Using BEXIS2 in SPP2089

Data Structure

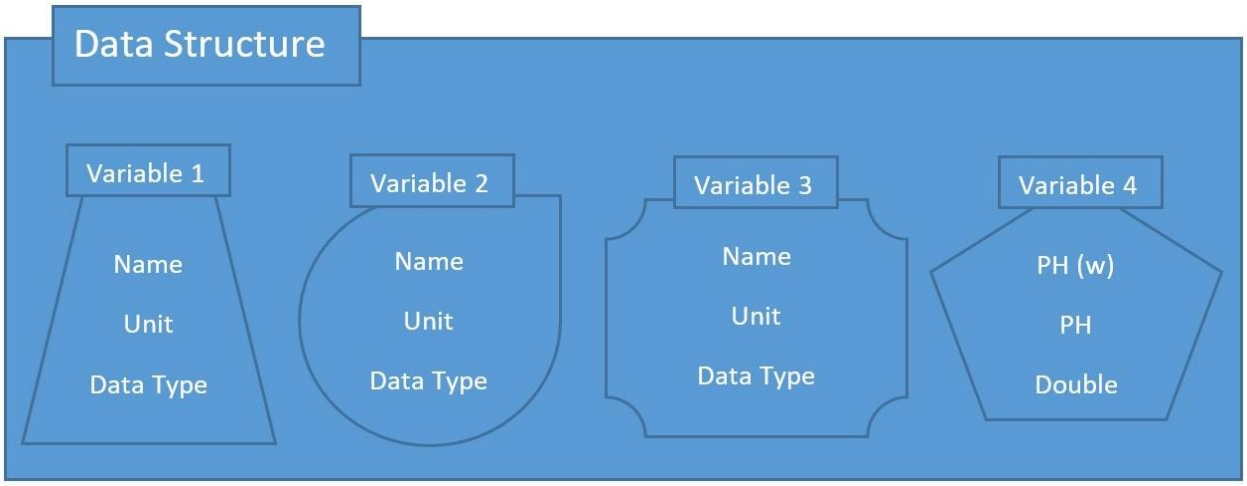
What does a Data Structure mean?

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).

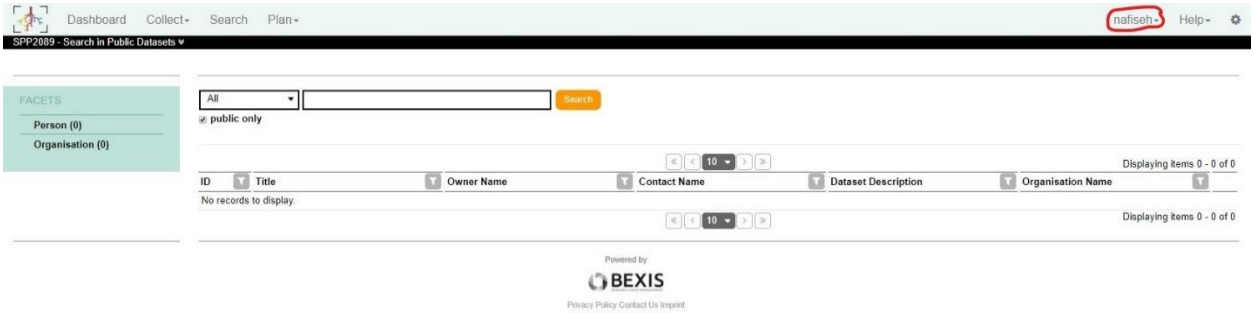
You can edit a Data Structure, but note that a Data Structure freezes once it is tied to a Dataset. In this case you have to create a copy of the Data Structure, edit it and tie to a new dataset.

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

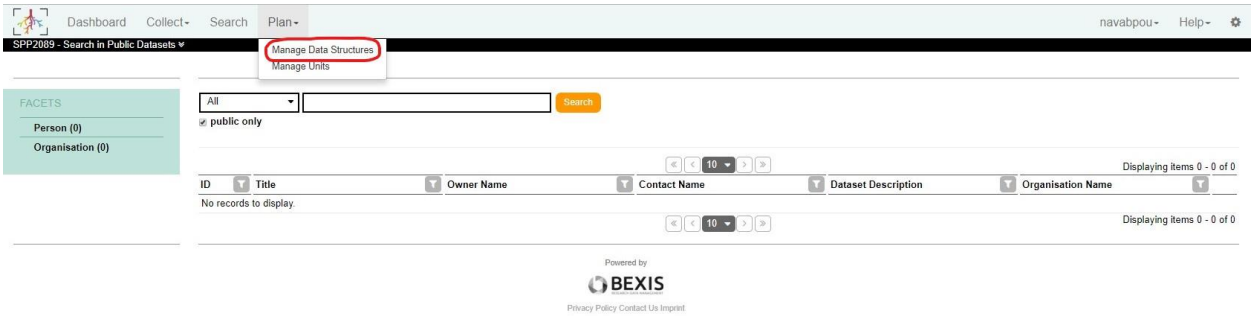


How do I create a Data Structure?

