

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

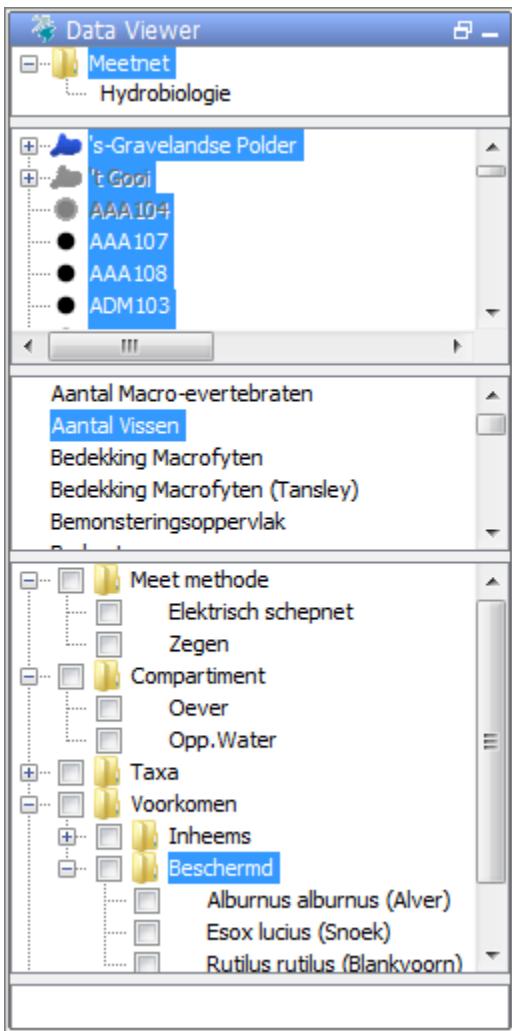
Data Viewer and qualifier tree

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.

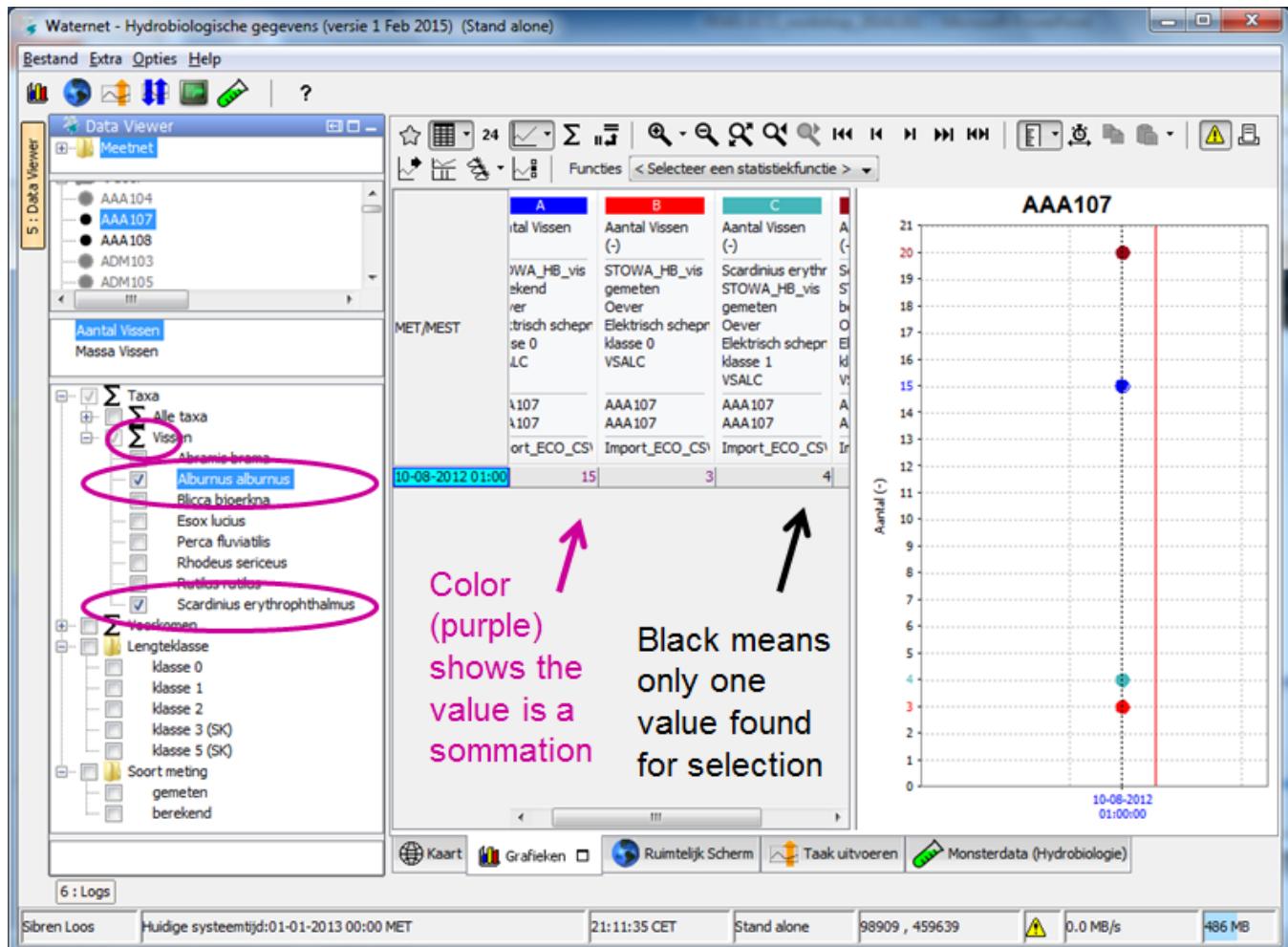
In the qualifier tree one can:

- 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.

Monsterdata (Hydrobiologie)

Tijd	Monster Id	Location N...	Medewerk...	Externe re...	Monster o...	X-coördina...	Y-coördina...	Projectcode	Medewerk...	Bron
21-07-2009 ...	3420090029	ADM105	ATKB_EEL_DIJ	20090301	20090301_...	122027	484684		ATKB_EEL_DIJ	Visdata_Wa...
22-07-2009 ...	3420090034	ADM112	ATKB_EEL_DIJ	20090301	20090301_...	122183	485755		ATKB_EEL_DIJ	Visdata_Wa...
23-07-2009 ...	3420090047	ADM109	ATKB_EEL_DIJ	20090301	20090301_...	118564	487747		ATKB_EEL_DIJ	Visdata_Wa...
24-07-2012 ...	3420120048	ADM112	ATKB_JAN_...	20120244	20120244_V...	122200	485737		ATKB_JAN_...	Visdata_Wa...
25-07-2012 ...	3420120052	ADM105	ATKB_JAN_...	20120244	20120244_V...	122008	484677		ATKB_JAN_...	Visdata_Wa...
25-07-2012 ...	3420120054	ADM105	ATKB_JAN_...	20120244	20120244_V...	122018	484679		ATKB_JAN_...	Visdata_Wa...
26-07-2012 ...	3420120061	ADM109	ATKB_JAN_...	20120244	20120244_V...	118553	487733		ATKB_JAN_...	Visdata_Wa...

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Monster Id	Locatie-naam	Parameter groep	Paramet... naam	Taxa	Vissen lengteklasse	Compartment	Analyse code	Analyse methode	Meet methode	Type waarde	Eenhk Waarde
1	1	1	1	8	4	1	1	1	1	2	1 647
3420090...	ADM112	Aantal	Aantal...	Sander lucoperca	klasse 2	Opp.Water	VSALC	STOWA_HB...	Zegen	gemeten	- 2,0
3420090...	ADM112	Aantal	Aantal...	Platichthys flesus	klasse 1	Opp.Water	VSALC	STOWA_HB...	Zegen	gemeten	- 1,0
3420090...	ADM112	Aantal	Aantal...	Rutilus rutilus	klasse 0	Opp.Water	VSALC	STOWA_HB...	Zegen	gemeten	- 9,0
3420090...	ADM112	Aantal	Aantal...	Perca fluviatilis	klasse 0	Opp.Water	VSALC	STOWA_HB...	Zegen	gemeten	- 259,0
3420090...	ADM112	Aantal	Aantal...	Gymnocephalus ce...	klasse 1	Opp.Water	VSALC	STOWA_HB...	Zegen	gemeten	- 19,0
3420090...	ADM112	Aantal	Aantal...	Abramis brama	klasse 3	Opp.Water	VSALC	STOWA_HB...	Zegen	berekend	- 10,0
3420090...	ADM112	Aantal	Aantal...	Rutilus rutilus	klasse 1	Opp.Water	VSALC	STOWA_HB...	Zegen	berekend	- 10,0
3420090...	ADM112	Aantal	Aantal...	Sander lucoperca	klasse 0	Opp.Water	VSALC	STOWA_HB...	Zegen	gemeten	- 12,0
3420090...	ADM112	Aantal	Aantal...	Platichthys flesus	klasse 1	Opp.Water	VSALC	STOWA_HB...	Zegen	berekend	- 3,0
3420090...	ADM112	Aantal	Aantal...	Abramis brama	klasse 2	Opp.Water	VSALC	STOWA_HB...	Zegen	berekend	- 13,0
3420090...	ADM112	Aantal	Aantal...	Sander lucoperca	klasse 1	Opp.Water	VSALC	STOWA_HB...	Zegen	gemeten	- 1,0

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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](#)