

WISE WFD reference spatial data sets

Technical Report

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Summary

1. This report describes the following Water Framework Directive (WFD) reference spatial data sets, which are part of the information in the Water Information System for Europe (WISE) :
 - River basin districts
 - River basin district sub-units
 - Surface water bodies
 - Groundwater bodies
 - Monitoring sites
2. The data sets include information reported to the European Commission in the 1st River Basin Management Plans (henceforth WFD2010), in the 2nd River Basin Management Plans (henceforth WFD2016) and in the 3rd River Basin Management Plans (henceforth WFD2022). The [WISE GIS Guidance](#) describes the structure and content of the spatial data sets.
3. The WFD2016 data were updated using WFD2022 data, whenever the spatial objects are identical. Likewise, the WFD2010 data were updated using WFD2016 data, whenever the spatial objects are identical. For WFD2010 objects, some information may be missing, if the objects no longer exist in the 2nd River Basin Management Plans, and were not reported in WFD2016.
4. The geometry of water bodies is reported using polygons or polylines. Separate *shapefiles* are provided for each geometry type, due to the limitations of the *shapefile* format. Polygonal geometries are published in the SurfaceWaterBody *shapefile*, linear geometries in SurfaceWaterBodyLine *shapefile*.
5. In WFD2010, Data Providers were not required to report the geometry of all water bodies. For some water bodies, the latitude and longitude of an arbitrary point is available. In other cases, only the river basin district (RBD) is known. This information is published in two special *shapefiles* that contain point geometries and may contain empty geometries (SurfaceWaterBodyPoint and GroundWaterBodyPoint).
6. The geometry of all spatial objects is published in WGS 84 (urn:ogc:def:crs:EPSG::4326). The geometry of the objects was not edited or corrected: topological and positional errors may exist. Please refer to the quality control feedback provided in the original deliveries in the Central Data Repository ([CDR](#)).
7. The size of spatial objects was calculated from the projected geometries in ETRS89-LAEA (urn:ogc:def:crs:EPSG::3035). For WFD2010 objects without proper geometry, the reported size (area or length) is used where available.
8. After consultation with the EU Water Directors, and per agreement between the European Commission and the Data Providers, as communicated to the Common Implementation Strategy (CIS) Working Group Data and Information Sharing (WG DIS) on 2017-06-07, the following access and use limitations are applicable to the WFD reference spatial data sets:
 - a. The information about drinking water monitoring sites ([DWD](#) or [DRI](#)) is not published due to safety and security concerns. The same applies to any monitoring site identified by Data Providers as "[not for publication](#)".
 - b. The information provided by the United Kingdom in WFD2010 and WFD2016 is not publicly available for download. The European Commission and the European Environment Agency may use the information for visualisation purposes.
9. The use limitations and the access and other constraints set by the Data Providers are described in the metadata files associated with each delivery in CDR. In WFD2010, not all Data Providers reported structured metadata. In WFD2016, all Data Providers reported structured metadata. Refer to Annex 1 for further information and to the original metadata for further information, prior to any use.
10. The datasets publicly available for download include information reported until 2023-07-12.

Data content

The WFD reference spatial data sets contain information reported to the European Commission under the Water Framework Directive (WFD) reporting obligations.

Public data sets can be downloaded via the EEA Spatial Data Infrastructure ([SDI](#)).

Each data set contains information relevant for the 1st River Basin Management Plans (RBMP), the 2nd RBMPs, or the 3rd RBMPS respectively `wfd2010`, `wfd2016`, `wfd2022`.

First River Basin Management Plans (WFD2010)

The data sets compile the available spatial data related to the first RBMPs, due in 2010.

See <http://rod.eionet.europa.eu/obligations/521> for further information on the WFD2010 reporting.

Due to changes in the reporting model, not all information requested in WFD2016 and WFD2022 is available in the WFD2010 data.

The dataset contains data from 524 deliveries, received between 2010-03-19 and 2016-03-16.

The data reported in WFD2010 were updated using data reported in WFD2016, whenever the spatial objects are identical in 2010 and 2016. For WFD2010 objects, some information may be missing, if the objects no longer exist in the 2nd River Basin Management Plans, and were not reported in WFD2016.