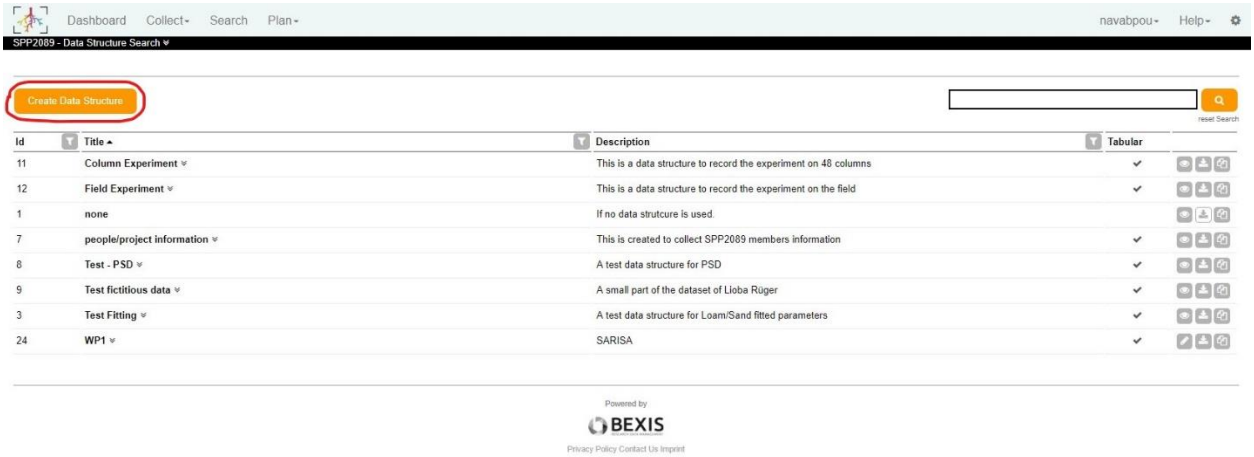
1. Be sure that you are logged in. Check if your username is written close the *Help* menu item.



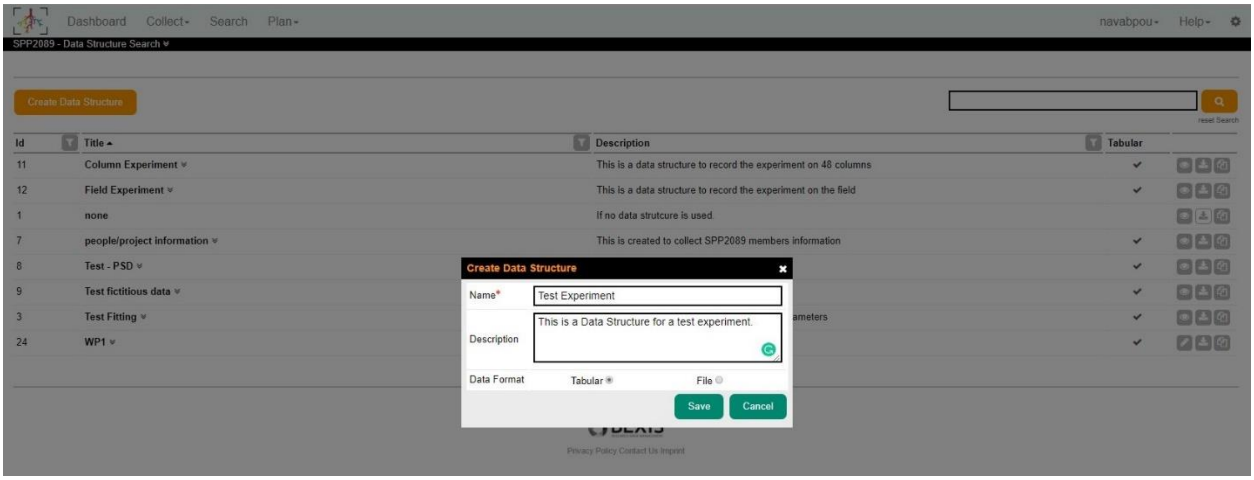
2. Click on **Manage Data Structure** under the **Plan** menu item.



