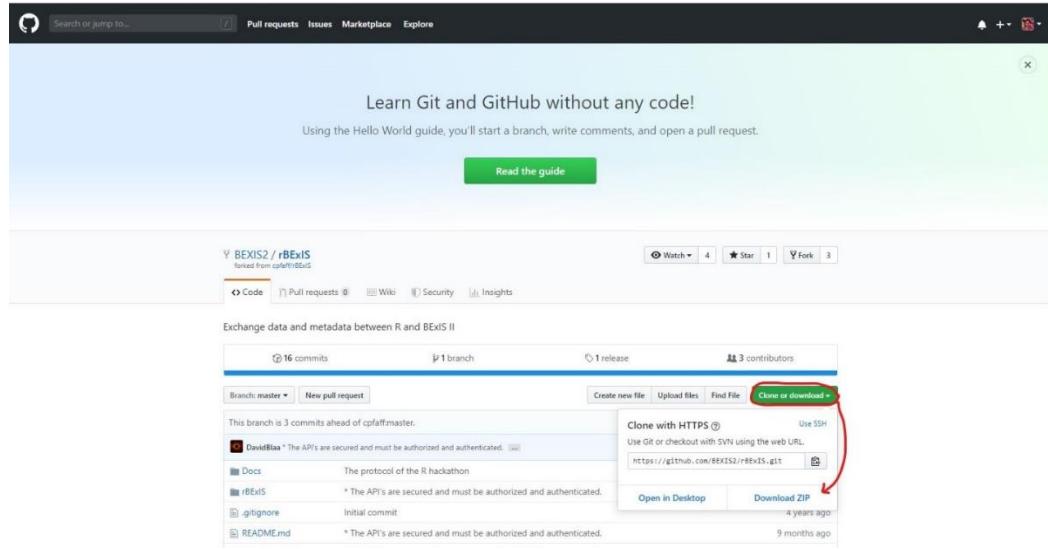
1. Download rBExIS package

- You will find the “rBExIS” package through the SPP 2089 intranet in *Download* and *Data Management* pages. Download and copy it to the R Working Directory.



The screenshot shows the BEXIS2 - Data Management System intranet page. The header features the logo for "Rhizosphere Spatiotemporal Organisation - SPP 2089". The left sidebar has a "Data Management" section selected, showing links for "BEXIS2 User Guide for SPP 2089" (6.1 MB) and "rBExIS - R package for BEXIS 2" (20 KB). The main content area describes BEXIS2 as a Data Management Platform, highlighting its focus on active data, data integration, and re-use. The right sidebar shows a contact section with a photo of Nafiseh Navabpour and her email address: nafiseh.navabpour@ufz.de.

- Download the “rBExIS” package from *GitHub*



1. Open the link <https://github.com/BEXIS2/rBExIS>
 2. Click on the “Clone or Download” button
 3. Click on the “Download ZIP” option
 4. Save the ZIP file in your computer and then un-ZIP it
 5. Copy the sub-folder “rBExIS” (the folder contains DESCRIPTION) in your R Working Directory.
-
2. Install the „rBExIS“ package
 - a) Install from your computer (Recommended)
`Devtools::install ("PATH_TO_THE _rBExIS")`
 - b) Install directly from the GitHub (The new version of the R Studio does not support this function)
`install_github ("BEXIS2/rBExIS", subdir = "rBExIS")`
 3. Load “rBExIS” package

```
library (rBExIS)

load_all ("rBExIS")

check ("rBExIS")

require (rBExIS)
```
 4. Set options for the rBExIS package
`bexis.options()`
`bexis.options("token" = "YOUR_TOKEN")`
`bexis.options("base_url" = "https://spp2089.ufz.de:4433")`

Data access functions

The “rBExIS” package has provided two main functions to have access the data via R without download the dataset.

1. Have a list of all dataset Ids

bexis.get.datasets ()

2. Retrieve data from a dataset specified by the dataset Id

bexis.get.dataset_by (id = xy)

Note: replace xy with the dataset Id.

How do I update a File format dataset?

A file format dataset is an unstructured dataset. It is a group of files, and you can increase the number of files that are uploaded to an unstructured data structure.

1. Select **Upload Data** under **Collect** menu item.



The screenshot shows the BEXIS 2 interface. At the top, there is a navigation bar with 'Dashboard', 'Collect', 'Search', and 'Plan' buttons. The 'Collect' button is currently selected. A dropdown menu for 'Collect' is open, showing 'Create Dataset', 'Upload Data' (which is highlighted with a red box), 'Import Data', and 'Push Big File'. Below this, there is a section titled 'FACETS' with 'Person (0)' and 'Organisation (0)' options. To the right, there is a search bar with a 'Search' button and a checkbox for 'public only'. At the bottom, there is a table header with columns for 'ID', 'Title', and 'Contact Name', followed by a message 'No records to display.'