Second River Basin Management Plans (WFD2016)

The data sets compile the available spatial data related to the second RBMPs, due in 2016, and to the Environmental Quality Standards Directive (EQSD) - Preliminary programmes of measures and supplementary monitoring reporting, due in 2018.

See <http://rod.eionet.europa.eu/obligations/715> for further information on the WFD2016 reporting.

See <https://rod.eionet.europa.eu/obligations/766> for further information on the EQSD reporting.

The dataset contains data from 30 WFD2016 deliveries, received between 2016-05-05 and 2019-08-05, supplemented with 77 EQSD deliveries, received between 2018-12-14 and 2020-09-28.

Third River Basin Management Plans (WFD2022)

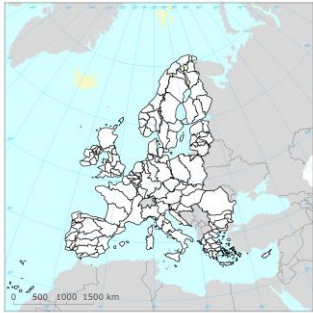
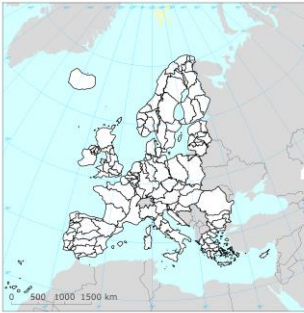
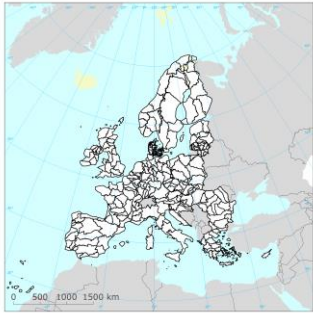
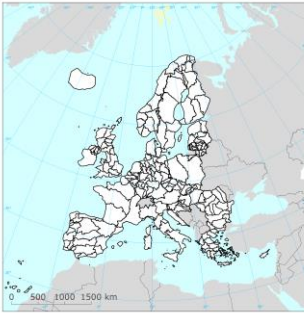
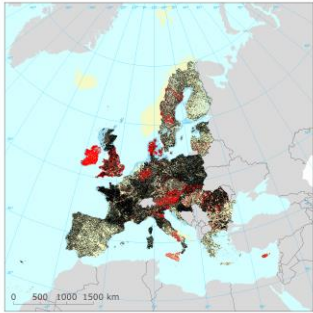
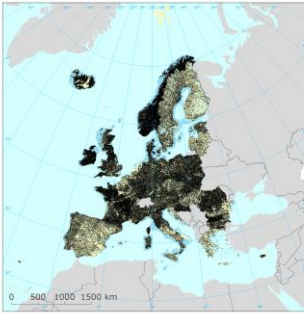
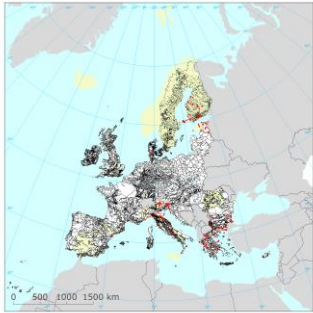
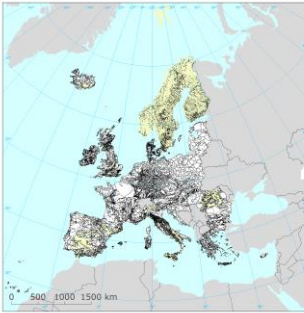
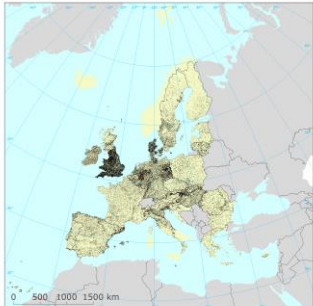
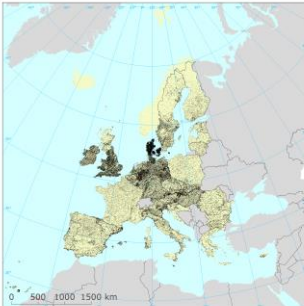
The data sets compile the available spatial data related to the third RBMPs, due in 2022.