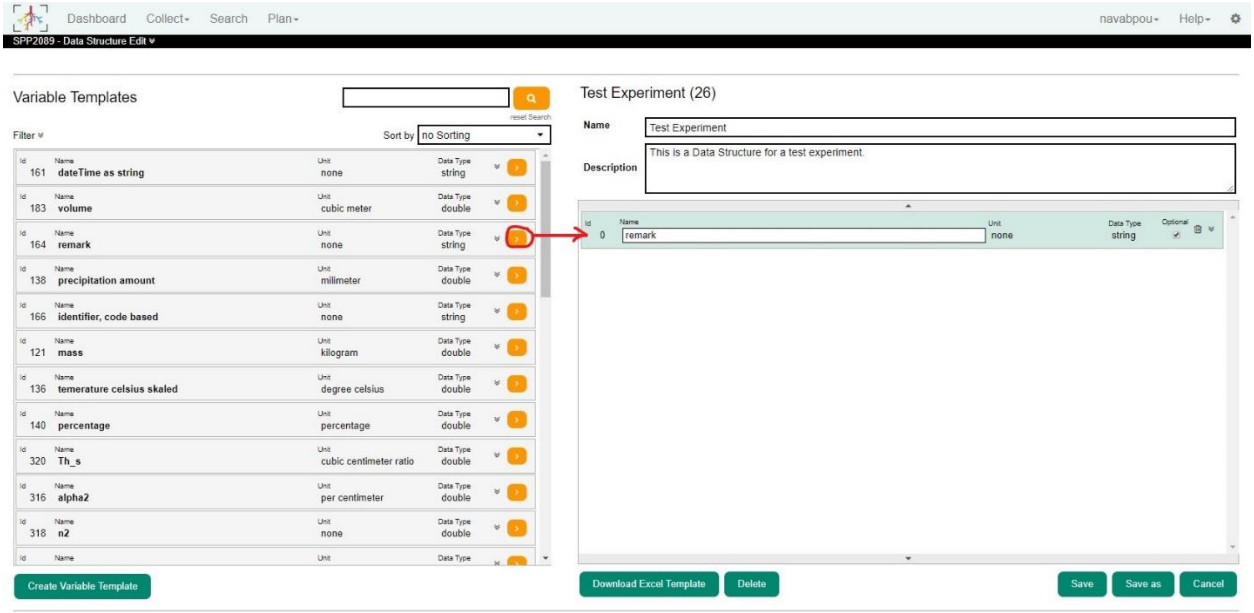
3. Click on the **Create Data Structure** button in the following window.



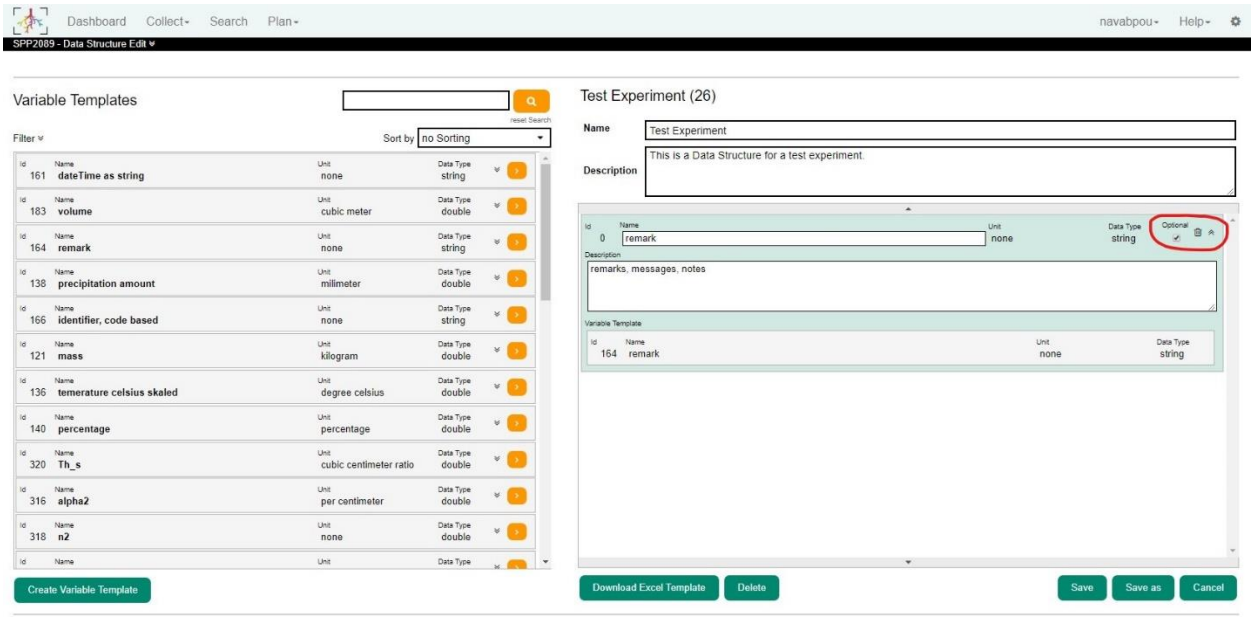
4. Fill the fields in opened modal window and click on the **Save** button. The **Name** is mandatory and please enter a descriptive description.
   Choose a **Data Format** compatible with your data structure. **Tabular** is for a data table and **File** is for non-structured data such a pdf file or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



