European Environment Agency

Reporting guidance for SoE WISE-6 Water quality using Reportnet 3

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Contents

Overview

These guidelines explain how to use Reportnet 3 (the European Environment Agency's new digital infrastructure for data collection) for reporting information for WISE-SoE WISE-6 (Water Quality in Inland, Coastal and Marine Waters). WISE-6 reporting is used for reporting of concentrations of nutrients, pesticides, hazardous substances and supportive determinands in groundwater and all types of surface waters. Data model of this reporting consists of three tables: DisaggregatedData, AggregatedData and AggregatedDataByWaterBody. Reporting of raw disaggregated data (i.e. sample values) is highly preferred. In the case reporting of disaggregated data is not possible, data annually aggregated, by monitoring site and determinand should be reported (AggregatedData table). The last table AggregatedDataByWaterBody is kept for historical reasons, due the compatibility with some data reported in the past. Links to the dataflow, data dictionary and further supporting documents are provided in this document.

The reporting is organised by the European Environment Agency (EEA) supported by ETC-BE.

User accounts and access permissions

For reporting in Reportnet 3, an EU login with the same email as is used for reporting is required as well as permission to upload the national delivery. Each country should have a Lead reporter for the WISE-6 (Water quality) reporting - these should be nominated by the National Data Flow Coordinator (NDFC) or the National Focal Point (NFP) writing to the WISE SoE Helpdesk (wisesoe.helpdesk@eionet.europa.eu) and specifying the person and dataflow required. Lead reporters can provide access to the dataflow for other reporters (roles Reporter write, Reporter read). It is possible to nominate more than one lead reporter.

Unless requested otherwise, EEA will reuse the WISE 6 country reporters from last year's reporting. Only reporters with valid EU logins will be kept from year to year.

WISE SoE Data call notifications will be posted on the -EXT- Eionet Teams channel in the subgroups of both NDFCs and NFPs.

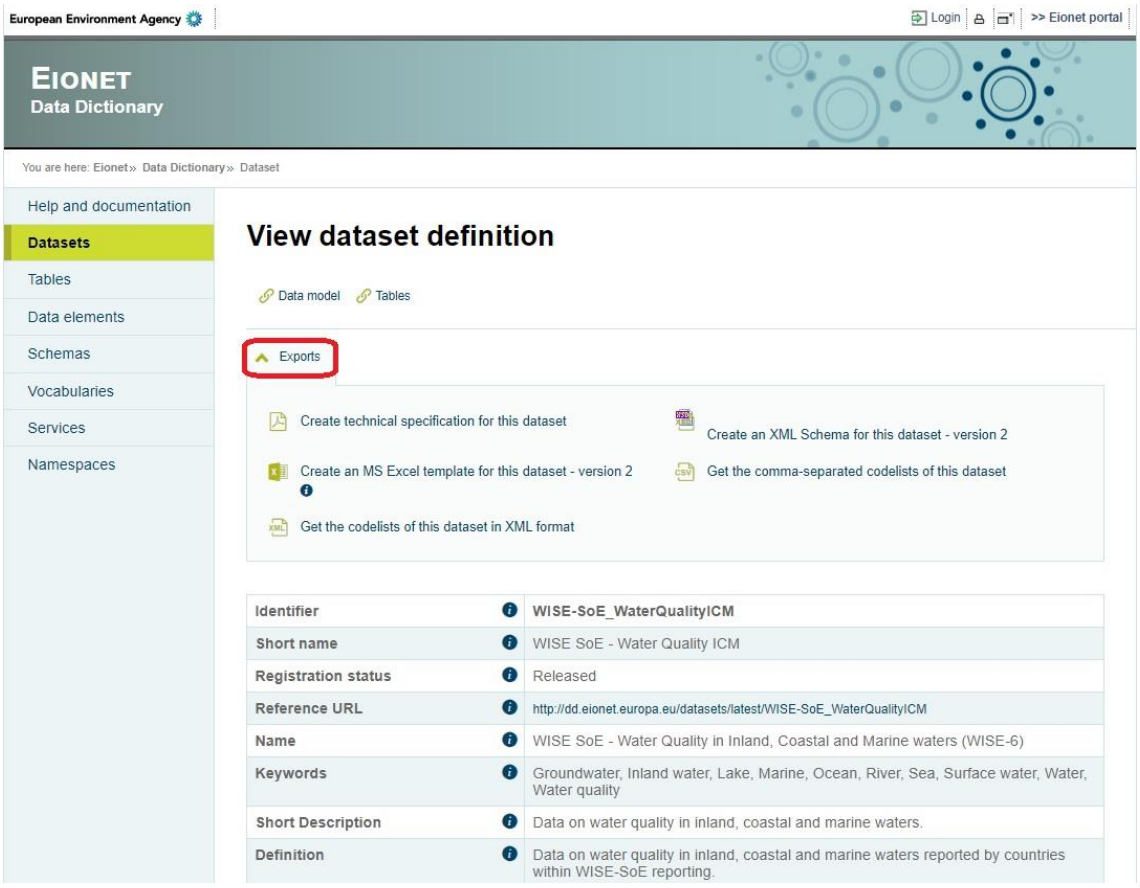
1 Reporting process step by step

1.1 Step 1: Download WISE-6 Data Dictionary and WISE-6 reporting template

Go to the WISE-6 Data Dictionary page (Datasets -> WISE SoE - Water Quality in Inland, Coastal and Marine waters (WISE-6)). Click the "Exports" section (Figure 1) and you can e.g. download the latest version of:

- Technical specification (.pdf)
- Data set templates (.xls; XML)
- Codelists (.csv; XML).

Figure 1: Downloading WISE-6 templates and documentation using "Exports" function



By clicking the "Create technical specification for this dataset", data dictionary pdf can be opened and downloaded.