See <https://rod.eionet.europa.eu/obligations/803> for further information on the WFD2022 reporting.

The dataset contains data from 26 deliveries, received between 2019-08-28 and 2024-02-06.

The WFD2022 is still ongoing. The WFD2016 data is provisionally valid for WFD2022, until the Data Providers report an update.

Table 1. Illustrative thumbnail images with extracts of the internal WFD reference spatial data sets.

	wfd2010	wfd2016
RiverBasinDistrict		
SubUnit		
SurfaceWaterBody		
GroundWaterBody		
MonitoringSite		

Each data set contains one or more *shapefiles* as summarized in Table 2.

Table 2. WFD reference spatial data sets and corresponding *shapefiles*.

Data set	Shapefile	Geometry type	Observations
River basin districts	RiverBasinDistrict	Polygon	
River basin district subunits	SubUnit	Polygon	
Surface water bodies	SurfaceWaterBody	Polygon	
	SurfaceWaterBodyLine	Polyline	
	SurfaceWaterBodyPoint	Point	Only for the 1 st RBMP (WFD2010). The <i>shapefile</i> may contain empty geometries.
Groundwater bodies	GroundWaterBody	Polygon	
	GroundWaterBodyPoint	Point	Only for the 1 st RBMP (WFD2010). The <i>shapefile</i> may contain empty geometries.
Monitoring sites	MonitoringSite	Point	The 1 st RBMP (WFD2010) dataset may contain empty geometries.

The data sets follow the WISE spatial data model described in the WISE GIS guidance, available at https://cdr.eionet.europa.eu/help/WFD/WFD_780_2022/GISGuidance/WISE_GIS_Guidance.pdf.

The formal specification is available at https://cdr.eionet.europa.eu/help/WFD/WFD_780_2022.

Refer to the WISE GIS guidance for the mapping between the GML elements in the XML schema and the corresponding fields in the *shapefile* format.

Table 3 lists the fields that are present in the *shapefiles*, but not in the reported data. These fields store information related to quality control and/or simplify the use of the data.

Table 3. Additional fields present in the *shapefiles*: *cYear*, *country*, *lat*, *lon*, *statusCode*, *statusDate*.

Field name	Description
cYear	Integer field containing the value 2010 in the <i>shapefiles</i> pertaining to WFD2010, the value 2016 or 2018 in the <i>shapefiles</i> pertaining to WFD2016 and EQS2018, and the value 2022 in the <i>shapefiles</i> pertaining to WFD2022.
countryCode	Two-letter ISO code of the country (ISO 3166 alpha-2), except for Greece and the United Kingdom, for which the abbreviations EL and UK are used.
lat	Latitude, in decimal degrees, of an arbitrary point located within the geometry of the object (if available)
lon	Longitude, in decimal degrees, of an arbitrary point located within the geometry of the object (if available)
statusCode	Status code of the thematic identifier in the WISE register (refer to Status for further information).
statusDate	Date of reference for the status code (typically the date when the data was reported or processed for publication).

Data processing

- The WFD2016 and WFD2022 spatial data files were reported as GML files and were subject to automated quality control upon delivery, automated harvest and version-control management. Only the latest technically accepted delivery is included in the data set.
- Specific issues or inconsistencies were clarified with the support of the national reporting contacts. No geometric or topological error correction was performed. Basic automated editing of string values (upper-casing, trimming, removal of invalid characters or values) was performed. Consolidation of the designation dates of spatial objects was done based on the publication date of the River Basin Management Plans.
- The WFD2010 spatial data files, reported as *shapefiles*, were not subject to automated quality control upon delivery, automated harvest or version-control management. The data sets include partial updates (per data set and per river basin district) submitted until 2016-03-16. It is not possible to trace each spatial object in the data set to a specific data delivery.
- The data reported in WFD2016 were updated using data reported in WFD2022, whenever the spatial objects are identical. The data reported in WFD2010 were updated using data reported in WFD2016, whenever the spatial objects are identical. Identical objects have `wiseEvolutionType` in ('noChange', 'changeCode', 'change'). For WFD2010 objects, some information may be missing, if the objects no longer exist in the second River Basin Management Plans, and were not reported in WFD2016. Objects that no longer exist have `wiseEvolutionType` = 'deletion'.
- In the WFD2010 reporting, some information required by the current WISE spatial data model was not requested. Where available, the missing information was compiled from the WFD2010 non-spatial reporting or from the WFD2016 reporting.
- All objects reported in the WFD2010 non-spatial data files are included in the dataset. The geometry of the objects was obtained from the spatial data files, where available. A conventional geometry is used if only the location of the representative point is known.
- The WFD2010 reporting requested only the location of a representative point (for example, a centroid) for some objects, e.g. for water bodies. For example, the WFD2010 spatial data files include the geometry of large water bodies, but normally do not include smaller water bodies.