2. Select **File** in the following page.



The screenshot shows the 'Upload Data' page. At the top, there is a navigation bar with 'Dashboard', 'Collect', 'Search', and 'Plan' buttons. The 'Collect' button is currently selected. Below this, the text 'SPP2089 - Upload Data' is displayed. The main content area is titled 'Add Data or Update Dataset'. It contains a note: 'In order to add to or update data of an existing dataset in the system, please select whether the dataset is structured or unstructured.' Below this note, there are two buttons: 'Tabular' (which is highlighted with a green box) and 'File'.

3. Click on the **Select** and choose a file from your computer or the drop down list. Then click on the **Next** and go to the next step.

Please note that you can only select one file to upload to an unstructured dataset each time.

4. Select a dataset from the drop down list that you want to add the selected file to it. Then click on the **Next** button.

5. Your update process will be completed on the following page. Click on the **Finish** button to go to the dataset view.

For a list of uploaded files, see the **Primary Data** tab.

Note: If you want to delete a file from an unstructured dataset, please contact me at nafiseh.navabpour@ufz.de.

How do I edit a tabular dataset?

Assume that you have uploaded data to an existing dataset and you want to edit data in some cells. It may be because of finding errors.

For example, the table below is uploaded.

ID	First Name	Last Name	Email
1	Eva	Lippold	eva.lippold@ufz.de
2	Maxim	Phalempin	maxime.phalempin@ufz.de
3	Naf	Navabpour	nafiseh.navabpour@ufz.de

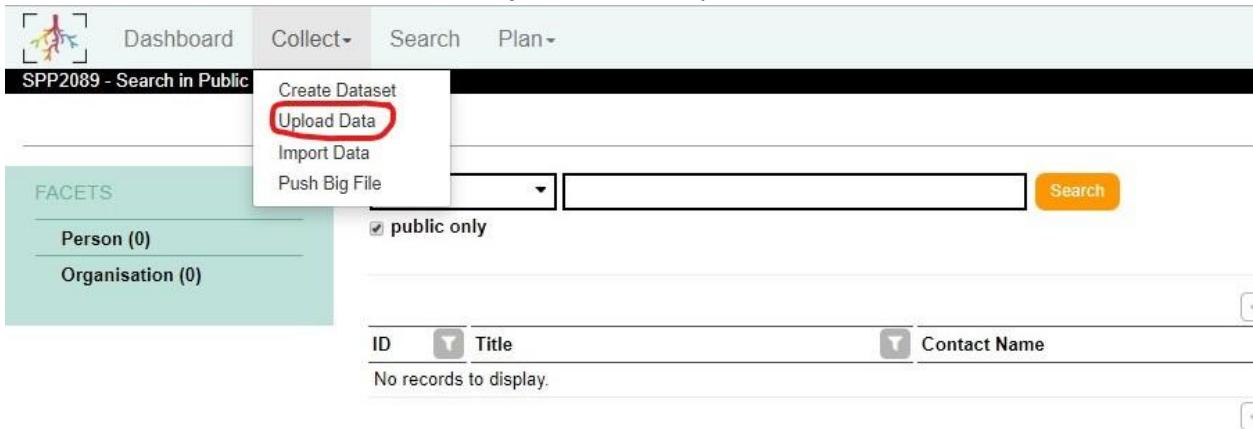
You see that the first name in the third line is incorrect. It should change like this:

ID	First Name	Last Name	Email
1	Eva	Lippold	eva.lippold@ufz.de
2	Maxim	Phalempin	maxime.phalempin@ufz.de
3	Nafiseh	Navabpour	nafiseh.navabpour@ufz.de

Go through the following steps to edit a dataset.

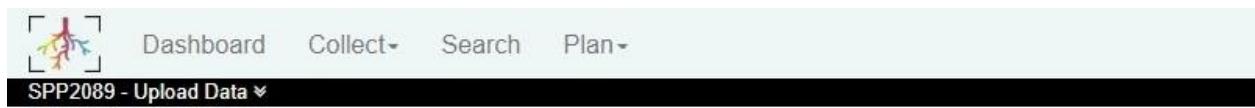
1. Open the data table from your computer.
You can still work with a data table in your computer or have recently downloaded a dataset from the BEXIS 2. No matter what format your file is in.
2. Make changes to the data table and save it.
It is important to keep a data tuple (one or a combination of some variables) as an identifier. The identifier should be unique throughout the dataset. The identifier in our example could be ID, Email or the tuple of (ID, Email).
3. Now you need to perform the normal upload process in BEXIS 2, except that you must select an update method and specify the identifier.

Under the menu item **Collect**, select the **Upload Data** entry.



