



# Reportnet 3 Requester HowTo

(14-01-2022)

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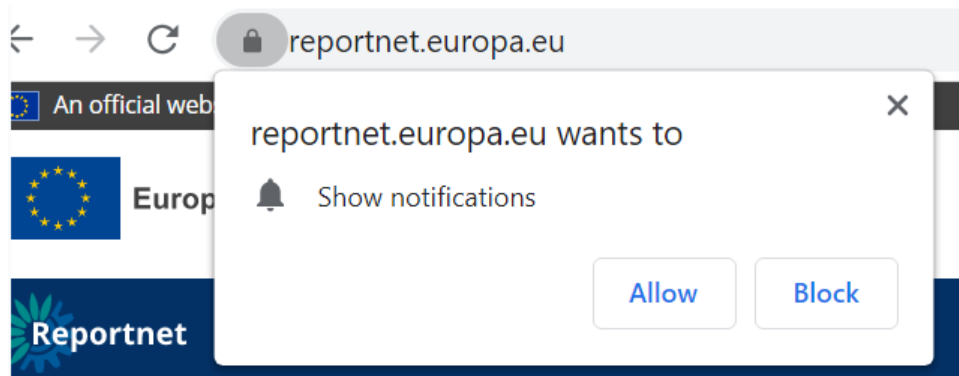
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# 1 User profile

## 1.1 How to log on to the production platform

1. Go to <https://reportnet.europa.eu/>
2. A notification for allowing notifications from Reportnet is displayed. It is recommended to allow them.



3. Following steps are detailed in a separate HowTo.
4. A dialogue with cookies information appears like in other EEA pages.

## 1.2 How to log on to the test platform

1. Go to <https://rn3test.eionet.europa.eu/>
2. Log on by using your email.

## 1.3 How to change my profile photo

1. On any screen, click on the **'User profile details'** button in the left context menu.
2. Click on the picture space to either select a default Avatar or upload your own photo.

## 1.4 How to change my global settings

1. On any screen, click on the **'User profile details'** button in the left context menu.
2. Available global settings can be managed from this page.
  - **Pagination rows** - Configure the number of rows displayed in the pagination.
  - **Date Format** - Select the desired date format to visualize.
  - **Theme** - Choose the theme to display in the system.
  - **Type of view** - Choose default layout to search obligations and dataflows.
  - **Logout confirmation** - Configure the way to logout with or without a confirmation popup.
  - **Basemap layer** - Configure the default basemap layer for your map.

## 1.5 How to log off

1. On any page, click on the power button in the top right or bottom left of the screen



- 
2. By default, you will be asked to confirm you wish to log off, however this can be turned off in your global settings or in the same pop-up window by clicking “Do not ask me again”.



## 2 Dataflows

### 2.1 Dataflows overview

#### 2.1.1 How to work with the dataflows page

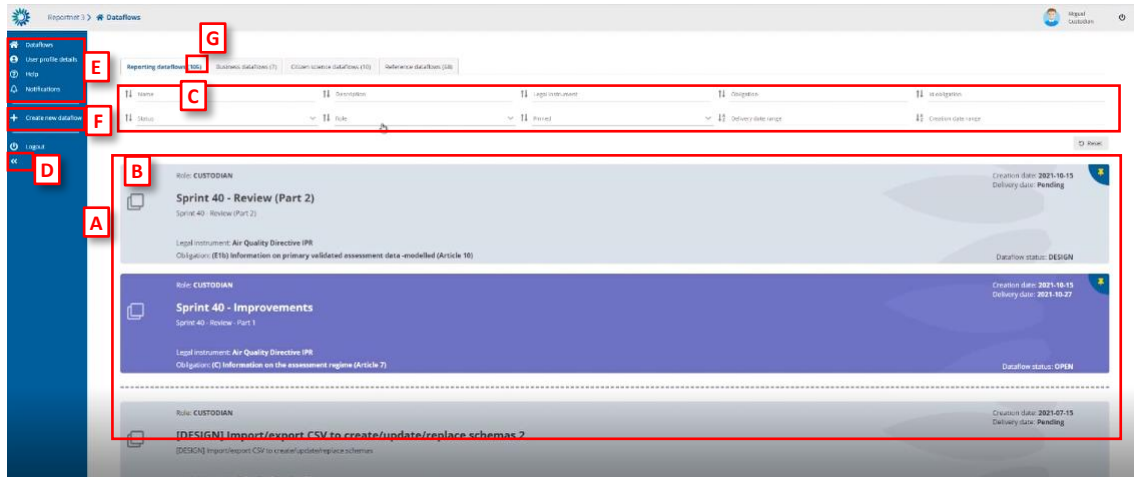


Figure 1 - Dataflows page

- [A] – The main part of the page comprises the list of dataflows which you have access to – ‘My dataflows’.
- [B] – A dataflow is colour coded according to the current status – grey in design and purple when reporting is open. On the dataflow card, you can see various metadata – Your role; Delivery date; Creation date; Dataflow name; Dataflow description; Associated obligation and instrument; Dataflow Status.
- [C] – Filters and sort on the various metadata of the dataflows list allow you to find things easily in the dataflows list.
- [D] – This button will expand the menu, to show the icon labels.
- [E] – The static menu is available on every page and has four buttons. From top to bottom, the buttons are:
  - My dataflows – will return you to this page.
  - User profile details – allows you to manage some global settings and see your user profile.
  - Help – Triggers a help walkthrough of the page you are currently on.
  - Notifications – Provides the history of all notifications (which appear in the top right of the screen) as a list.
- [F] – Below the line is the context menu. The context menu changes on each screen. On this screen, you can:
  - Create a new dataflow.
- [G] – Amount of this kind of dataflow.

#### 2.1.2 How to sort and filter my dataflow list

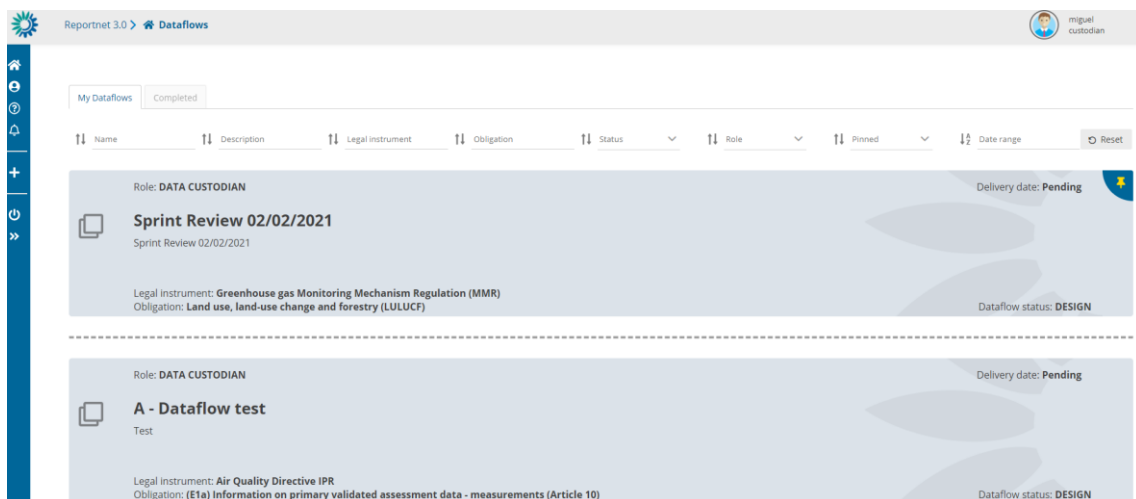
1. The dataflow list is by default ordered first by status (design dataflows at the top) and secondly by delivery date (descending).



- Each of the metadata fields on the dataflows (name, description, legal instrument, obligation, id obligation, status, role, pinned, delivery date range, creation date range (only available for custodians)) can be filtered or sorted on using the filter bar at the top of the dataflows list. The filters are applied on entering.
- Combinations of more than one filter can be used.
- The button on the right **'Reset'** will put the list back to its default state.

### 2.1.3 How to pin a dataflow

- There is a **pin** icon in the top right of each dataflow card.
- When clicking on pin, there is a notification message. The dataflow displays a pin icon in the right side and it goes to top of the list.
- When I have others already pinned, it keeps the same order criteria than when unpinned.
- When I unpin any, there is a notification message. The dataflow turns unpinned and come back to dataflow list following proper order criteria.



### 2.1.4 How to create a new data flow

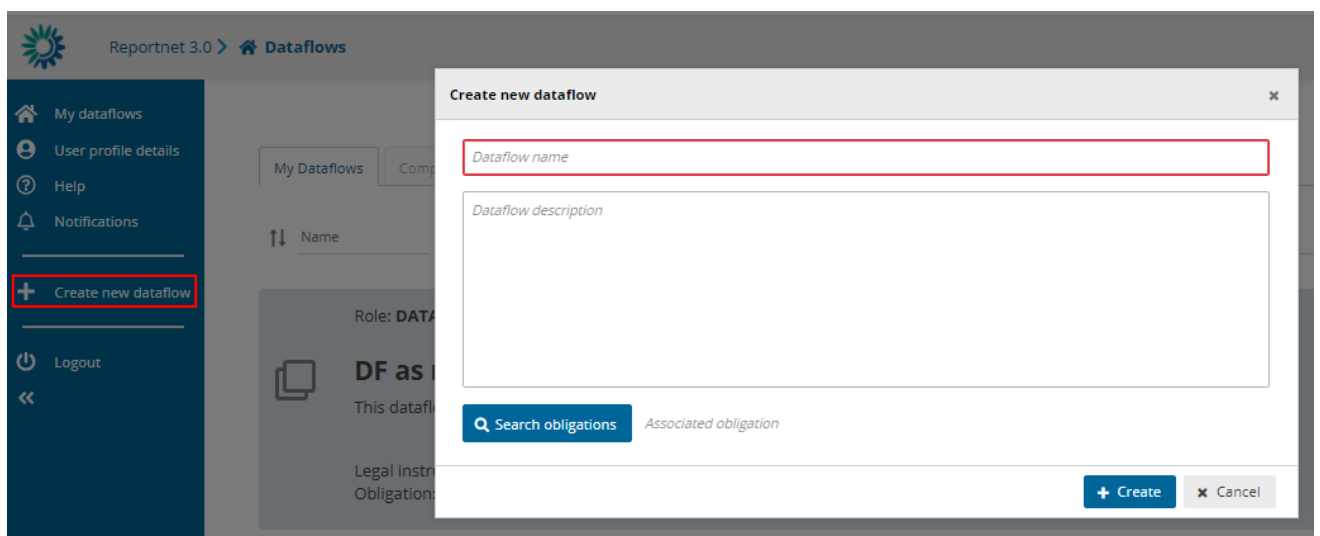


Figure 2 Create new dataflow

- Optional: Expand the left panel by clicking on the double **arrow at bottom left**.



2. Click on **'Create new dataflow'** in the left menu.
3. In the next dialogue window, provide your new dataflow some metadata – 'Dataflow name' and 'Dataflow description'. The name of the dataflow has to be unique across all dataflows and a notification error will pop up if the dataflow name already exists in the system. In this case, please choose another name for your dataflow.
4. Associate the dataflow to a reporting obligation in Reporting Obligations Database (ROD). Click on the **'Search obligations'** button and you will be taken to a new window. You are now looking at all the obligations stored in the ROD. To find the right obligation, you can either;
  - i. use the free text **search** field in the top left, or
  - ii. use the dropdowns to **filter** the list based on different metadata. To apply your filter, you need to press **'Apply filters'** button on the right, and you also need to press this button after you press **'reset'**.
  - iii. Once you have found your obligation, **select it** and press **'OK'** and you will be taken back to the previous window.
5. Click on **'Create'**.
6. You will now see your dataflow at the top of the list with a status of **'Design'** Delivery date **'Pending'** and associated with a reporting obligation.

### 2.1.5 How to create a new reference dataflow

A reference dataflow is a dataflow without ROD obligation (only name and description) with design schemas but without lead reporters. The reference dataset will be like DC, only read-only. Also, reference dataflows will have the information about the dataflows that are using it as reference.

All custodians/stewards/editor write could use this reference dataflow as external link.



Figure 3 Reference dataflows



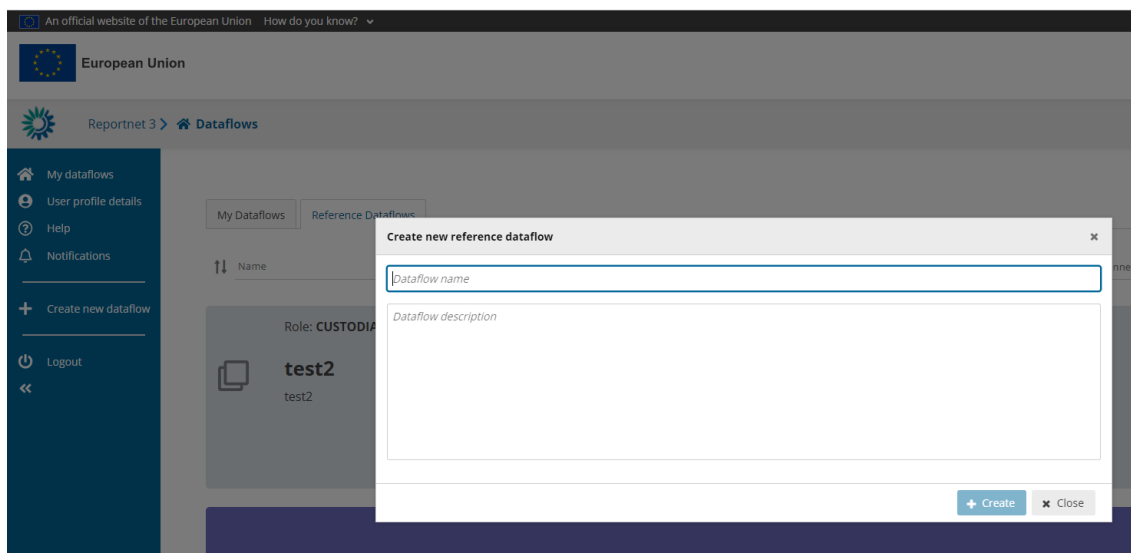


Figure 4 Create new reference dataflow

1. Optional: Expand the left panel by clicking on the double **arrow at bottom left**.
2. Click on **'Create new dataflow'** in the left menu.
3. In the next dialogue window, provide your new dataflow some metadata – 'Dataflow name' and 'Dataflow description'. The name of the dataflow has to be unique across all dataflows and a notification error will pop up if the dataflow name already exists in the system. In this case, please choose another name for your dataflow.
4. Click on **'Create'**.
5. You will now see your dataflow at the top of the list with a status of *'Design'*.

### 2.1.6 How to create a new business dataflow

Only a user with admin role can create this business dataflows. As a custodian or steward you could see the list of business dataflow.

To create a business dataflow you need to add a name, description, obligation, select the group of companies to user in the manage lead reporters and the FME user.

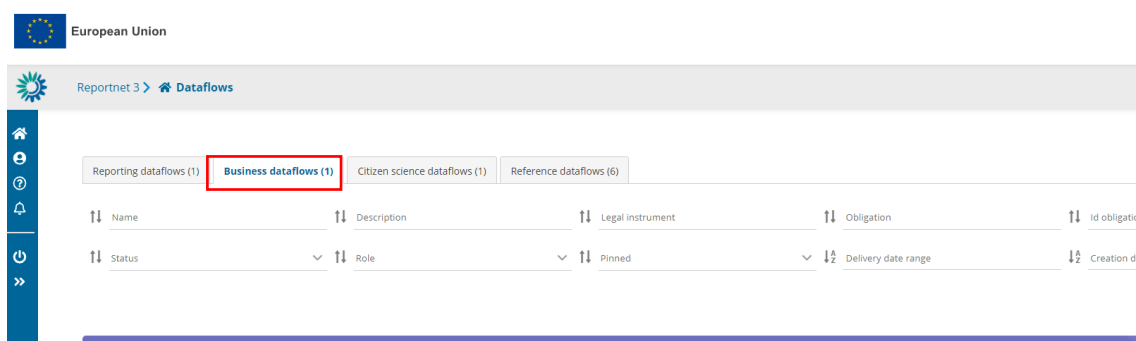


Figure 5 Business dataflows

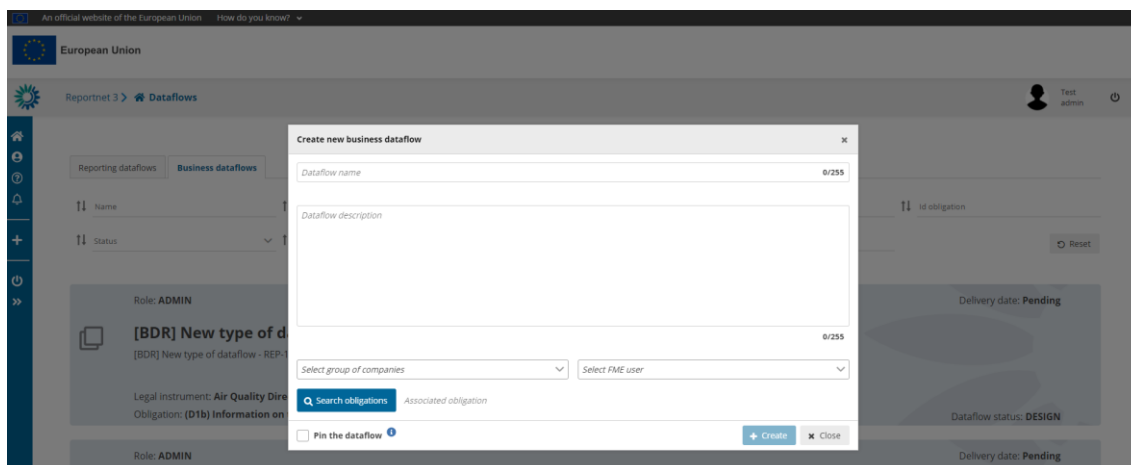


Figure 6 Create new business dataflow

1. Optional: Expand the left panel by clicking on the double **arrow at bottom left**.
2. Click on **'Create new dataflow'** in the left menu.
3. In the next dialogue window, provide your new dataflow some metadata – 'Dataflow name', 'Dataflow description', 'Group of companies' and 'FME user'. The name of the dataflow has to be unique across all dataflows and a notification error will pop up if the dataflow name already exists in the system. In this case, please choose another name for your dataflow.
4. Associate the dataflow to a reporting obligation in Reporting Obligations Database (ROD). Click on the **'Search obligations'** button and you will be taken to a new window. You are now looking at all the obligations stored in the ROD. To find the right obligation, you can either;
  - i. use the free text **search** field in the top left, or
  - ii. use the dropdowns to **filter** the list based on different metadata. To apply your filter, you need to press **'Apply filters'** button on the right, and you also need to press this button after you press **'reset'**.
  - iii. Once you have found your obligation, **select it** and press **'OK'** and you will be taken back to the previous window.
5. Click on **'Create'**.
6. You will now see your dataflow at the top of the list with a status of **'Design'**.

### 2.1.7 How to create a new citizen science dataflow

As a custodian or steward you could see the list of citizen science dataflows.

To create a citizen science dataflow you need to add a name, description and obligation.