Table 4 describes the different data processing options in the production of the European reference data sets. See Table 5 and Table 6 for the information applicable to each *shapefile*.

Table 4. Data processing and data source precedence (see also Table 5 and Table 6).

Notation	Description
r	The European reference spatial data set contains the value reported by the Data Provider (if available).
d	The European reference spatial data set contains a value derived from other data reported by the Data Provider. E.g. the size was derived from the geometry, or the WFD2010 data was updated or derived using information reported in WFD2016.
i	Not applicable , i.e. the European reference spatial data set does not contain a given field.
r/d	The value reported by the Data Provider (if available and consistent) takes precedence over derived values.
d/r	The derived value (if it can be calculated) takes precedence over the reported value.

Table 5 describes the structure of the *shapefiles* with river basin districts, sub-units or water bodies.

The three SurfaceWaterBody *shapefiles* have an identical structure (see Table 2). The two GroundWaterBody *shapefiles* have an identical structure (see Table 2). The first column of Table 5 contains the name of the data element in the WISE GML files reported by Data Providers. The second column contains the name of the field in the *shapefile*: due to the limitations of the *shapefile* format, it has a maximum of 10 characters.

Table 5 also presents the source of the information included in the *shapefile*, according to the notation explained in Table 4.

Table 5. Structure and content of the *RiverBasinDistrict*, *SubUnit*, *SurfaceWaterBody* and *GroundWaterBody* shapefiles.

WISE GML	Shapefile	RiverBasinDistrict	SubUnit	SurfaceWaterBody	GroundWaterBody	Notes
geometry	shape	r	r	r/d	r	(1)
inspireIdLocalId	localId	r	r	r	r	
inspireIdNamespace	namespace	r	r	r	r	
inspireIdVersionId	versionId	r/d	r/d	r/d	r/d	(2)
thematicIdIdentifier	thematicId	r	r	r	r	
thematicIdIdentifierScheme	themaldSch	r	r	r	r	
beginLifespanVersion	beginLife	r/d	r/d	r/d	r/d	(3)
endLifespanVersion	endLife	r	r	r	r	
predecessorsIdentifier	predecesId	r/d	r/d	r/d	r/d	(4)
predecessorsIdentifierScheme	predeldSch	r/d	r/d	r/d	r/d	(4)
successorsIdentifier	successold	r/d	r/d	r/d	r/d	(4)
successorsIdentifierScheme	succeldSch	r/d	r/d	r/d	r/d	(4)
wiseEvolutionType	wEvolution	r/d	r/d	r/d	r/d	(5)
nameTextInternational	nameTxtInt	r/d	r/d	r/d	r/d	(6)
nameText	nameText	r	r	r	r	
nameLanguage	nameTxtLan	r	r	r	r	
designationPeriodBegin	desigBegin	r/d	r/d	r/d	r/d	(7)
designationPeriodEnd	desigEnd	r/d	r/d	r/d	r/d	(7)
zoneType	zoneType	r	r	r	r	
specialisedZoneType	spZoneType	i	r	r	r	
relatedZonIdentifier	rZoneld	i	r/d	r/d	r/d	(8)
relatedZonIdentifierScheme	rZoneldSch	i	r	r	r	
relatedZoneTransboundaryIdentifier	rTrnsId	i	i	r	r	
relatedZoneTransboundaryIdentifierScheme	rTrnsIdSch	i	i	r	r	
sizeValue	sizeValue	d	d	d/r	d/r	(9)
sizeUom	sizeUoM	d	d	d/r	d/r	(9)
meanDepth	meanDepth	i	i	r	i	
horizons	horizons	i	i	i	d/r	(10)
link	link	r	r	r	r	
	cYear	d	d	d	d	
	country	d	d	d	d	
	lat	d	d	d	d	
	lon	d	d	d	d	
	statusCode	d	d	d	d	
	statusDate	d	d	d	d	