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 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.

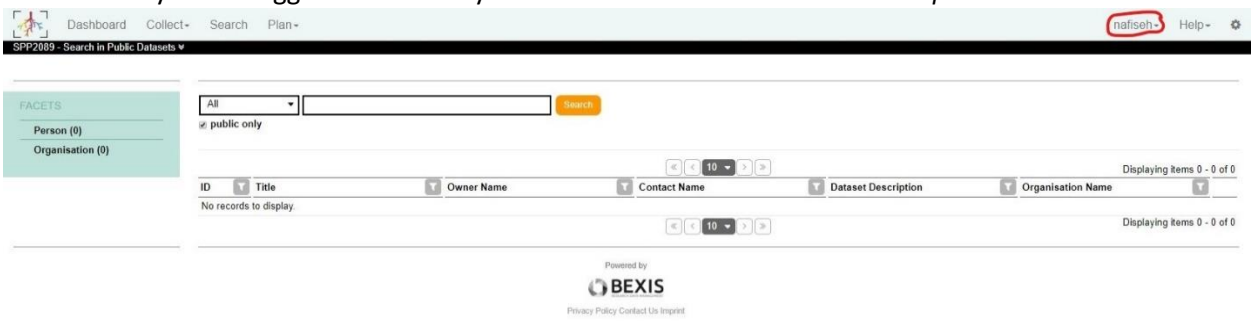


Searching, sorting and filtering are available when you are looking for a variable template.

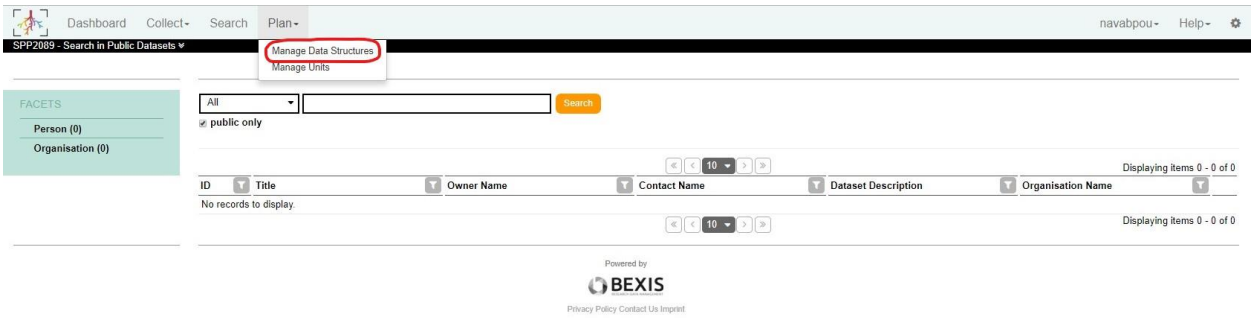
6. Click on the **Save** button to save the changes.

How do I edit a Data Structure?

