Waterbase – Water Quantity
Version 6

Quality control documentation

Waterbase – Water Quantity

Data on water quantity are collected annually through the WISE-SoE data collection process. Data and information obtained through the WISE-SoE data collection process are primarily used to compile indicator factsheets, associated with the EEA's Core Set Indicators, upon which EEA assessment reports are based. Data collected through the WISE-SoE data collection process are also published in Waterbase, a series of water topic-specific databases and web pages, publicly accessible via the EEA Data Service's web site.

Dataset contains all time series related to water quantity data, reported by member and collaborating countries. Reported data have been assessed and processed by the ETC-ICM and the EEA. Results of quality assessment have been incorporated into the individual data tables.

QA/QC activities

This document briefly presents the ETC-ICM (former ETC Water) and the EEA activities focused on quality of the Waterbase – Water quantity dataset and the results of these activities.
The Quality control tests have been performed on the Waterbase – Water Quantity database provided in 27 February 2011 by ETC-ICM. This database is included in the EEA data service as version 6, and is publicly available. The database and metadata are available at the following URL:
http://www.eea.europa.eu/data-and-maps/data/waterbase-water-quantity-5

Waterbase – Water Quantity dataset contains nine data tables:
- GENTITIES
- RAIN_GAUGE_STATIONS
- RESERVOIRS
- STREAM_FLOW_STATIONS
- WELLS
- LARGE_ITEMS
- AREAS
- WATER_ABSTRACTION_SOURCES
- TIME_SERIES

For reporting the data under the WISE-SoE Water Quantity data collection process the data reporters use a dedicated reporting tools developed by the ETC-ICM. The tool automatically control data on the entry level and assures that the errors, which often haunts the other WISE-SoE datasets, are not entered into the dataset. The following QA tests are performed automatically:
- Mandatory values tests
- Data definition compliance tests
- Outlier tests
- Logical rule tests
- Cross-table relation tests

The tests that are not performed automatically are:
- Primary key/Duplicates tests
- Areal rules tests
- Station coordinates tests

Summary

Waterbase – Water Quantity: GEntities

Country	Number of records											
	from the last delivery							in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered								
		total	QA issue	total	QA issue	number	reason	total	QA issue		number	reason
AT	0	0	0	0	0	0		258	0	258	0	
BE	377	377	0	0	0	0		453	0	453	0	
BG	85	85	0	0	0	0		133	0	133	0	
HR	123	123	0	0	0	0		123	0	123	0	
CY	212	212	0	0	0	0		250	0	250	0	
CZ	0	0	0	0	0	0		60	0	60	0	
DK	494	494	0	0	0	0		591	0	591	0	
EE	0	0	0	0	0	0		39	0	39	0	
FI	81	81	0	0	0	0		128	0	128	0	
FR	0	0	0	0	0	0		189	0	189	0	
IE	47	47	0	0	0	0		1936	0	1936	0	
LV	94	94	0	0	0	0		94	0	94	0	
LT	34	34	0	0	0	0		60	0	60	0	
MK	0	0	0	0	0	0		38	0	38	0	
NL	35	35	0	0	0	0		35	0	35	0	
RS	91	91	0	0	0	0		91	0	91	0	
RO	0	0	0	0	0	0		71	0	71	0	
SK	0	0	0	0	0	0		104	0	104	0	
SI	230	230	0	0	0	0		253	0	253	0	
SE	83	83	0	0	0	0		128	0	128	0	
CH	48	48	0	0	0	0		108	0	108	0	
TR	43	43	0	0	0	0		43	0	43	0	
Total	2077	2077	0	0	0	0		5185	0	5185	0	

Waterbase – Water Quantity: Rain_Gauge_Stations

Country	Number of records											
	from the last delivery							in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered								
		total	QA issue	total	QA issue	number	reason	total	QA issue		number	reason
AT	0	0	0	0	0	0		30	30	30	0	
BE	266	266	157	0	0	0		266	157	266	0	
BG	33	33	0	0	0	0		33	0	33	0	
HR	34	34	0	0	0	0		34	0	34	0	
CY	148	148	0	0	0	0		148	0	148	0	
CZ	0	0	0	0	0	0		3	3	3	0	
DK	0	0	0	0	0	0		0	0	0	0	
EE	0	0	0	0	0	0		0	0	0	0	
FI	0	0	0	0	0	0		0	0	0	0	
FR	0	0	0	0	0	0		0	0	0	0	
IE	1	1	0	0	0	0		1857	0	1857	0	
LV	9	9	0	0	0	0		9	0	9	0	
LT	0	0	0	0	0	0		0	0	0	0	
MK	0	0	0	0	0	0		10	0	10	0	
NL	35	35	0	0	0	0		35	0	35	0	
RS	0	0	0	0	0	0		0	0	0	0	
RO	0	0	0	0	0	0		0	0	0	0	
SK	0	0	0	0	0	0		28	0	28	0	
SI	215	215	0	0	0	0		215	0	215	0	
SE	0	0	0	0	0	0		0	0	0	0	
CH	0	0	0	0	0	0		0	0	0	0	
TR	17	17	0	0	0	0		17	0	17	0	
Total	758	758	157	0	0	0		2685	190	2685	0	