Notes:

- (1) No geometric or topological error correction was performed. Refer to the CDR deliveries for the quality control results.
- (2) In the absence of a reported value and for internal data management purposes, the *inspireIdLocalId* value was set to the original national identifier of the spatial object.
- (3) In the absence of a reported value and for internal data management purposes, the *inspireIdVersionId* value was set to 'yyyymmdd', based on the CDR delivery date.
- (4) In the absence of a reported value and for internal data management purposes, the *beginLifespanVersion* value was set to 'yyyy-mm-dd', based on the CDR delivery date.
- (5) Where applicable, the information was consolidated using the WFD2010, WFD2016 and WFD2022 information.
- (6) In the absence of a reported value and for internal data management purposes, the *nameTextInternational* was set to the *nameText* value. Characters not in the Latin alphabet were transliterated if necessary and possible.
- (7) The designation dates were consolidated after the reporting, based on the publication date of the RBMPs: e.g. if an object is created in the 2nd RBMP, the *designationDateBegin* value is set to the date of publication of the RBMP.
- (8) For the WFD2010 datasets and for internal data management purposes, the *relatedZonIdentifier* value of objects with *wiseEvolutionType* = 'deletion' was updated to the corresponding WFD2016 identifier, where it could be determined.
- (9) Where possible, the size (area/length) of the spatial objects was derived from the geometry.
- (10) Where applicable, the information was consolidated using with information reported in the *GroundwaterBodyHorizon* dataset.

Table 6. Structure and content of the MonitoringSite shapefiles.

WISE GML	Shapefile	MonitoringSite	Notes
geometry	shape	r	(1) The WFD2010 information has low reliability. Refer to the CDR deliveries for the quality control results for WFD2016 data.
inspireIdLocalId	localId	r/d	(2) In the absence of a reported value and for internal data management purposes, the <i>inspireIdLocalId</i> value was set to the original national identifier of the spatial object.
inspireIdNamespace	namespace	r	
inspireIdVersionId	versionId	r/d	(3) In the absence of a reported value and for internal data management purposes, the <i>inspireIdVersionId</i> value was set to 'yyyymmdd', based on the CDR delivery date.
thematicIdIdentifier	thematicId	r	
thematicIdIdentifierScheme	themaIdSch	r	
beginLifespanVersion	beginLife	r/d	(4) In the absence of a reported value and for internal data management purposes, the <i>beginLifespanVersion</i> value was set to 'yyyy-mm-dd', based on the CDR delivery date.
endLifespanVersion	endLife	r	
supersedesIdentifier	precedesId	r/d	(5) Where applicable, the information was consolidated using both the WFD2010 and the WFD2016 information.
supersedesIdentifierScheme	preIdSch	r/d	See note (5).
supersededByIdentifier	successId	r/d	See note (5).
supersededByIdentifierScheme	succIdSch	r/d	See note (5).
wiseEvolutionType	wEvolution	r/d	See note (5).
nameTextInternational	nameTxtInt	r/d	(6) In the absence of a reported value and for internal data management purposes, the <i>nameTextInternational</i> was set to the <i>nameText</i> value.
nameText	nameText	r	
nameLanguage	nameTxtLan	r	
operationalActivityPeriodBegin	opActBegin	r/d	
operationalActivityPeriodEnd	opActEnd	r/d	
featureOfInterestIdentifier	foId	r	(7) The WFD2010 information has low reliability. The identifiers of water bodies that no longer exist in 2016 were kept in the data set.
featureOfInterestIdentifierScheme	foIdSch	r	
relatedToIdentifier	rSiteId	r	
relatedToIdentifierScheme	rSiteIdSch	r	
mediaMonitoredBiota	mediaBiota	r	
mediaMonitoredWater	mediaWater	r	
mediaMonitoredSediment	mediaSedim	r	
purpose	purpose	r/d	(8) The values reported in the spatial data sets were updated with additional data from the descriptive data reporting.
catchmentArea	catchArea	r	
maximumDepth	maxDepth	r	
confidentialityStatus	confStatus	r/d	(10) All sites related with drinking water abstraction were updated and marked as 'not for publication'.
link	link	r	
	cYear	d	
	country	d	
	lat	d	
	lon	d	
	statusCode	d	
	statusDate	d	

