

Using BEXIS2 in SPP2089

Data Structure

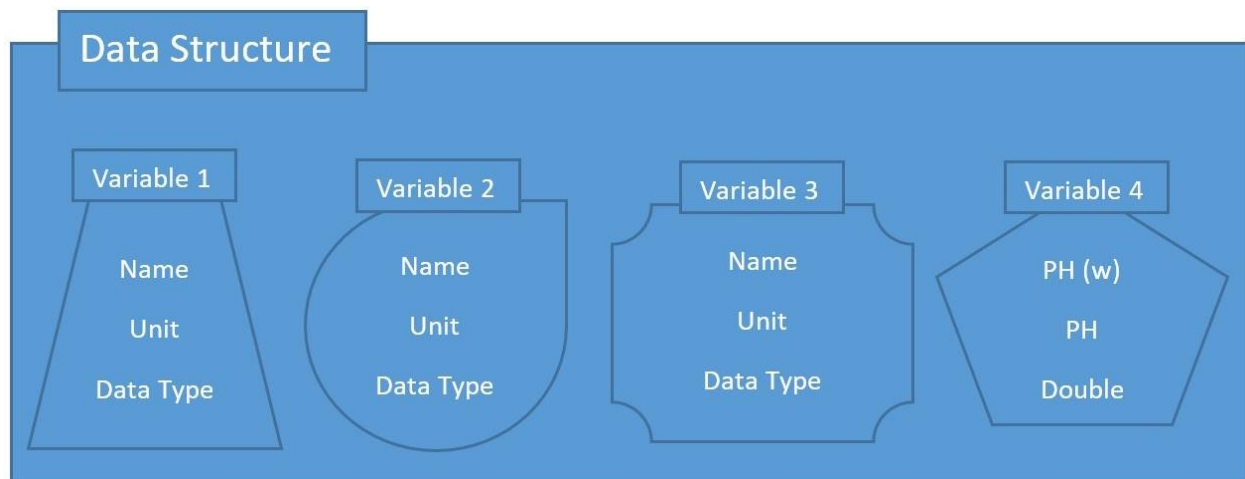
What does a Data Structure mean?

A Data Structure contains one or more Variables. 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 by the user or the data manager, if they are not available yet.

One example could be a variable which is used for the measure of the acidity. PH is the unit of variable which is measured as a double number. The name of a variable is up to the user. It could be PH (w).

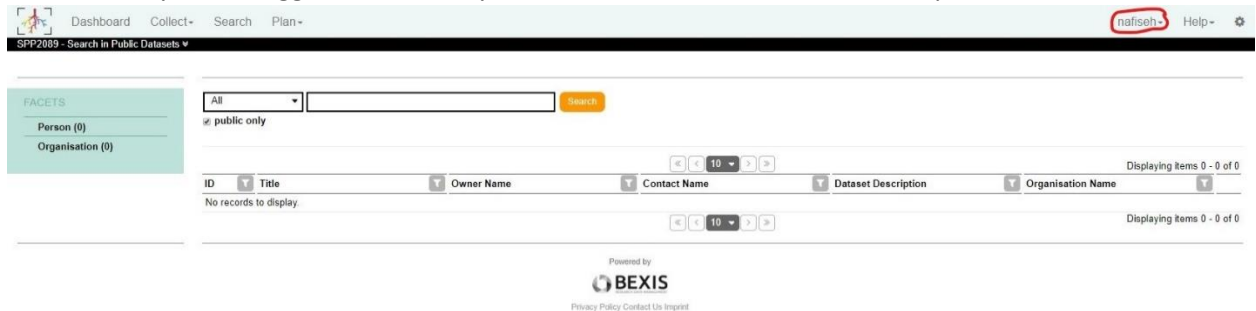
You can edit a Data Structure, but note that a Data Structure freezes once it is tied to a Dataset. In this case you have to create a copy of the Data Structure, edit it and tie to a new dataset.

It would be reasonable if you think a bit about creating a Data Structure before collecting your data in the field or the laboratory.