Waterbase – Water Quantity: Reservoirs

Country	Number of records											
	from the last delivery								in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered				total	QA issue		number	reason
		total	QA issue	total	QA issue	number	reason					
AT	0	0	0	0	0	0		29	29	29	0	
BE	0	0	0	0	0	0		0	0	0	0	
BG	13	13	0	0	0	0		13	0	13	0	
HR	0	0	0	0	0	0		0	0	0	0	
CY	16	16	0	0	0	0		18	0	18	0	
CZ	0	0	0	0	0	0		0	0	0	0	
DK	0	0	0	0	0	0		0	0	0	0	
EE	0	0	0	0	0	0		0	0	0	0	
FI	0	0	0	0	0	0		0	0	0	0	
FR	0	0	0	0	0	0		0	0	0	0	
IE	9	9	0	0	0	0		9	0	9	0	
LV	3	3	0	0	0	0		3	0	3	0	
LT	0	0	0	0	0	0		0	0	0	0	
MK	0	0	0	0	0	0		0	0	0	0	
NL	0	0	0	0	0	0		0	0	0	0	
RS	0	0	0	0	0	0		0	0	0	0	
RO	0	0	0	0	0	0		0	0	0	0	
SK	0	0	0	0	0	0		9	0	9	0	
SI	2	2	0	0	0	0		2	0	2	0	
SE	0	0	0	0	0	0		0	0	0	0	
CH	0	0	0	0	0	0		0	0	0	0	
TR	6	6	6	0	0	0		6	6	6	0	
Total	49	49	6	0	0	0		89	35	89	0	

Waterbase – Water Quantity: Stream_Flow_Stations

Country	Number of records											
	from the last delivery							in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded		total	QA issue		number	reason
		new		redelivered								
		total	QA issue	total	QA issue	number	reason					
AT	0	0	0	0	0	0		22	22	22	0	
BE	48	48	48	0	0	0		48	48	48	0	
BG	39	39	0	0	0	0		39	0	39	0	
HR	66	66	0	0	0	0		66	0	66	0	
CY	11	11	0	0	0	0		22	0	22	0	
CZ	0	0	0	0	0	0		5	5	5	0	
DK	0	0	0	0	0	0		0	0	0	0	
EE	0	0	0	0	0	0		22	22	22	0	
FI	81	81	0	0	0	0		81	0	81	0	
FR	0	0	0	0	0	0		0	0	0	0	
IE	31	31	0	0	0	0		37	0	37	0	
LV	13	13	0	0	0	0		13	0	13	0	
LT	13	13	13	0	0	0		13	13	13	0	
MK	0	0	0	0	0	0		10	0	10	0	
NL	0	0	0	0	0	0		0	0	0	0	
RS	91	91	0	0	0	0		91	0	91	0	
RO	0	0	0	0	0	0		0	0	0	0	
SK	0	0	0	0	0	0		21	0	21	0	
SI	6	6	0	0	0	0		6	0	6	0	
SE	5	5	5	0	0	0		5	5	5	0	
CH	25	25	0	0	0	0		25	0	25	0	
TR	13	13	0	0	0	0		13	0	13	0	
Total	442	442	66	0	0	0		539	115	539	0	