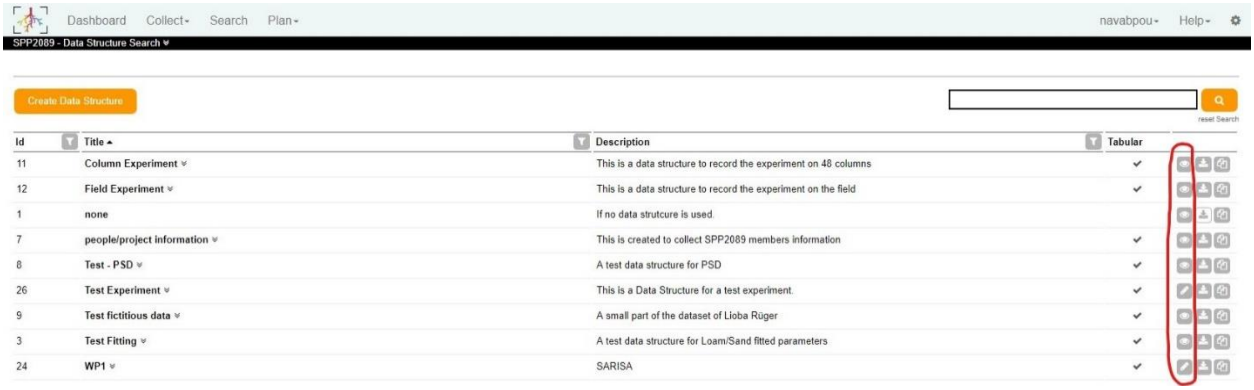
1. Be sure that you are logged in. Check if your username is written close the *Help* menu item.



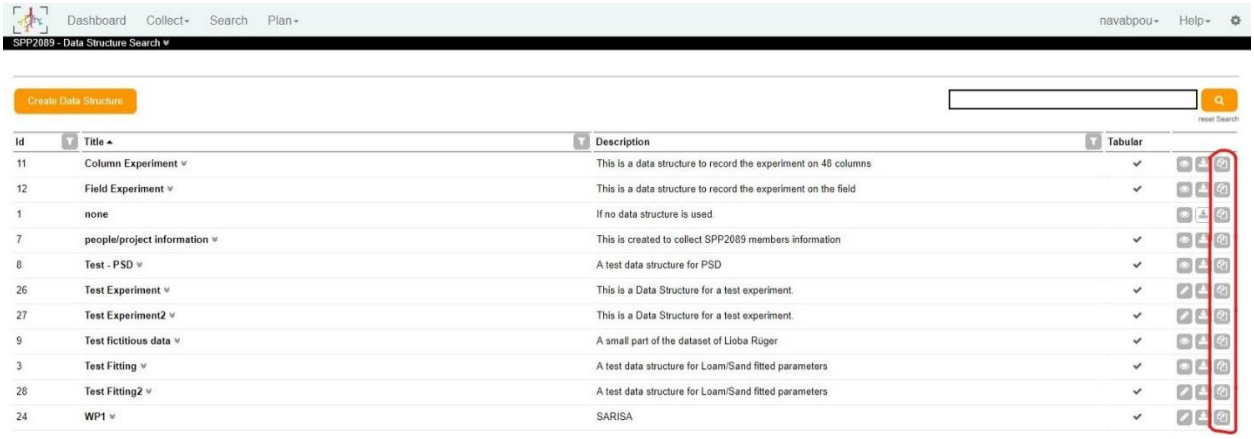
2. Click on **Manage Data Structure** under the **Plan** menu item.



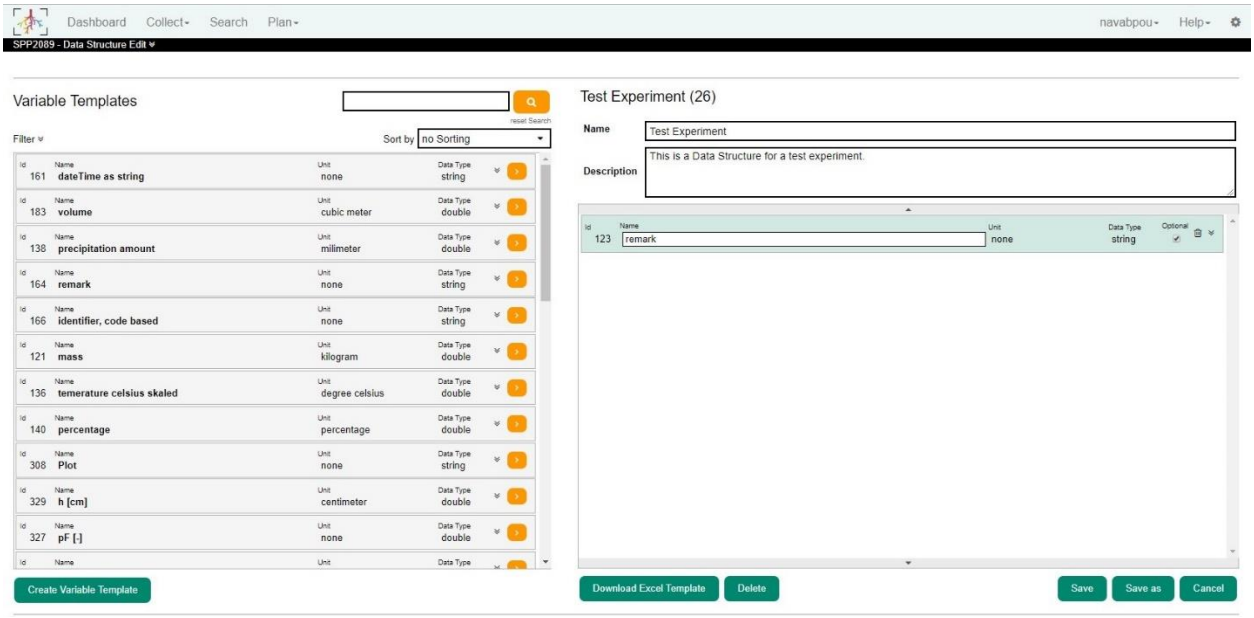
3. In the following page you can see different buttons close data structures. The **Eye** means that you are able to edit only the name and the description of a data structure. The **Pen** means that you are able to edit the structure in addition.