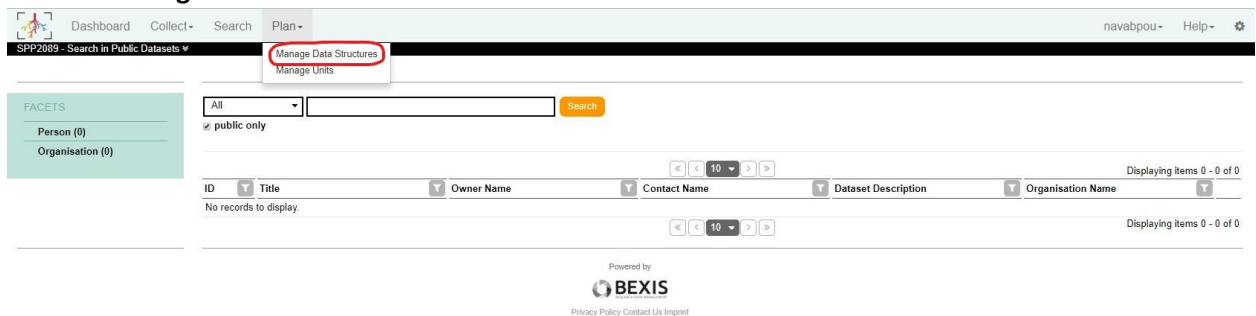


How do I create a Data Structure?

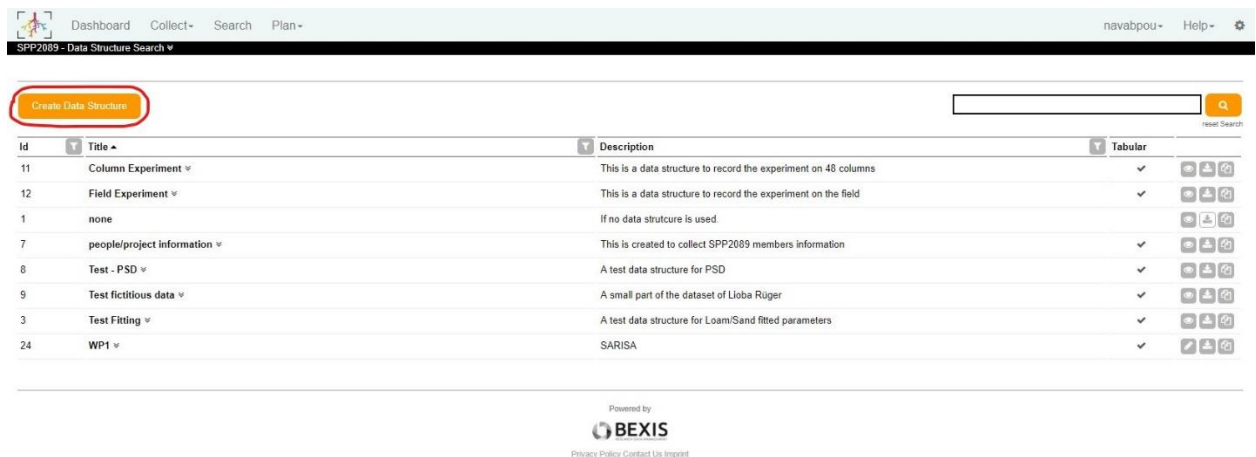
1. Be sure that you are logged in. Check if your username is written close the *Help* menu item.



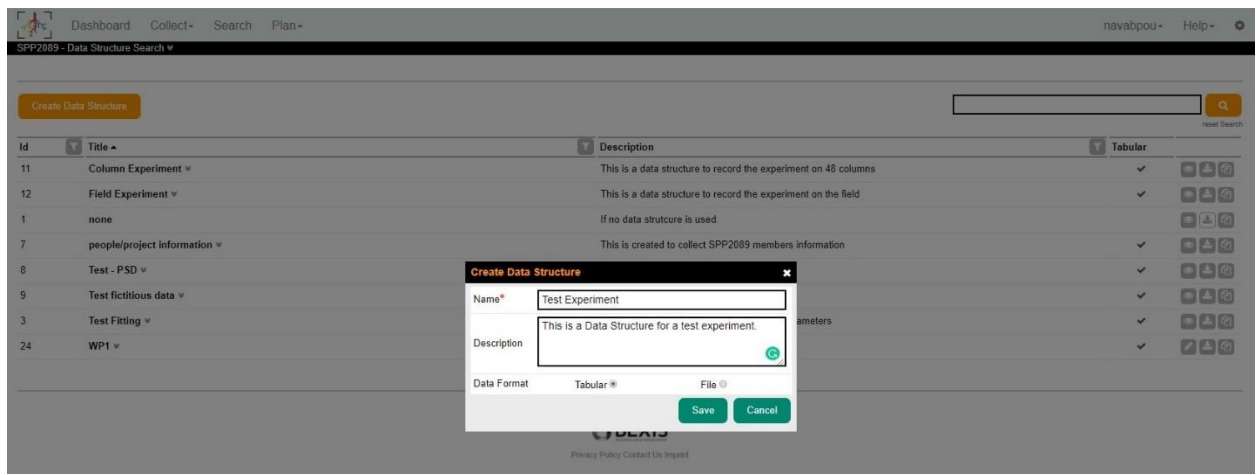
2. Click on **Manage Data Structure** under the **Plan** menu item.