Figure 3 Citizen science dataflows

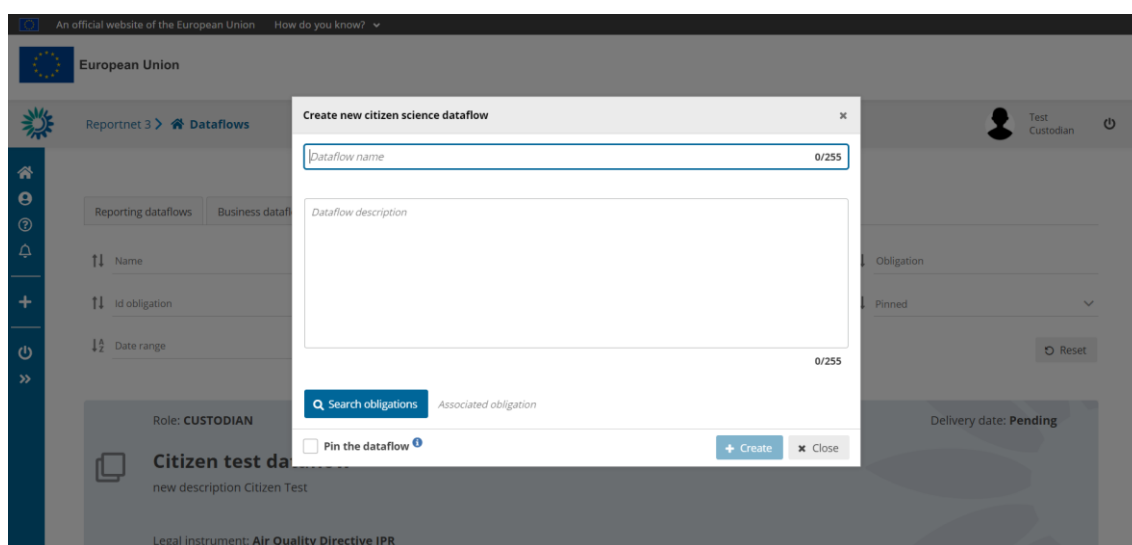


Figure 7 Create new citizen science dataflow

7. Optional: Expand the left panel by clicking on the double **arrow at bottom left**.
8. Click on **'Create new dataflow'** in the left menu.
9. In the next dialogue window, provide your new dataflow some metadata – 'Dataflow name' and 'Dataflow description'. The name of the dataflow has to be unique across all dataflows and a notification error will pop up if the dataflow name already exists in the system. In this case, please choose another name for your dataflow.
10. Associate the dataflow to a reporting obligation in Reporting Obligations Database (ROD). Click on the **'Search obligations'** button and you will be taken to a new window. You are now looking at all the obligations stored in the ROD. To find the right obligation, you can either;
  - i. use the free text **search** field in the top left, or
  - ii. use the dropdowns to **filter** the list based on different metadata. To apply your filter, you need to press **'Apply filters'** button on the right, and you also need to press this button after you press **'reset'**.
  - iii. Once you have found your obligation, **select it** and press **'OK'** and you will be taken back to the previous window.
11. Click on **'Create'**.



12. You will now see your dataflow at the top of the list with a status of 'Design'.
13. You will be able to do everything like in a reporting dataflow but with organizations instead of countries.

## 3 Dataflow in design phase

### 3.1 Dataflow management

#### 3.1.1 Permissions depending on user role

Different permission depending on role during dataflow in design phase:

- **Custodian** – Write permission
- **Steward** – Write permission
- **Editor write** – Write permission
- **Editor read** – read-only permission.

#### 3.1.2 How to work with the dataflow page

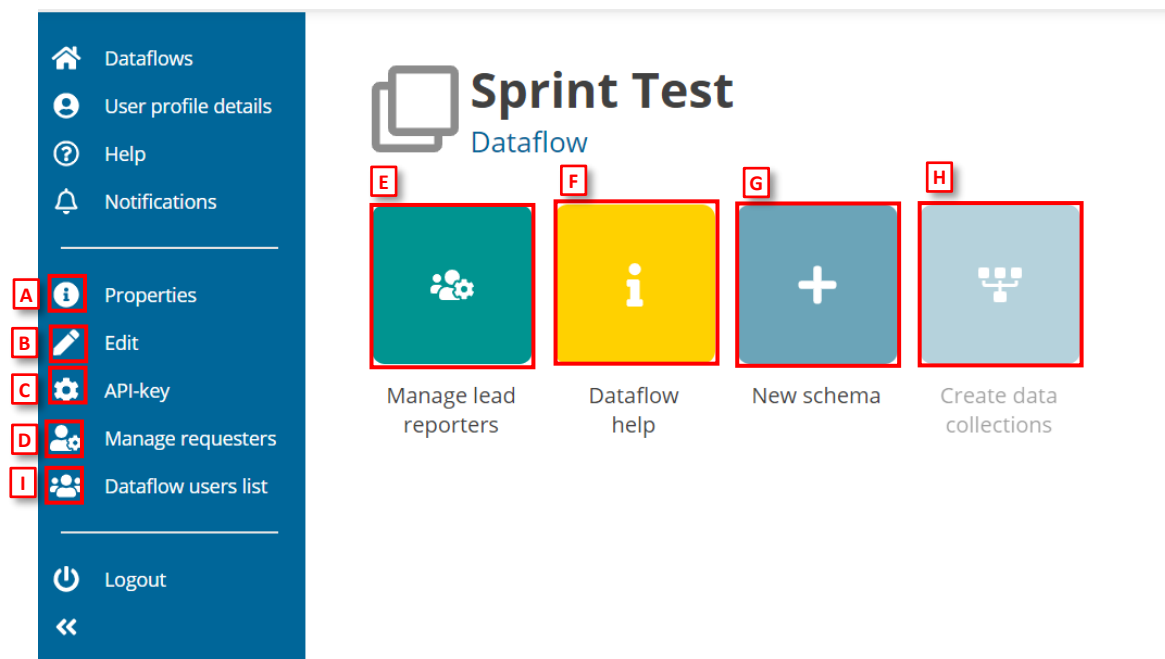



Figure 8 - Dataflow page – design phase

- [A] – The icon marked with 'i' will display the information regarding the dataflow, reporting obligation and legal instrument (extracted from ROD).
- [B] – The pencil icon enables to edit the name, description or associated obligation of the dataflow as well as to delete it (explained in 3.1.2).
- [C] – The cog button displays the API key and other parameters for accessing Reportnet3 programmatically (explained in 3.1.6).
- [D] – This button displays a dialogue to manage (add) other users to collaborate in the dataflow design.



- [E] – This button displays a dialogue to manage (add) lead reporters to the dataflow (explained in 3.1.78).
- [F] – For accessing to the dataflow help page (explained in 3.2).
- [G] – By clicking on ‘New schema’, you can create a new dataset schema or clone an existing one (explained in 3.3).
- [H] – The ‘Create data collections’ button publishes the dataflow out to the reporters. It is enabled when there is a schema, and a reporter has been added (explained in 3.1.10).
- [I] – This button displays a dialogue with the users assigned to this dataflow (explained in 3.2.5).

For an admin role we have a button ‘Datasets info’  where we can see the list of all datasets (design, reporting, reference, test, DC and EU) with the name and the ID. It is possible to filter the list by name, type and country/organization/company

### 3.1.3 *How to change the name, description, or associated obligation of my dataflow (only in design phase)*

1. Go to the dataflow page.
2. Click on ‘**Edit**’ button in the left context menu.
3. In the next ‘*Update dataflow*’ dialogue window you can edit the name or description.
  - i. On business dataflows, if you have an admin role, you can edit name, description, group of companies, FME user and obligation.
  - ii. On business dataflows, if you have a custodian/steward with permissions assigned for this kind of dataflow, you can edit name, description and obligation.
4. Click on the ‘**Search**’ button and you will be taken to a new window where you can select a new obligation and press ‘**OK**’ to return to the ‘*Update dataflow*’ window.
5. Click ‘**Save**’ to update the dataflow and return to the dataflow page.

### 3.1.4 *How to delete my dataflow (only in design phase)*

1. Go to the dataflow page.
2. Click on ‘**Edit**’ button in the left context menu.
3. In the next ‘*Update dataflow*’ dialogue window click on the ‘**Delete this dataflow**’ button.
4. Follow the instructions in the dialogue window to delete the dataflow.



### 3.1.5 How to add a dataset schema



Figure 9 Add dataset schema

1. Go to the dataflow page.
2. Click on the **'New item'** button and either select **'New empty dataset schema'** or **'clone all schemas from dataflow'**.
3. [A] For new empty schema, in the dialogue give your dataset schema a name.
4. Click on **'Create'**.
5. [B] For cloning an existing dataflows schema, in the dialogue select the dataflow you wish to copy the schema from.
6. Click on **'Close selected dataflow'**.
7. After cloning, you can rename your schema.
8. [C] For importing schema, you will need to import a zip file and upload it (explained in section 3.1.6).

### 3.1.6 How to rename or delete my dataset schema

1. Go to the dataflow page.
2. Click on the **down arrow** on the design schema icon to bring up a small menu.
3. Click on 'rename' and give your schema new name OR click on 'delete' to remove it.

### 3.1.7 How to import and export schemas

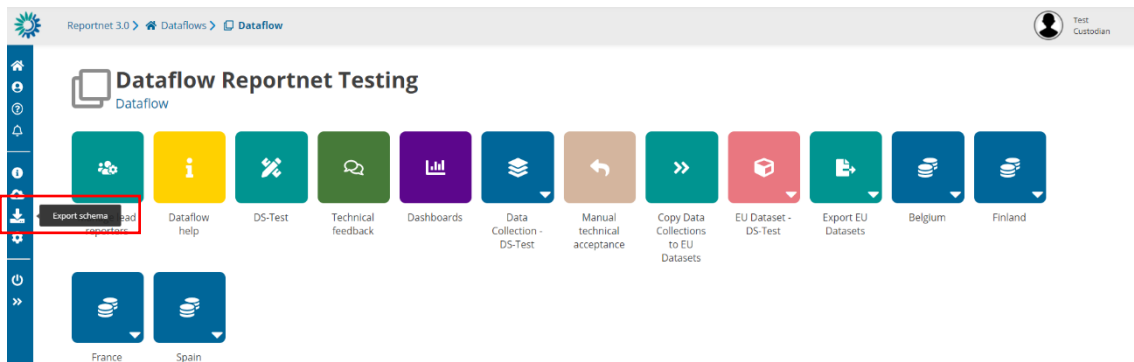


Figure 10 Export schema



In order to export a schema from one dataflow with complete information (all datasets, tables, fields, webforms, QCs, uniques, external integrations...) you have to click on button “**Export schema**” and a file will be generated.

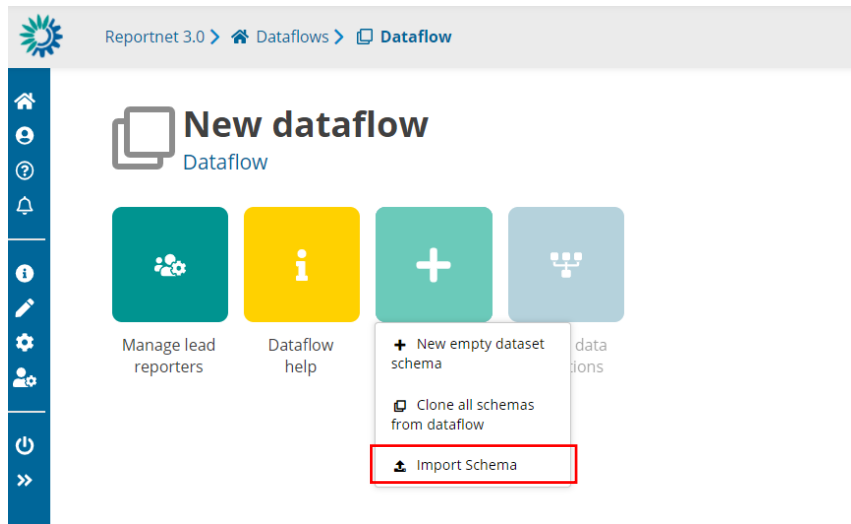


Figure 11 Import schema

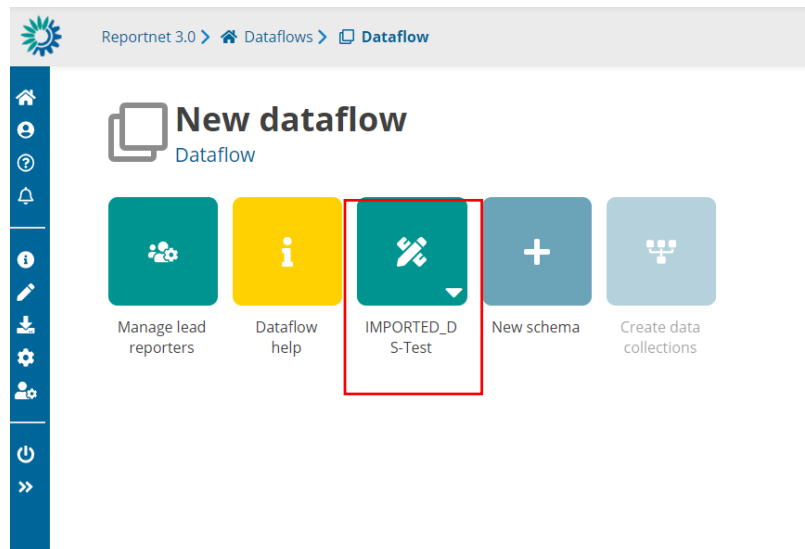


Figure 12 Generated schema

If you want to import a schema from one dataflow with complete information (all datasets, tables, fields, webforms, QCs, uniques, external integrations...) you have to click on **New schema** and click the option “**Import Schema**” where you can upload a file. A new schema will be generated based on the file uploaded. Schema name can be changed.



### 3.1.8 How to generate API-key

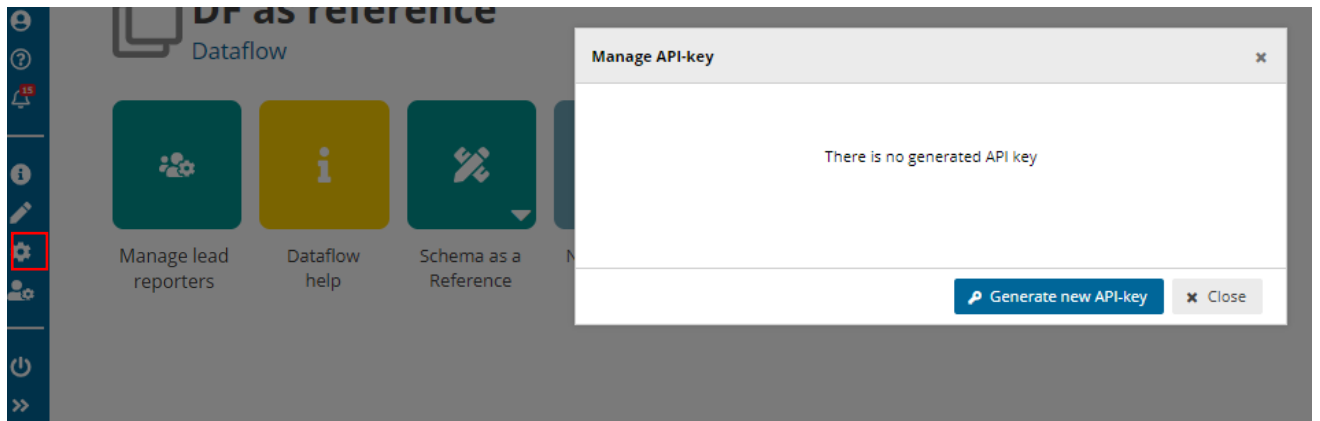


Figure 13 Manage API-key

1. Go to the dataflow page.
2. There will not be API generated if it is the first time for the user.
3. Click on '**Generate new API-key**'.

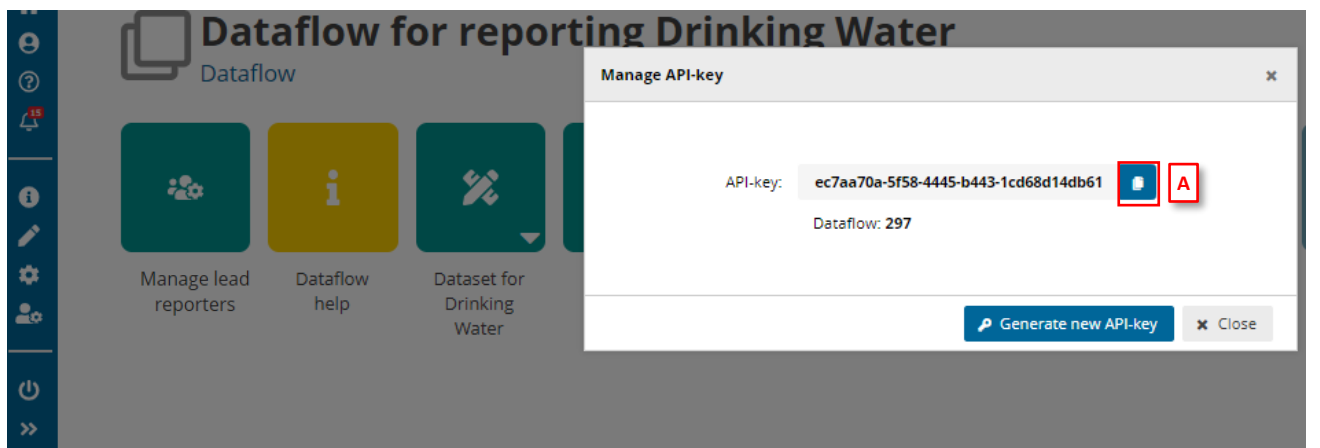


Figure 14 Generate API-key

4. Once the API-key is generated, it can be copied on clipboard using [A].
5. Different API-keys will be generated every time user clicks on 'Generate new API-key'.
6. API-key could be used as explained in 3.3.18.





### 3.1.9 How to add collaborators to support design of my dataflow

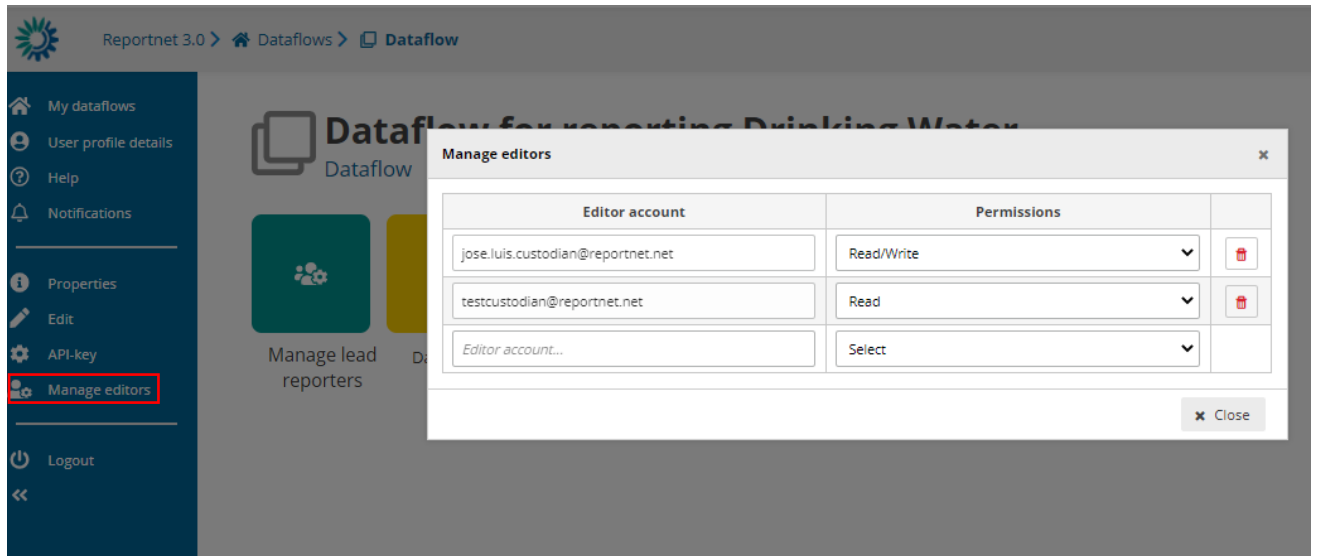


Figure 15 Manage editors

1. Go to the dataflow page.
2. Click on the double arrow at bottom left to expand the left menu, and click on the button **'Manage editors'**.
3. A pop-up will appear where you can add editors.
4. Add the editors accounts. Under the account field, add the registered users email address and select an editor level of **'read'** or **'read-write'**. Click on the dialogue away from the input fields.
  - i. If the system cannot find the email as a registered user, then a red box will appear around the email address.
  - ii. If it is accepted, then you will be able to add another editor (the account field is automatically generated after a successful entry) and so on.

