How to handle samples; timeseries with valueType "sample" used for water quality and ecological data

Example on how to import, visualize, and export sample data

Import and validation

The import for samples is based on the generalCsv import type.

The import task includes the validation of the imported file; if the import of samples fails, log messages are written in a separate *ImportFileName*.log file:

"Warnings for the import of *ImportFile* will be written to *ImportFileName*.log. This file will be placed in failed folder if not empty and import failed."

Possible Import.Warnings are:

"External location / parameter / qualifier …. can not be mapped to FEWS location / parameter / qualifier ... at line *nr* for sample ..."
"Enumeration value ... for property ... not found in SampleMetadataSchema.xml"
"Property ... has different … for sample …" or "Property … missing … for sample …"
"Sample with id ... already created. Only import files that are sorted by sample id are allowed. Please check if the samples are grouped together. See line *nr*

In case of failed imports, the user can correct the import files the samples and then re-import the adjusted file.

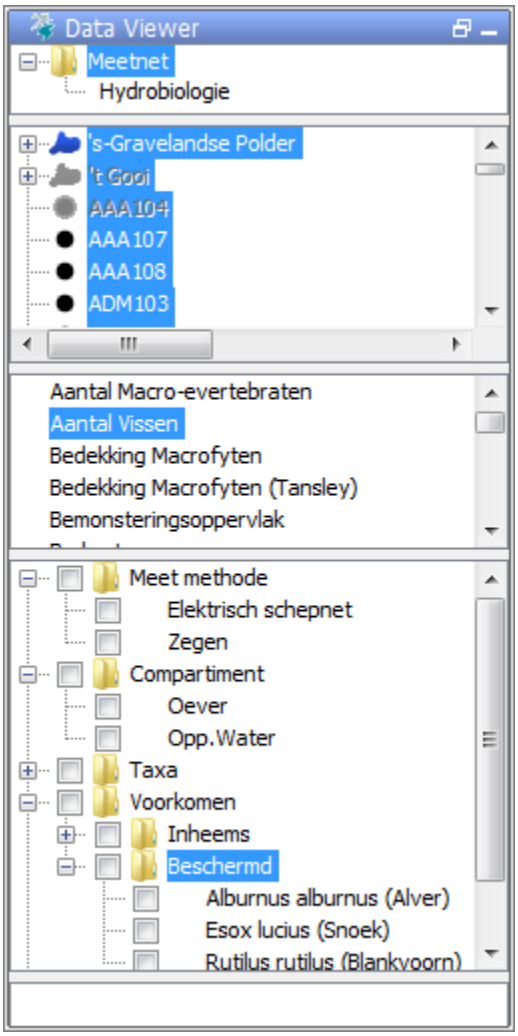
Visualize sample data

To visualize sample data, two viewers are available, the Data Viewer and the Sample Viewer

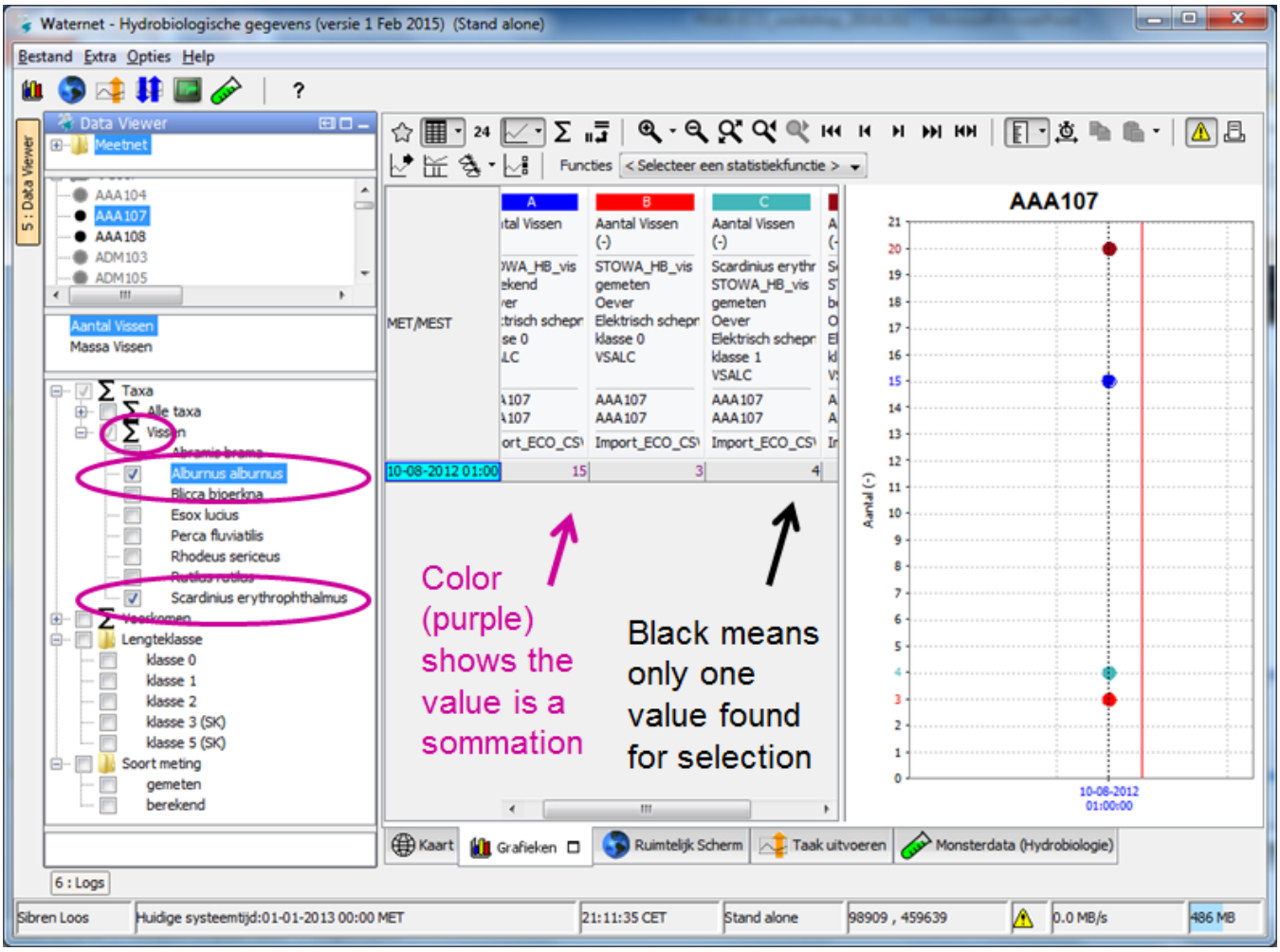
Data Viewer and qualifier tree
in the Data Viewer, location(s), parameter(s), and qualifier(s) can be selected; qualifiers are used a sort of sub-parameters that define specific attributes of a parameter value, e.g. the parameter Mass of Fish (kg) can be further specified into different fish species (lucius esox, abramis brama, ...), gender (male, female), length class etc.; all these sub-parameters can be shown in a qualifier tree, which can be configured by the user. The use of qualifiers helps to keep the parameter list small.
In the qualifier tree one can:

- toggle between different name conventions for the qualifiers. See Change qualifier labels
- use the on-the-fly summation tool to sum selected qualifiers for the active timeSeries (location(s) and parameter(s) selection). See Qualifier Summation

Example of a qualifier tree:

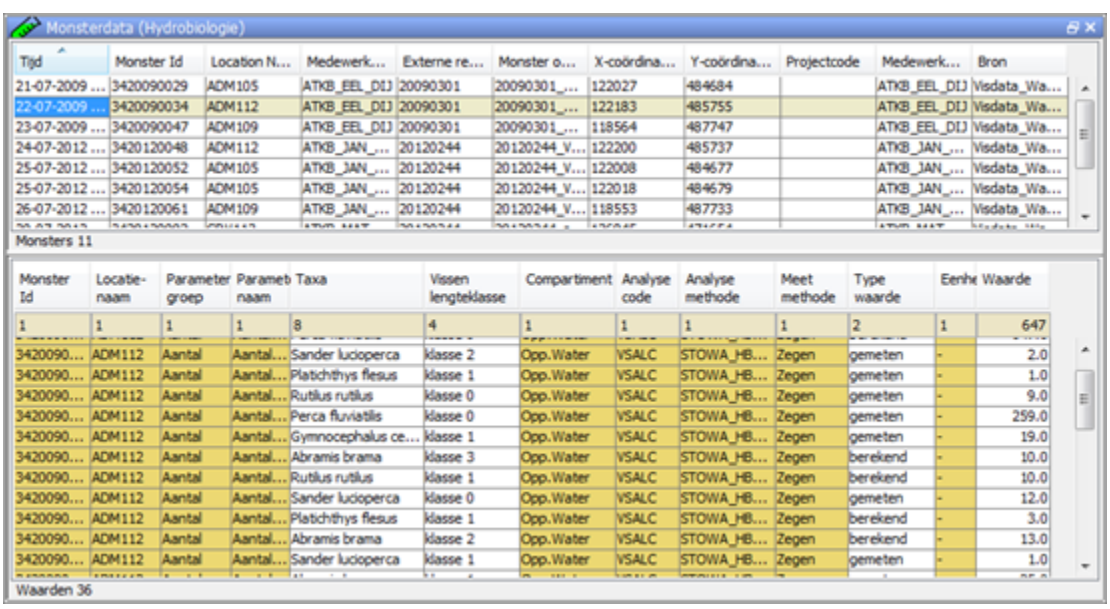


Example of the on-the-fly summation feature:



Sample Viewer

In the sampleViewer the user can view additional attributes that belong to the samples.



Export

Alike the import the generalCsv type is used for the export.

An interactive export from the Explorer can be geconfigured (in the SystemConfigFiles\Explorer.xml). The attributes that need to be exported can be defined by filling in the table list (similar to the import), one can add a sampleIdColumn, dateTimeColumn, locationColumn, unitColumn, parameterColumn, multiple qualifierColumn's, multiple propertyColumn's and a valueColumn. For details see Table Layout.

Configuration

Parameters, Qualifiers, sampleProperties