The screenshot shows the BEXIS 2 interface. At the top, there is a navigation bar with 'Dashboard', 'Collect', 'Search', and 'Plan'. Below this is a search bar with the text 'SPP2089 - Search in Public'. Under the 'Collect' menu, there are four options: 'Create Dataset', 'Upload Data' (which is highlighted with a red circle), 'Import Data', and 'Push Big File'. To the right of the search bar, there is a checkbox labeled 'public only' and a 'Search' button. On the left, there is a sidebar titled 'FACETS' with sections for 'Person (0)' and 'Organisation (0)'. At the bottom, there is a table with columns 'ID', 'Title', and 'Contact Name', and a message 'No records to display.'

4. On the following page, select **Tabular** as the dataset format.



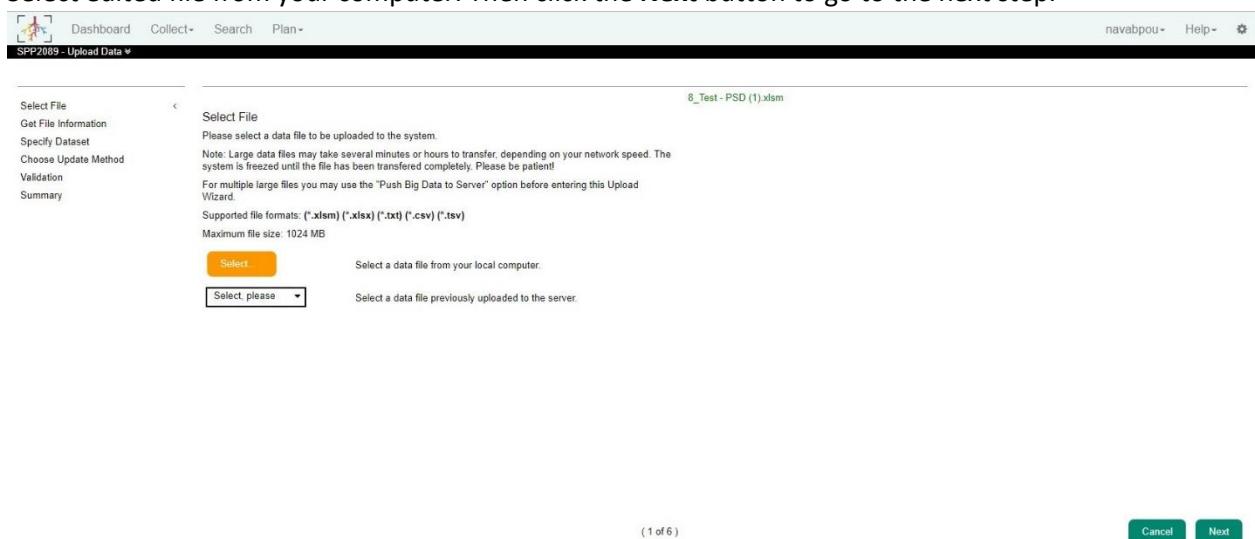
Add Data or Update Dataset

In order to add to or update data of an existing dataset in the system, please select whether the dataset is structured or unstructured.

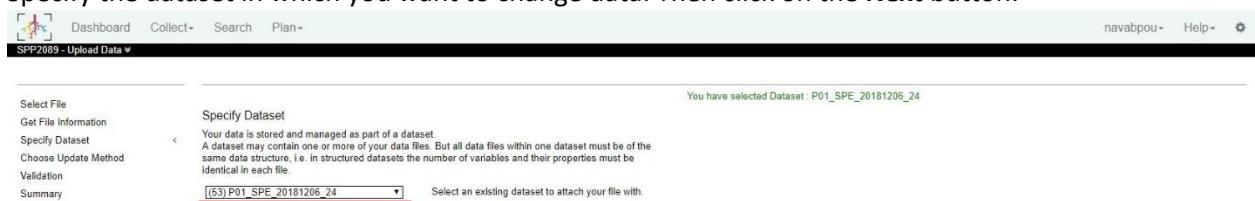
Tabular

File

5. Select edited file from your computer. Then click the **Next** button to go to the next step.



6. Specify the dataset in which you want to change data. Then click on the **Next** button.



7. In the following page select **Update** as the update method.
8. Mark variables that you want to specify as identifiers.

Select File

Get File Information

Specify Dataset

Choose Update Method

Validation

Summary

Choose Update Method

Update Append

Update the rows from the files to the dataset. Therefore define a unique primary key.

ID

First Name

Last Name

Email

9. Click on **Check** button and the system will indicate if your identifier is unique.

Select File

Get File Information

Specify Dataset

Choose Update Method

Validation

Summary

Choose Update Method

Update Append

Update the rows from the files to the dataset. Therefore define a unique primary key.

ID

First Name

Last Name

Email

• Primarykeys:
• ID
• Email
• Unique!!!