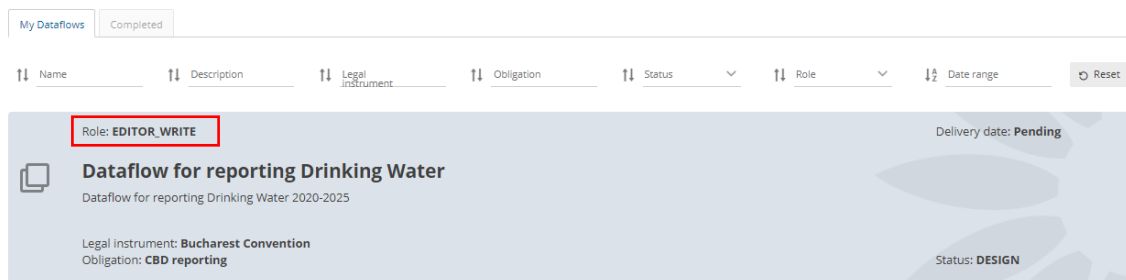


Figure 16 Editor write

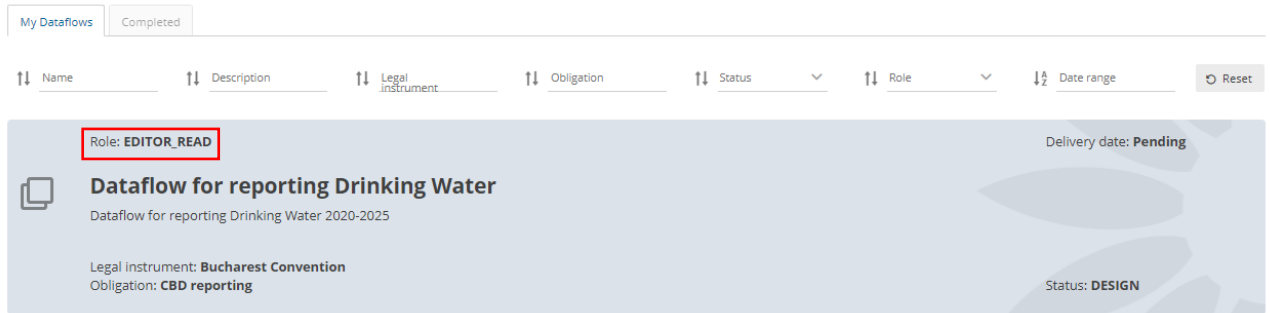


Figure 17 Editor read

5. Note: 'read' can only see the dataflow schema through the 'Dataflow help' -> 'Dataset schemas' page
6. Once you have added all your editors click 'Close'.
7. Note: Once the dataflow moves to Draft status, these collaborators are removed.

3.1.10 How to add lead reporters to my dataflow

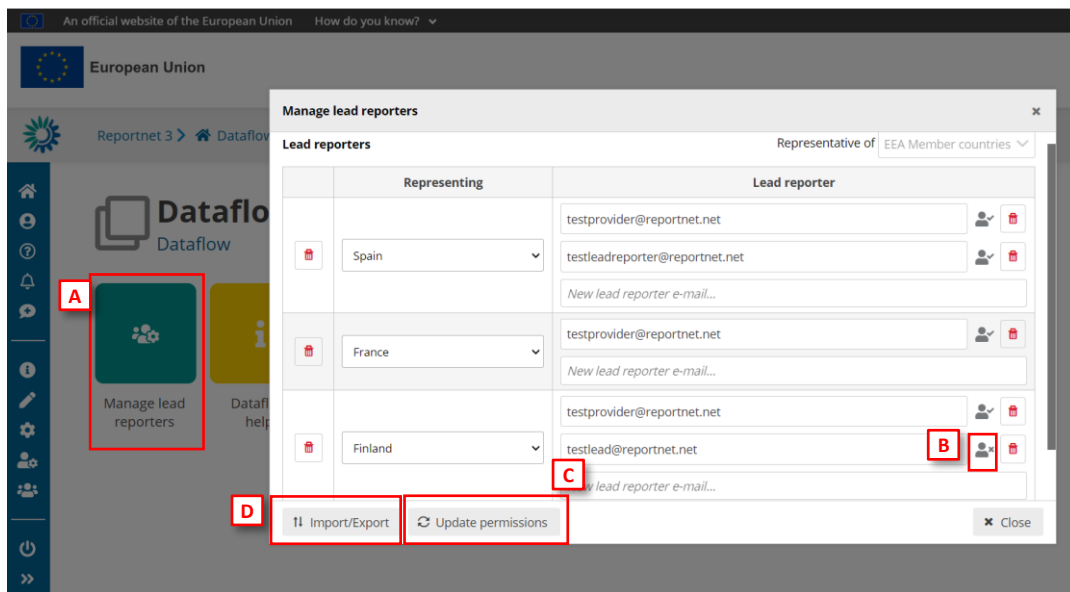


Figure 18 Manage reporters

1. Go to the dataflow page.
2. Click on the button 'Manage reporters' [A].
3. A pop-up will appear where you can add reporters.
4. On 'Representative of' drop down, choose either 'EEA Member countries' or 'All countries: EEA Member countries PLUS other countries and territories'. This changes the countries available to assign reporters to, depending on the needs of the reporting obligation.
5. Add the lead reporter accounts. Under the account field, add the registered users email address and select a country. Click on the dialogue away from the input fields.



- i. If the system cannot find the email as a registered user, then a red box will appear around the email address and an icon indicating the user is not valid [B]. Moreover, you have a button “Update the permissions” [C] to check if the user is or not created and has permissions.
  - i. If it is accepted, then you will be able to add another reporter (the account field is automatically generated after a successful entry) and so on.
6. In addition, you can load the **lead reporters** [D] with a CSV file.
    - i. If a country-reporter exists previously, it will be skipped.
    - ii. If there are errors on the CSV file, they will be skipped, and a CSV will be downloaded with the records with fails and a message (user or country does not exist)
  7. You can add multiple reporters in the same country.
  8. Moreover, you can export a CSV [D] with the current **lead reporters**.
  9. You can export a template file to managing the reporters with the representatives for the group selected.
  10. Once you have added all your reporters click ‘Close’.

### 3.1.11 How to create the data collection and start reporting

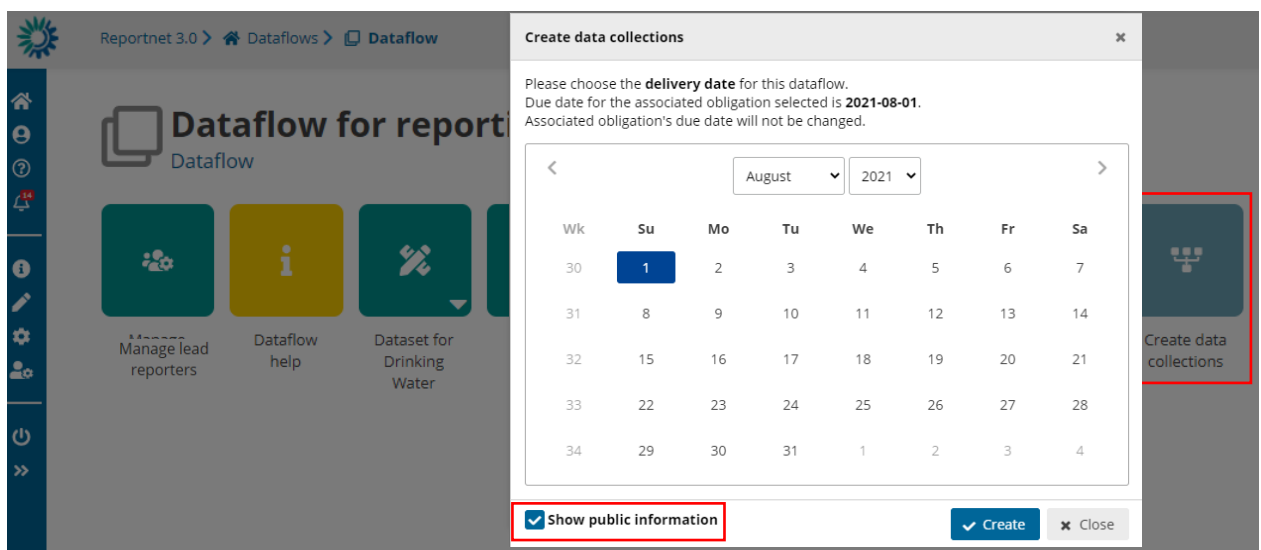


Figure 19 Create Data Collection

1. Go to the dataflow page.
2. If you have added at least one registered user as a reporter and created a dataset schema, then the ‘Create data collections’ button will be enabled.
3. Click the ‘Create data collections’ button. A warning appears when there are any QC disabled or SQL QCs invalid (and the count of each type).
4. In the data selection dialogue, you choose the closing data for the reporting. If it exists, the delivery date is automatically taken from the metadata in ROD, but you can override it here. Leave the date or select a new one.
5. By default, option to “Show public information” is selected, meaning that this dataflow will be on the list of reported data publicly available (View by obligation <https://reportnet.europa.eu/public/dataflows> or View by country



<https://reportnet.europa.eu/public/countries>). This attribute can be changed afterwards (see section 3.1.11). “BDR Dataflow” will have only the Dataflow Help part visible.

6. Click on **‘Create’**.
7. A confirmation dialogue appears to warn the user that edition related to design datasets (tables, fields, QC's, snapshots, etc) will be no longer allowed.
8. There is the possibility to add a technical acceptance step for the reporter submissions (explained in section 4.1.7).

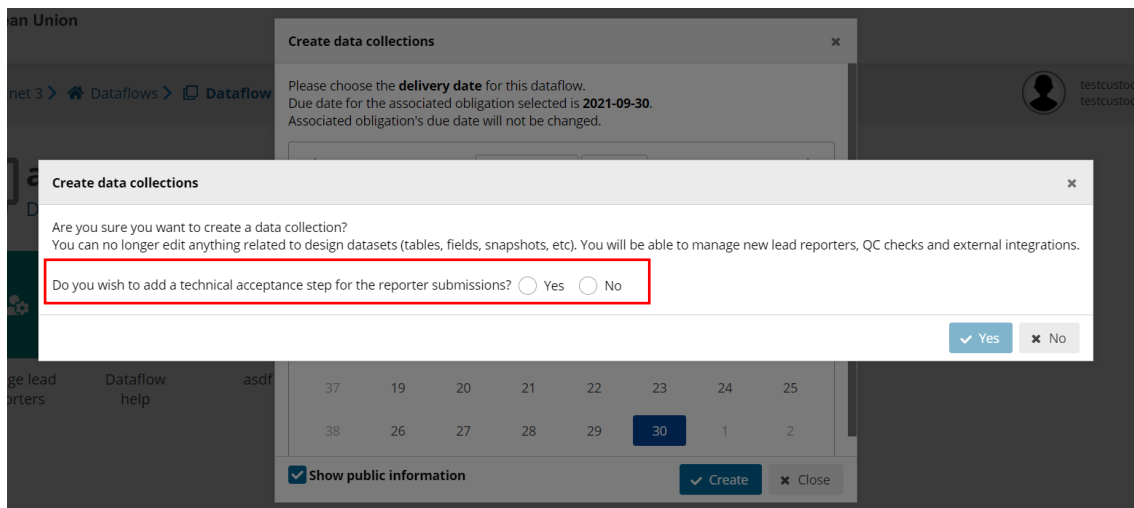


Figure 20 Technical Acceptance

9. You are returned to the dataflow page. The view now changes so you can see the data collection, which contains all data which has been released by the countries, a status dashboard and the individual reporter datasets, which contain the latest version of the data.
10. Go back to the dataflows list and you will see status and colour of dataflow has now changed.
11. Reporting has now been opened and the dataflows assigned to all the reporters.
12. Go to Section 4 ‘Dataflow in reporting phase’ for further help.



### 3.1.12 How to change Public status

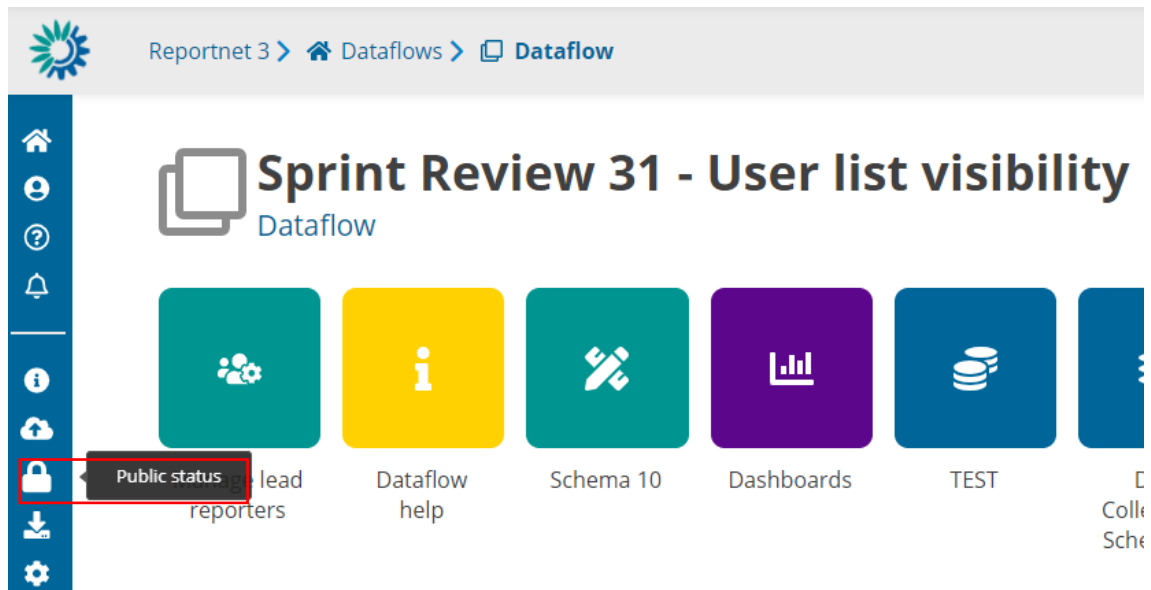


Figure 21 Public status

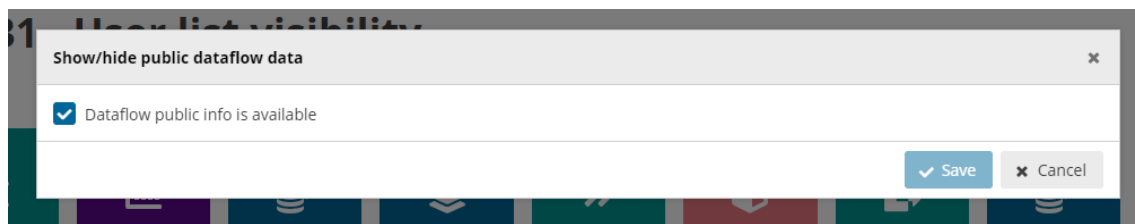


Figure 22 Public status confirmation

1. In a dataflow in open status, public attribute can be changed from “**Public status**” button in left bar.
  - i. This option is not available for business dataflows.



## 3.2 Dataflow help

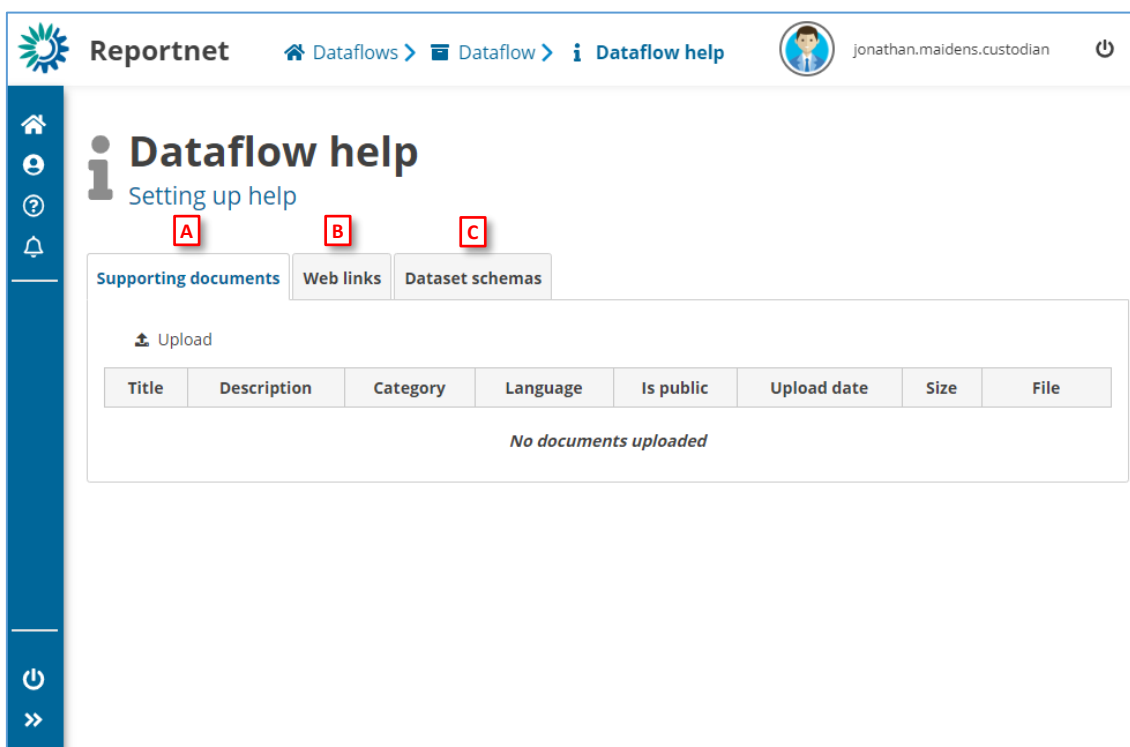


Figure 23 - Dataflow help page

- [A] – Upload the documents to support the data delivery for example reporting guidance or templates.
- [B] – Add the web links to external resources relevant to the reporting.
- [C] – View the information on the dataset schema – QC rules, table and field names and descriptions.

### 3.2.1 How to add supporting documents for your dataflow

1. From the 'Dataflow' page click on '**Dataflow help**'.
2. Select the '**Supporting documents**' tab.
3. Click on the button '**Upload**'.
4. In the dialogue, write a small description, select the language, and browse for the relevant document before pressing '**Upload**'.
5. You can select if the document is public or not (public documents will be visible in the dataflow public page as extra information if the dataflow is public)

### 3.2.2 How to add supporting links for your dataflow

1. Select the '**Web links**' tab.
2. Click on the button '**Add**' in documents tab.
3. In the dialogue, write a small description and specify the URL before pressing '**Add**'.
4. You can select if the Web Link is public or not (public documents will be visible in the dataflow public page as extra information if the dataflow is public)



### 3.2.3 How to review the schema technical documentation

1. Select the **'Dataset schemas'** tab.
2. You will see the technical documentation for the reporting schema. It lists the codelists, tables, fields, uniques, QC checks including all the description text added in the design view.
3. If you wish to update any of the text, then go back to the schema design view to edit any description text.

### 3.2.4 How to add descriptive text dataset schema documentation

1. Go into the **'Schema design'** view where you add tables and fields to your schema.
2. Add text in the description text boxes at the levels of dataset, table field, and QC rule as appropriate (see section 3.3.1 - Figure 26).
3. Return to the 'Dataset schemas' tab in the **'Dataflow help'** to see these descriptive texts as part of the technical documentation.

### 3.2.5 How to check dataflow users list



Figure 24 Dataflow users list



Dataflow users list	
Role	Email
DATA CUSTODIAN	miguel.custodian@reportnet.net
LEAD REPORTER	miguel.provider@reportnet.net
NATIONAL COORDINATOR	national.spain@reportnet.net
REPORTER READ	kiko.provider@reportnet.net
REPORTER WRITE	igor.provider@reportnet.net
REPORTER WRITE	pablo.provider@reportnet.net

Figure 25 Dataflow users list Roles

1. From a dataflow inside a country selection, I can see all users assigned to this dataflow country by selection 'Dataflow users list' in the left bar.
2. All roles, if applied, are displayed; Data Custodian, Lead Reporter, National Coordinator, Reported Read, Reporter Write...

### 3.3 Dataset schema design

#### 3.3.1 How to get an overview of the design schema page

Figure 26 - Dataset schema initial view





## Dataset schema: Schema for RN3 RC4.2 Sprint 24

RN3.0 RC4.2 (Sprint 24)

Figure 27 - Dataset schema after table is added

Initial view (Figure 26):

- [A] – Metadata in this field will be reflected on the Dataflow help page.
- [B] – Click here to add a Table by clicking the tab with a '+' icon.