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.

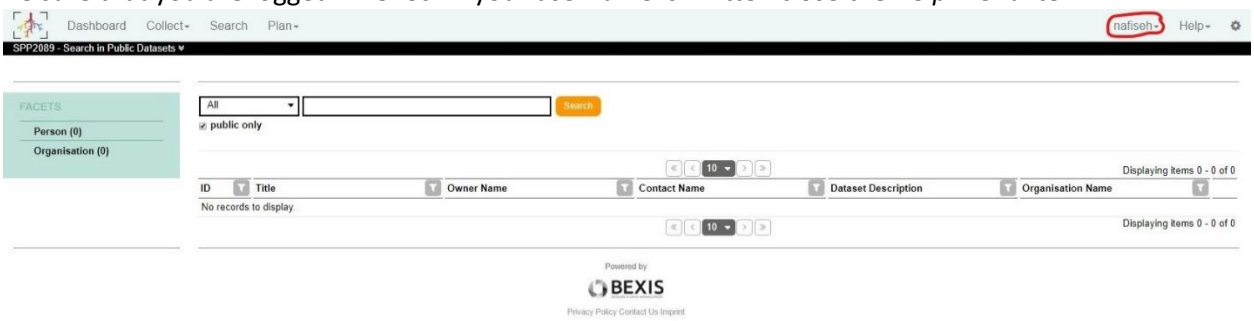


4. Edit the data structure and click on the **Save** button.

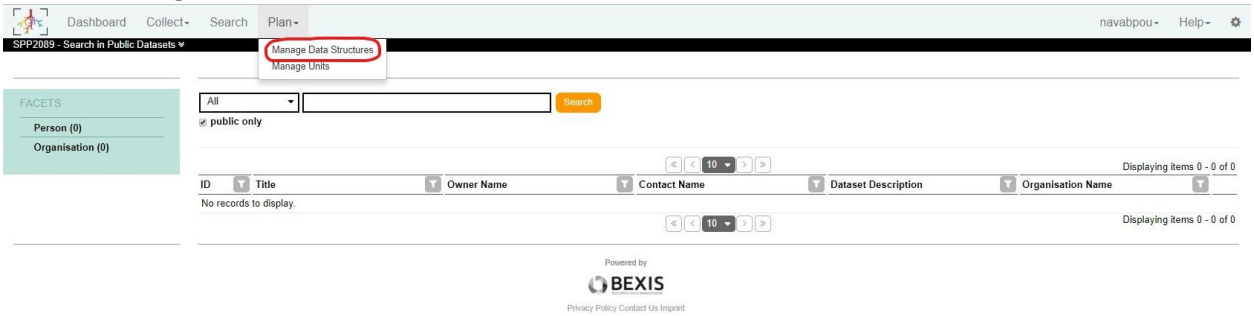


How do I download a Data Structure?