Data policy

Per agreement between the European Commission and the Data Providers, after consultation with the EU Water Directors on 2017-04-11 (https://circabc.europa.eu/sd/a/420decec-d487-4d7b-84d3-b9eb8af281f6/Note_publication%20of%20data%20reported%20in%20WISE_final.docx), and as communicated to the Common Implementation Strategy (CIS) Working Group Data and Information Sharing (WG DIS) on 2017-06-07, the following constraints are applicable:

- The information about drinking water monitoring sites (DWD or DRI) will not be made publicly available due to safety and security concerns. The same applies to any monitoring site identified by Data Providers as "not for publication".
- The information provided by the United Kingdom will not be made publicly available for download. The information provided by the United Kingdom can be used by the European Commission and the European Environment Agency for visualisation purposes.

The 2017-06-07 agreement supplements the "WISE Reporting Arrangements" dated 2007-03-01, which define the conditions applicable to the European Commission (EC) and the European Environmental Agency (EEA).

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Please refer to the legal notice (<http://cdr.eionet.europa.eu/legalnotice>) for information on access and re-use of CDR data sets.

For the CDR data sets listed in *Annex I – Data sources*, a summary is provided in the **CDR_metadata.txt** file, which accompanies the WISE WFD reference spatial data sets (see Table 7 for a description of the file).

Table 7. Fields present in CDR_metadata.txt file.

Field name	Description
cYear	Integer field containing the value 2010 in the WFD2010 data, 2016 in the WFD2016 data, 2018 in the EQS data and 2022 in the WFD2022 data.
countryCode	Two-letter ISO code of the country (ISO 3166 alpha-2), except for Greece and the United Kingdom, for which the abbreviations EL and UK are used.
dataset	Applicable WISE WFD reference spatial data set.
reportingDate	Date when the envelope contained in file was delivered in CDR.
envUrl	URL of the delivered data.
metadataUrl	URL of the metadata file, if reported.
fileUrl	URL of the data file.
isRestricted	Public access to the data file (0) or restricted access to the data file (1)
title	CDR data set title or data set title in the spatial metadata file, if reported.
abstract	Abstract in the spatial metadata file, if reported.
useLimitation	Use limitation(s) in the spatial metadata file, if reported.
accessConstraints	Access constraints(s) in the spatial metadata file, if reported.
otherConstraints	Other constraints(s) in the spatial metadata file, if reported.
resourceConstraints	Extract of the metadata file.

References

- WISE GIS Guidance - Guidance on the reporting of spatial data to WISE. Version 7.0.6. 2022-10-05
https://cdr.eionet.europa.eu/help/WFD/WFD_780_2022/GISGuidance/WISE_GIS_Guidance.pdf
- Central Data Repository data flow specific instructions: <http://cdr.eionet.europa.eu/help/WFD>

