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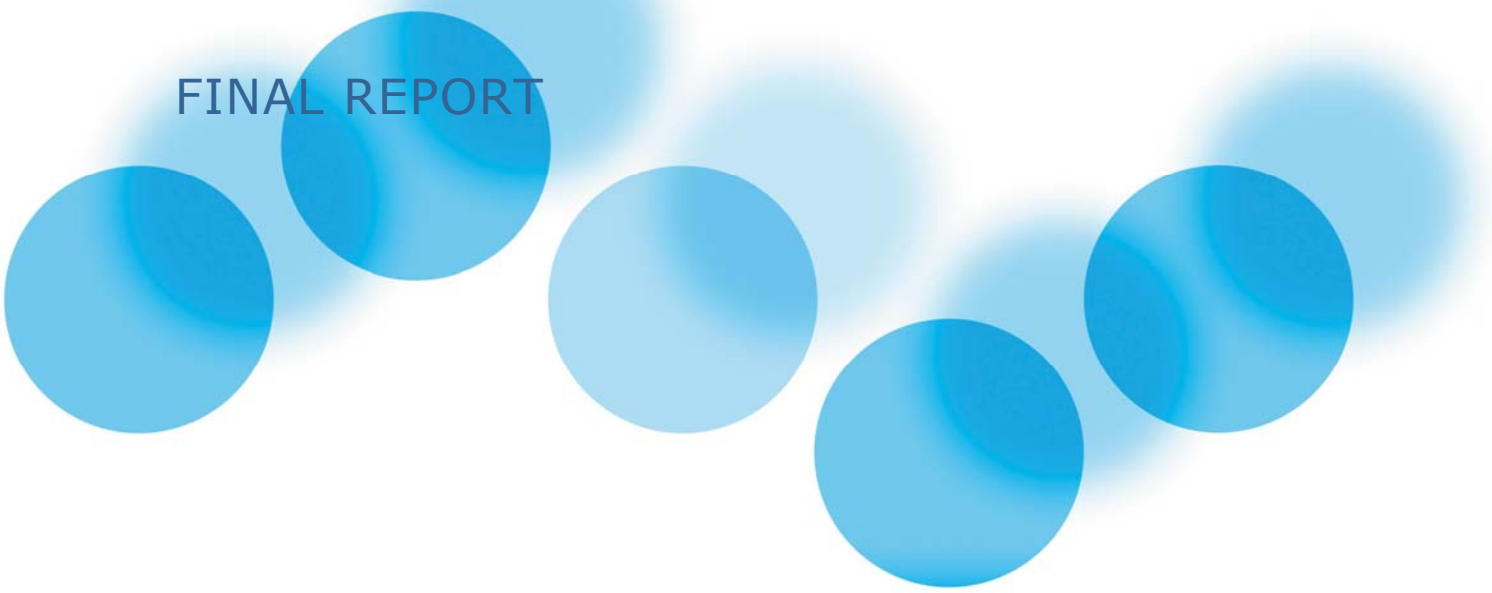
GEOGRAPHIC INFORMATION SYSTEM FOR THE DANUBE RIVER BASIN

– VERSION 0.1 (PROTOTYPE)

FINAL REPORT



WORKING FOR THE DANUBE AND ITS PEOPLE

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PREFACE

The long term goal of the Danube Regional Project (DRP) is, in short, to strengthen capacities of key Danube stakeholders and institutions to effectively and sustainably manage the Danube River Basin's water resources and ecosystems for citizens of Danube countries. This includes developing and making available the key tools necessary for making effective management decisions.

It is increasingly recognized that one core tool for river basin management is a Geographical Information System (GIS). The main water policy driver in the DRB, the EU Water Framework Directive (WFD), underlines the need for EU member states and candidate countries to utilize GIS. The ICPDR is developing a Danube GIS, under guidance of the ICPDR GIS Expert Sub-Group, in order to use it for diverse tasks of the ICPDR, in particular for preparing a Danube River Basin Management Plan and fulfilling other EU WFD requirements.

The Danube Regional Project is supporting the ICPDR in the development of the Danube GIS through its Project Component on Development of the Danube River Basin GIS.

The Danube GIS is being developed in a step-by-step approach. Firstly, the activities related to system definition, design and analysis of system building and implementation were carried out in 2004-2005 and the report on System Definition and Design was finalized in February 2005.

The present report is a result of a second part of work on Danube GIS development, the creation of a First Prototype of the System (DRB GIS V0.1), which serves as a "proof of concept" for the complete system.