The General help page with the data dictionary for WISE-6 can be found here: https://cdr.eionet.europa.eu/help/WISE_SoE/wise6

The template in tabular format includes three WISE-6 reporting tables (sheets):

Figure 2: Overview of Water Quality (WISE-6) dataset tables

Dataset tables

Full name	Short name
Disaggregated data in water, sediment an ...	DisaggregatedData
Annual statistics data by monitoring sit ...	AggregatedData
Annual statistics data by water body	AggregatedDataByWaterBody

A detailed description of the different reporting tables is given in the WISE-6 Data Dictionary, e.g.:

- Disaggregated data
  http://dd.eionet.europa.eu/datasets/latest/WISE-SoE_WaterQualityICM/tables/DisaggregatedData
- Aggregated data
  http://dd.eionet.europa.eu/datasets/latest/WISE-SoE_WaterQualityICM/tables/AggregatedData

etc.

1.2 Step 2: Log on to Reportnet 3

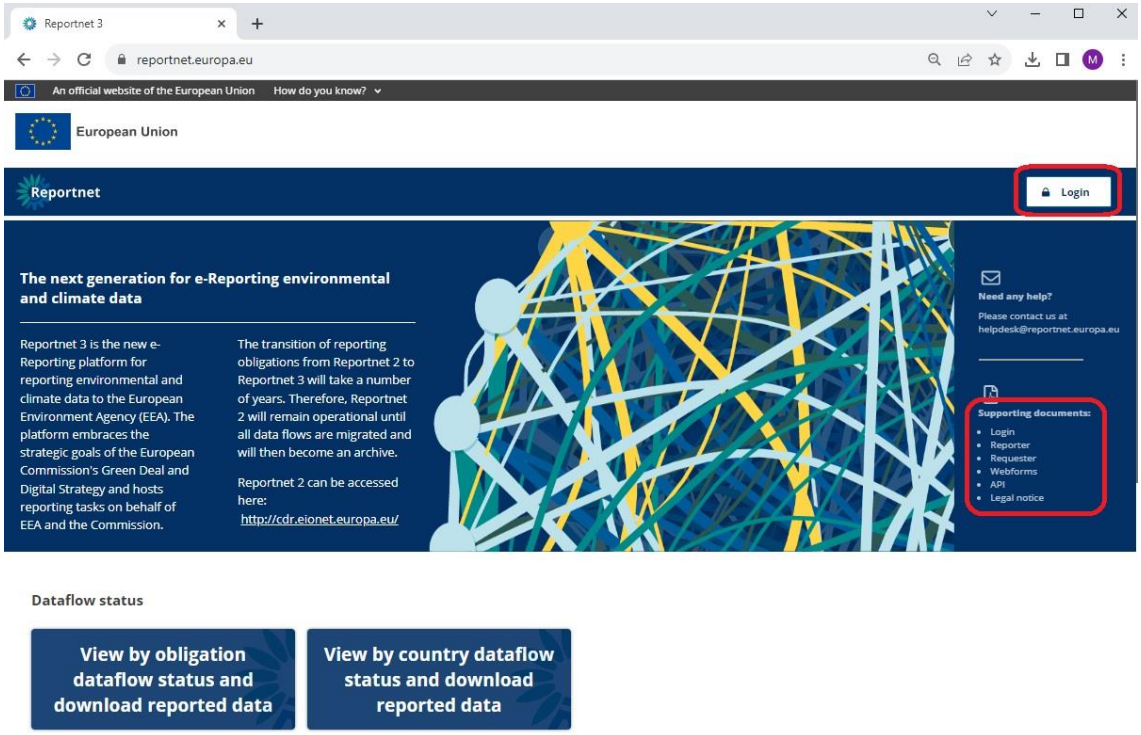
The Reportnet 3 production platform (Figure 2) is found here is found here https://reportnet.europa.eu/

Before logging in at that page in a first step an EU login is needed. If you do not have an EU login, follow the steps described here:
https://www.eionet.europa.eu/reportnet/docs/prod/howto_login_reportnet3.0

Login and common functions of Reportnet 3 are described in a common guidance:
https://www.eionet.europa.eu/reportnet/docs/prod/reporter_howto_reportnet3.0#

Reportnet 3 has Multi-Factor Authentication (MFA) from 2024. Guidelines can be found at Reportnet 3 under Authentication. Other supporting documents can also be found on the right side of the landing page of Reportnet3 (see Figure 4 below, red circle).

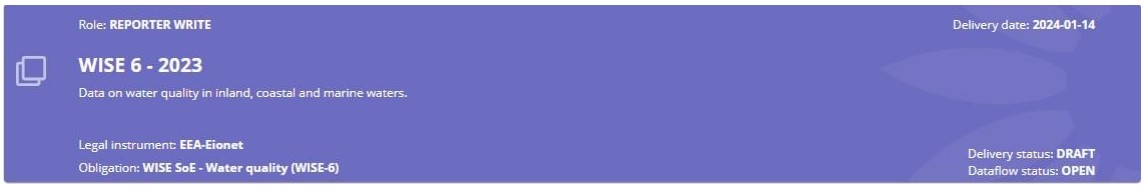
Figure 4: Reportnet 3 -Login page



1.3 Step 3: Open the WISE-6 dataflow

Once you are logged in, you will see all data flows to which you can contribute. Choose the latest WISE-6 dataflow (e.g. 2023). By clicking on it, you will reach the dataflow overview page. Each reporter will see only her/his country data.

Figure 5: Selecting WISE-6 data flow (example: 2023 reporting exercise)



Using a direct link to the data flow is possible as well (again, 2023 example):
https://reportnet.europa.eu/dataflow/799

1.4 Step 4: Go to reported data

The dataflow overview page provides the most relevant functions to delivering reporting (see Figure 6).

- **Dataflow help:** Here you will find three tabs showing WISE-6 specific information:
  - Supporting documents
  - Web links

- Dataset schemas. This tab contains information similar to the WISE-6 Data Dictionary, list of relevant QC rules, specification of fields creating together unique keys for each table and information on external integrations (see Figure 7)

- **Reference dataset:** Here you will find list of all relevant information important for proper preparation of the WISE-6 country dataset (Figure 8):
  - List of spatial units (countries, RBDs, SubUnits)
  - List of all monitoring sites
  - Code lists

  Reference data cannot be edited by reporters.
- **Reporting data.** Here you can upload and validate the data
- **Release to data collection.** For submitting your reported data once you have uploaded and validated. This function is available for lead reporters only.