After table has been added (Figure 27):

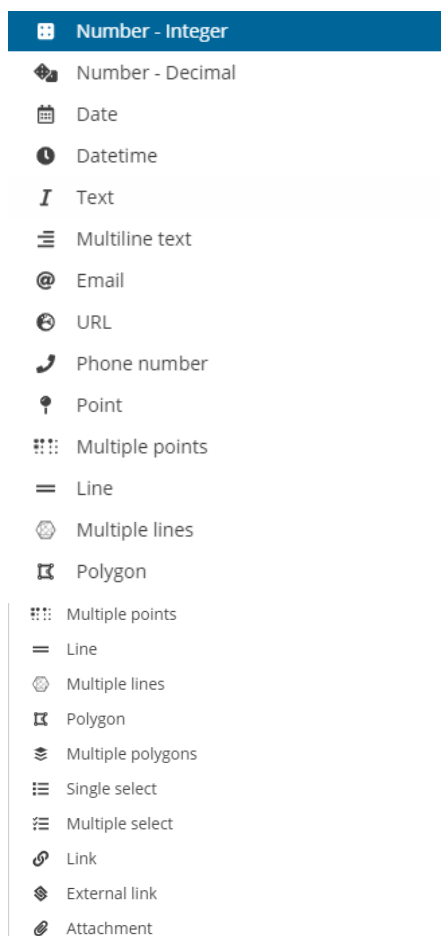
- [C] – Add more tables by clicking the tab with a '+' icon. By double clicking on the table, it is possible to rename tables. Drag and drop allows you to change the order of the tables. Right clicking enables you to delete the table.
- [D] – Add fields by typing in Field name and Field description (to be reflected on the Dataflow help page). You can choose the field type from the dropdown menu.
- [E] – Once clicked on the Required, the reporter must enter data to that particular field.
- [F] – Primary Key (PK) links the fields in the different tables together. If this PK is a text field, it may not contain commas.
- [G] – Manage table and field restrictions (QC rules) from this button.
- [H] – Save a copy of the design schema that you can always revert back to.
- [I] – Add uniqueness constraints (QC rules) to records in a table.
- [J] – Add a row constraint to the defined fields.
- [K] – By switching the toggle from 'Design' to 'View data' to test a schema design.
  - Please, refer to *HowTo\_Reporter* document for further details on features of View Data mode.
- [L] – Prefill a table with data and make it read-only (code lists or reference data). Also set table as Mandatory (QC rule associated) and fix number of records to disable users the option to modify the number of records in this table.
- [M] – Once clicked on Read Only, Reporters can't change value of this field.
- [N] – Configure Webforms is explained in a section 3.3.24.
- [O] – Option that makes this specific dataset publicly available when releasing.

### 3.3.2 How to add tables and fields to my schema

1. Go to the dataset schema design page.
2. In the design view, add a table by clicking on the **tab with the plus**, give it a name. Once you have entered the name, click away from the entry field and the table will be created.



3. Then **add fields for that table**, one by one by providing a name, description (optional), and field type. The description will be part of the documentation on Dataflow Help page, and also as a pop-up from the 'i' icon in a table column.
  - i. The field types could be:



4. QC rules are automatically created to validate the data to ensure it respects the field type limitations. Go to the '**QC Rules**' dialog and you will see that a QC rule has been automatically added for the 'table' and 'field' you just created. Click on the edit button to the right of the rule in order to edit the error message.
5. Click on the **tab with a plus** to add further tables.

### 3.3.3 How to change field order

1. If you have more than one field defined, change the order of fields using the button on the very left of the field name, with three horizontal bars, to drag a field to its new desired position.

### 3.3.4 How to rename a table, or change the order of tables

1. Rename tables by double clicking on the table name, or right clicking on the table name and selecting '**Edit**' from the context menu.
2. Use a drag and drop to *change the order* of tables.

### 3.3.5 How to delete a table

1. Right click on a table name and



2. Selecting **'Delete'** from the context menu.

### 3.3.6 How to delete a field

1. Click on the red trash-can icon to the very right of the field.
2. You will be prompted to confirm the deletion – click 'yes' to confirm.
3. Note: All associated QC checks both automatic and manually added are also deleted.

### 3.3.7 How to configure an Attachment field

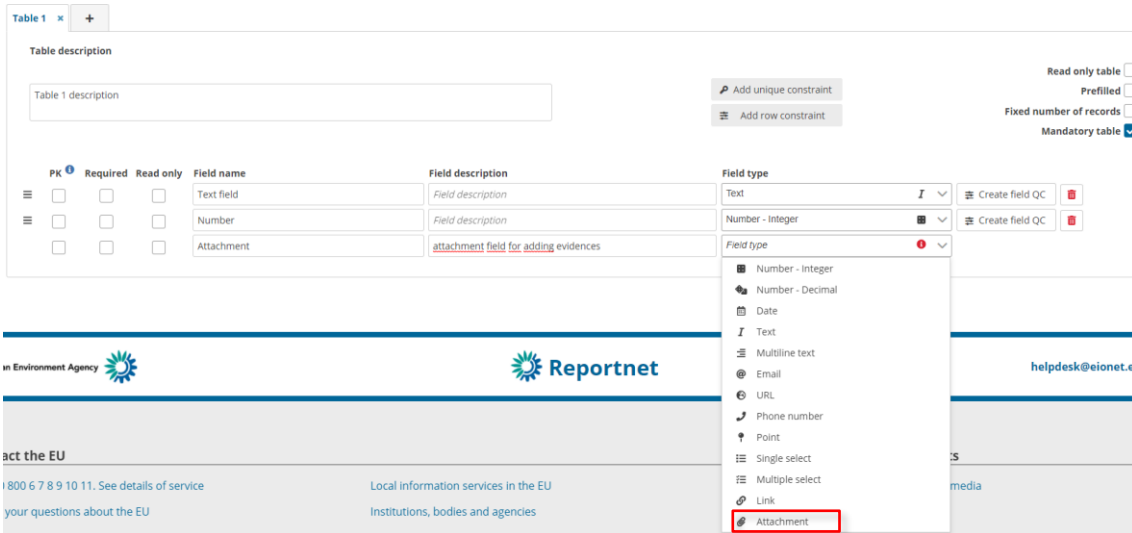


Figure 8 Attachment field

1. Go to the dataset schema design page.
2. In field type, select Attachment

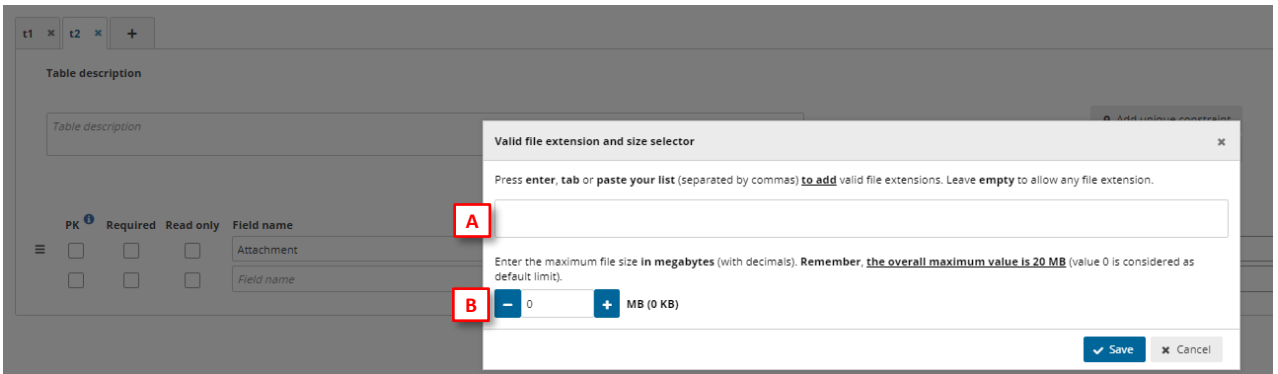


Figure 39 File extension and Size

3. [A] List of valid extension can be added in here. If the user leaves empty this list, any file extension will be valid.
4. [B] The maximum file size in megabytes is set through this box, taking into account maximum value is 20MB.



### 3.3.8 How to ensure records in a table are unique

1. On the field which is the unique identifier for the records in the table, enable **'PK'** (Primary Key) tickbox to the left of the field name (If not already enabled, this will also make this field 'Required').
2. Go to the 'QC Rules' dialog and you will see that an additional QC rule has been automatically added with name 'Table type uniqueConstraint' and description 'Checks if either one field or combination of fields are unique within table'. Edit the error message to make it more meaningful.

### 3.3.9 How to manually add field constraints (field QC rules)

1. You manually add further field constraints by clicking on the **'Create field QC'** button to the right of the field definition row. Click on this to open a validation builder in a new window.
2. Alternatively, open the 'QC rules' dialog and click the button **'Create field constraint'** at the bottom left.
3. Moreover, you can clone a QC rule by clicking on the **'Duplicate'** button where you will be able to prefill new QC from an existing one and you can **'Quick edit'** the basic information (code, name, description, message, level error and status)

..

Table	Field	Code	Name	Description	Message	Expression	Type of QC	Level error	Creation Mode	Status	Valid	Actions
t1	test	test	test	test	Error field	(test > 5)	FIELD	ERROR		✓	✓	

Each QC can be provided with some metadata to help the reporter understand what restrictions have been imposed on the schema (name, description). Here you also set the error message when which is triggered when the value fails the validation, and you can also set the level of validation.

4. Different levels of validation can be set depending on severity:
  - **BLOCKER**: Blocker messages indicate that the detected error will prevent data submission (data release is not possible).  
By default, the automatic QCs are created with this level of validation.
  - **ERROR**: Error messages indicate issues that clearly need corrective action by the data reporter.
  - **WARNING**: Warning messages indicate issues that may be an error. Data reporters are expected to double-check relevant records.
  - **INFO**: Informative message. Neutral or statistical feedback about the delivery, e.g. number of species reported.
5. Examples of field constraints, which are dependent upon the type of field:
  - dates must fall within a certain range;
  - text which is limited to a certain number of characters;
  - a number field with thresholds the values must fall between
  - for a text field, use the string and MATCH operator to validate patterns using RegEx e.g. an ID of two digits and four numbers: `[A-Z]{2}\d{4}`
  - QC based on SQL sentences (see section 3.3.14).
6. If you have more than one expression which are related, then you can add them with the **'add new rule'** button. You need to establish the relationships between the rules – AND or OR. For example, a number value must be greater than 0 AND less than 10.



7. It is also possible to create expression groups and establish relations between groups and individual rules, or groups and groups. To enable a group – tick at least two tickboxes on the left for the rules you wish to group. As soon as more than one is ticked, then a ‘Group’ button appears. Press this to create the Group. You then establish the relation between this group and other rules or groups using AND or OR dropdown.
8. Once you have finished then press the ‘Create’ button.
9. After rule creation, the rules engine will validate the rule to ensure it is logically valid. If there is an issue, you will see a red notification window appearing in the top right. The user has also the option to validate QCs on demand (revalidates all the QCs, required for SQL rules when table or field names has been changed).
10. To review a created rule, click on the ‘QC rules’ button in the table menu bar. A dialog will appear listing all the rules – both those created automatically as well as manually.
11. It is possible to edit the created rule by clicking on the edit button on the right of the rules in the Actions column.
12. It is possible to download the list of QCs in a CSV file by clicking on the ‘Download QCs’ button.

### 3.3.10 How to link tables together and validate values in child table

You can link tables together with type ‘Link’ (linked with table defined on the current dataflow) or ‘External Link’ (where you will be able to create an external link to a reference dataset inside a reference dataflow).

1. On the parent table enable ‘Primary Key - PK’ tickbox to the left of the field name, for the field which is going to be the link between tables. (If not already enabled, this will also make this field ‘Required’).
2. On the second (child) table, create a field with the same name, and for the field type select ‘Link’.
3. In case of type ‘Link’, in the dialogue window, select the field in the first table, which you made the ‘PK’ in the first step, and optionally the linked table label field and conditional fields, and press ‘Save’.

Figure 30 Select a Link

4. In case of type ‘External Link’, in the dialogue window, you first must select the ‘reference dataflow’ [A] and then select the schema and table to use the link.



Moreover, select the field in the first table, which is the 'PK', and optionally the linked table label field and conditional fields, and press 'Save'.

Figure 31 Select a Link

- In the second table, the only allowable values are those which have been entered as ID on the first table (table which PK is enabled). A relation has been established between the two tables and all fields involved with the conditional data. If you import data to the second table and the ID value is not existing in table 1, then you will receive an error message.
- Go to the 'QC Rules' dialog and you will see that an additional QC rule has been automatically added with name 'Field type LINK' and description 'Checks if the record based on criteria is valid LINK'. Edit the error message to make it more meaningful.
- Note: Fields type *Point*, *Line*, *Polygon*, *Multiple points*, *Multiple lines* and *Multiple polygons* can't be set as Primary Key (PK).

### 3.3.10.1 How to establish Conditional fields in Linked tables.

Figure 32 Example Link



Text PK	Number group	Label
text 1	1	Group 1
text 2	2	Group 2
text 3	3	Group 3
text 4	1	Group 1
text 5	2	Group 2
text 6	3	Group 3

Link FK	Conditional value
text 1	1
-- None --	3
Search value	
-- None --	
text 3 - Group 3	
text 6 - Group 3	

Total: 2 records

Paste records

Figure 33 Example data Table 1 PK

Figure 34 Example data Table 2 FK

- [A] – Set a label for the data (only visible when combo is expanded, once the data is chosen, the label will not appear).
- [B] – Set the data linked with primary key.
- [C] – Set the data which will conditionate the possible values for the linked field.

Therefore, when in Table 2 we set a value in [C], the *Link FK* field will only display *Text PK* possible field values depending on conditional values on [B].

Note: These fields are optional when linking fields between tables.

### 3.3.11 How to validate values between linked tables so all PK values in parent table are present in the child table

- To create for a new relation between tables, follow steps in the previous section up to step 3 to link two tables together, but do not save from the 'Select a link' dialog.
- For an existing relation between two tables, click on the button to the right of the linked field, field type which shows the established relation in the 'Select a link' dialog.
- In the 'Select a link' dialog, enable **'All PK values must be used on link'**.
- Click **'Save'**.
- In the child table, the only allowable values are firstly those which have been entered as ID on the parent table (table which PK is enabled), and child table must also contain all the values which are have been entered as ID on the parent table.
- Go to the **'QC Rules'** dialog and you will see that an additional QC rule has been automatically added with name 'Table Completeness' and description 'Checks if contains all the records based on set criteria'. Edit the error message to make it more meaningful.



### 3.3.12 How to validate values between non-linked tables, e.g. reference data

Table	Field	Code	Name	Description	Message	Expressions	Type of qc	Level error	Automatic	Enabled	Valid	Actions
T2 table2		TC1	Field type LINK	Checks if the record based on criteria is valid LINK	The value is not a valid member of the referenced list.		TABLE	ERROR	✓	✓	✓	[Edit]
T2 table2		TO2	Table Completeness	Checks if contains all the records based on set criteria.	Omission - does not contain an expected record based on set criteria.		TABLE	ERROR	✓	✓	✓	[Edit]
T1 table1		TB1	Mandatory table records check	When a table is marked as mandatory, checks at least one record is added	Mandatory table has no records		TABLE	ERROR	✓	✓	✓	[Edit]
T1 table1	Number	FT6	Field type NUMBER - INTEGER	Checks if the field is a valid NUMBER - INTEGER	The value is not a valid whole number		FIELD	ERROR	✓	✓	✓	[Edit]
T1 table1	Text	FC8	Field cardinality	Checks if the field is missing or empty	The value must not be missing or empty		FIELD	ERROR	✓	✓	✓	[Edit]
T1			Table type	Checks if either one field or combination of fields	Uniqueness and multiplicity constraints - either one field or							[Edit]

Figure 35 QC Rules

1. A scenario could be you want to validate the reported data against reference data e.g. historical data, to ensure, for example, the same monitoring stations were reported as previously. The reference data is available in the dataflow as a separate read-only schema but is not part of the reporting schema and therefore the tables are not linked.
2. Add the reference data into a table – same schema or different schema in the same dataflow as the reported data.
3. Open the ‘QC rules’ dialog in your dataset schema design page.
4. Click on ‘Create table constraint’ at the bottom of the window.
5. Moreover, you can clone a QC rule by clicking on the ‘Duplicate’ button where you will be able to prefill new QC from an existing one and you can ‘Quick edit’ the basic information (code, name, description, message, level error and status)

Table	Field	Code	Name	Description	Message	Expression	Type of QC	Level error	Creation Mode	Status	Valid	Actions
Table1		test	test	test	test		TABLE	INFO		✓	✓	[Info] [Edit] [Duplicate]

6. In the dialog ‘Info’ tab, select the table data which you wish to validate (the reported data).
7. Add the additional metadata information.
8. In the dialog ‘Table relations’ tab, select between the target dataset schema and target table which you are comparing the reported data with (the reference data) or adding a SQL sentence.



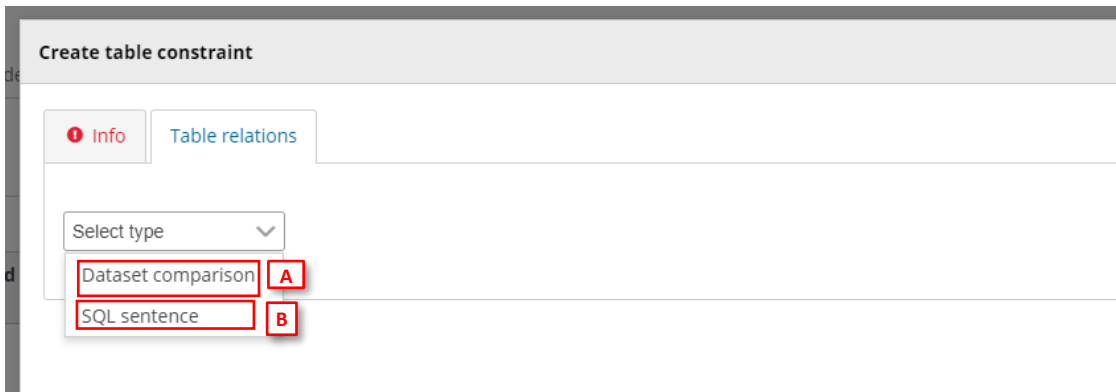


Figure 36 Table SQL sentence

9. [A] For **Dataset Comparison**, the field dropdowns will now be enabled and you can specify the fields in each table which you are checking between. For example, MonitoringStationID. The field name does not have to be the same in each table.
10. [Optional] It is possible to compare the two tables with a combination of fields. To do this click on the **'Add new relation'** button and specify which other fields should be part of this validation.
11. [B] For **SQL sentence**, the sentences should look like the examples displayed in the inline SQL Help. The left table helps the user to provide the exact name of the item (see section 3.3.14).

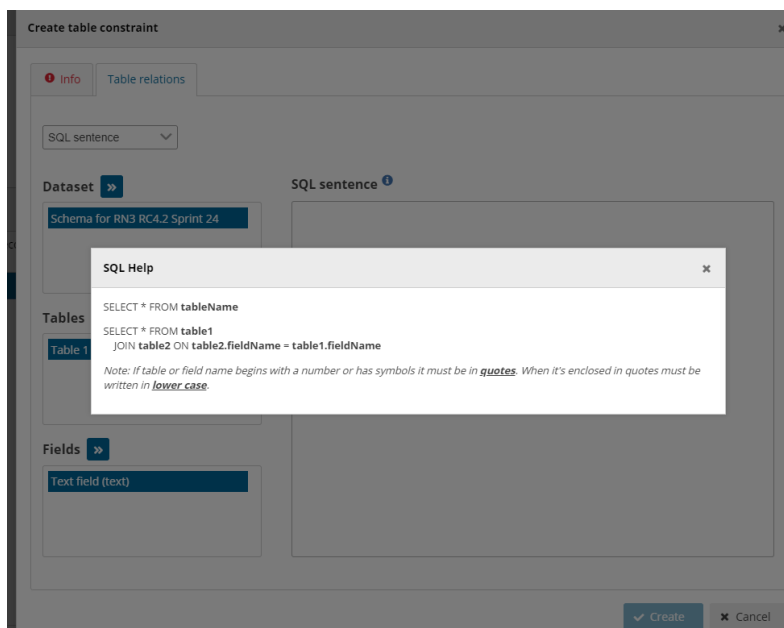


Figure 4 SQL Inline Help

12. Click **'Create'**.
13. A validation rule has now been created which will be triggered if any record is missing in the reported data table data which are present in the target (reference data) table, based on the specified field. Note: if there are additional records in the reported data table, no error will be triggered.



14. After rule creation, the rules engine will validate the rule to ensure it is logically valid. If there is an issue, you will see a red notification window appearing in the top right. The user has also the option to validate QCs on demand (revalidates all the QCs, required for SQL rules when table or field names has been changed).
15. In the **'QC Rules'** dialog and you will see that an additional QC rule has been added with name, description and error message you entered.
16. [Optional] It is also possible to make the check to trigger an error if there are additional rows found in the reported data table, which are not found in the reference data. From the **'QC rules'** dialog, open the QC rule and go to the **'Table relations'** tab. Enable the tickbox marked **'All PK values must be used on link'**.
17. The rule has now been updated and the referenced table will have errors if any record, based on the specified field, is found in the reported data table which is not found in the referenced data table.