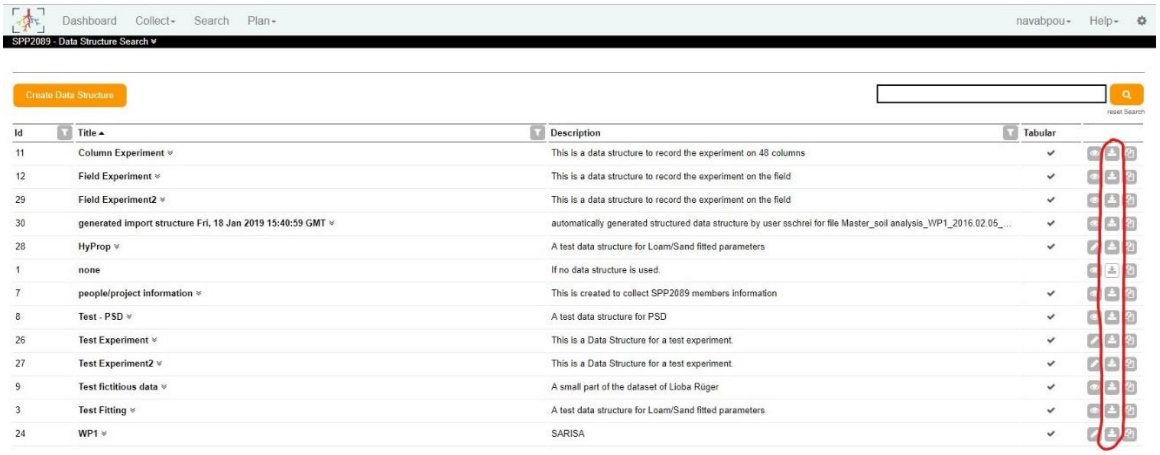
1. Be sure that you are logged in. Check if your username is written close the *Help* menu item.



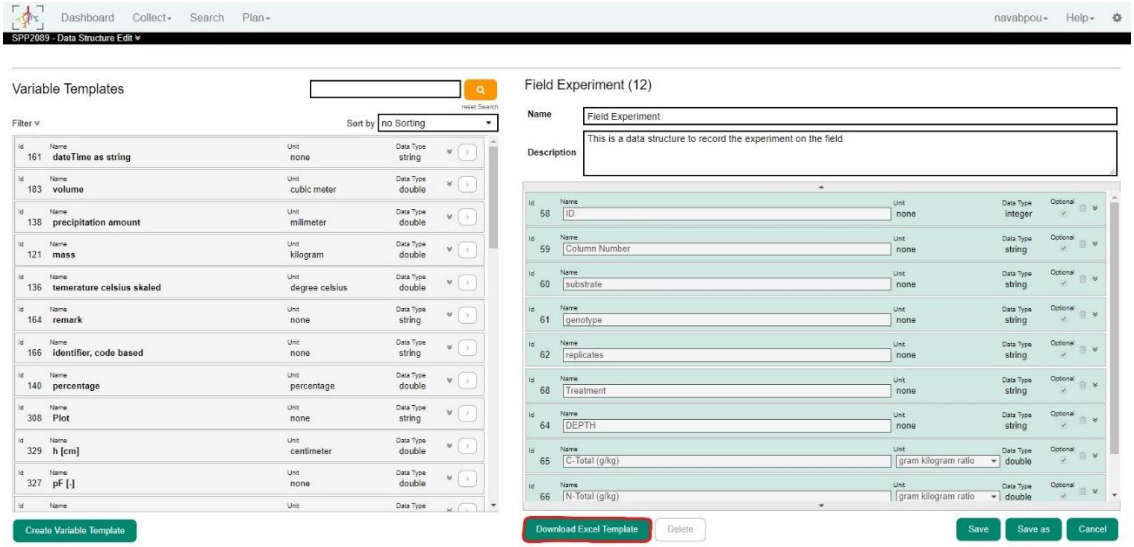
2. Click on **Manage Data Structure** under the **Plan** menu item.