Figure 6: Dataflow overview (example – Czech Republic)

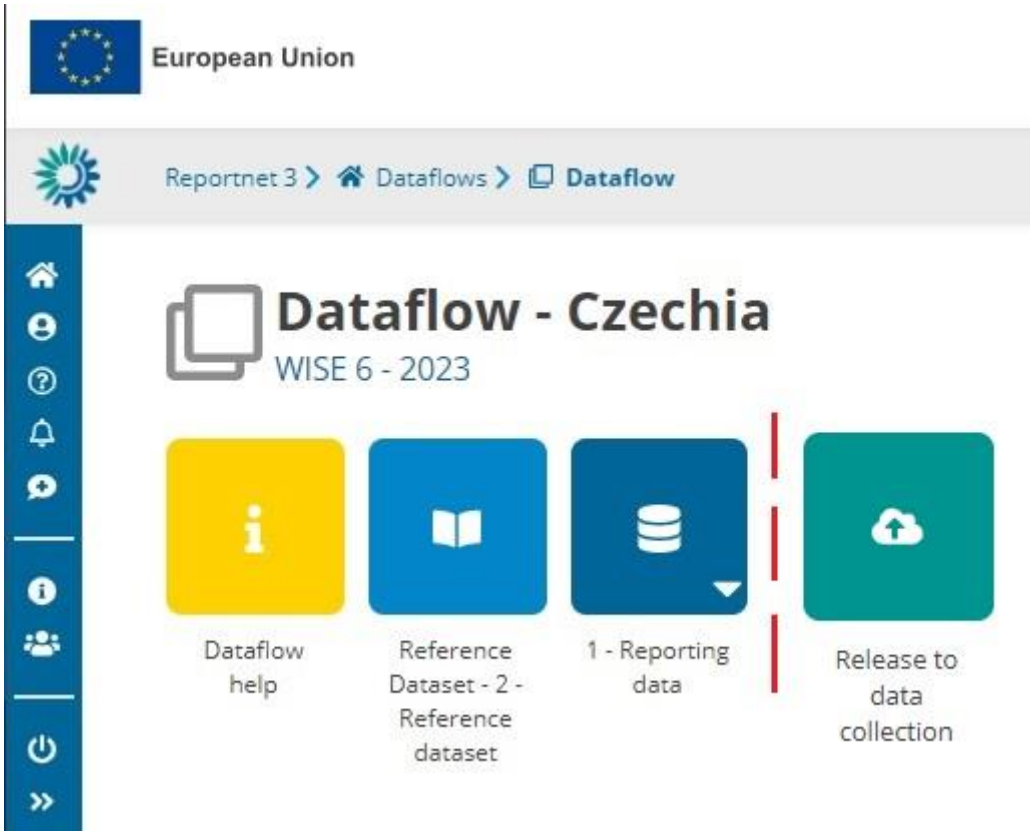


Figure 7: Dataflow help page (unpopulated in example).

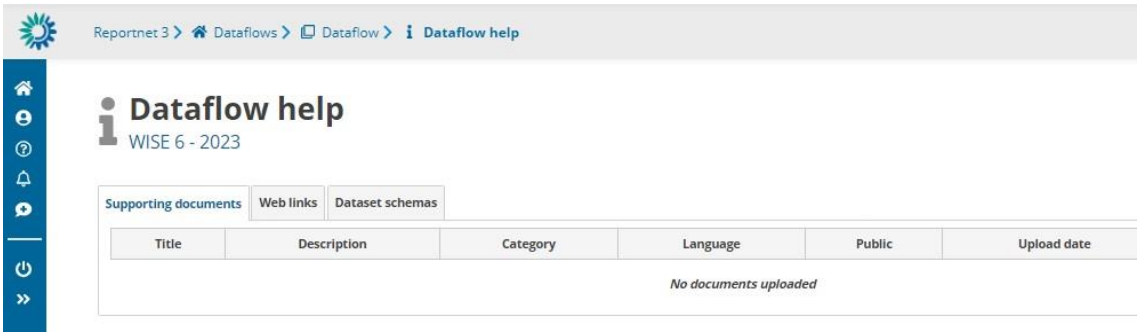
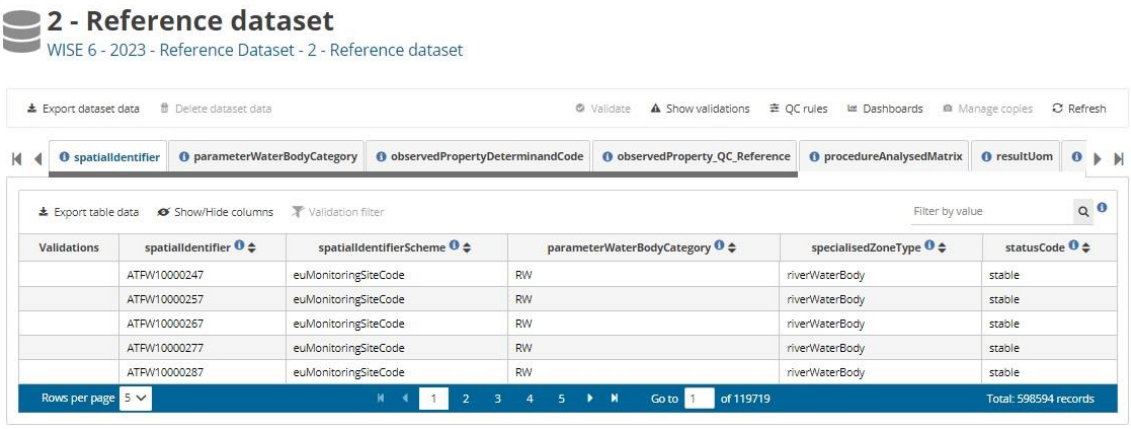