### 3.3.13 How to add table record constraints (QC rules between fields)

1. To add a row constraint do you need to have first defined fields.
2. Click on the **'Add row constraint'** button in the table design area or open the **'QC rules'** dialog and click the same named button at the bottom left.
3. Moreover, you can clone a QC rule by clicking on the **'Duplicate'** button where you will be able to prefill new QC from an existing one and you can **'Quick edit'** the basic information (code, name, description, message, level error and status).

Table	Field	Code	Name	Description	Message	Expression	Type of QC	Level error	Creation Mode	Status	Valid	Actions
Table1		test	test	test	test	{ Field1 > 5 }	RECORD	INFO		✓	✓	<input type="button" value="Info"/> <input type="button" value="Duplicate"/> <input type="button" value="Delete"/>

4. In the popup **'Info'** tab, first select the table the row constraint will be applied to. Also in this tab, provide metadata to help the reporter understand what restrictions have been imposed on the schema (name, description, error message). Here you set the error message which is triggered when the value fails the validation, and you can also set the level of validation.
5. Different levels of validation can be set depending on severity:
  - i. **BLOCKER**: Blocker messages indicate that the detected error will prevent data submission (data release is not possible).
  - ii. **ERROR**: Error messages indicate issues that clearly need corrective action by the data reporter.
  - iii. **WARNING**: Warning messages indicate issues that may be an error. Data reporters are expected to double-check relevant records.
  - iv. **INFO**: Informative message. Neutral or statistical feedback about the delivery, e.g. number of species reported.
6. In the popup **'Expression'** tab, the constraint is applied. The first action is to define the type of row restriction:
  - i. **'Field comparison'** – allows you to compare one field with another or with a fixed value, for example the sampling data field must have the same year as the Year field.
  - ii. **'If-then clause'** – allows you to define business relations between records, for example if field A has a value of **'Yes'** then text field B must be filled in, i.e. have a string length greater than 0.
  - iii. **'SQL sentence'** (see section 3.3.14)

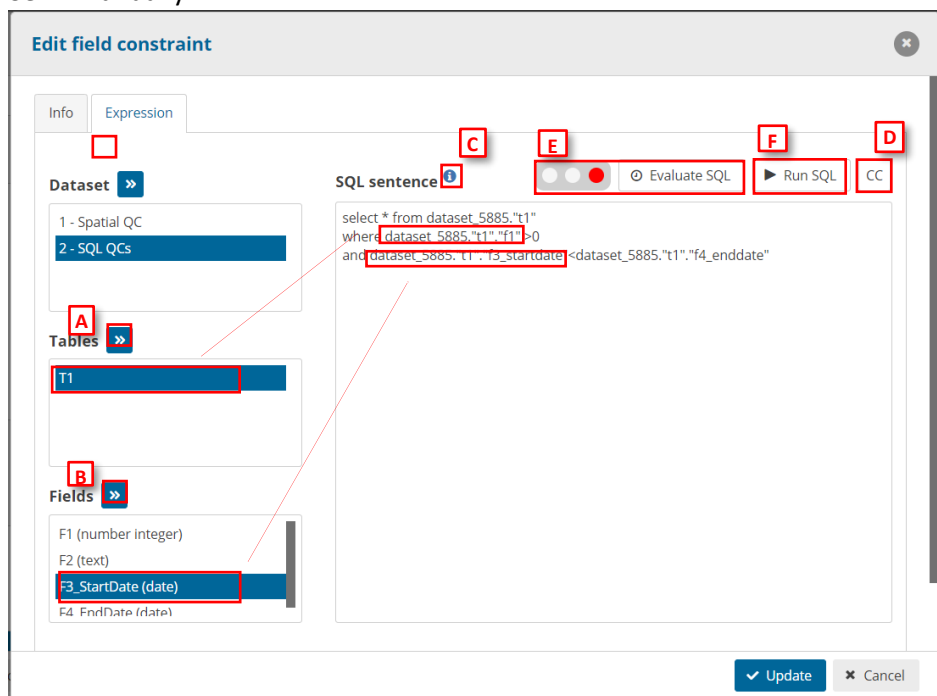


7. If you have more than one expression, then you can add additional ones with the 'add new rule' button. You need to establish the relationships between the rules – AND or OR.
8. It is also possible to create expression groups and establish relations between groups and individual rules, or groups and groups. To enable a group – tick at least two tickboxes on the left for the rules you wish to group. As soon as more than one is ticked, then a 'Group' button appears. Press this to create the Group. You then establish the relation between this group and other rules or groups using AND or OR dropdown.
9. Once you have finished then press the 'Create' button.
10. After rule creation, the rules engine will validate the rule to ensure it is logically valid. If there is an issue, you will see a red notification window appearing in the top right. The user has also the option to validate QCs on demand (revalidates all the QCs, required for SQL rules when table or field names has been changed).
11. To review a created rule, click on the 'QC rules' button in the table menu bar. A dialog will appear listing all the rules – both those created automatically as well as manually. If the rules validator is still running, you will see a spinning circle in the 'valid' column, otherwise a tick if it is OK.
12. It is possible to edit the created rule by clicking on the edit button on the right of the rules in the Actions column.

### 3.3.14 How to introduce SQL sentences

There are different ways to introduce SQL sentences. These sentences are executed exactly as it is introduced in in the system in a raw SQL language.

#### i. Semi-manually



- a. We can introduce the schema, table and field names in a semi-manual way by selecting the schema and the tables or field we want to declare in the sentence [A].



- b. Field types are displayed between brackets (*Text* in the example) to have the information of them when we are writing the SQL sentences [A-B].
- c. Detailed help info to create the sql rules [C]
- d. The SQL sentence will have this text replaced by the country code (refers to {%R3\_COUNTRY\_CODE%}) [D]
- e. We can evaluate the SQL sentence [E]. This traffic light indicates you the complexity of the expression of the SQL sentence. You can see it too on the list of qc rules in the column **'SQL evaluation'**.

Table	Field	Code	Name	Description	Message	Expression	SQL evaluation	Type of QC	Level error	Automatic	Enabled	Valid	Actions
T1		TB1	Mandatory table records check	When a table is marked as mandatory, checks at least one record is added	Mandatory table has no records			TABLE	BLOCKER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
T1	F1	FZ2	Field type NUMBER - INTEGER	Checks if the field is a valid NUMBER - INTEGER	The value is not a valid whole number			FIELD	ERROR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
T1	F1	01	First value	Green light	First value from T1	select * from dataset_5885."T1" LIMIT 1		FIELD	INFO	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
T1	F1	02	F1 values	Yellow light	F1 values	select * from dataset_5885."T1"		FIELD	WARNING	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
T1	F1	03	F1 values higher than 0 and F2 = F3	Red light	F1 values higher than 0 and F2 = F3	select * from dataset_5885."T1" where dataset_5885."T1"."F1">0 and dataset_5885."T1"."F3_startdate"<dataset_5885."T1"."F4_enddate"		FIELD	ERROR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

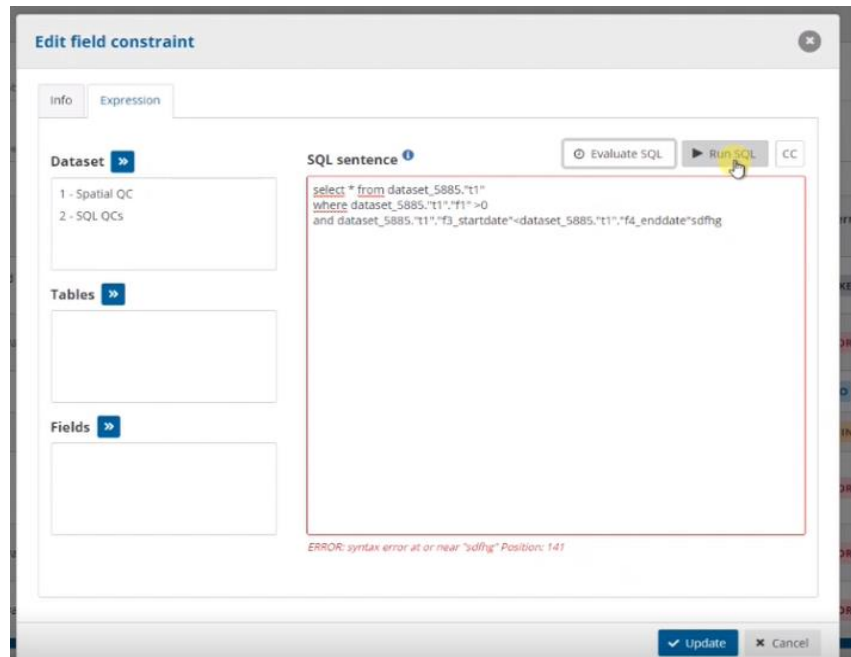
- f. We can run the SQL sentence by clicking the button **'Run SQL'** [F] and it will show a dialog with the results of this SQL sentence.

The screenshot shows the 'Edit field constraint' dialog box. The 'SQL sentence' field contains: `select * from dataset_5885."T1" LIMIT 1`. Below the dialog, a 'SQL sentence validation' window is open, displaying a table of results:

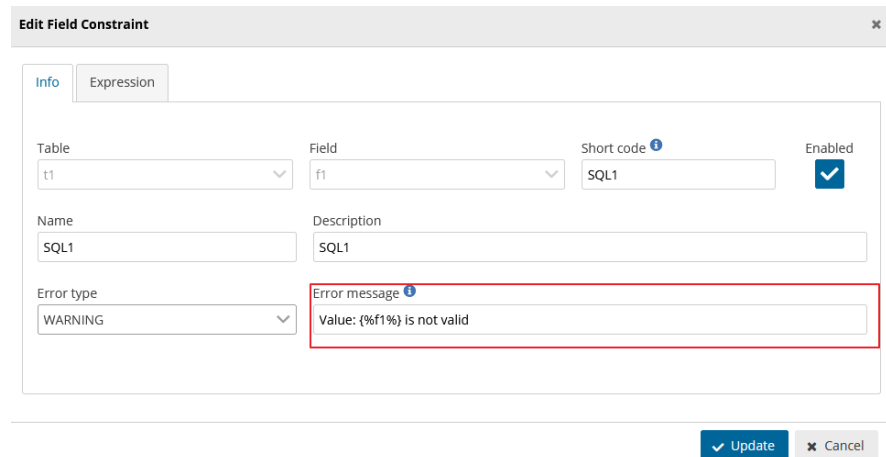
t1.record_id	t1.f1_id	t1.f1	t1.f2_id	t1.f2	t1.f3_startdate_id	t1.f3_startdate	t1.f4_enddate_id	t1.f4_enddate
77A576070298C29E2C116F568C25D70	DBFE714332DC14D1917E4FCC35079CB4	0	A382D8FA1EDEC43792C95D6858E14F05	France	D554314708DB840EA36840FEA1987390	2021-12-15	8C78EADD6F9CF838014C051735289A8C	2021-12-17

At the bottom of the validation window, there is a 'Total: 7 records' indicator and buttons for 'Update' and 'Cancel'.

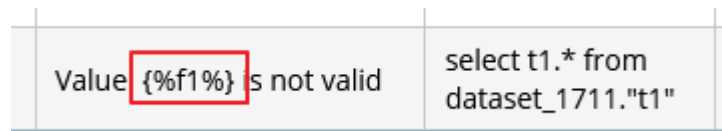
Note: if you add a wrong SQL sentence and you click on **'Evaluate SQL'** or **'Run SQL'**, you will see highlighted in red the area of the SQL sentence and below of this area, we can see the error.



g. We can include SQL fields in the message setting the text between { %f1 %}. This keyword is replaced in the SQL result for this field. We can use an Alias or add more fields in the message



	PK <sup>i</sup>	Required	Read only	Field name
☰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	f1
☰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	f2
☰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	f3
☰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	f4
☰	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	f5
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Field name <span style="color: red;">i</span>





## ii. Manually

We also have the possibility to introduce the sentences in a completely manual way.

- a. In the info button we can display the SQL Help dialog that show us the way we have to introduce the sentences and names of each element (SQL Help will display differently if we are creating a field, record or table constraint):

Table SQL sentences:

The screenshot shows a dialog box titled "SQL Help" with a close button in the top right corner. The content includes the following text:

```
SELECT * FROM tableName
```

```
SELECT * FROM table1
JOIN table2 ON table2.fieldName = table1.fieldName
```

*Note: If table or field name begins with a number or has symbols it must be in **quotes**. When it's enclosed in quotes must be written in **lower case**.*

*Note: Datetime field values must follow **'YYYY-MM-DD HH:mm:ss'** format.*

*Note: Spatial QC functions must contain **public**. before the function:*  

```
SELECT * FROM tableName WHERE public.ST_Distance (field1, field2) > X
```

*Note: You can see the different GIS operations with the following [link](#)*

*Note: You can include the keyword **{%R3\_COUNTRY\_CODE%}** to use the country code in the SQL sentence.*

Record SQL sentences:

The screenshot shows a dialog box titled "SQL Help" with a close button in the top right corner. The content includes the following text:

```
SELECT * FROM tableName
```

```
SELECT record_id FROM tableName
```

```
SELECT * FROM table1
JOIN table2 ON table2.fieldName = table1.fieldName
```

*Note: If table or field name begins with a number or has symbols it must be in **quotes**. When it's enclosed in quotes must be written in **lower case**.*

*Note: Datetime field values must follow **'YYYY-MM-DD HH:mm:ss'** format.*

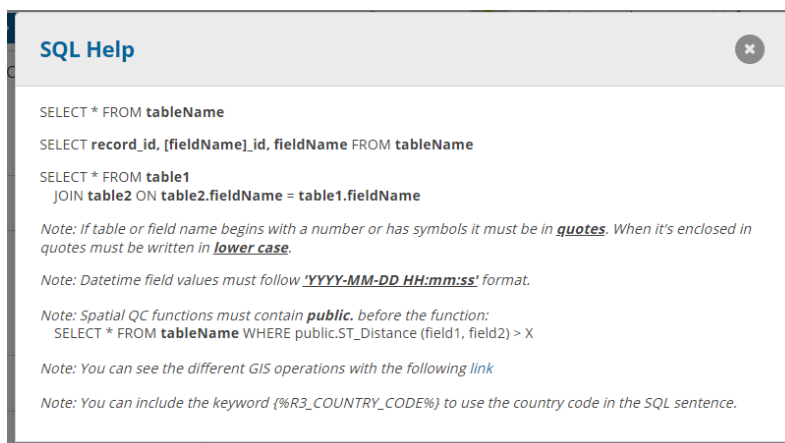
*Note: Spatial QC functions must contain **public**. before the function:*  

```
SELECT * FROM tableName WHERE public.ST_Distance (field1, field2) > X
```

*Note: You can see the different GIS operations with the following [link](#)*

*Note: You can include the keyword **{%R3\_COUNTRY\_CODE%}** to use the country code in the SQL sentence.*

Field SQL sentences:



The main difference between them it's in the field and record SQL sentences:

- If it's a record it needs *record\_id* in the *select*.
- If it's a field it needs *record\_id*, *field\_id* and the *field name*.

The note in the bottom part it's for all the SQL QCs: *If a table or field name begins with a number or has symbols in the name it must be written in quotes. When a name it's enclosed in quote it must be written in lower case.*

For POSTGIS spatial functions which are exposed to the SQL interface – the relevant ones are here: [https://postgis.net/docs/reference.html#Spatial\\_Relationships](https://postgis.net/docs/reference.html#Spatial_Relationships)

### 3.3.15 How to develop SQL sentences

Differences between MSSQL and PostgresSQL:

SQL Server	PostgreSQL
Select * From data.BWD_SeasonalPeriod Where ([startDate] = '9999-12-31' OR [startDate] > <b>GETDATE()</b> )	Select * From data.BWD_SeasonalPeriod Where ([startDate] = '9999-12-31' OR [startDate] > <b>NOW()</b> )
select a.* from SeasonalPeriod a left join (SELECT bathingWaterIdentifier, season, startDate, endDate FROM SeasonalPeriod WHERE periodType = 'bathingSeason' and year(startDate) != season and datediff(MONTH,startDate,endDate) = 11 ) b on a.bathingWaterIdentifier = b.bathingWaterIdentifier and a.season = b.season where a.startDate != '9999-12-31' AND YEAR(a.startDate) != a.season AND b.bathingWaterIdentifier is null	select a.* from SeasonalPeriod a left join (SELECT record_id,bathingWaterIdentifier, season, startDate, endDate FROM SeasonalPeriod WHERE periodType = 'bathingSeason' and date_part('year', startDate) != season and (DATE_PART('month', endDate) - DATE_PART('month', startDate)) = 11 ) b on a.bathingWaterIdentifier = b.bathingWaterIdentifier and a.season = b.season where a.startDate != '9999-12-31' AND date_part('year', a.startDate) != a.season AND b.bathingWaterIdentifier is null

### 3.3.16 How to manage existing field QC rules and row constraints

1. To review a created rule, click on the **'QC rules'** button in the table menu bar. A dialog will appear listing all the rules – both those created automatically as well as manually.
2. Use the filters to find a rule.
3. It is possible to edit the created rule by clicking on the edit button on the right of the rules in the Actions column.



4. It is possible to edit the metadata and error message for automatically created rules.
5. After rule update, the rules engine will validate the rule to ensure it is logically valid. If there is an issue, you will see a red notification window appearing in the top right. The user has also the option to validate QCs on demand (revalidates all the QCs, required for SQL rules when table or field names has been changed).
  - If validating an SQL sentence there is an error, a message will be shown on the Valid column to know more about the failure.

The screenshot shows the 'QC Rules' interface with a table of rules. A red error notification window is overlaid on the table, indicating an error in the SQL evaluation of a rule. The error message is: 'ERROR: relation "dataset\_3885\_11" does not exist Position: 23'. Below the error message, it says 'Please click to copy to clipboard the SQL Error.' The table below has the following columns: Table, Field, Code, Name, Description, Message, Expression, SQL evaluation, Type of QC, Level error, Automatic, Enabled, Valid, and Actions.

Table	Field	Code	Name	Description	Message	Expression	SQL evaluation	Type of QC	Level error	Automatic	Enabled	Valid	Actions
T1		TB1	Mandatory table records check	When a table is marked as mandatory, checks if at least one record is added	Mandatory table has no records			TABLE	BLOCKER	✓	✓	✓	
T1	F1	F72	Field type NUMBER - INTEGER	Checks if the field is a valid NUMBER - INTEGER	The value is not a valid whole number			FIELD	ERROR	✓	✓	✓	
T1	F1	Q1	First value	Green light	First value from T1	select * from dataset_3885_11 LIMIT 1		FIELD		✓	✓	✓	
T1	F1	Q2	F1 values	Yellow light	F1 values	select * from dataset_3885_11		FIELD	ERROR	✓	✓	✓	
T1	F1	Q3	F1 values higher than 0 and F2 > F3	Red light	F1 values higher than 0 and F2 > F3	select * from dataset_3885_11 where dataset_3885_11.F1 > 0 and dataset_3885_11.F2 > dataset_3885_11.F3		FIELD	ERROR	✓	✓	✓	
T1	F3_Start Date	F74	Field type DATE	Check if the field is a valid DATE	The value is not a valid date (YYYY-MM-DD)			FIELD	ERROR	✓	✓	✓	
T1	F4_End Date	F75	Field type DATE	Check if the field is a valid DATE	The value is not a valid date (YYYY-MM-DD)			FIELD	ERROR	✓	✓	✓	

### 3.3.17 How to add complex 'uniqueness constraints' to records in a table (QC rules)

1. Click on the 'Add unique constraint' button.
2. In the dialogue select from the left side which table you wish to set the unique constraints on.
3. On the right side of the dialogue select the field, or combination of fields, which you wish to enforce as unique (NB: the primary key for a table will already have a QC rule to ensure it is unique).
4. Press 'Close'.

### 3.3.18 How to manage existing 'uniqueness constraints'

1. To review the unique constraints, click on the 'Unique constraints' table menu bar.
2. In this dialogue, you can review edit and delete the constraints which have been set up.