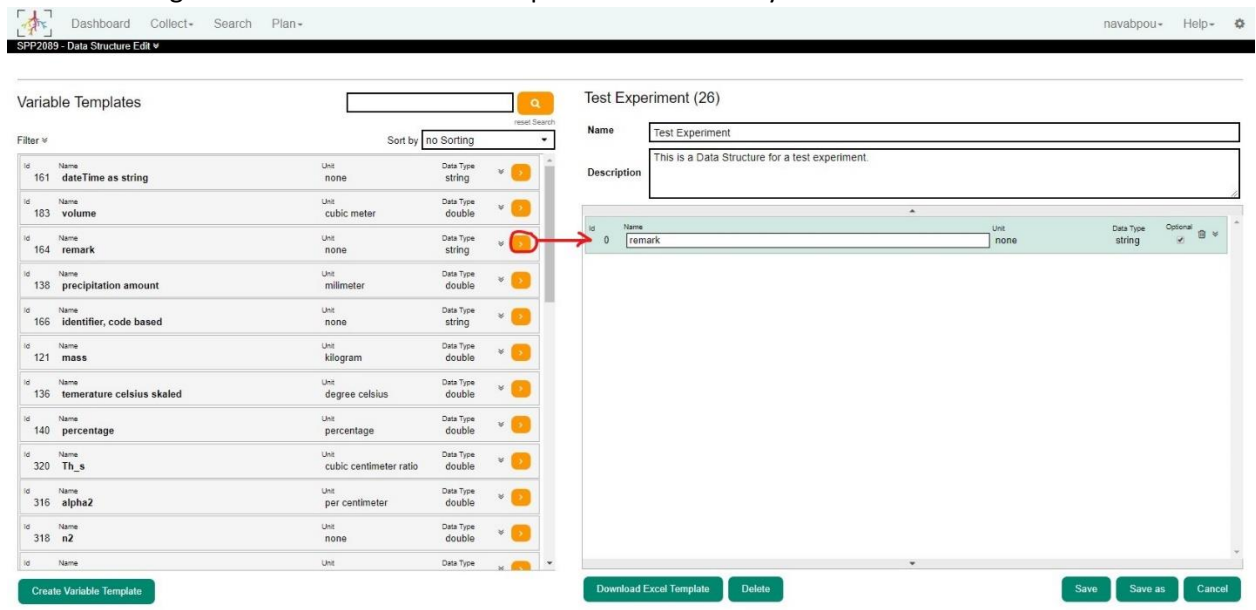
3. Click on the **Create Data Structure** button in the following window.



4. Fill the fields in opened modal window and click on the **Save** button. The **Name** is mandatory and please enter a descriptive description.
Choose a **Data Format** compatible with your data structure. **Tabular** is for a data table and **File** is for non-structured data such as pdf file or images.



- 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 templates and add it to your data structure.



You can change the name of the 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.

Variable Templates

ID	Name	Unit	Data Type
161	dateTime as string	none	string
183	volume	cubic meter	double
164	remark	none	string
138	precipitation amount	millimeter	double
166	identifier, code based	none	string
121	mass	kilogram	double
136	temperature celsius scaled	degree celsius	double
140	percentage	percentage	double
320	Th_s	cubic centimeter ratio	double
316	alpha2	per centimeter	double
318	n2	none	double

Test Experiment (26)

Name: Test Experiment

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

Variable Template

ID	Name	Unit	Data Type	Optional
0	remark	none	string	<input checked="" type="checkbox"/>
164	remark	none	string	<input type="checkbox"/>

Searching, sorting and filtering are available when you are looking for a variable template.