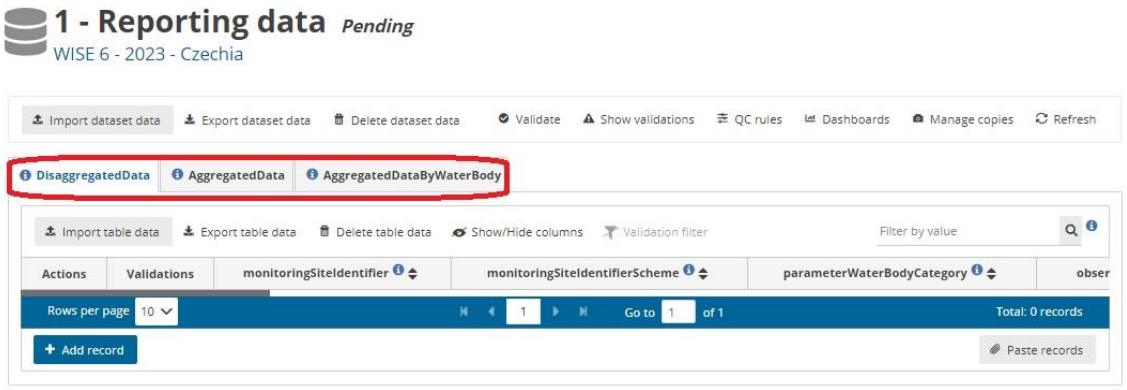
Figure 8: Reference dataset page



1.5 Step 5: Upload the WISE-6 tabular data

Go to 1-Reporting data on the dataflow overview page (Figure 6 above) and you will reach the data reporting page (Figure 9).
On the data reporting page you will find three WISE-6 tables, which are empty if you get there for the first time.

Figure 9: WISE-6 1- Reporting data page (example: Czech Republic)

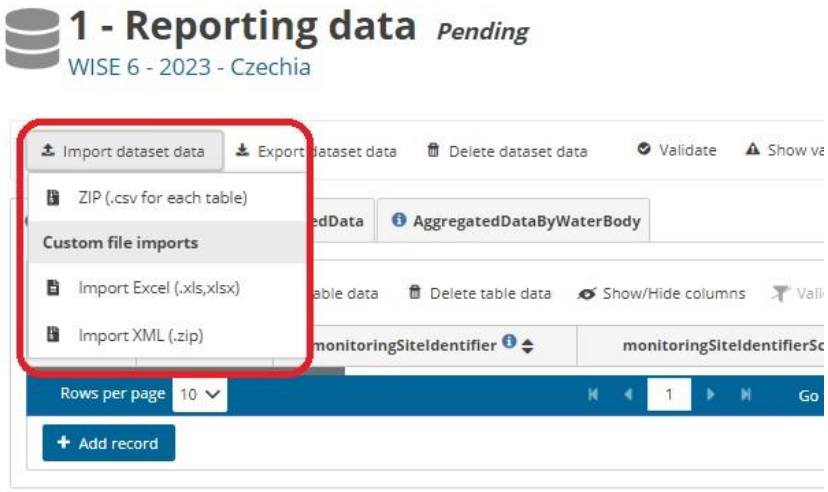


Now you can upload the filled WISE-6 template containing your data delivery. It is also possible to import each data table separately.

To import a new WISE-6 data file (currently only .xls, .xlsx and .csv is possible) click on the "**Import dataset data**" button on the top left menu (Figure 10). Select the file to be uploaded. You can also upload individual tables separately using the function „**Import table data**". In this case, import of .csv files is possible only.

.csv files imported to Reportnet 3 should contain comma as fields delimiter. Next, numbers 1, resp, 0 should be used instead of strings true / false in boolean fields. Focus on the proper date field format (YYYY-MM-DD) as well.

Figure 10: Import WISE-6 dataset



The application will automatically extract the national data from the uploaded file and transfer it into the dataset – shown in the data tables (Figure 12). The originally uploaded file itself is not stored on the platform. Notifications in the top right will inform you the import has started and when it has finished (Figure 11). Use the **Refresh button** afterwards, to display the uploaded data.

Figure 11: Notification on the successful data upload, Release button

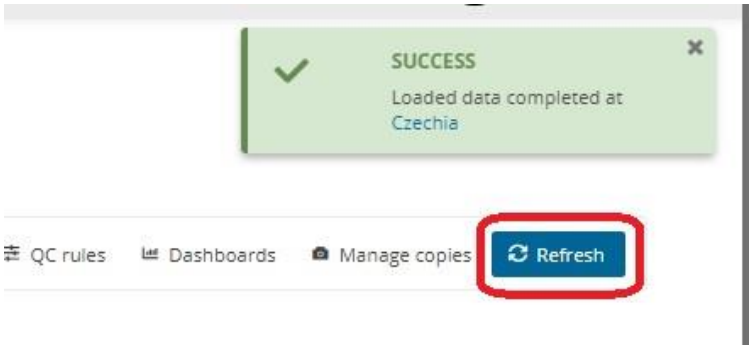
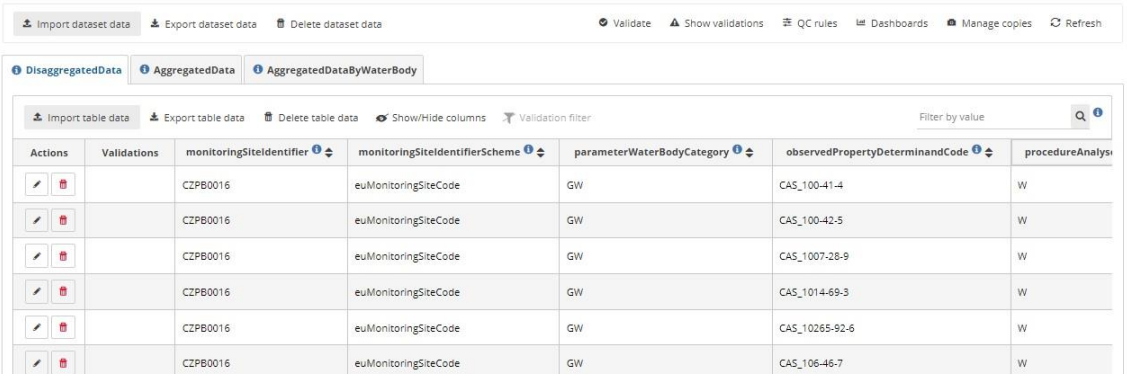
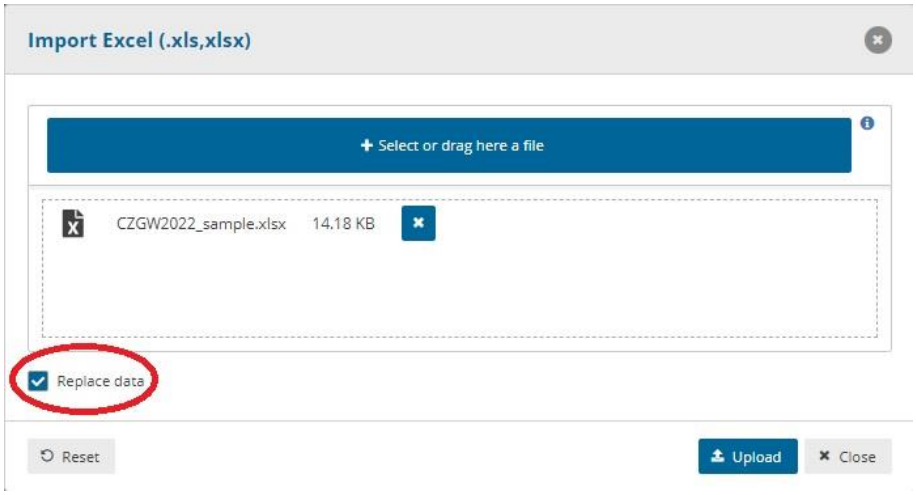