### 3.3.19 How to add an external integration with import and export

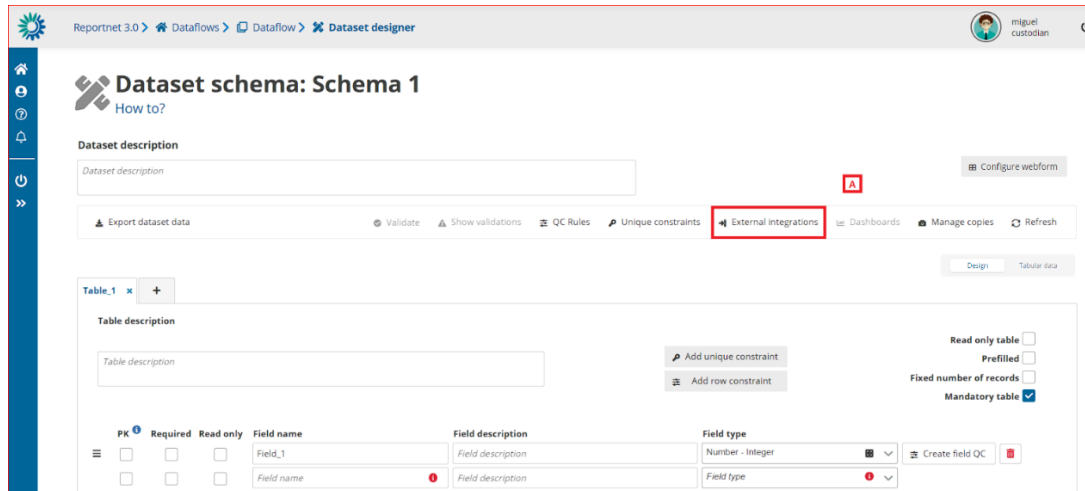


Figure 37 External Integrations

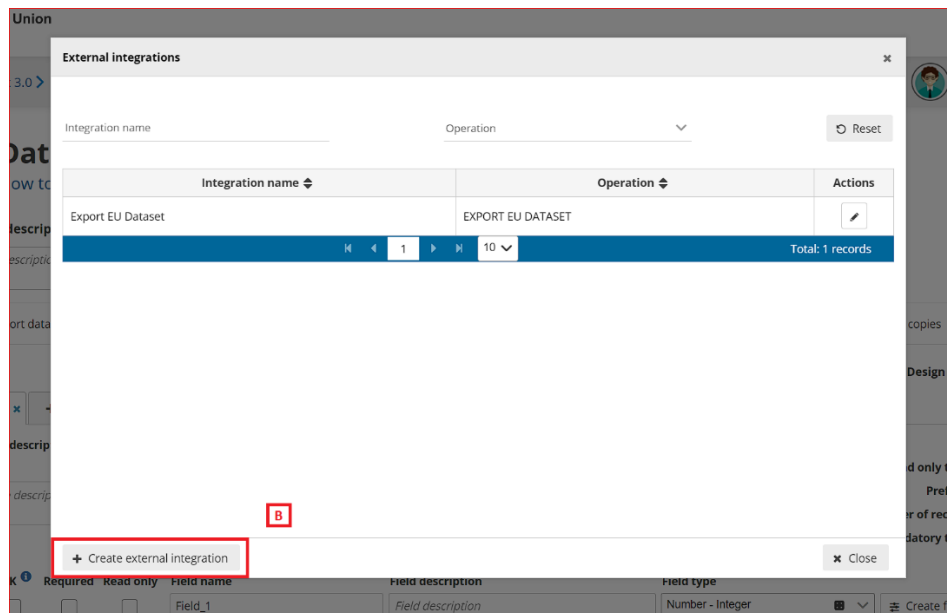


Figure 38 Create external integration

- [A] – The **‘External integrations’** button pops up a dialog with a list of the External integrations set up in the system. An ‘Export EU Dataset’ integration is created by default on each dataflow creation.
- [B] – You can add a new integration by clicking **‘Create external integration’** where you will be able to set the type of external integration.



Figure 39 External integration import and export

- [A] – Input the external integration name.
- [B] – Input the external integration description.
- [C] – Choose the FME repository from the dropdown.
- [D] – Select the proper FME process.
- [E] – Select the Operation:
  - For 'Import' and 'Export' operations it's mandatory to input the [F] file extension. You can include more than one extension separated by commas.
  - External integrations for imports could have the same extension more than once.
- Finally click on 'Create' to create the external integration.

## Dataset schema: Schema 1

How To's

### Dataset description

Dataset description A






-  Import dataset data
-  Export dataset data
-  Import from file
-  Import previous data
-  Prefilled data

Table description

Table description

PK	Required	Read only	Field name	Field description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F1	Field description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Field name	Field description <span style="color: red;">!</span>



## Dataset schema: Schema 1

How To's

### Dataset description

Dataset description

Import dataset data Export dataset data

XLS (.xls)  
XLSX (.xlsx)  
**External extensions**  
CSV (.csv)

Tab1 x +

Table description

Table description

PK	Required	Read only	Field name	Field description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F1	Field description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Field name	Field description

Import dataset data Export dataset data Delete dataset data Validate Show validated

Table1 x Table2 x Table3 x Table4 x +

Import definition Export definition Add unique constraint Add row constraint

Table description

description Table1

18/10000

PK	Required	Read only	Field name	Field description
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Field1	Field 1 description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Field2	Field 2 description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Field name	Field description

- [A] – The external integrations import type can be executed by clicking the **'Import dataset data'** dropdown. 'Import from file' refers to the import set up with file extension and the list below 'Import previous data' are the 'Import from other system' imports.
- [B] – The export extensions export type is executed by clicking the **'Export dataset data'** and then selecting the options below 'External extensions'.
- [C] – The delete dataset data is executed by clicking the **'Delete dataset data'**. When you click, a modal appears with a check to select if prefilled tables must be deleted or not. If you check the **'Delete prefilled tables data'**, all tables must be deleted. If you uncheck the **'Delete prefilled tables data'** (default value), all tables but prefilled tables must be deleted.



### 3.3.20 How to configure prefilling of previously reported data

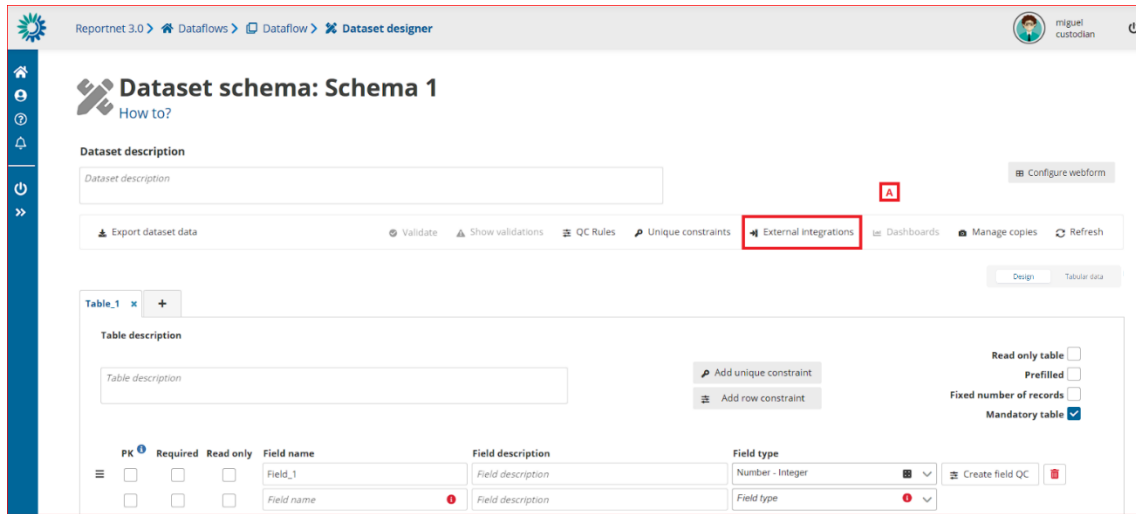


Figure 40 External Integration

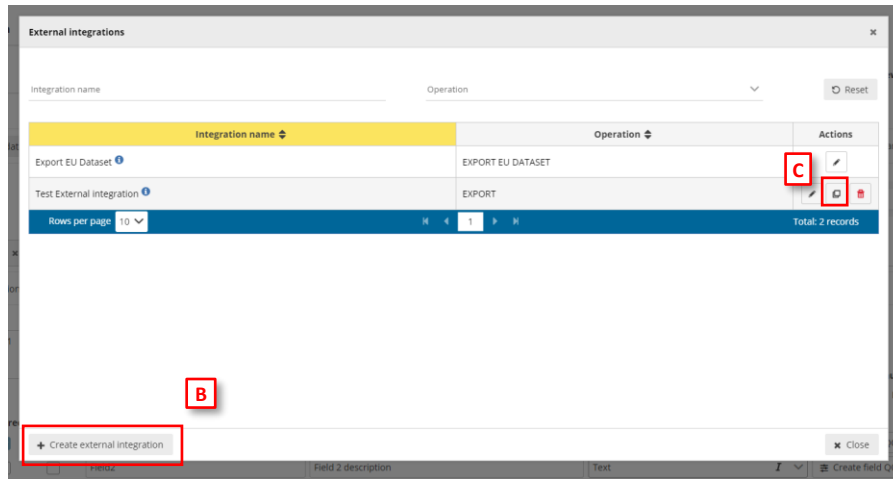


Figure 41 Create External Integration

- [A] – The ‘**External integrations**’ button pops up a dialog with a list of the External integrations set up in the system. An ‘Export EU Dataset’ integration is created by default on each dataflow creation.
- [B] – You can add a new integration by clicking ‘**Create external integration**’ where you will be able to set the type of external integration.



- [C] – You can clone a new integration by clicking on the clone button [C] where you will be able to prefill new external integration from an existing one.

**Figure 42 Import from other system**

- [A] - Select the proper process that will connect with the proper database or file (configured in the FME process).
- [B] – Select **'import from other system'**.

### 3.3.21 How to prefill a table with data and make it read-only (code lists or reference data)

1. To the right in the table design mode, enable the tick box **'Read only table'**.
2. This will automatically enable *'Prefilled'*.
3. Toggle the **'View data'** so you can see the dataset view.
4. Add rows, paste records, or import data as you prefer into the table.
5. When the data collection is created this table will be visible to the user read-only and populated with the prefilled data.
6. It is possible to link fields on other tables to this prefilled data, in order to create code lists or reference data.

### 3.3.22 How to save a copy of the design schema

1. On the table menu bar, click on **'Manage copies'**.
2. In the dialogue, give your copy a description in the text field at the top and press the **'+'** button.
3. Click **'Yes'** to confirm in the popup.
4. The copy will be of both the design and any data added to tables.
5. The copy will now be listed on the right.
6. Close the right panel and continue working.



### 3.3.23 How to restore a copy of the design schema

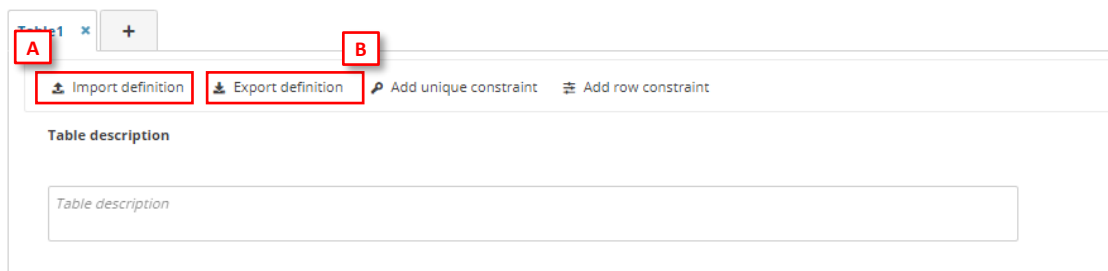
1. On the table menu bar, click on **'Manage copies'**.
2. In the list, press the **'Restore copy'** button next to the copy you wish to revert to (WARNING: the current design will be overwritten – consider taking a copy of the current schema before reverting to an older one).
3. Confirm in the dialogue you wish to continue.
4. Wait for the green notification to appear in the top right, confirming the copy has been successfully restored.
5. Close the right panel.
6. Click on the **'Refresh'** button.

### 3.3.24 How to test a schema design

1. To the right of the table design view toggle from **'Design'** to **'View data'**.
2. You will now see the data entry view of your schema.
3. Add data through add records, paste records or import.
4. Click **'Validate'** in the table menu bar to run the quality control checks.

### 3.3.25 How to Import/Export CSV to create/update/replace schemas

1. To import the definition in a table, on the table menu, click on **'Import definition'** [A], then a dialog to select a CSV file will be appear and you can check if you want to replace or not the data. The Field name, PK, Required, ReadOnly, Field description, Field type, Extra information will be informed on this file. Then the fields of the tables will be created.
2. To export the definition in a table, click on **'Export definition'** [B], then a CSV file is downloaded with the table definition.



### 3.3.26 How to filter table data

To filter table data, insert in an input text in the table bar **'Filter value'** [A] the text you want to search in all fields.

The geometer fields will be omitted, and the filter is case sensitive.





### 3.3.27 How to configure a simple questionnaire

By configuring fields in a specific way, it is possible to create a simple questionnaire:

Figure 43 Questionnaire fields

- [A] – Question field configured as Text type and Read Only – the Reporter won't be able to change it.
- [B] – Answer field configured as Text type and Required – to ensure all the questions are answered.
- [C] – Prefilled and Fixed number of records set – when dataflow is moved to reporting phase, Questions added are maintained and no more rows can be inserted.

Figure 44 Questionnaire view mode



### 3.3.28 How to configure a Webform

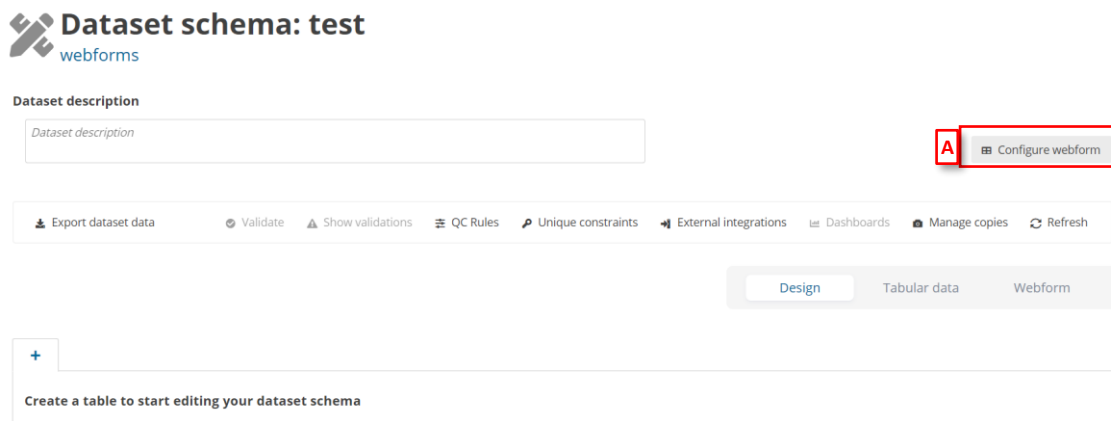


Figure 45 Configure Webform

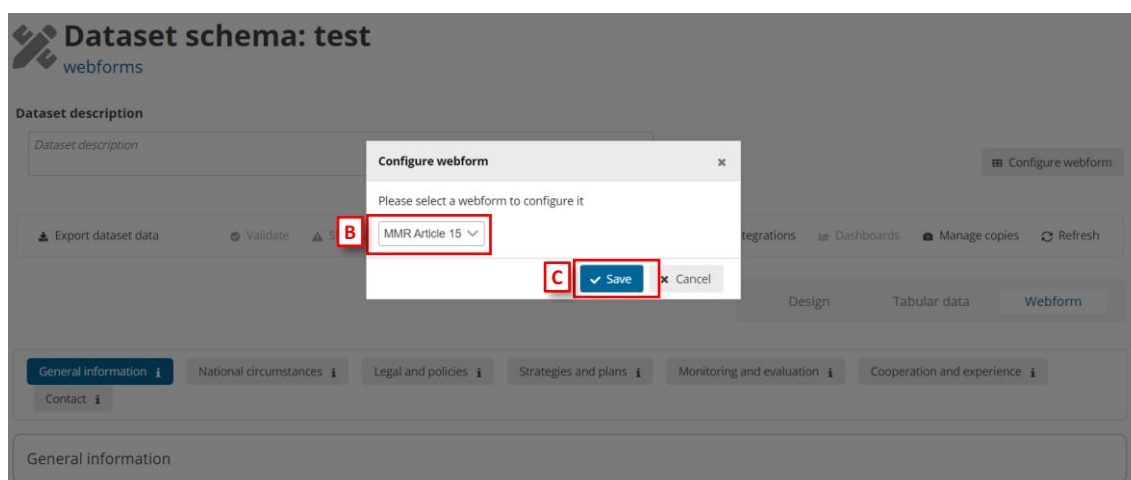


Figure 46 Select Webform

- [A] – The **'Configure webform'** button pops up a new dialogue with a dropdown [B]: first option (default) 'No webform' and the rest options will be the specific webforms developed in the system.
- [C] – You can add a new webform by clicking **'Save'** when you have selected the webform needed.

Configure webforms for:

- National climate change adaptation planning and strategies
- National greenhouse gas policies and measures

are explained in a separate HowTo document.





### 3.3.29 How to set a dataset as Reference Dataset

1. The custodian/steward has the option to set the design dataset as **Reference Dataset**.

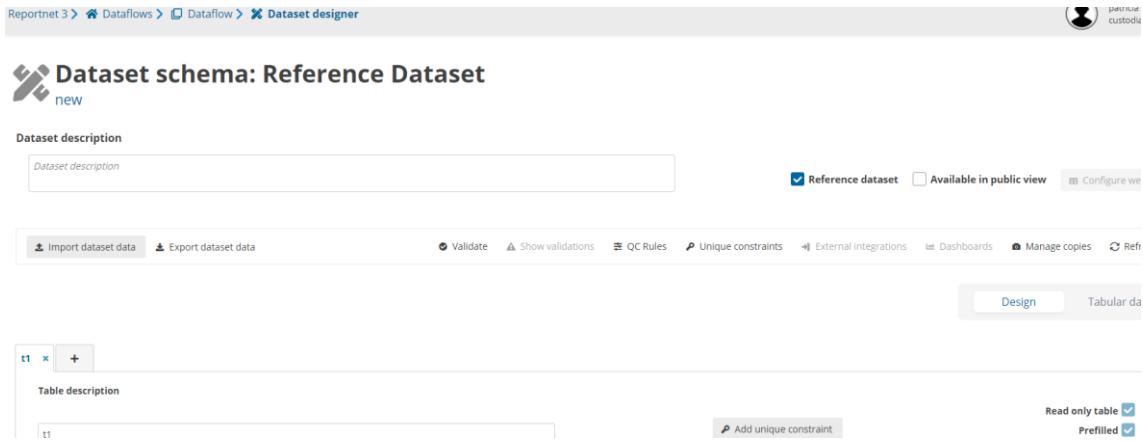


Figure 47 Reference Dataset

2. All tables in this dataset are set as prefilled and read-only.
3. No possibility to configure external integrations or webforms.
4. This reference dataset is unique for the dataflow.
5. All reporting datasets, test datasets, DC datasets and EU datasets link the same reference dataset (not needed to copy for each country and copy in release actions).
6. Reference datasets could be updateable or not if the dataset is marked as locked or unlocked by clicking on a button in the left bar [A] and marked as open for changes or not [B]
  - i. Option not available on reference dataflows.