Further development work will be needed to ensure full system functionality. Testing the prototype is the next step as an input for further development stages. The system should then be refined and completed with the functionalities defined in the system definition. This includes the creation of a query tool, of web mapping clients for public and expert use, and the implementation of user roles and access, and security functions. Furthermore, some hard- and software adaptations are required (acquisition of a database sever and a database management system).

Beyond the development of the system itself, its connection to and interoperability with other tools and systems (most importantly WISE, the Water Information System for Europe) is an important issue.

For the future, a system expansion for further uses and its enhancement towards a decentral system architecture (where data remain with the Danube countries and are obtained via web services rather than physically on a central server) is desired.

The work was carried out by a team of experts from Umweltbundesamt Wien (Federal Environmental Agency, Vienna), Ms. Ingrid Roder, Ms. Doris Riedl, Ms. Cordula Göke, Ms. Kerstin Placer and Mr. Michael Hadrbolec.

For further information about the Danube Regional Project, its objectives, activities, results etc. please visit the DRP webpage at: www.undp-drp.org.

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Geographic Information System for the Danube River Basin (DRB GIS)

Version 0.1 (First Prototype)

Final Report

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1 OBJECTIVES

After the preparation of a Danube River Basin (DRB) GIS System Definition, the Umweltbundesamt GmbH was commissioned to start the creation of a first prototype of the system (DRB GIS V0.1) in mid-2005. A description of the prototype's scope and functionality was provided by the end of July 2005[1]; the progress of work was documented in a report in November 2005[2]. The system was finalised by the end of 2005 and went online on 16 January 2006. This document is to describe the work accomplished and the project output.

2 OVERVIEW OF DRB GIS V0.1

The aim of the DRB GIS prototype is the creation of a tool that can provide proof of concept for the complete system. DRB GIS V0.1 allows the controlled upload of data to the central server, mapping the datasets to a defined schema and viewing the data in a simple WebGIS viewer. Furthermore, data and templates can also be downloaded and a workflow tool allows the reproduction of all processes performed in the system. On the data side, the structure of all datasets was defined in templates that conform to several sources (e.g. WFD; WISE) and a metadata schema was created.

DRB GIS V0.1 can be reached at www.danubegis.org; to protect the system from unauthorized access a user name (donaugis) and password (donaugis2006) have to be given.

[1] Geographic Information System for the Danube River Basin (DRB GIS), Version 0.1 (First Prototype). Description – Workplan – Hard-/Software Costs. Umweltbundesamt, July 2005.

[2] Geographic Information System for the Danube River Basin (DRB GIS), Version 0.1 (First Prototype). Progress Report. Umweltbundesamt, November 2005.

3 DATABASE DESIGN AND DEVELOPMENT

3.1 DATA MODELLING

The data model was created using Microsoft Visio Professional (see Figure 1: Data modelling in MS Visio Professional), as the software has several advantages:

- immediate verification of relationships
- straightforward creation of coded value domains
- facilitation of ex-post changes (e.g. field name, data type)