Figure 12: Filled WISE-6 data table with uploaded data (example: Czech Republic)



If you are importing the entire dataset again (e.g. after QA/QC), then make sure to choose "**Replace data**" in the tick box (Figure 10) of the Import window. If you do not want to replace the data, but just add new ones, do not tick this box, in which case new rows will be appended to the current tables.

Figure 13: Reimport of the dataset

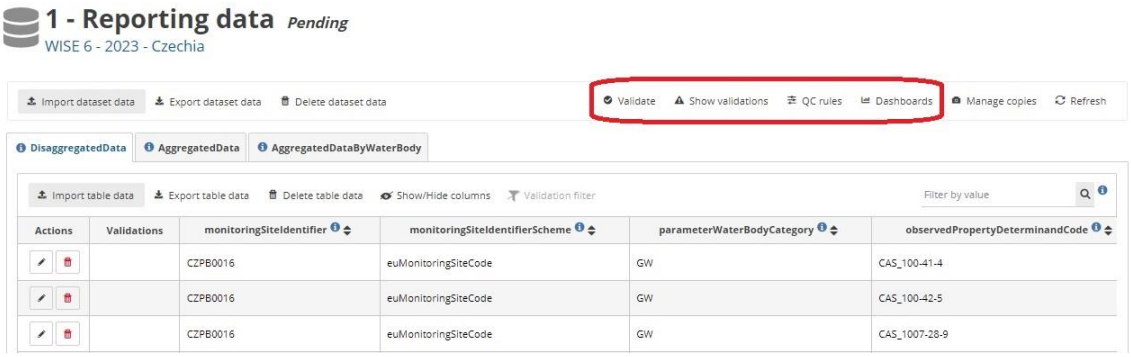


1.6 Step 6: Run Quality control checks (QA/QC)

A first check against the data model (schema) is run during data upload (step 4). After the data are successfully imported all the QC checks defined for WISE-6 need to be run.

For validating the entire dataset follow the described process using the menu buttons shown in Figure 14.

Figure 14: Validation tools (Reportnet 3)



1. **Start the QC-process** by clicking on the button "**Validate**" (dataset menu; Figure 14 above).
2. A notification in the top right will indicate that validation process has started and when it has been completed.
3. **"Refresh"** the data tables (dataset menu) once the validations are complete.
4. **Page through all validation results and sort them to understand errors in the data.**

   There are different ways to look at the error messages caused by QC-test failures.

   To get an overview of all validation results - Click on "**Show validations**" button (dataset menu) to open a table where all QC results in the dataset are listed. This table includes the following important information:

   - Column 'Entity' – specifies the related entity for the QC failure. It could be on the level of a single FIELD, a RECORD, an entire TABLE or the whole DATASET.
   - Column 'Table' – names the table with the error message.
   - Column 'Field' – name of the field containing error
   - Column 'Code' – identification of the error in the list of errors
   - Column 'Level error' – describes the level of error message. If a QC-test fails, the following levels of flagging the data are used:
     - **INFO** – **i**nformation that data (attributes) which are not defined as mandatory are missing. The data set is still deliverable.
     - **WARNING** – information that e.g. the reported year from the phenomenonTimePeriod value is outside of the expected range. The data set is still deliverable.
     - **ERROR** – information that shows there may be a real error. The data set is still deliverable, but the error should be accepted by the client (EEA or ETC expert).
     - **BLOCKER** – information that e.g. a mandatory information (e.g. specification of the monitoring site (monitoringSiteIdentifier) is missing. Data set cannot be delivered. BLOCKER needs to be fixed first.

Only BLOCKERS will stop the data from being released to the data collection. Note however that, as part of the feedback process, the client (EEA/ETC) may subsequently request changes where non-blocking QC issues have been flagged.

- Column 'Message' – description of the specific error.
- Column 'Number of records' – specifies the number of affected records.

The button '**QC rules**' (dataset menu) shows a list of all validations which have been created for the WISE-6 dataset and the level of error message they cause (Figure 15). A description of all defined WISE-6 QC rules can also be found here: https://cdr.eionet.europa.eu/help/WISE_SoE/wise6.