Annex I – Data sources

- Information on river basin districts and sub-units was submitted under the "Water Framework Directive - River Basin Districts and Competent Authorities" [Article 3] reporting obligation (<http://rod.eionet.europa.eu/obligations/525>). Data originally delivered in 2004 and 2005 was moved to the Central Data Repository (<http://cdr.eionet.europa.eu/>), which contains information from the EU-27 Member States and the United Kingdom, plus Norway, reported between 2007-03-11 and 2012-06-22 (including resubmissions and updates).
- Information on surface water bodies (rivers, lakes, transitional and coastal water bodies - including artificial and heavily modified water bodies), groundwater bodies and protected areas was reported under the "Water Framework Directive - Characterisation of River Basin Districts" [Article 5] reporting obligation (<http://rod.eionet.europa.eu/obligations/136>). Data originally delivery in 2004 and 2005 was moved to the Central Data Repository (<http://cdr.eionet.europa.eu/>), which contains information from the EU-27 Member States and the United Kingdom (except Croatia, Greece, Malta and Romania), plus Norway, reported between 2005-01-26 and 2011-09-26 (including resubmissions and updates).
- Information on monitoring sites was reported under the "Water Framework Directive - Monitoring Programmes" [Article 8] reporting obligation (<http://rod.eionet.europa.eu/obligations/520>). The Central Data Repository (<http://cdr.eionet.europa.eu/>) contains information from the EU-27 Member States (except Croatia and Malta) and the United Kingdom reported between 2007-03-16 and 2012-03-21 (including resubmissions and updates).
- For some countries or river basin districts, updates to the spatial data were submitted under "Water Framework Directive - River Basin Management Plans - 2010 Reporting" [Article 13] reporting obligation (<http://rod.eionet.europa.eu/obligations/521>). The reporting of the first River Basin Management Plans was first due in 2010-03-23. The Central Data Repository (<http://cdr.eionet.europa.eu/>) contains information from the EU-27 Member States plus Norway and the United Kingdom, reported between 2009-09-14 and 2016-03-17 (including resubmissions and updates).
- For the second River Basin Management Plans, spatial data was reported under the "Water Framework Directive - River Basin Management Plans - 2016 Spatial data". See <http://rod.eionet.europa.eu/obligations/717> for further information on the reporting.
- For the Environmental Quality Standards Directive, spatial data was reported under the "Environmental Quality Standards Directive - Preliminary programmes of measures and supplementary monitoring". See <http://rod.eionet.europa.eu/obligations/766> for further information on the reporting.
- For the third River Basin Management Plans, spatial data was reported under the "Water Framework Directive - River Basin Management Plans - 2022 Spatial data". See <http://rod.eionet.europa.eu/obligations/780> for further information on the reporting.

The WISE WFD reference spatial data sets contain data from the [CDR](#) data files listed in the [CDR_metadata.txt](#).

Annex II – Corrections to designationPeriod and operationalActivityPeriod values

1st River Basin Management Plans

The **designationPeriodBegin** value for river basin districts (RBD), subunits and waterbodies reported in the 1st River Basin Management Plans, was set to the publication date of the River Basin Management Plan (RBMP).

The publication date was obtained from the Water Framework Directive - River Basin Management Plans - 2010 reporting (<https://rod.eionet.europa.eu/obligations/521>). The publication date was reported for 175 out of 180 RBMPs, and missing for the following RBDs: ITD, ITE, ITF, ITH and UKGI17. The publication date for ITD, ITE, ITF and ITH was communicated directly by IT (2023-03-03). Note that Norway did not report RBMPs in 2010, so there is no equivalent information available about the 17 Norwegian RBDs.

All objects in a given RBD are provisionally assigned a designationPeriodBegin based on the RBMP publication date.

For monitoring sites, and given the lack of other information, the **operationalActivityPeriodBegin** value was also set to the RBMP publication date, based on the RBD of the associated water body. (For sites where the feature of interest is unknown, the operationalActivityPeriod value remains '9999-12-31')

2nd River Basin Management Plans

The publication date was obtained from the Water Framework Directive - River Basin Management Plans - 2016 RBD XML data (<https://rod.eionet.europa.eu/obligations/719>) reporting. The publication date was reported for 195 out of 196 RBMPs. For the RBD UKGI17 a provisional date of 2015-09-01 was obtained from a draft report. Note that Iceland did not report RBMPs in 2016, so there is no equivalent information available about the one Icelandic RBD.

The following criteria apply when checking the **designationPeriodBegin** values reported in the 2nd RBMP reporting (hereafter WFD2016) for river basin districts, subunits, and waterbodies.