Check None All

10. Click on the **Next** button.

Please note that the system blocks your progress in this step if your identifier is not unique.

11. Click the **Validate** button on the following page.

Select File

Get File Information

Specify Dataset

Choose Update Method

Validation

Summary

Validation

With this step the selected data file is validated against the selected data structure. Both, the structure of the data (e.g. variable properties) and whether the data values fit to the specified structure (e.g. data type, value range) is evaluated.

Validate

Validate selected data file against a given data structure.

12. Click on the **Next** button if your upload is validated.
13. The following page is the last page of the update procedure contains dataset information.
Click on the **Finish** button to go to the dataset view.

Note: If your dataset does not contain a unique primary key in any row, BEXIS2 adds the row to the dataset.

How do I add rows to a tabular dataset?

Assume that you have uploaded data to an existing dataset and you want to add more rows to it.

For example, the table below is uploaded.

ID	First Name	Last Name	Email
1	Eva	Lippold	eva.lippold@student.uni-halle.de
2	Maxim	Phalempin	maximephalempin@gmail.com
3	Nafiseh	Navabpour	nafiseh.navabpour@ufz.de

You want to add a new person to the list as follows:

ID	First Name	Last Name	Email
1	Eva	Lippold	eva.lippold@ufz.de
2	Maxim	Phalempin	maxime.phalempin@ufz.de
3	Nafiseh	Navabpour	nafiseh.navabpour@ufz.de
4	Doris	Vetterlein	doris.vetterlein@ufz.de

Complete the following steps to add rows to a dataset.

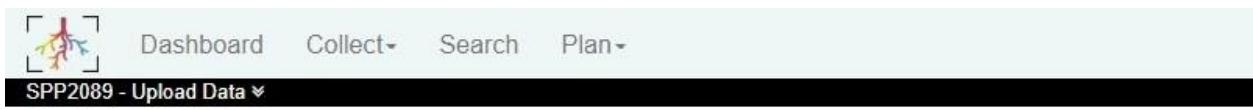
1. Open the data table from your computer.
You can still work with a data table in your computer or have recently downloaded a dataset from the BEXIS 2. No matter what format your file is in.
2. Add new rows to the data table and save it.
3. Now you need to perform the normal upload process in BEXIS 2, except that you must choose an update method.

Under the menu item **Collect**, select the **Upload Data** entry.



The screenshot shows the BEXIS 2 interface. At the top, there is a navigation bar with 'Dashboard', 'Collect', 'Search', and 'Plan'. Below this, a sub-menu for 'Collect' is open, showing 'Create Dataset', 'Upload Data' (which is circled in red), 'Import Data', and 'Push Big File'. To the right of the sub-menu, there is a search bar with the placeholder 'public only' and a 'Search' button. On the left, there is a sidebar titled 'FACETS' with sections for 'Person (0)' and 'Organisation (0)'. At the bottom, there is a table with columns for 'ID', 'Title', and 'Contact Name', with a message 'No records to display.'

4. On the following page, select **Tabular**.



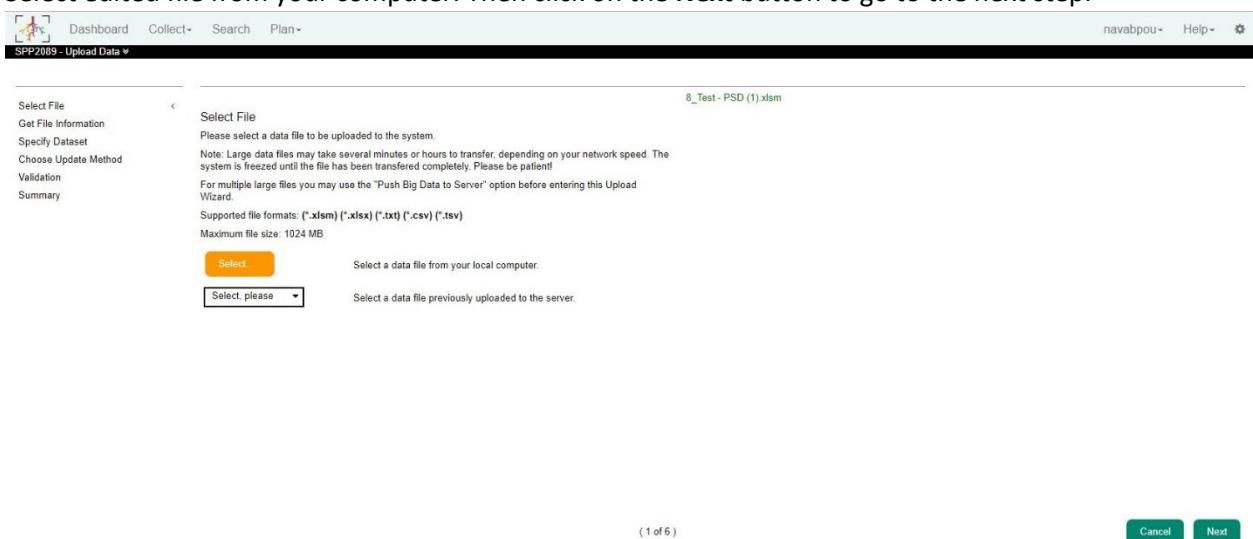
Add Data or Update Dataset

In order to add to or update data of an existing dataset in the system, please select whether the dataset is structured or unstructured.