Figure 15: Button QC rules and list of WISE-6 QC rules in Reportnet 3

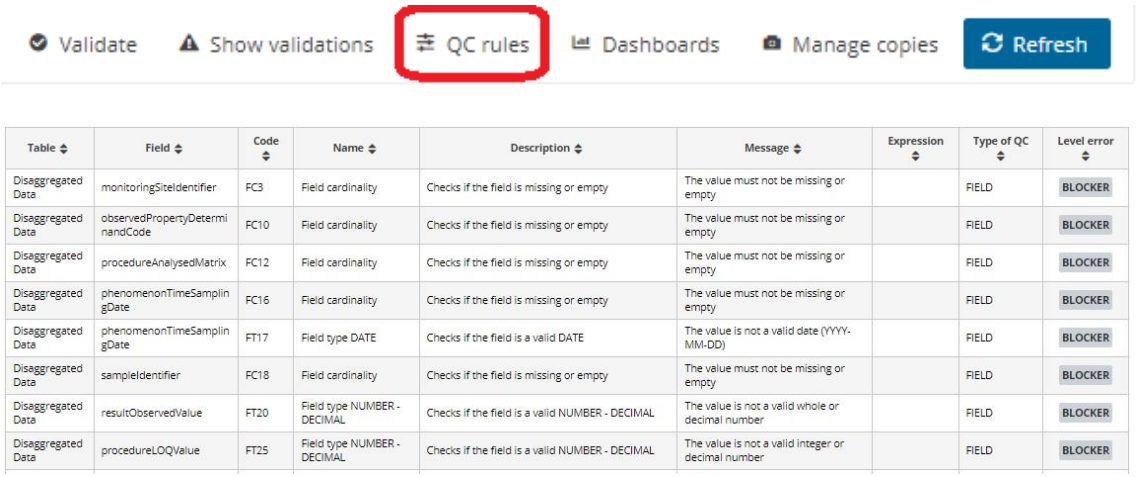


Table	Field	Code	Name	Description	Message	Expression	Type of QC	Level error
Disaggregated Data	monitoringSiteIdentifier	FC3	Field cardinality	Checks if the field is missing or empty	The value must not be missing or empty		FIELD	BLOCKER
Disaggregated Data	observedPropertyDeterminandCode	FC10	Field cardinality	Checks if the field is missing or empty	The value must not be missing or empty		FIELD	BLOCKER
Disaggregated Data	procedureAnalysedMatrix	FC12	Field cardinality	Checks if the field is missing or empty	The value must not be missing or empty		FIELD	BLOCKER
Disaggregated Data	phenomenonTimeSamplingDate	FC16	Field cardinality	Checks if the field is missing or empty	The value must not be missing or empty		FIELD	BLOCKER
Disaggregated Data	phenomenonTimeSamplingDate	FT17	Field type DATE	Checks if the field is a valid DATE	The value is not a valid date (YYYY-MM-DD)		FIELD	BLOCKER
Disaggregated Data	sampleIdentifier	FC18	Field cardinality	Checks if the field is missing or empty	The value must not be missing or empty		FIELD	BLOCKER
Disaggregated Data	resultObservedValue	FT20	Field type NUMBER - DECIMAL	Checks if the field is a valid NUMBER - DECIMAL	The value is not a valid whole or decimal number		FIELD	BLOCKER
Disaggregated Data	procedureLOQValue	FT25	Field type NUMBER - DECIMAL	Checks if the field is a valid NUMBER - DECIMAL	The value is not a valid integer or decimal number		FIELD	BLOCKER

In the data tables where the fields and records are tagged, you have a detailed view of the error messages (Figures 16 and 17).

Figure 16: Erroneous records in the Disaggregated data table identified by the QA/QC process

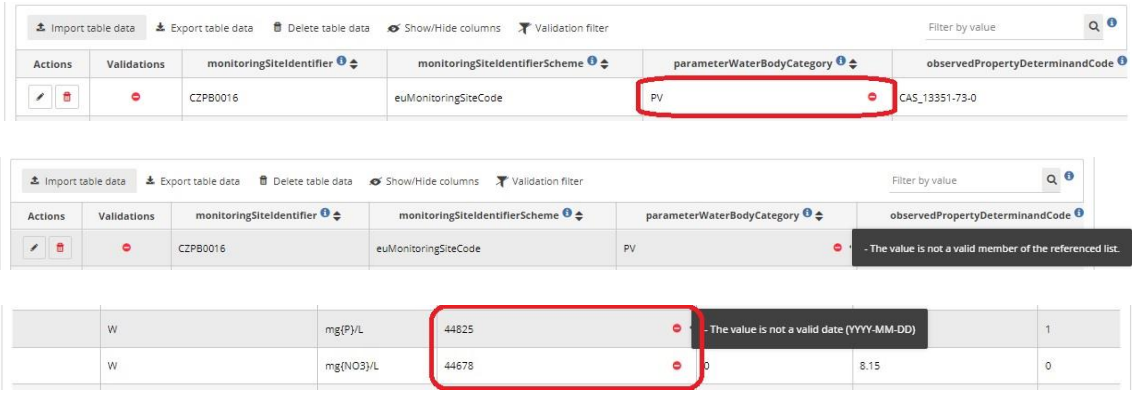


Figure 17: 'Show validations' - overview of validation results. Number of records violating given rule is available in the right most column

The column '**Validations**' in each data table shows for each record which level of errors at field and record level occurred. Field level errors have icons next to the value (attribute) in the field. Hover over it to see the error message. It is also possible to filter records in the validation table to make it easier to work with. You can filter on the error messages either by the error level or the entity type. Double-click on an error in the list to go to the record in the table and it will be highlighted.

The **'Dashboards'** (dataset menu) gives a visual overview of the number of errors in the data by table.

5. **Correct the data.** Corrections to the data should be made in your source data and the data file should be reimported. When the number of corrections are limited, they can also be made to the data tables directly in the records imported through Reportnet 3 on the Reporting data page (Figure 18) or by selecting the pen icon in the "Actions" column (Figure 19). Afterwards, it is recommended to export table data to avoid variations in the nationally stored data.
6. **Enable editing – new in 2024.** To edit records reporters must first select 'enable editing'. Depending on the number of records in the dataset it will take more or less time for the editing to be enabled. When editing is enabled, the validation and import functions are disabled, but the overall layout and functionality is otherwise similar to last years version (same buttons in same places etc.)