- Click on the **Save** button to save the changes.

How do I edit a Data Structure?

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

Dashboard Collect+ Search Plan+ nafiseh Help+

SPP2009 - Search in Public Datasets

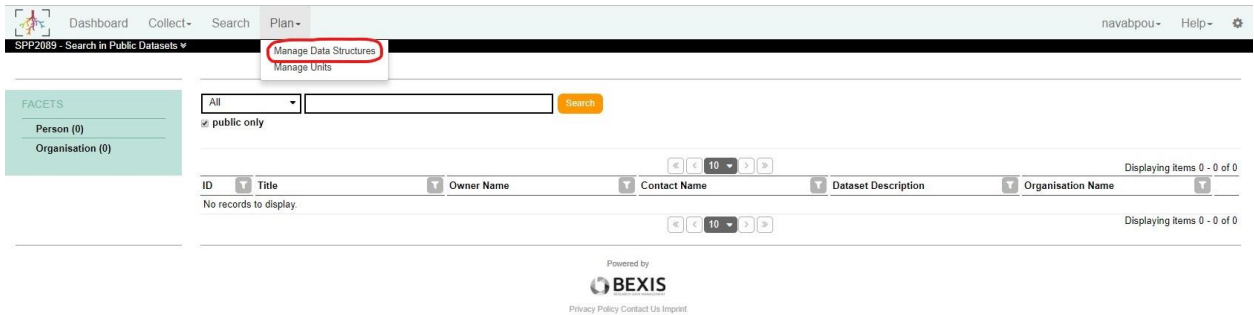
Search: All [Search]

public only

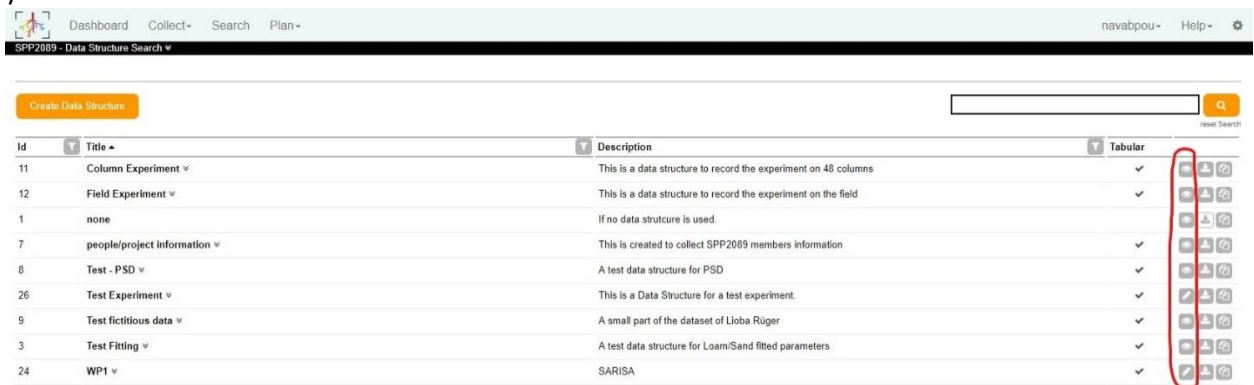
ID	Title	Owner Name	Contact Name	Dataset Description	Organisation Name
No records to display.					