Waterbase – Water Quantity: Wells

Country	Number of records											
	from the last delivery							in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered								
		total	QA issue	total	QA issue	number	reason	total	QA issue		number	reason
AT	0	0	0	0	0	0		115	115	115	0	
BE	63	63	63	0	0	0		63	63	63	0	
BG	0	0	0	0	0	0		0	0	0	0	
HR	23	23	23	0	0	0		23	23	23	0	
CY	37	37	0	0	0	0		53	0	53	0	
CZ	0	0	0	0	0	0		3	3	3	0	
DK	494	494	0	0	0	0		561	0	561	0	
EE	0	0	0	0	0	0		0	0	0	0	
FI	0	0	0	0	0	0		0	0	0	0	
FR	0	0	0	0	0	0		0	0	0	0	
IE	6	6	0	0	0	0		6	0	6	0	
LV	69	69	0	0	0	0		69	0	69	0	
LT	21	21	21	0	0	0		23	23	23	0	
MK	0	0	0	0	0	0		7	0	7	0	
NL	0	0	0	0	0	0		0	0	0	0	
RS	0	0	0	0	0	0		0	0	0	0	
RO	0	0	0	0	0	0		0	0	0	0	
SK	0	0	0	0	0	0		21	0	21	0	
SI	7	7	0	0	0	0		7	0	7	0	
SE	78	78	0	0	0	0		78	0	78	0	
CH	23	23	0	0	0	0		23	0	23	0	
TR	7	7	7	0	0	0		7	7	7	0	
Total	828	828	114	0	0	0		1059	234	1059	0	

Waterbase – Water Quantity: Large_Items

Country	Number of records											
	from the last delivery							in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered								
		total	QA issue	total	QA issue	number	reason	total	QA issue		number	reason
AT	0	0	0	0	0	0		0	0	0	0	
BE	0	0	0	0	0	0		0	0	0	0	
BG	0	0	0	0	0	0		0	0	0	0	
HR	0	0	0	0	0	0		0	0	0	0	
CY	0	0	0	0	0	0		0	0	0	0	
CZ	0	0	0	0	0	0		0	0	0	0	
DK	0	0	0	0	0	0		0	0	0	0	
EE	0	0	0	0	0	0		0	0	0	0	
FI	0	0	0	0	0	0		0	0	0	0	
FR	0	0	0	0	0	0		0	0	0	0	
IE	0	0	0	0	0	0		0	0	0	0	
LV	0	0	0	0	0	0		0	0	0	0	
LT	0	0	0	0	0	0		0	0	0	0	
MK	0	0	0	0	0	0		0	0	0	0	
NL	0	0	0	0	0	0		0	0	0	0	
RS	0	0	0	0	0	0		0	0	0	0	
RO	0	0	0	0	0	0		0	0	0	0	
SK	0	0	0	0	0	0		0	0	0	0	
SI	0	0	0	0	0	0		0	0	0	0	
SE	0	0	0	0	0	0		0	0	0	0	
CH	0	0	0	0	0	0		7	0	7	0	
TR	0	0	0	0	0	0		0	0	0	0	
Total	0	0	0	0	0	0		7	0	7	0	

Waterbase – Water Quantity: Areas

Country	Number of records											
	from the last delivery							in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered								
		total	QA issue	total	QA issue	number	reason	total	QA issue		number	reason
AT	0	0	0	0	0	0		9	0	9	0	
BE	0	0	0	0	0	0		2	0	2	0	
BG	0	0	0	0	0	0		4	0	4	0	
HR	0	0	0	0	0	0		0	0	0	0	
CY	0	0	0	0	0	0		1	0	1	0	
CZ	0	0	0	0	0	0		3	0	3	0	
DK	0	0	0	0	0	0		2	0	2	0	
EE	0	0	0	0	0	0		1	0	1	0	
FI	0	0	0	0	0	0		1	0	1	0	
FR	0	0	0	0	0	0		43	0	43	0	
IE	0	0	0	0	0	0		7	0	7	0	
LV	0	0	0	0	0	0		0	0	0	0	
LT	0	0	0	0	0	0		5	0	5	0	
MK	0	0	0	0	0	0		1	0	1	0	
NL	0	0	0	0	0	0		0	0	0	0	
RS	0	0	0	0	0	0		0	0	0	0	
RO	0	0	0	0	0	0		1	0	1	0	
SK	0	0	0	0	0	0		6	0	6	0	
SI	0	0	0	0	0	0		3	0	3	0	
SE	0	0	0	0	0	0		5	0	5	0	
CH	0	0	0	0	0	0		5	0	5	0	
TR	0	0	0	0	0	0		0	0	0	0	
Total	0	0	0	0	0	0		99	0	99	0	