Figure 18: Direct correction of the wrong values is possible on the Reporting data page – selection of the correct value from the codelist (if available) is possible

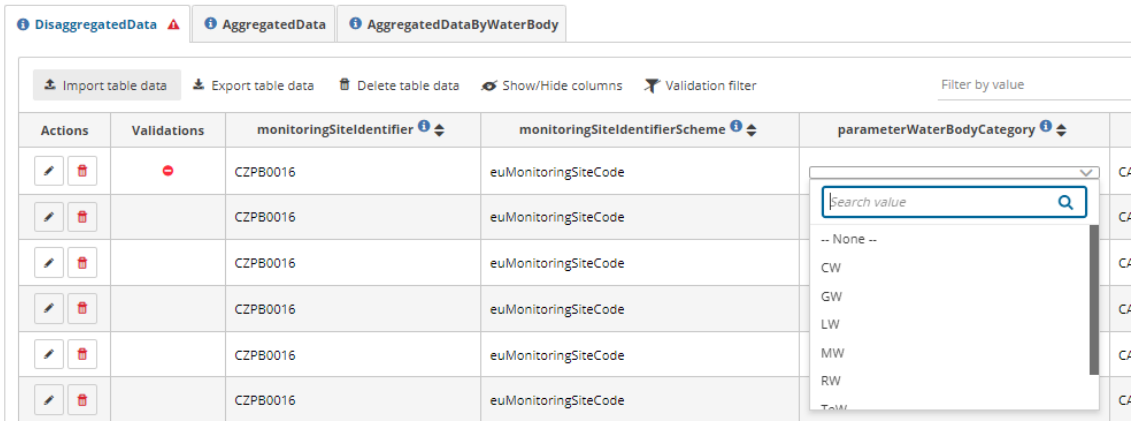
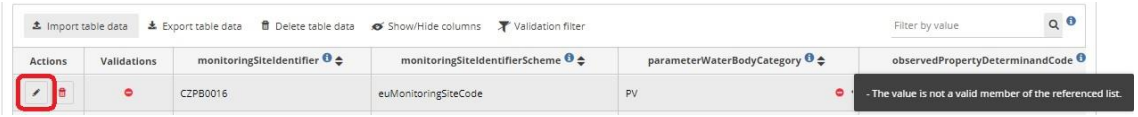
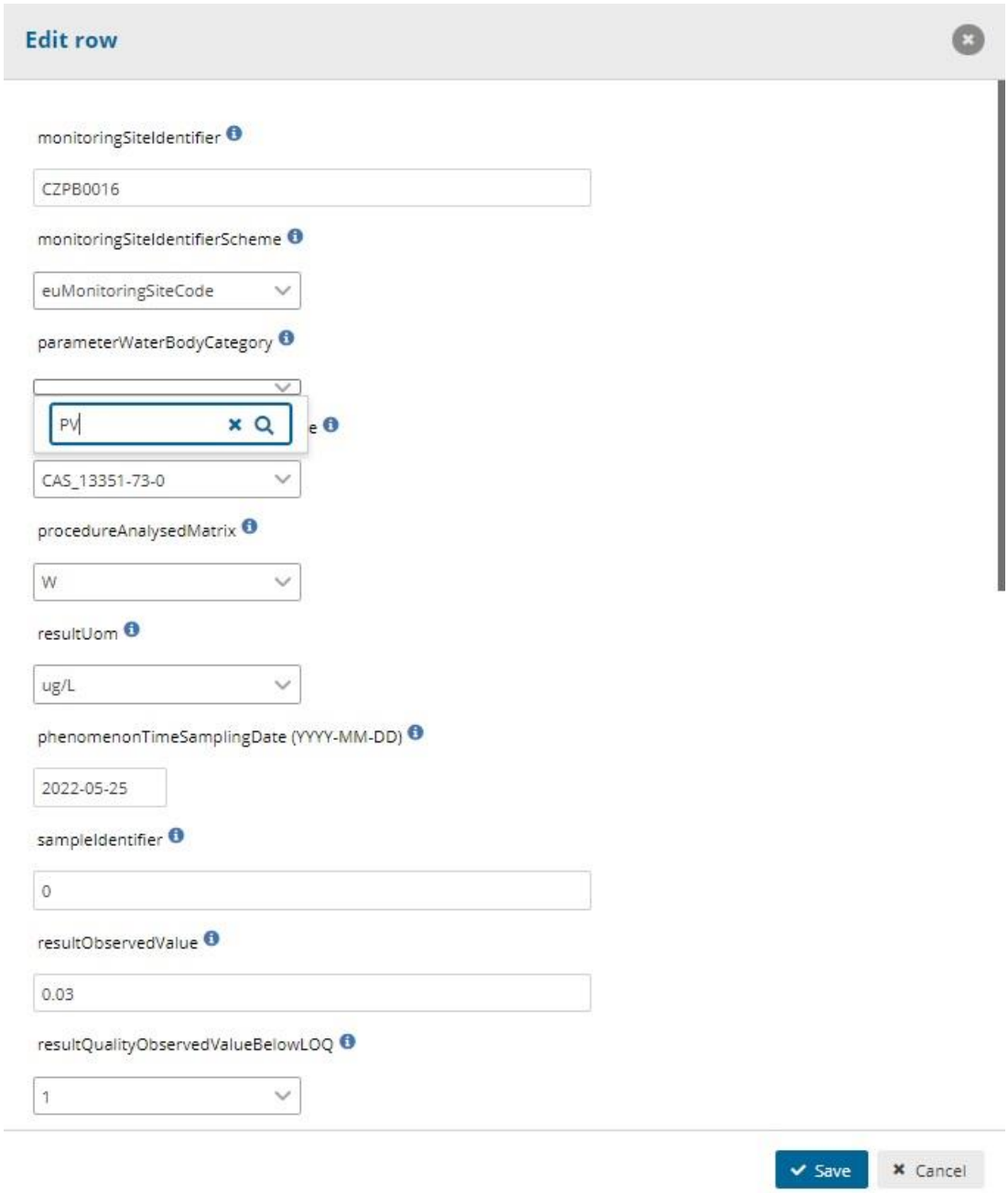


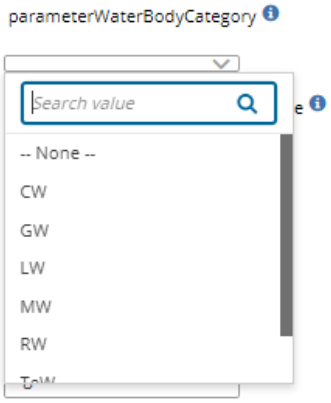
Figure 19: Tool for direct interactive correction of the data (pen icon)