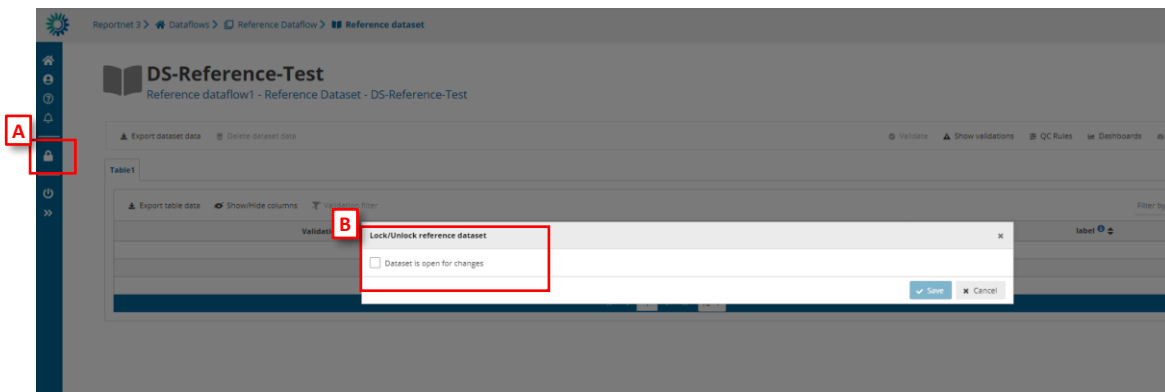


Figure 48 Reference schema file

7. From public page, reference dataset schema files can be downloaded.



Name	Obligation	Legal instrument	Deadline	Status	Delivered	Release date	Reference datasets	Files
Publik Ravlik Pavlik	Batteries collection targets compliance report	Batteries directive (new)	2021-07-01	Closed	✓	2021-04-26 16:40		
[BE] Improve getFieldsValuesReferenced endpoint to avoid 500 on invalid data	(E1a) Information on primary validated assessment data - measurements (Article 10)	Air Quality Directive IPR	2023-01-08	Open	✓	2021-04-28 08:02		
S33 - Reference Dataset	(E1a) Information on primary validated assessment data - measurements (Article 10)	Air Quality Directive IPR	2023-01-01	Open		-		
S32 - Include ZIP export at dataset level	(B) Preliminary information on zones and agglomerations (Article 6)	Air Quality Directive IPR	2022-01-01	Open	✓	2021-05-11 14:11		🔒
S32 Refactor	(C) Information on the assessment regime (Article 7)	Air Quality Directive IPR	2021-10-01	Open	✓	2021-05-14 13:09		🔒
Reference datasets 17-05	(E1a) Information on primary validated assessment data - measurements (Article 10)	Air Quality Directive IPR	2023-01-20	Open	✓	2021-05-17 10:51	📄	🔒

Figure 49 Reference schema file

### 3.3.29.1 How to create a Reference dataset on Reference dataflow

Inside reference dataflow you can create a new schema. By default, this new schema will be marked as reference dataset [A].

The screenshot shows the 'Reference Dataset Designer' interface. At the top, there's a 'Dataset description' section with a text area and a checkbox labeled 'Reference dataset' (marked with 'A'). To the right of this checkbox is an 'Available in public view' checkbox. Below this, there are several action buttons like 'Import dataset data', 'Export dataset data', etc. The main part of the interface is a table definition area with columns for 'PK', 'Required', 'Read only', 'Field name', 'Field description', and 'Field type'. There are three rows of fields defined: 'test1' (Number - Integer), 'test2' (Number - Integer), and 'Field name' (Field type).

Figure 50 Reference Dataset

1. If you have added at least one dataset and created a dataset schema, then the 'Create reference datasets' [A] button will be enabled.

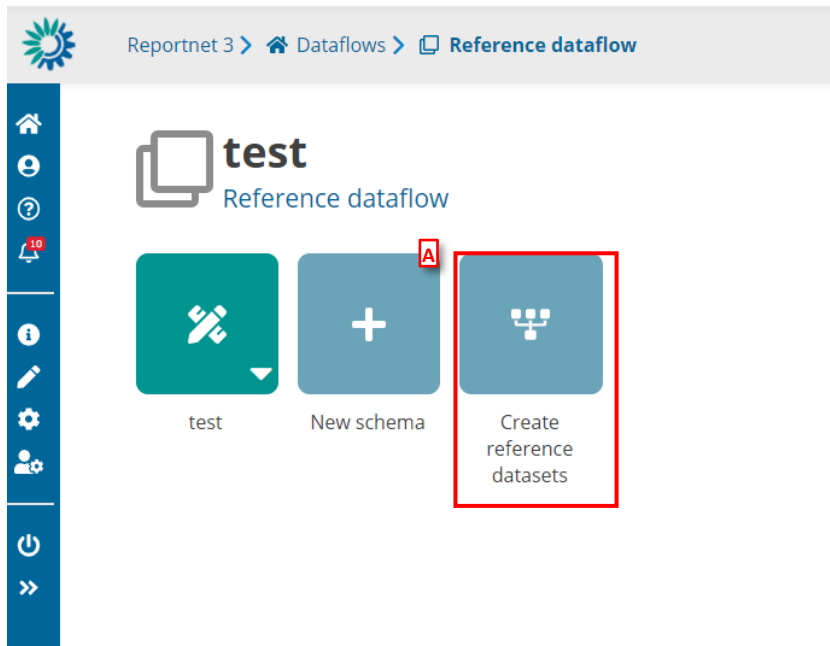


Figure 51 Create reference datasets

2. Click the **'Create reference datasets'** [A] button. If all tables in all schemas have PKs the process starts. But if there are tables without PK, a modal appears [B] to have the option to continue or cancel the process.

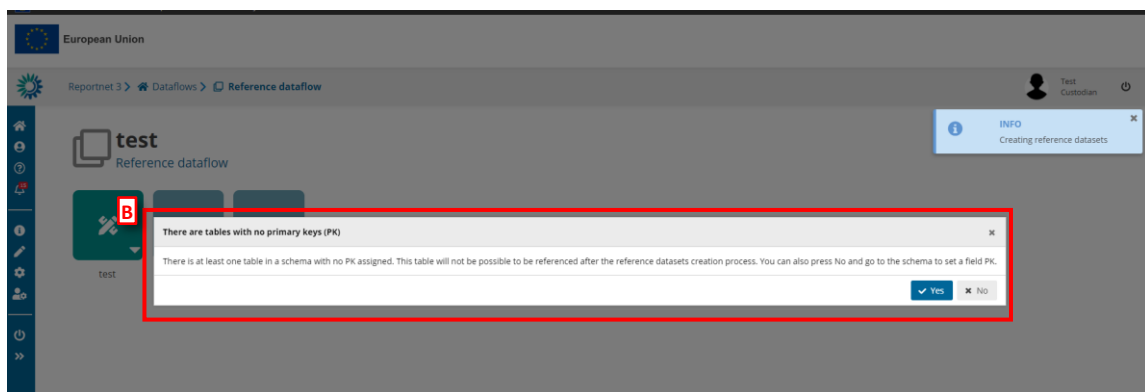


Figure 52 Check PKs in reference datasets



## 4 Dataflow in reporting phase

### 4.1 Dataflow

#### 4.1.1 Permissions depending on user role

Different permission depending on role during reporting phase:

- **Custodian/Steward** – read-only permission except for TEST dataset with write permission
- **Observer** – read-only permission.
- **National Coordinator** – read-only permission.
- **Lead-reporter** - Write permission
- **Reporter write** - Write permission
- **Admin** – can see the list of all dataflows of any type and have option to give rights. Inside the dataflow you can see the dataflow help and manage the requesters.
- **Steward support** – read-only permissions except for test dataset edition, full access to technical acceptance workflow, can update documentation and weblinks, can manage lead reporters and gets mail notification when there is a delivery.

#### 4.1.2 How to work with the dataflow page during reporting

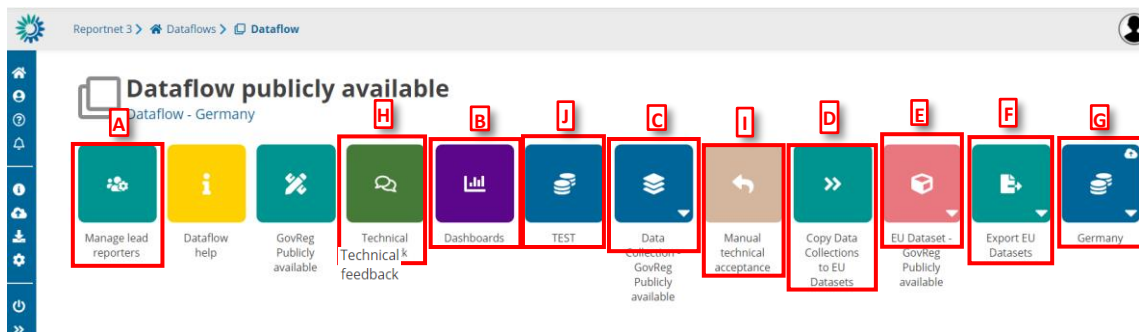


Figure 53 - Dataflow page - reporting phase

- [A] – Add new lead reporters to the dataflow.
- [B] – Dashboards present an overview of the reporting process (validations, release status).
- [C] – View the collated submitted data from here – the data collection (DC).
- [D] – Take a copy of the data in the current data collection over to the EU dataset.
- [E] – View the EU dataset.
- [F] – Export the EU dataset to the Common Workspace (triggers a configurable FME process, see section 4.1.4).
- [G] – You can see the reporting status of each single country by clicking on the icon associated with the country name (only one country is shown in the above).
- [H] – Communication between Lead Report and Custodian during release phase (see section 4.1.8).
- [I] – Review of the data released in the data collection (see section 4.1.7)



- [J] – TEST dataset for supporting reporters and trying to reproduce a situation (see section 4.1.12)

#### 4.1.3 How to see an overview of reporting progress

1. From the 'Dataflow' page click on '**Dashboards**'.
2. For each country reporting under the dataflow, you can see an overview of the errors – under the 'Validation dashboards'.
3. You can also see the status under the 'release status dashboards' – released/unreleased, which reflects whether they have delivered a snapshot to the data collection.
4. At the top of the page there are means for filtering by country and/or the table within each dataset. It is possible to filter on error type.

#### 4.1.4 How to add reporters after reporting has started

2. Go to the dataflow page.
3. There is an icon on '**Manage lead reporters**'.
4. A pop-up will appear where you can add reporters.

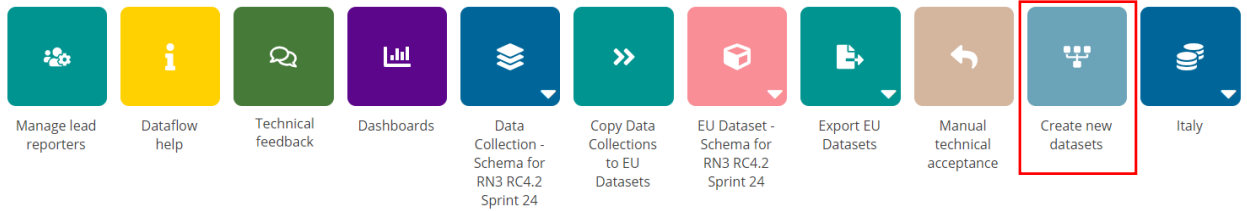
Representing	Lead reporter
Spain	testprovider@reportnet.net
Spain	testleadreporter@reportnet.net
France	testprovider@reportnet.net
Finland	testprovider@reportnet.net
Bulgaria	testprovider@reportnet.net
Select...	

5. Add the lead reporter accounts. Under the account field, add the registered users email address and select a country. Click on the dialogue away from the input fields.
  - i. If the system cannot find the email as a registered user, then a red box will appear around the email address and an icon indicating the user is



- not valid. Moreover, you have a button “Update the permissions” to check if the user is or not created and has permissions.
- ii. If it is accepted, then you will be able to add another reporter and so on.
- 6. Only one **lead reporter** can be assigned per country (the lead reporters manage additional access for their countries).
- 7. Once you have added all your reporters click **‘Close’**.

**RN3.0 RC4.2 (Sprint 24)**  
Dataflow

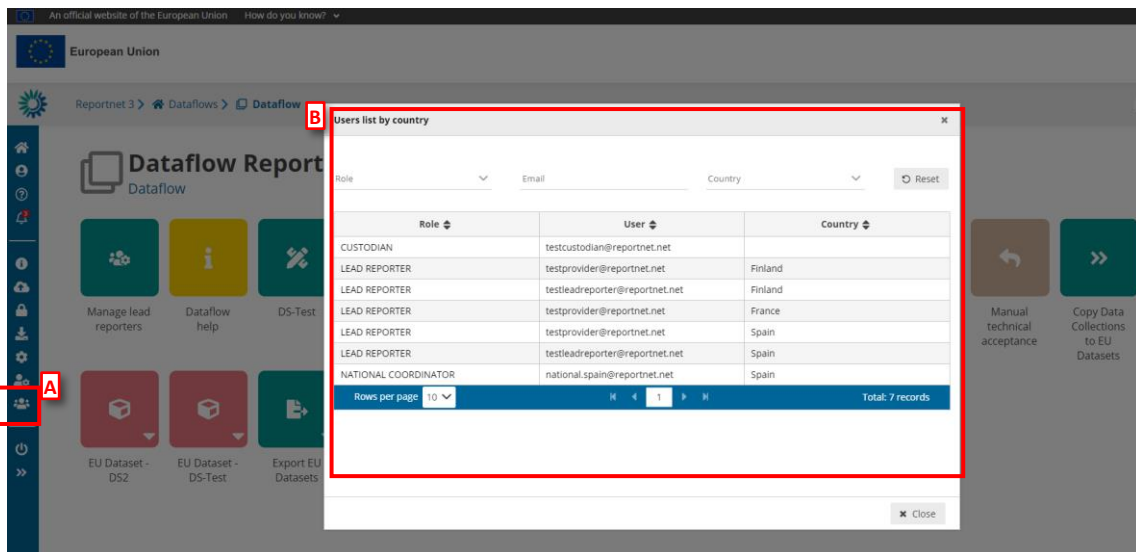


**Figure 31 Create new datasets**

- 8. New icon appears **‘Create new datasets’**, to create datasets for the new representatives added.

**4.1.5 How to see the list of users by country in a dataflow**

- 1. Go to the dataflow page.
- 2. There is an icon on **‘User list by country’** [A].
- 3. A pop-up will appear [B] where you can see the list of users for this dataflow and the country.



**Figure 54 Users list by country**



#### 4.1.5.1 How to download the list of users by country in a dataflow

1. Go to the dataflow page.
2. There is an icon on **'User list by country' [A]**.
3. A pop-up will appear where you can see the list of users for this dataflow and the country.
4. If we click on the button [B] , we download the 'User list by country' list.

Reportnet 3 > Dataflows > Dataflow

DF1 to probar  
Dataflow

Manage lead reporters | Dataflow help | ds1

**Users list by country**

Role: [v] | Email: [ ] | Country: [v] | [Reset]

Role	User	Country
CUSTODIAN	mario.custodian@reportnet.net	
LEAD REPORTER	mario.provider@reportnet.net	Spain

Rows per page: 10 | Page: 1 | Total: 2 records

[Download users list] [Close]



#### 4.1.6 How to configure the FME process used to copy EU dataset to the Common Workspace



Figure 55 Update Configuration EU Dataset

1. Click on the sub-menu on the 'Export EU datasets' button.
2. Configure the external integration accordingly by clicking on 'Update configurations'.
3. Note: It is the same configuration screen as the one displayed in Figure 39 External integration import and export.

#### 4.1.7 How to export data to the common workspace



Figure 56 Export EU Datasets

1. Click on the icon 'Export EU datasets' button.
2. A confirm dialogue appears to export EU datasets and the user will be notified when each schema of the dataset is exported correctly.

#### 4.1.8 How to see the latest draft data

1. From the 'Dataflow' page click on the dataset for the country you are interested in.
2. You see the data as read only in the individual data for each reporter in its latest state, which may be different to the version released to the data collection, if they have continued to work on it.





#### 4.1.9 How to review the data released

##### RN3.0 RC4.2 (Sprint 24)

Dataflow

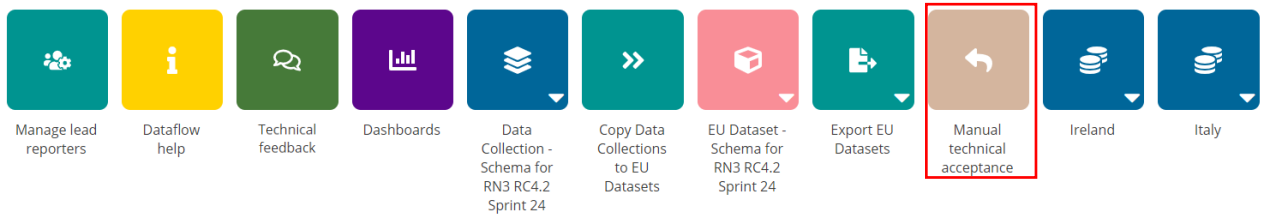


Figure 57 Manual technical acceptance

The custodian can review data released and send feedback using 'Manual technical acceptance' button.

1. When the reporter releases data the status is marked as 'Final feedback'.
2. The custodian can now make a review of the data released in the data collection.
3. It is possible to set the status to 'technically accepted' or 'correction requested'.
4. If 'correction requested', the data stays in the data collection and feedback is sent to Lead Reporter and Reporting Dataset status is updated.
5. If its 'technical accepted' then the version in the data collection is marked as such and Reporting Dataset status is updated.

Dataset Name	Country	Feedback Status	Released	Change status
Schema for RN3 RC4.2 Sprint 24	Italy	Pending		
Schema for RN3 RC4.2 Sprint 24	France	Correction requested	✓	
Schema for RN3 RC4.2 Sprint 24	Malta	Technically accepted	✓	

Total: 3 records

Figure 58 Feedback Status

#### 4.1.10 How to Communicate with Lead Reporter

##### RN3.0 RC4.2 (Sprint 24)

Dataflow

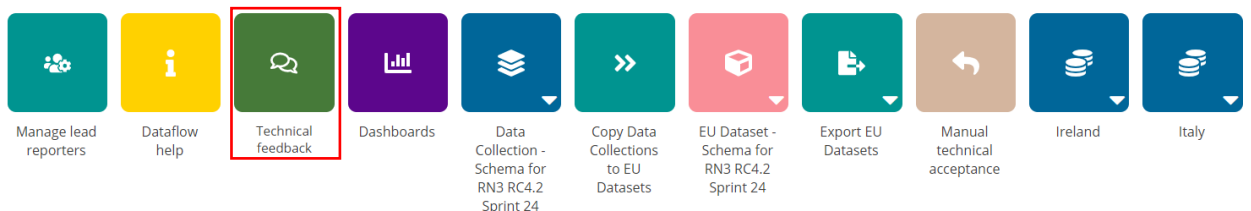


Figure 59 Feedback

1. When data is released, a channel to communicate with Lead Reporters appears at Dataflow level ('Technical Feedback' button).
2. User can select a country and see the messages (not read), get previous messages and the option to add new messages (text messages, upload files and delete a message).



- Note: Communication for technical acceptance review (see section 4.1.7) is also included in this Feedback section.

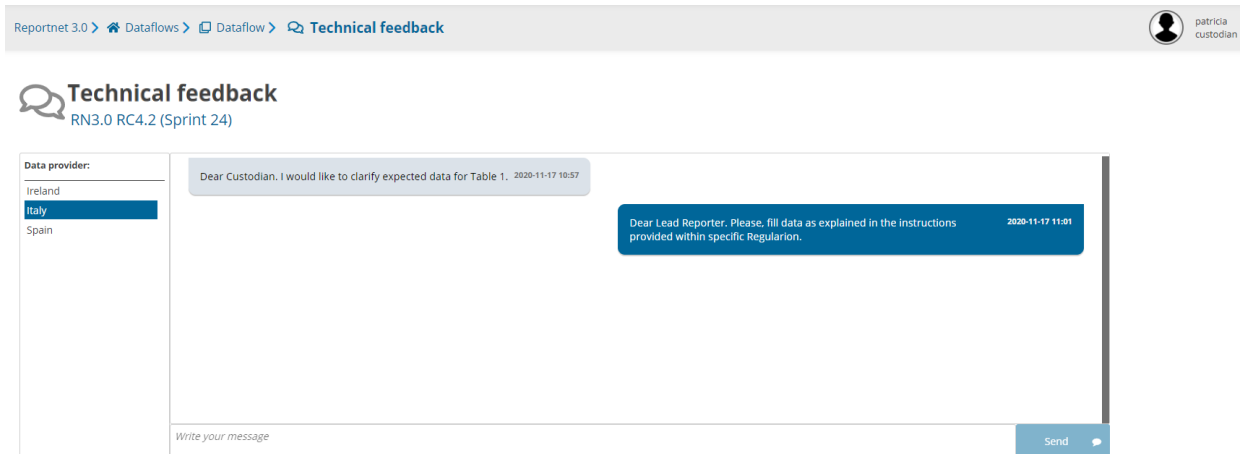
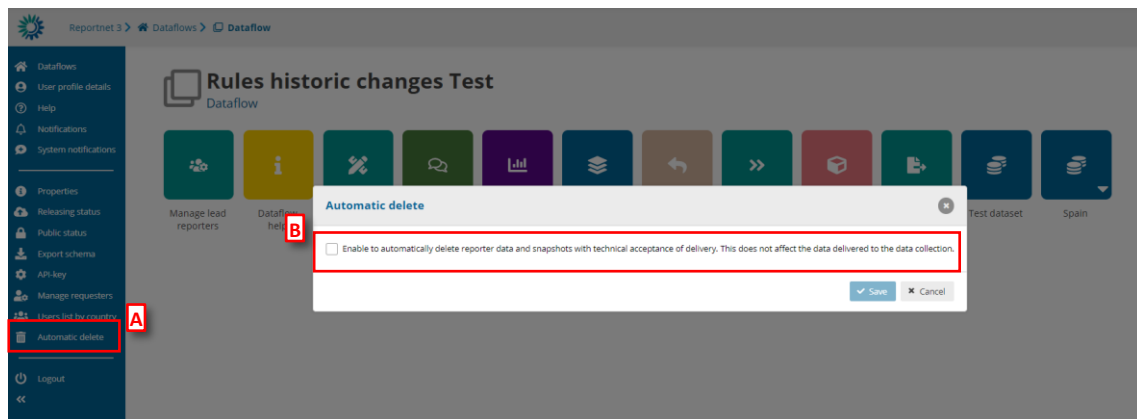


Figure 60 ack messages

#### 4.1.11 How to mark for automatic data+snapshots deletion

Some dataflows must store data for a maximum period of time and system must be remove automatically some data. You can configure a dataflow to be deleted reporter datasets after technical acceptance step was set to ACCEPTED.