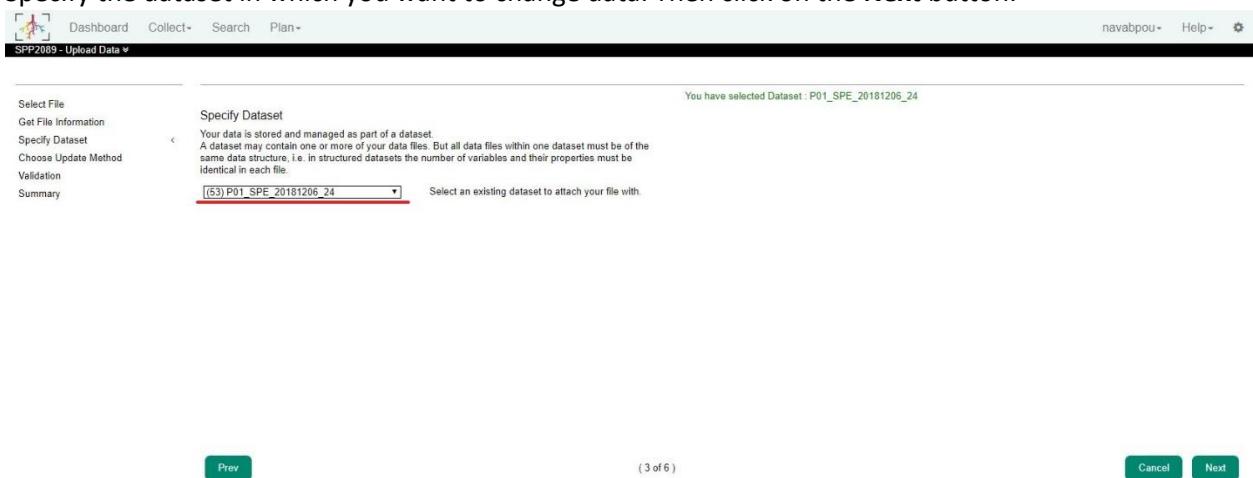
Tabular

File

5. Select edited file from your computer. Then click on the **Next** button to go to the next step.



6. Specify the dataset in which you want to change data. Then click on the **Next** button.



7. Select **Append** as the update method and Click on the **Next**.

Select File

Get File Information

Specify Dataset

Choose Update Method

Validation

Summary

Choose Update Method

Update

Append

Add the rows from the files to the dataset only.

8. Click the **Validate** button on the following page.

Select File

Get File Information

Specify Dataset

Choose Update Method

Validation

Summary

Validation

With this step the selected data file is validated against the selected data structure. Both, the structure of the data (e.g. variable properties) and whether the data values fit to the specified structure (e.g. data type, value range) is evaluated.

Validate

Validate selected data file against a given data structure.

Prev

(5 of 6)

Cancel

Next

9. Click on the **Next** button if your upload is validated.
10. The following page is the last page of the update procedure contains dataset information.
11. Click on the **Finish** button to go to the dataset view.

How do I add columns to a tabular dataset?

Assume that you have uploaded data to an existing dataset and you want to add columns to it.

For example, the table below is uploaded.

Table 1

ID	First Name	Last Name	Email
1	Eva	Lippold	eva.lippold@ufz.de
2	Maxim	Phalempin	maxime.phalempin@ufz.de
3	Nafiseh	Navabpour	nafiseh.navabpour@ufz.de
4	Doris	Vetterlein	doris.vetterlein@ufz.de

You want to add more information to each person, e.g. *Gender*.

Table 2

ID	First Name	Last Name	Email	Gender
1	Eva	Lippold	eva.lippold@ufz.de	F
2	Maxim	Phalempin	maxime.phalempin@ufz.de	M
3	Nafiseh	Navabpour	nafiseh.navabpour@ufz.de	F
4	Doris	Vetterlein	doris.vetterlein@ufz.de	F

In BEXIS 2 a table is stored and managed as part of a tabular dataset based on its data structure. So two tables above do not have the same data structure (*Table 1* has four and *Table 2* has five variables). Then you must upload the second table as a new dataset with a new data structure.