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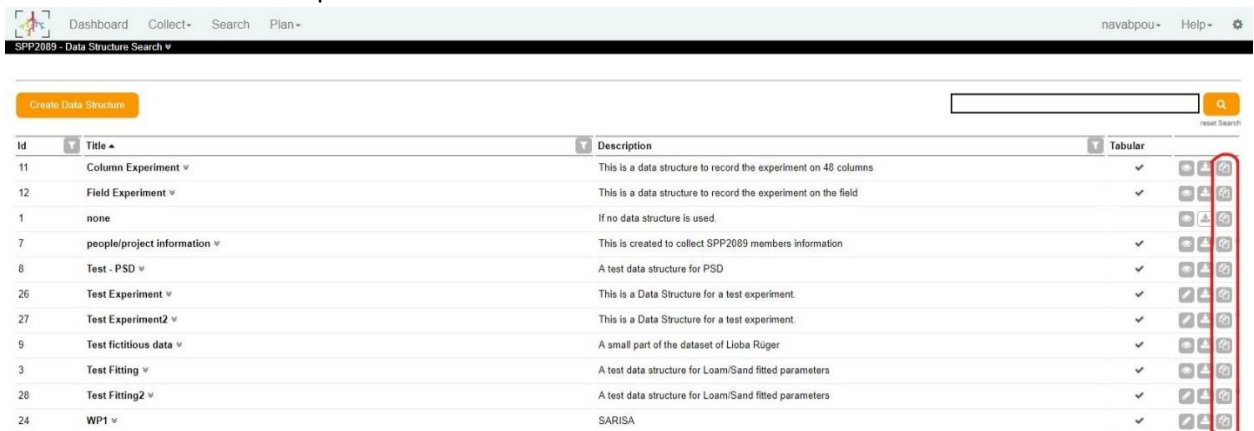
- Click on **Manage Data Structure** under the **Plan** menu item.



- 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.



Note: Once a dataset uses a data structure, the data structure can no longer be edited. In case a data structure is not editable or you want to have a copy of a data structure, click on the **Copy Data Structure** button close to a data structure. You should change the name of the data structure to be a unique name.



- 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

Test Experiment (26)

Name: Test Experiment

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

Variable Template (123): remark (none, string)

Buttons: Create Variable Template, 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.

Dashboard Collect Search Plan

navabpou Help

SPP2089 - Search in Public Datasets

Search: All [Search]

public only

ID	Title	Owner Name	Contact Name	Dataset Description	Organisation Name
No records to display.					

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

Dashboard Collect Search Plan

navabpou Help

SPP2089 - Search in Public Datasets

Plan: Manage Data Structures, Manage Units

Search: All [Search]

public only

ID	Title	Owner Name	Contact Name	Dataset Description	Organisation Name
No records to display.					

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3. You are able to download a Data Structure in two ways.
 - a. Click on the **Download** button close a Data Structure.

Dashboard

Collect

Search

Plan

navabpou

Help

SPP2089 - Data Structure Search

Create Data Structure

Search

Recent Datasets

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

- b. Click on the **Download Excel Template** button and system creates an Excel Template from current Data Structure.

Dashboard Collect Search Plan				navabpou Help			
SPP2089 - Data Structure Edit							
Variable Templates							
Filter		Sort by no Sorting		New Variable			
Id	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				
Create Variable Template							
Field Experiment (12)							
Name Field Experiment							
Description This is a data structure to record the experiment on the field							
Id	Name	Unit	Data Type	Optional			
58	ID	none	integer	✓			
59	Column Number	none	string	✓			
60	substrate	none	string	✓			
61	genotype	none	string	✓			
62	replicates	none	string	✓			
68	Treatment	none	string	✓			
64	DEPTH	none	string	✓			
65	C-Total (g/kg)	gram kilogram ratio	double	✓			
66	N-Total (g/kg)	gram kilogram ratio	double	✓			
Download Excel Template Delete Save Save as Cancel							