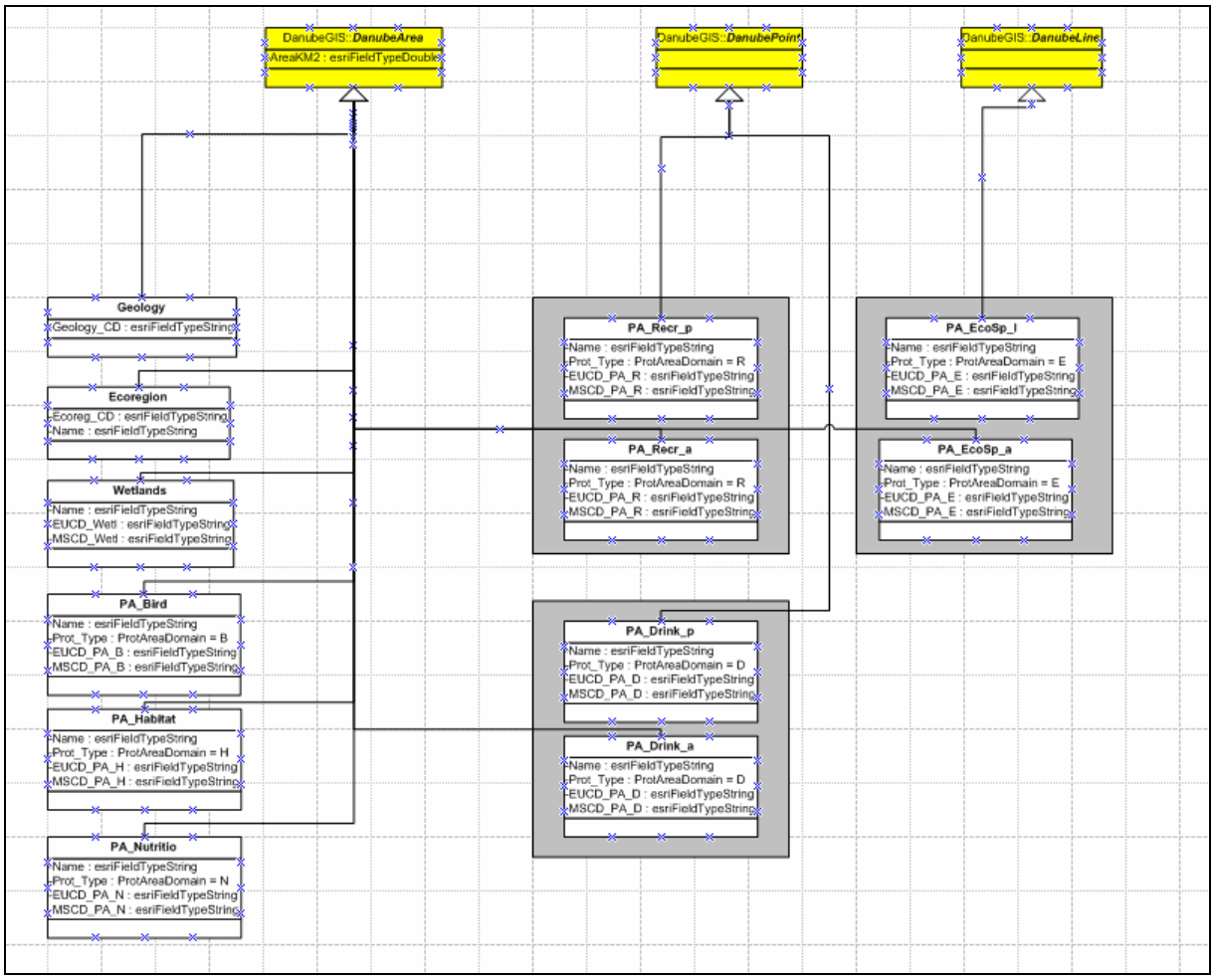


Figure 1: Data modelling in MS Visio Professional

The Master Input Data List in the Final Report on the DRB GIS System Definition[3] (Annex A) is based on the layers promoted by the WFD GIS Guidance Document[4], the data used for

[3] Final Report: Geographic Information System for the Danube River Basin (DRB GIS) – System Definition. Umweltbundesamt, Feb. 2005.

roof report 2004 and the data already available in the Danube Information System. In the refinement process of data modelling, several further documents, systems and resources were considered. Altogether the following sources of information were taken into account:

- WFD GIS Guidance Document: since this document is currently being revised, minor discrepancies may occur. These can be adapted once the renewed GIS Guidance Document is available.
- Maps and templates (e.g. for heavily modified waterbodies) used for the roof report 2004
- WISE database: all information currently available (i.e. the templates already completed (Article 3), the MS Access test database, further papers) was accounted for. Not all specifications were strictly adhered to, and adjustments will be necessary as WISE development is still in progress.
- For open questions, the Water Framework Directive[5] was consulted directly.
- For topics not explicitly mentioned in the Water Framework Directive, further sources or experts were consulted (e.g. Water Risk Index).
- To facilitate work for countries who will be working with both systems, the data model was also compared to the German WasserBLIcK.

As for WISE, where definitions are still in progress, and the WFD GIS Guidance Document, which is presently being reworked, all information currently available was taken into account. Changes can, however, be expected. For maximum efficiency, we suggest a stepwise adaptation: the current DRB GIS data model and the corresponding shapefile templates should be adopted as Version 0.1. Further refinements according to WISE and WFD GIS Guidance changes as well as to feedback from test users (GIS ESG) should then repeatedly be taken into account in oncoming DRB GIS implementation phases. As was suggested at the 13th GIS ESG Meeting in Sofia, also the examination of the reporting sheets should be considered for further template refinement. A need for adaptation (i.e. adding appropriate attributes) can also be expected in the field of river coding, which is currently being discussed.

In addition to the exported shapefile templates (see 3.3), the data model is available on CD in the original format for MS Visio Professional, as pdf, as XMI-file and in ESRI Personal Geodatabase format.

[4] Common Implementation Strategy for the Water Framework Directive (2000/60/EC). Guidance Document No 9 Implementing the Geographical Information System Elements (GIS) of the Water Framework Directive. Produced by Working Group 3.1 – GIS

[5] Water Framework Directive (2000/69/EC): Directive 2000/60/EG of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

3.2 CODELIST DEVELOPMENT

The codelists (domains) were developed in the process of data modelling in MS Visio Professional and are listed in the template documentation (see Annex A and CD). They can be viewed in html format (see CD) and are also part of the data model in form of coded value domains.