BEXIS 2 provides two operational features:

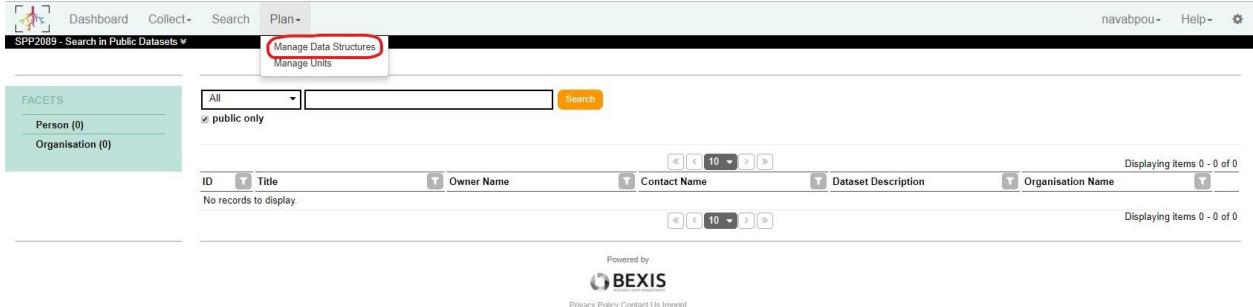
- **Copy Data Structure** creates a new data structure with the same variables.
- **Copy Dataset** creates a new dataset with the same metadata.

Some works are reduced with the help of these two functions. You must only complete the following steps.

- I. Make a copy of the old data structure
- II. Add new variables (in our case, Gender)
- III. Create a copy of the old dataset
 - a. Link the new data structure to the new dataset
 - b. Enter a new name for the new dataset
- IV. Upload data

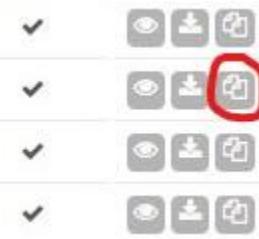
How do I Make a copy of a Data Structure?

1. Choose a data structure in the **Manage Data Structures** under the menu item **Plan**.



The screenshot shows the BEXIS 2 user interface. At the top, there is a navigation bar with links for Dashboard, Collect, Search, and Plan. The 'Plan' link is highlighted. Below the navigation bar, there is a sub-menu for 'SPP2089 - Search in Public Datasets' with options for 'Manage Data Structures' and 'Manage Units'. The 'Manage Data Structures' option is circled in red. The main content area is titled 'Manage Data Structures' and shows a search interface with fields for 'All', 'Title', 'Owner Name', 'Contact Name', 'Dataset Description', and 'Organisation Name'. There are also dropdowns for 'Facets' (Person (0) and Organisation (0)) and buttons for 'Search' and 'Copy'. Below the search interface, it says 'No records to display'. At the bottom of the page, there is a footer with links for 'Powered by BEXIS', 'Privacy Policy', 'Contact Us', and 'Imprint'.

2. Click the **Copy** button next to the data structure.



3. Change the name of the new data structure to a non-existent name and save it.

How do I edit an existing Data Structure?

You are able to edit a data structure before you link it to a dataset.

1. Open the **Data Structure Edit** by clicking the **Edit** button.



2. Add variables that you want to add to the data structure by clicking the orange right arrow next to the variable.

Variable Templates					
Sort by	Name	Unit	Data Type	Options	Actions
166	Identifier, code based	none	string	<input type="checkbox"/>	
165	Identifier, integer number	none	whole n...	<input type="checkbox"/>	
453	K-total	mg/kg	real nu...	<input type="checkbox"/>	
448	K_CAL	mg/kg	real nu...	<input type="checkbox"/>	
503	K_RFA	mg/kg	real nu...	<input type="checkbox"/>	
324	Ks	cm/d	real nu...	<input type="checkbox"/>	
121	mass	kg	real nu...	<input type="checkbox"/>	
450	Mg	mg/kg	real nu...	<input type="checkbox"/>	

Structure of Table2 (47)					
Name	Value	Unit	Data Type	Options	Actions
397	First Name	none	string	<input type="checkbox"/>	
398	Last Name	none	string	<input type="checkbox"/>	
399	Email address	none	string	<input type="checkbox"/>	