Waterbase – Water Quantity: Water_Abstraction_Sources

Country	Number of records											
	from the last delivery								in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered				total	QA issue			
		total	QA issue	total	QA issue	number	reason	total	QA issue		number	reason
AT	0	0	0	0	0	0		0	0	0	0	
BE	0	0	0	0	0	0		0	0	0	0	
BG	0	0	0	0	0	0		0	0	0	0	
HR	0	0	0	0	0	0		0	0	0	0	
CY	0	0	0	0	0	0		0	0	0	0	
CZ	0	0	0	0	0	0		0	0	0	0	
DK	0	0	0	0	0	0		0	0	0	0	
EE	0	0	0	0	0	0		2	0	2	0	
FI	0	0	0	0	0	0		0	0	0	0	
FR	0	0	0	0	0	0		0	0	0	0	
IE	0	0	0	0	0	0		0	0	0	0	
LV	0	0	0	0	0	0		0	0	0	0	
LT	0	0	0	0	0	0		16	0	16	0	
MK	0	0	0	0	0	0		0	0	0	0	
NL	0	0	0	0	0	0		0	0	0	0	
RS	0	0	0	0	0	0		0	0	0	0	
RO	0	0	0	0	0	0		0	0	0	0	
SK	0	0	0	0	0	0		0	0	0	0	
SI	0	0	0	0	0	0		0	0	0	0	
SE	0	0	0	0	0	0		0	0	0	0	
CH	0	0	0	0	0	0		0	0	0	0	
TR	0	0	0	0	0	0		0	0	0	0	
Total	0	0	0	0	0	0		18	0	18	0	

Waterbase – Water Quantity: Time_Series

Country	Number of records											
	from the last delivery						in the ETC working database		exported to the EU dataset	excluded from the EU dataset	
	total	accepted				excluded						
		new		redelivered								
		total	QA issue	total	QA issue	number	reason	total	QA issue		number	reason
AT	14	14	0	0	0	0		7649	0	7649	0	
BE	14339	14339	0	0	0	0		15089	0	15089	0	
BG	468	468	0	0	0	0		1092	0	1092	0	
HR	24514	24514	0	0	0	0		24514	0	24514	0	
CY	5882	5882	0	0	0	0		60452	0	60452	0	
CZ	0	0	0	0	0	0		715	0	715	0	
DK	690	690	0	0	0	0		4144	0	4144	0	
EE	0	0	0	0	0	0		8089	0	8089	0	
FI	29565	29565	0	0	0	0		59168	0	59168	0	
FR	0	0	0	0	0	0		774	0	774	0	
IE	9257	9257	0	0	0	0		22228	0	22228	0	
LV	1488	1488	0	0	0	0		1488	0	1488	0	
LT	5535	5535	0	0	0	0		11278	0	11278	0	
MK	9	9	0	0	0	0		3880	0	3880	0	
NL	236	236	0	0	0	0		236	0	236	0	
RS	33215	33215	0	0	0	0		33215	0	33215	0	
RO	0	0	0	0	0	0		15	0	15	0	
SK	0	0	0	0	0	0		2454	0	2454	0	
SI	2383	2383	0	0	0	0		7118	0	7118	0	
SE	1031	1031	0	0	0	0		2516	0	2516	0	
CH	9765	9765	0	0	0	0		19391	0	19391	0	
TR	5129	5129	0	0	0	0		5129	0	5129	0	
Total	143520	143520	0	0	0	0		290634	0	290634	0	

1.   Primary key tests

Primary key is a field or combination of fields with values which have to be unique in the data table. If primary key is duplicated it is an error which has to be solved or the records are excluded from the dataset.

List of data tables primary keys:
- GENTITIES: CountryCode, GEntityCode, GEntityType
- RAIN_GAUGE_STATIONS: CountryCode, GEntityCode
- RESERVOIRS: CountryCode, GEntityCode
- STREAM_FLOW_STATIONS: CountryCode, GEntityCode
- WELLS: CountryCode, GEntityCode
- LARGE_ITEMS: CountryCode, GEntityCode
- AREAS: CountryCode, GEntityCode
- WATER_ABSTRACTION_SOURCES: CountryCode, GEntityCode, SectorCode, WaterSource
- TIME_SERIES: CountryCode, GEntityCode, Year, TimeStep, Index, VariableCode

2. Areal rule tests

The areal rules are specific logical rules that the data provided have to follow to be considered as valid. The records violating any of the rules are marked in a special QA field (QA_ALRviolations) with code of the rule.

The list of the rules together with their respective codes is provided separately in the Code list section of the dataset web page on the EEA dataservice (http://www.eea.europa.eu/data-and-maps/data/waterbase-water-quantity-5/code-lists).

3.   Station coordinates tests

Point data records (Rain_Gauge_Stations, Reservoirs, Stream_Flow_Stations, Wells) that are missing coordinates values are marked in a special QA field (QA_station_issues) with flag 502.

Point data coordinates that were not reported in the requested coordinate system were excluded from the dataset.