- If the object was created in WFD2016, then its designationPeriodBegin is set to the publication date of the respective RBMP.
- If the object already existed in WFD2010, then its designationPeriodBegin cannot be after the publication date of the previous RBMP.
- If the reported designationPeriodBegin date is posterior to the publication date of the previous RBMP, then designationPeriodBegin is set to the publication date of the previous RBMP. This applies also if only the identifier changed between the 1st and the 2nd RBMPs.
- If the object already existed in WFD2010, then its designationPeriodBegin can be before the publication date of the 1st RBMP.

Such values are allowed, and back-propagated to the WFD2010 data. This applies also if only the identifier changed between the 1st and the 2nd RBMPs. However a plausibility criteria is applied, and dates before 2003-12-22 (the deadline for the characterisation under the Water Framework Directive) are set to 2003-12-22.

If an object is deleted in WFD2016, then its **designationPeriodEnd** is set to the publication date of the 2nd RBMP.

For monitoring sites, if the object already existed in WFD2010, then the **operationalActivityPeriodBegin** can be before the publication date of the first RBMP. Such values are allowed and propagated to the WFD2010 data. This applies also if only the identifier changed between the first and the second RBMPs, i.e. where wiseEvolutionType = 'creation'.

If an object was created in WFD2016, then the reported `operationalActivityPeriodBegin` value is kept. This applies to the cases where `wiseEvolutionType` in ('aggregation','splitting','creation').

If an object is deleted in WFD2016, then the reported `operationalActivityPeriodEnd` value is kept. This applies to the cases where `wiseEvolutionType` = 'deletion' and `supersededByIdentifier` is null.

3rd River Basin Management Plans

The publication date is obtained from the Water Framework Directive - River Basin Management Plans - 2022 RBDXML data (<https://rod.eionet.europa.eu/obligations/805>) reporting. Since the reporting is ongoing, only some RBMP publication dates can be obtained at the moment of publication. Therefore, the data for the 3rd River Basin Management is provisional.

The following criteria apply when checking the `designationPeriodBegin` values reported in the 3rd RBMP reporting (hereafter WFD2022) for river basin districts, subunits, and waterbodies.

- If the object was created in WFD2022, then its `designationPeriodBegin` MUST BE SET to the publication date of the RBMP.
- If the object is created in WFD2022, but the RBMP publication date is not yet known, then all `designationPeriodBegin` values must be identical within a given River Basin District and must be posterior to the publication date of the previous RBMP (if the RBD existed in WFD2016).
- If the object already existed in WFD2010, then its `designationPeriodBegin` cannot be after the publication date of the 1st RBMP. If the reported `designationPeriodBegin` date is posterior to the publication date of the 1st RBMP, then `designationPeriodBegin` is to the publication date of the 1st RBMP. This applies also if only the identifier changed since the 1st RBMPs.
- If the object already existed in WFD2010, then its `designationPeriodBegin` can be before the publication date of the 1st RBMP. Such values are allowed, and propagated to the WFD2010 and WFD2016 data. This applies also if only the identifier changed since 1st RBMPs. However a plausibility criteria is applied, and dates before 2003-12-22 (the deadline for the characterisation under the Water Framework Directive) are set to 2003-12-22.
- If the object already existed in WFD2016 (but not in WFD2010), then its `designationPeriodBegin` is set to the publication date of the 2nd RBMP. This applies also if only the identifier changed since the 2nd RBMP.

If an object is deleted in WFD2022, then its `designationPeriodEnd` is set to the publication date of the 3rd RBMP.

For monitoring sites,

- If the object already existed in WFD2010 or WFD2016, then the `operationalActivityPeriodBegin` can be before previously known date. Such values are allowed and propagated to the WFD2010 and/or WFD2016 data. This applies also if only the identifier changed between the RBMPs, where `wiseEvolutionType` = 'changeCode'.
- If an object was created in WFD2016, then the reported `operationalActivityPeriodBegin` value is kept. This applies to the cases where `wiseEvolutionType` in ('aggregation','splitting','creation').
- If an object was deleted in WFD2022, then the reported `operationalActivityPeriodEnd` value is kept. This applies to the cases where `wiseEvolutionType` = 'deletion' and `supersededByIdentifier` is null.