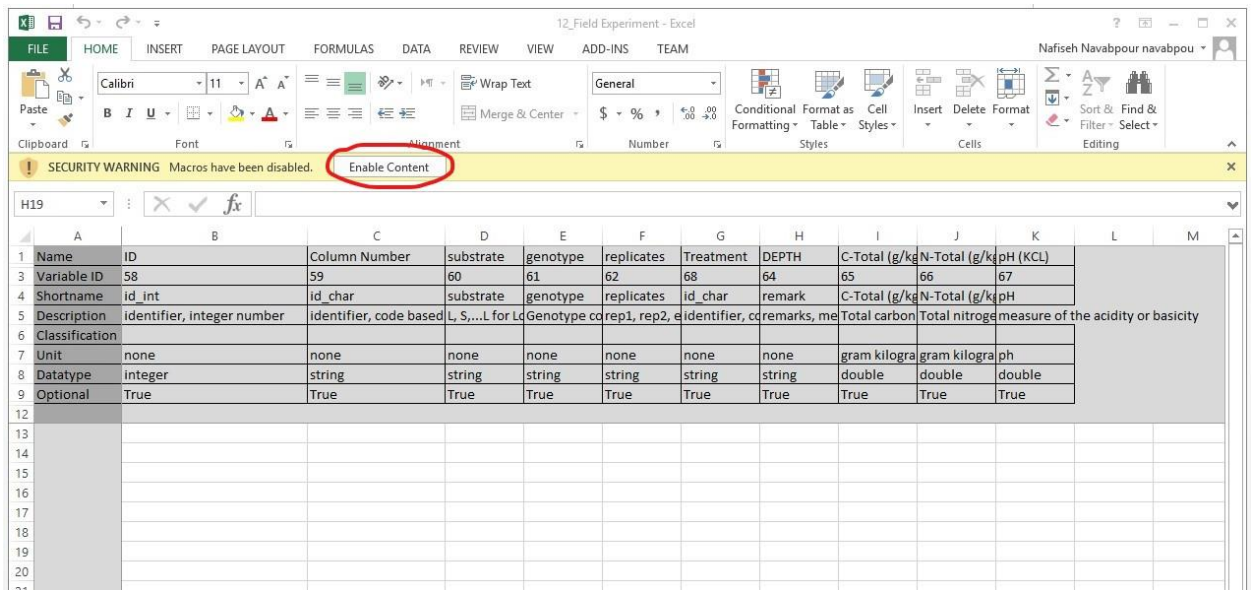
Save the Excel Template on in your favorite location.

How do I work with an Excel Template?

Excel Template is an excel file created by the system based on a Data structure. On the header you see information about variables, its units, data types and more. Excel Template can check the quality of data based on its Data Type and definition of being Optional.

Enable Macros

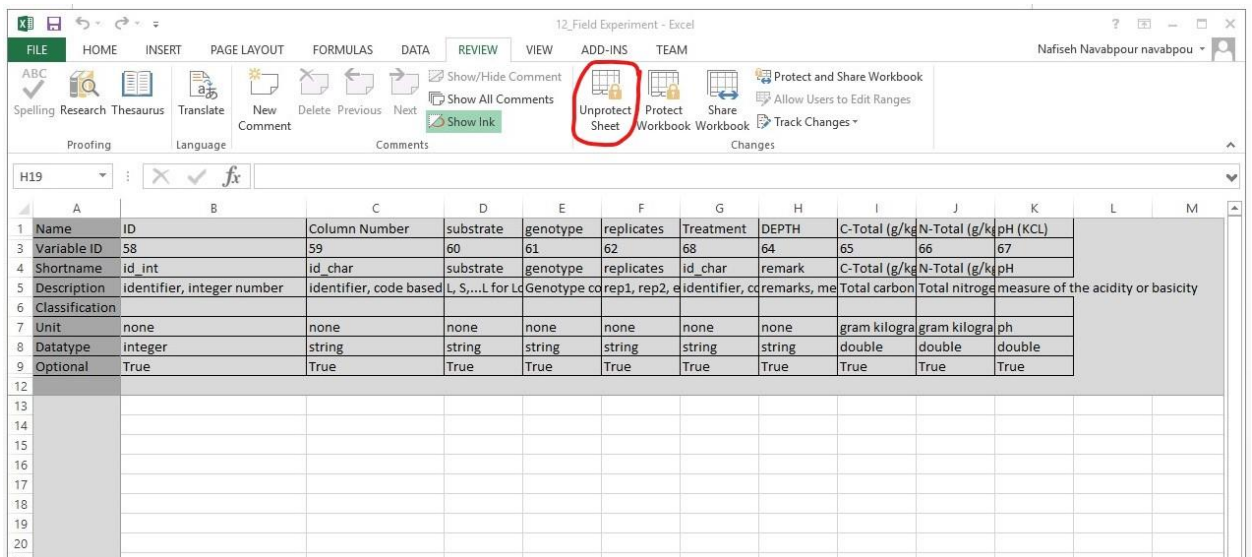
Open the Excel Template and enable macros for it. Macros automate frequently-used tasks, in our case quality check on the data table. Depending on what Microsoft version you use, enable or disable macros is a bit different. But, Macro security settings are generally located in the *Trust Center*.



Unlock the header

Header of an Excel template is locked. It is caused of conserving the data structure. You are able to unlock the header if you need to copy information from this part.

Click on the **Unprotect Sheet** option under **REVIEW** tab to unlock the header.



Note: Please don't touch this part and lock it again by clicking on the **Protect Sheet**.