3. Change the name of the variable in your favorite name and save your changes by clicking **Save**.

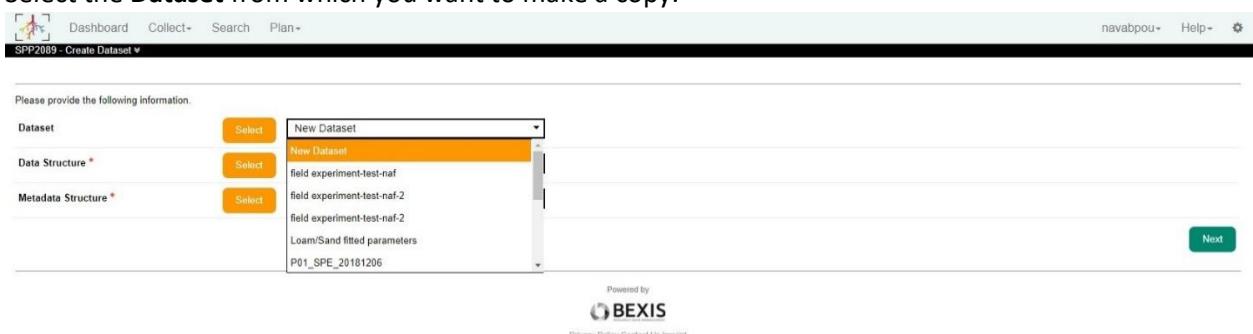
How do I create a copy of a dataset?

1. Open the procedure **Create Dataset** under the menu item **Collect**.



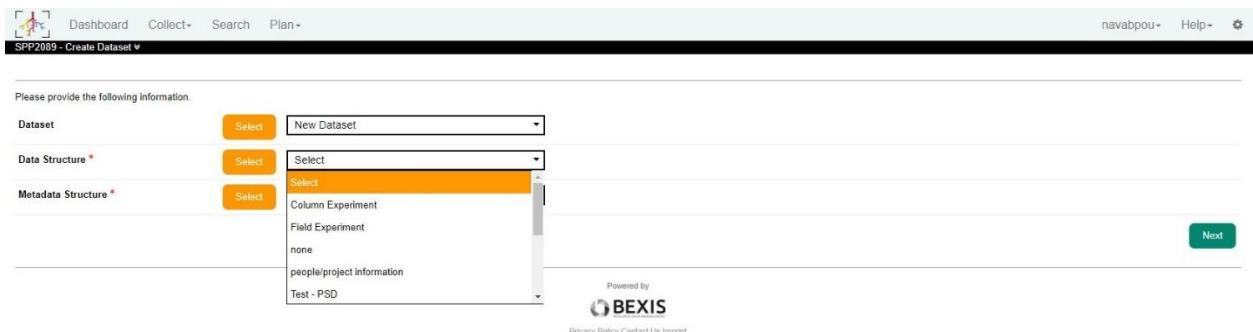
The screenshot shows the BEXIS 2 interface with the 'Create Dataset' button highlighted in red. The interface includes a navigation bar with 'Dashboard', 'Collect', 'Search', and 'Plan' items. Below the navigation is a search bar with 'SPP2089 - Search in Public' and a 'Create Dataset' button. A 'FACETS' sidebar on the left shows 'Person (0)' and 'Organisation (0)'. The main content area displays search results for 'Title', 'Owner Name', 'Contact Name', 'Dataset Description', and 'Organisation Name'. The footer includes the BEXIS logo and links to 'Privacy Policy', 'Contact Us', and 'Imprint'.

2. Select the **Dataset** from which you want to make a copy.



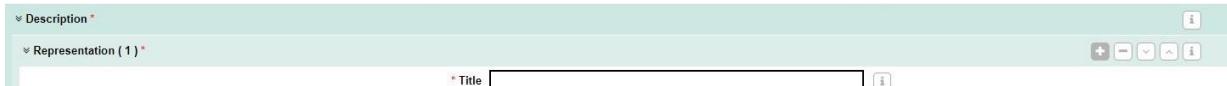
The screenshot shows the 'Create Dataset' form. The 'Dataset' dropdown is open, showing a list of datasets: 'New Dataset' (selected), 'New Dataset', 'field experiment-test-naf', 'field experiment-test-naf-2', 'field experiment-test-naf-2', 'Loam/Sand fitted parameters', and 'P01_SPE_20181206'. Other fields on the form include 'Data Structure' and 'Metadata Structure', each with a 'Select' button. A 'Next' button is visible on the right.

3. Link the dataset to a favorite Data Structure.



The screenshot shows the 'Create Dataset' form with the 'Data Structure' dropdown open. The list includes 'Select' (selected), 'Select', 'Select', 'Column Experiment', 'Field Experiment', 'none', 'people/project information', and 'Test - PSD'. Other fields on the form include 'Dataset' and 'Metadata Structure', each with a 'Select' button. A 'Next' button is visible on the right.

4. Change the title of dataset to be unique.



The screenshot shows the 'Create Dataset' form with a 'Title' input field containing the placeholder 'Title'. The interface includes a 'Description' section and a 'Representation (1)' section.

5. Click the **Save** button.

Note: If you want to delete the old dataset, please send me the ID and the name of that dataset (nafiseh.navabpour@ufz.de).

How do I add/remove attachments?