Correction of the wrong water body category value in the Edit row window



Codelist of allowed values is available after dobleclick on the corrected field in the Edit row window



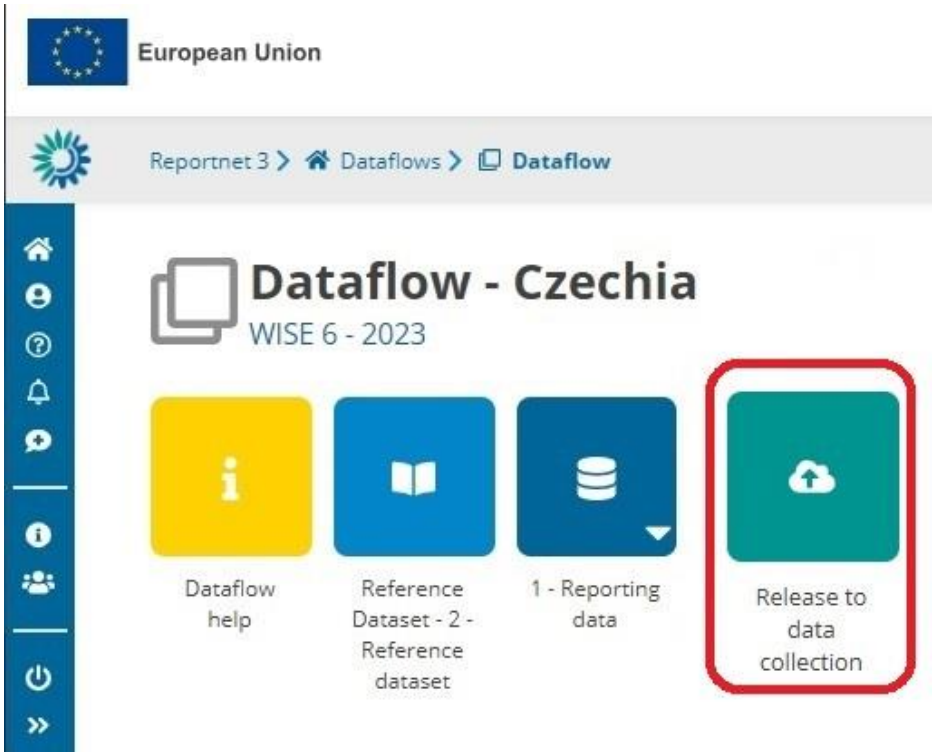
6. **Reupload the data.** When reimporting your file, remember to either **Delete dataset data first or check the Replace data** in the import dialogue. Once imported, revalidate the data starting with step 1 again.

1.7 Step 7: Release the data to the data collection

Once you are satisfied with the uploaded data, complete your delivery by releasing to the data collection.

1. Go back to the WISE-6 Dataflow overview page (Figure 20).

Figure 20: WISE-6 Dataflow overview – Release to data collection (example: Czech Republic). Release function is available for Lead reporters only



2. Click on the button **Release to data collection**. In the background, QC runs again on each dataset and the "**Show validations**" list in the dataset will be refreshed.

   - If there are blockers in any dataset, the release is stopped and there will be a message to inform about that.

   - If the QCs run fine, a notification will appear saying the data has been "released successfully". An automatic copy will be created.

You will also see a new icon "**Technical feedback**" on the Dataflow overview page from which you can download a **Confirmation receipt**. If you change the data and resubmit a new copy to the data collection, then a new confirmation receipt is available for download.

To look at your submission history, on the dropdown menu for the Reporting data, you will find **Historic releases** which opens a dialogue showing the releases metadata.

Once the data is released, it is marked as an official delivery. The delivery must be reviewed before it is technically accepted. Whilst awaiting review, the status of the delivery is "**Final feedback**".

The final feedback is given by the client (EEA/ETC expert). If the client flagged the delivery as "**Corrections requested**" due to incompleteness, you will be contacted by the helpdesk and asked for clarifications. In such case, inconsistencies in the data will have to be corrected by reporter and submitted under a new release to the data collection as described above (Steps 1-8). When the client has "**Technically accepted**" the delivery, no further actions are necessary on your side.

Only the latest accepted release stays in the system. So all the data that are to be reported must be in the tables when released. If data is removed from the platform between releases, then the removed data will no longer be in the system.

1.8 Notes on reporting watchlist data and multiple releases

1. For watchlist reporting, please add "Watchlist 2024" in the remarks field for the relevant records.
2. Upload and validate as usual, If needed, review and address validation errors as necessary.
3. Release the data.
4. Following the release, a receipt can be downloaded. While it will not specifically include the word Watchlist, it will refer to date and data flow of the latest release. We did not manage to improve this functionality since the last reporting.
5. When further WISE 6 data is ready to be uploaded, please add it to the relevant tables (DisaggregatedData, AggregatedData, AggregatedDataByWaterBody), but leave the already uploaded Watchlist data in place.
6. Validate, address validations, and release again. Please note, that if the watchlist data is removed from the tables before adding the regular WISE 6 data, it will go out of the system again, i.e. the latest successful release must contain all the data a country wants to report in their dataflow this year.
7. If you have documents containing additional information needed to interpret the Watchlist data, these can be uploaded to 'Watchlist supporting documents'

2 Further steps and where to find more help

An acknowledgment of receipt is generated when an envelope has been released and completed. This confirmation document is available in the feedback section of the CDR envelope and a notification will be forwarded to the subscribers.

More help on Reportnet 3 is available at:
https://www.eionet.europa.eu/reportnet/docs/prod/reporter_howto_reportnet3.0
and:
https://www.eionet.europa.eu/reportnet/docs/prod/howto_login_reportnet3.0

In case of login or platform problems, please contact Eionet Helpdesk:
helpdesk@reportnet.europa.eu.

In case of data problems or reporter permissions, please contact the WISE-SoE helpdesk:
wisesoe.helpdesk@eionet.europa.eu.