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



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



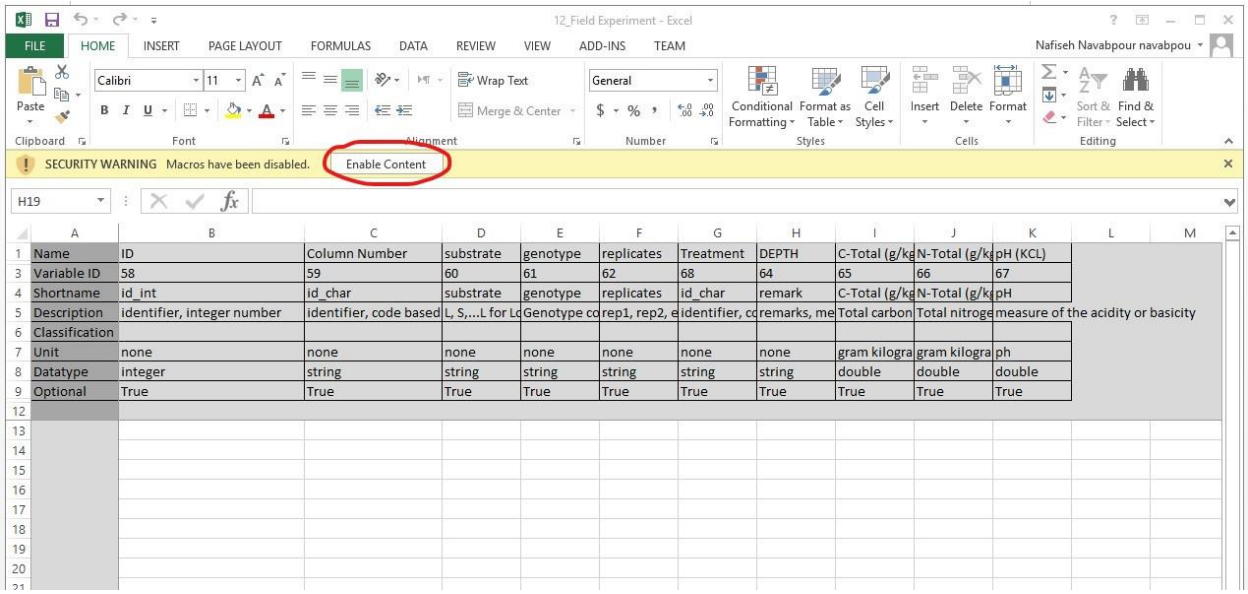
Save the Excel Template on in your favorite location.

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*.



	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 Lo	Genotype co	rep1, rep2, e	identifier, co	remarks, me	Total carbon	Total nitroge	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													
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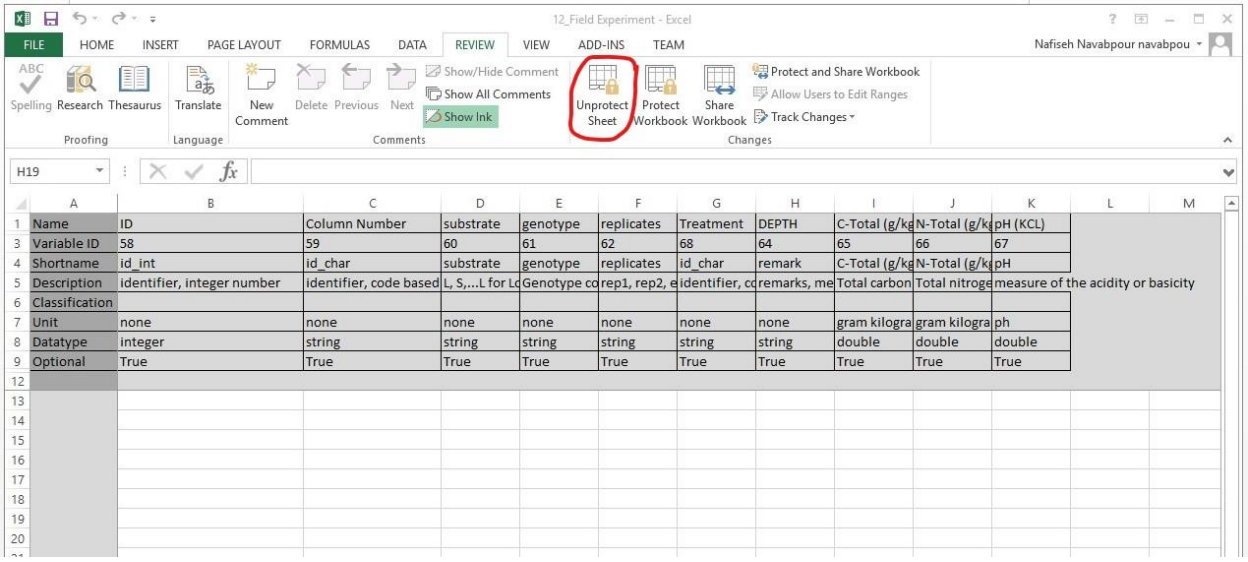
Unlock the header

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.



	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)		
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5	Description	identifier, integer number	identifier, code based	L, S,...L for Lo	Genotype co	rep1, rep2, e	identifier, co	remarks, me	Total carbon	Total nitroge	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													
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Note: Please don't touch this part and lock it again by clicking on the **Protect Sheet**.