If you need to attach files to your dataset go through the following steps. A file could be additional images, word, pdf or text files and etc...

1. Select **Attachment** tab on the dataset view.

P01_SPE_20181206_24

Dataset Id: 53, Version: 1

Attachments

Attach files to this dataset

You can select one or multiple files. Please provide a short description for your selected file(s).
Note: Depending on your network connection the upload may take some time. Please stay patient.
Maximum file size: 1024 MB

Description:

Files:

Select...

Push

No	File name	Type	Size
1	maize1.jpg		17 KB
2	maize2.jpg		117 KB
3	maize3.jpg		62 KB
4	maize4.jpg		99 KB

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2. Click on the **Select** and choose one or multiple files from your computer. Each file should be smaller than 1GB.
3. Click the **Push** and files will appear in a list.

PSD for Sand

Dataset Id: 12, Version: 10

Attachments

Attach files to this dataset

You can select one or multiple files. Please provide a short description for your selected file(s).
Note: Depending on your network connection the upload may take some time. Please stay patient.
Maximum file size: 1024 MB

Description:

Files:

Select...

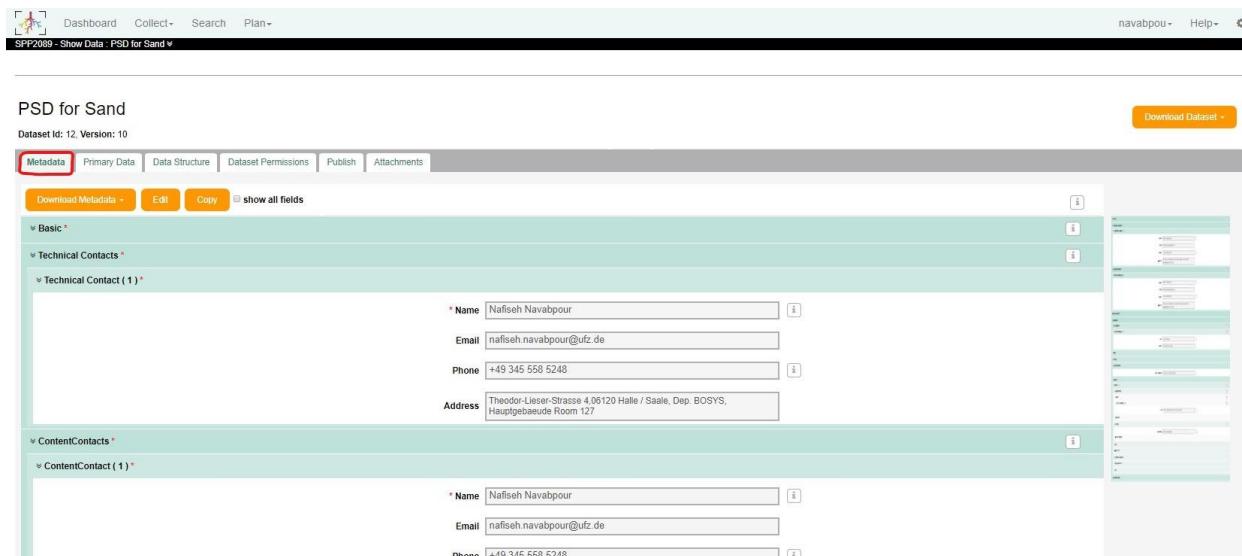
Push

No	File name	Type	Size
1	maize1.jpg		17 KB
2	maize2.jpg		117 KB
3	maize3.jpg		62 KB
4	maize4.jpg		99 KB

To **delete** a file, use the trash icon next to the file.

How do I edit the metadata?

The metadata provides information about your dataset. The metadata formula will open as default when you open a dataset view.



The screenshot shows the BEXIS 2 dataset metadata editor for a dataset named 'PSD for Sand'. The dataset ID is 12, and the version is 10. The 'Metadata' tab is selected, highlighted with a red box. Other tabs include Primary Data, Data Structure, Dataset Permissions, Publish, and Attachments. Below the tabs are buttons for Download Metadata, Edit (which is highlighted in orange), Copy, and show all fields. The main content area is divided into sections: 'Basic', 'Technical Contacts', and 'Content Contacts'. The 'Basic' section contains fields for Name (Nafiseh Navabpour), Email (nafiseh.navabpour@ufz.de), Phone (+49 345 558 5248), and Address (Theodor-Lieser-Strasse 4, 06120 Halle / Saale, Dep. BOSYS, Hauptgebäude Room 127). The 'Technical Contacts' and 'Content Contacts' sections each contain one contact entry with identical information. On the right side of the editor, there is a sidebar with a tree view of the dataset structure, showing various nodes and their properties.

Click on the **Edit** button to be able to edit the metadata.

Don't forget to **save** your changes.