- Go to the dataflow page.
- There is an icon on 'Automatic delete' [A].
- A pop-up will appear where you check if enable/disable [B] the automatically delete reporter data and snapshots with technical acceptance of delivery. This does not affect the data delivered to the data collection.



4.1.12 How to consult Historic Releases

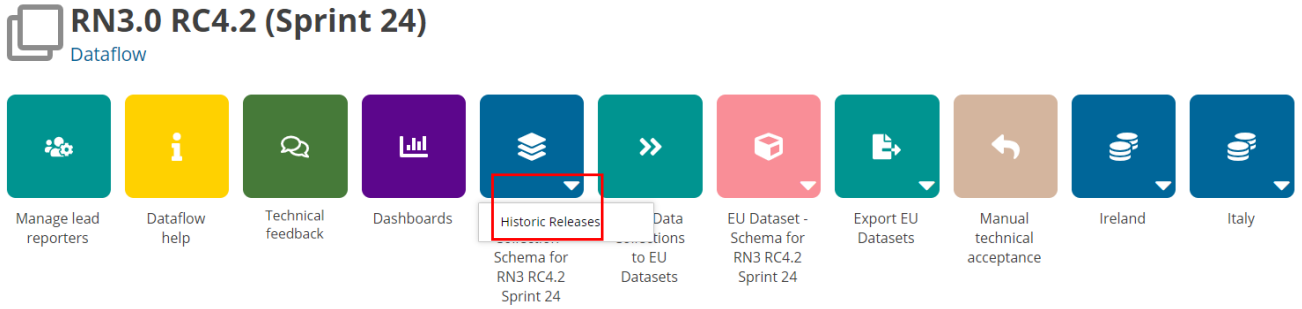


Figure 61 Historic Releases DC

1. From the 'Dataflow' page click on 'Historic Releases' button inside Data Collection context menu.
  - i. A new dialogue will appear with the release history for this data collection.

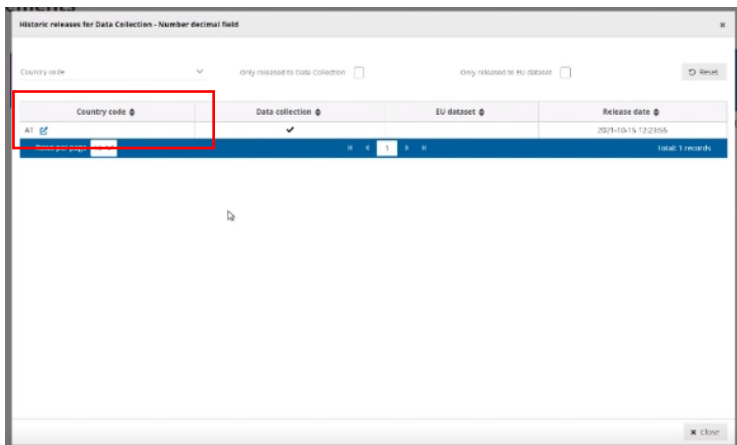
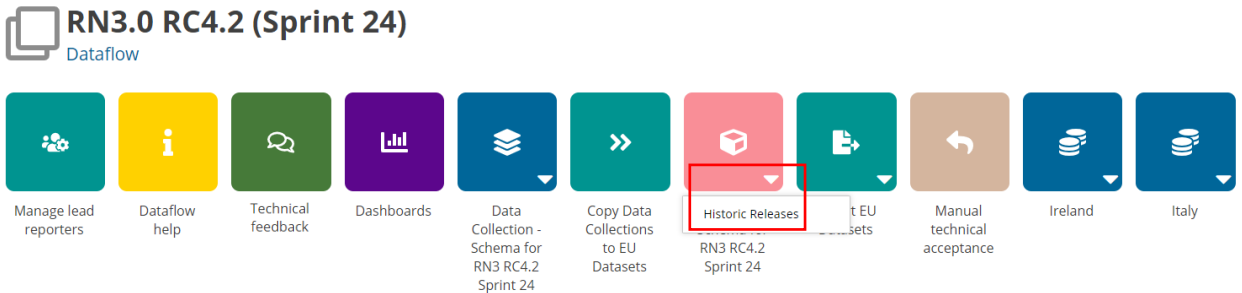


Figure 62 Historic Releases EU Dataset

2. From the 'Dataflow' page click on 'Historic Releases' button inside EU Dataset context menu.
  - i. A new dialogue will appear with the release history for this EU Dataset.
  - ii. If we have a released dataset, on the 'Country code' column we have a link with a redirection to this country dataset.



- iii. Note: This Historic will be empty until Data collections is copied to EU datasets correctly.

### 4.1.13 How to close/open release process

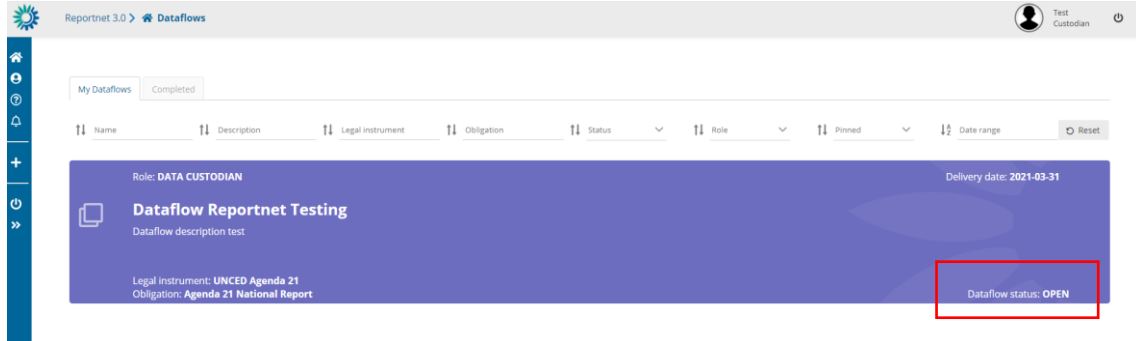


Figure 63 Dataflow status OPEN

When you create a data collection the status by default of this dataflow is **OPEN**

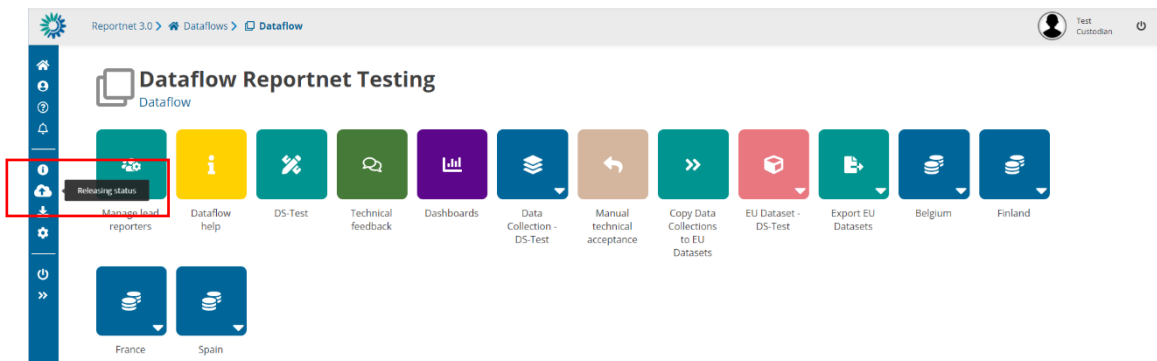


Figure 64 Releasing status

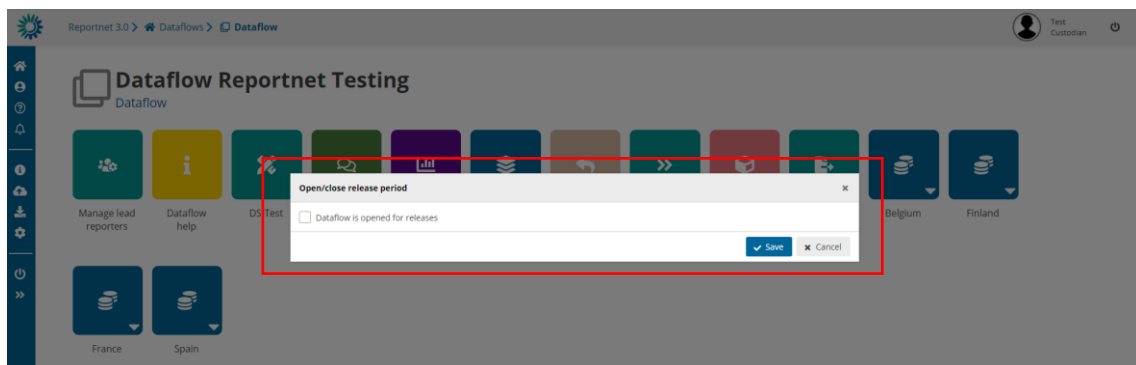


Figure 65 Open/close release period

If you want to change the status, you can click on “**Releasing status**” and a check appears showing if reporting is open or not. You can change it by clicking on check and saving.

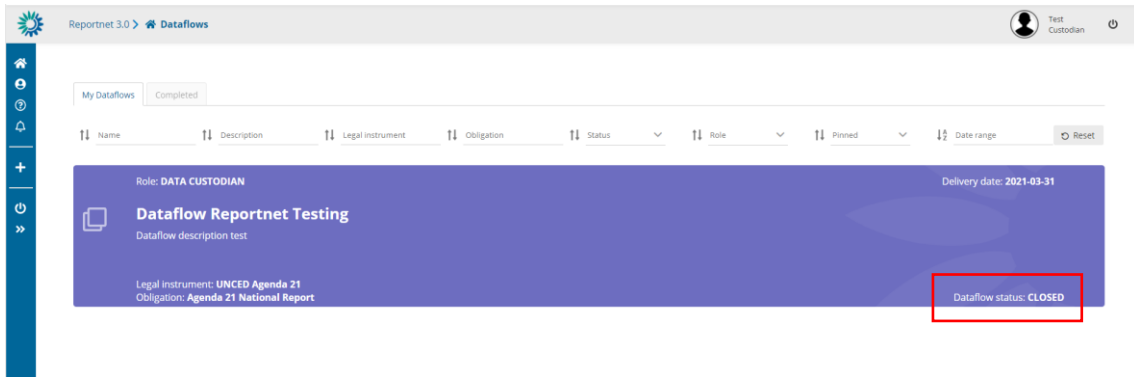


Figure 66 Dataflow status CLOSE

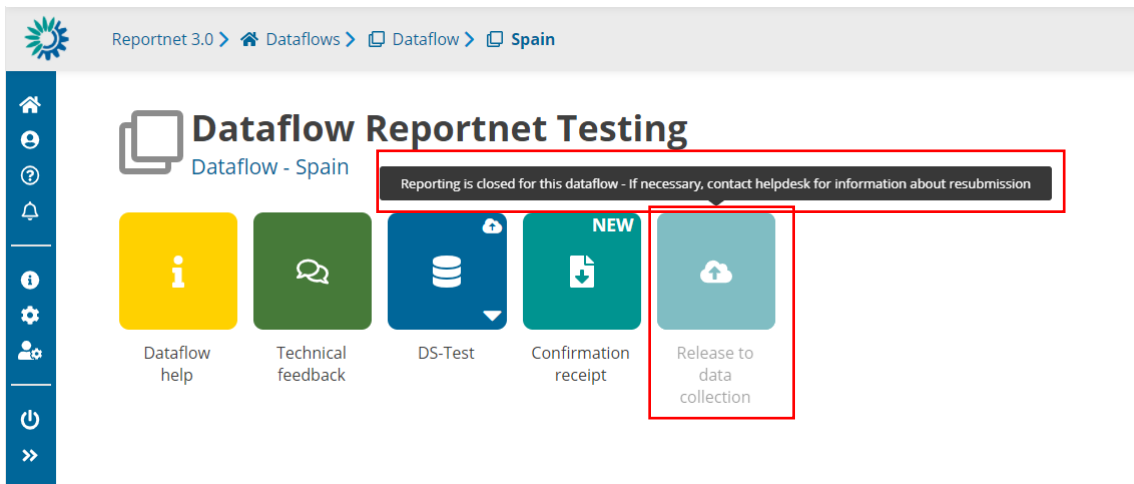


Figure 67 Disabled release

If you close the reporting, reporters could not release data. It means that the button “**Release to data collection**” will be disabled and a tooltip will be appear explaining that the releasing period is closed.

#### 4.1.14 How to manage external integrations in reporting dataflows

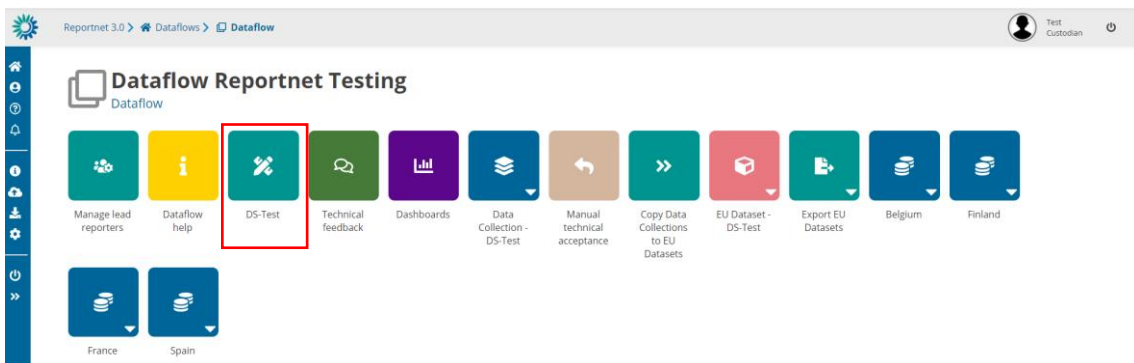


Figure 68 Design dataset

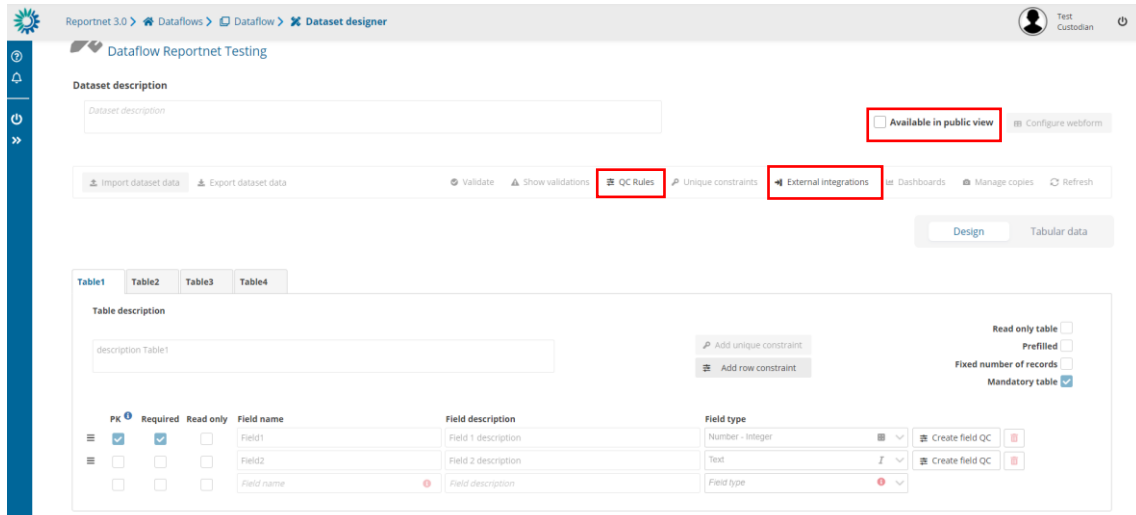


Figure 69 Read-only except external integrations, public view and QCs

You can be able to manage the external integrations for all datasets in reporting. If you click on the design dataset you could see that everything will be read-only except the external integrations configurations, QC Rules and publicly available.

#### 4.1.15 How to reproduce reporters' feedback

1. Once data collection has been opened, a **TEST** dataset is created where the data custodians have a place to do also tests, in support of the reporters trying to reproduce a situation.

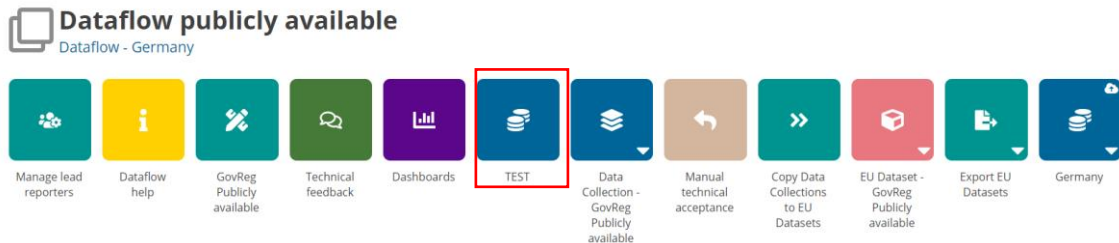


Figure 70 TEST dataset

2. There is no option to release data, no dashboard and no public information.

#### 4.1.16 How to consult the QC rules history

For the dataflows in reporting phase you have the possibility to check the history of all changes for the QC rules.



QC rules

Search by (code, name, description, message) Table Field Type of QC

Level error Creation mode Status Validity

Table	Field	Code	Name	Description	Message	Expression	SQL evaluation	Type of QC	Level error	Automatic	Enabled	Valid	Actions
Table 1		TB1	Mandatory table records check	When a table is marked as mandatory, checks at least one record is added	Mandatory table has no records			TABLE	BLOCKER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Table 1	Field 1	FT2	Field type NUMBER - INTEGER	Checks if the field is a valid NUMBER - INTEGER	The value is not a valid whole number			FIELD	ERROR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Table 1		TU3	Table type uniqueConstraint	Checks if field 1 is unique within table	Uniqueness and multiplicity constraints - The field Field 1 is unique within table			TABLE	ERROR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Table 1	Field 1	FC4	Field cardinality	Checks if the field is missing or empty	The value must not be missing or empty			FIELD	ERROR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Table 1	Field 1	SC1	Test 1	test 1	SC1 - Test 1	( Field 1 > 55 )		FIELD	INFO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Table 1	Field 1	A1	A1	A1	F1 > 5	( Field 1 > 5 )		FIELD	WARNING	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Rows per page: 10

Go to 1 of 1

QC history Download QCs Create field constraint Create row constraint Create table constraint Validate QCs Close

You can consult the QCs history by clicking on the 'QCs history' button and also you can see the info for each manual QC.

QC rules

Search by (code, name, description, message)

Level error

QC history

User	Timestamp	Expression	Metadata	Status
edu@ec.europa.eu	2022-01-14 12:51:57			<input checked="" type="checkbox"/>

Rows per page: 10

Go to 1 of 1

QC history Download QCs Create field constraint Create row constraint Create table constraint Validate QCs Close

## 5 System Notifications

### 5.1 How to launch System notifications. (Only Admin)

1. Click on the icon [A] 'System Notifications'.
2. Click on [B] Add Button.
3. Add the message [C].
4. Select the level of the notification (INFO, SUCCESS OR ERROR) and check if we enable or disable the notification. [D]
5. Click on save [E] and the notification will be created.



If you have a system notification active you will see an exclamation on the system notifications icon.