3.3 SHAPEFILE TEMPLATES DEVELOPMENT

For the creation of shapefile templates and tables from Visio, the model was exported to a database (ArcSDE) and, in a second step, to shapefiles and dBase tables respectively (see Table 1: List of shapefile / table templates).

template name	template description	geometry type
AdminBound	Codes for administrative boundaries (includes information on administrative entities)	line
AuthGroup	Table for the m:n relationship between competent authorities and RDBs	table
Catchment	Catchments	polygon
City_a	Cities (represented as areas)	polygon
City_p	Cities (represented as points)	point
Compauth	Competent authorities	polygon
ContSite_a	Contaminated sites (represented as areas)	polygon
ContSite_p	Contaminated sites (represented as points)	point
CWBody	Coastal water bodies	polygon
CWType	Coastal water body types	table
Ecoreg	Ecoregions	polygon
Geology	Geology	polygon
GWBody	Groundwater bodies	polygon
GWStn	Groundwater monitoring stations	point
Harbour_a	Harbours (represented as areas)	polygon
Harbour_p	Harbours (represented as points)	point
HydroStruc	Hydrologicals structures	point
LWBody	Lake water bodies - Link to LWseg	table
LWSeg	Lake segments	polygon
LWType	Lake water body types	table
PA_Bird	Bird protection area	polygon

template name	template description	geometry type
PA_Drink_a	Drinking water protection area (represented as areas)	polygon
PA_Drink_p	Drinking water protection area (represented as points)	point
PA_EcoSp_a	Economically significant aquatic species protection area (represented as areas)	polygon
PA_EcoSp_l	Economically significant aquatic species protection area (represented as lines)	line
PA_Habitat	Habitat protection area (FFH)	polygon
PA_Nutritio	Nutrition-sensitive areas	polygon
PA_Recr_a	Recreational waters (represented as areas)	polygon
PA_Recr_p	Recreational waters (represented as points)	point
PointSourc	Point sources	point
RBD	River basin district	polygon
RiskSpot_a	Accident risk spots (represented as areas)	polygon
RiskSpot_p	Accident risk spots (represented as points)	point
Rivbasin	River basins	polygon
River	Rivers - Link to RWseg	polygon
RWBody	River water bodies - Link to RWseg	table
RWSeg	River segments	line
RWType	River water body types	table
Settlement	Settlement Area	polygon
State	State description codes and parameters	polygon
SWStn	Surface water monitoring stations	point
TWBody	Transitional water bodies	polygon
TWType	Transitional water body types	table
Wetland	Wetlands	polygon

Table 1: List of shapefile / table templates

The templates were provided to the ICPDR for the 13th meeting of the GIS ESG in Sofia and can now (in a slightly modified version – some minor errors were corrected) be accessed via the CD attached or downloaded via the DRB GIS prototype. Template documentation (giving extensive information on fields, field types, coded value domains, instructions on how data have to be filled in etc.) is available in Annex A and on CD (pdf and MS Excel format) (see Figure 2: Template documentation (example)).

City_p

template description									info for database	
attribute name	field name	field type*		description of the attribute	values and codelists	obligation**	obligation date according to WFD***	example values	key_to_field	linked_table
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"City_p_" & ISO3166_CD Domain & RBDCode Domain	m		City_p_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the city		m		Wien		
EuropeanCityCode	EUCD_CITY	string	24	International Code for the City	ISO3166_CD Domain & [MSCD_City]	m		AT8		
MSCityCode	MSCD_CITY	string	22	National code for the city		m		8		
Inhabitants	CITY_INHAB	long integer	8	Number of inhabitants of the city		c (either the number of the inhabitants or the category [inhab_cat] have to be given)		1608144		
InhabitantsCategory	INHAB_CAT	string	3	Category for the number of inhabitants of the city	Inhab_Cat Domain	c (either the number of the inhabitants [City_Inhab] or the category have to be given)		L		

Figure 2: Template documentation (example)

3.4 METADATA

A metadata profile for the DRB GIS was already finished for the DRB GIS System Definition (Annex B) and approved for usage at the 13th GIS ESG Meeting in Sofia. The metadata schema was now designed as XML Schema Definition (XSD)[6] according to ISO19115 (Geographic information — Metadata, First edition 2003-05-01). The metadata package in the ISO standard is separated in several XSD-Files (see Figure 3: Metadata packages).

[6] An XML Schema Definition (XSD) is an instance of an XML schema written in the W3C's XML Schema language. An XSD defines a type of XML document in terms of constraints upon what elements and attributes may appear, their relationship to each other, what types of data may be in them, etc.

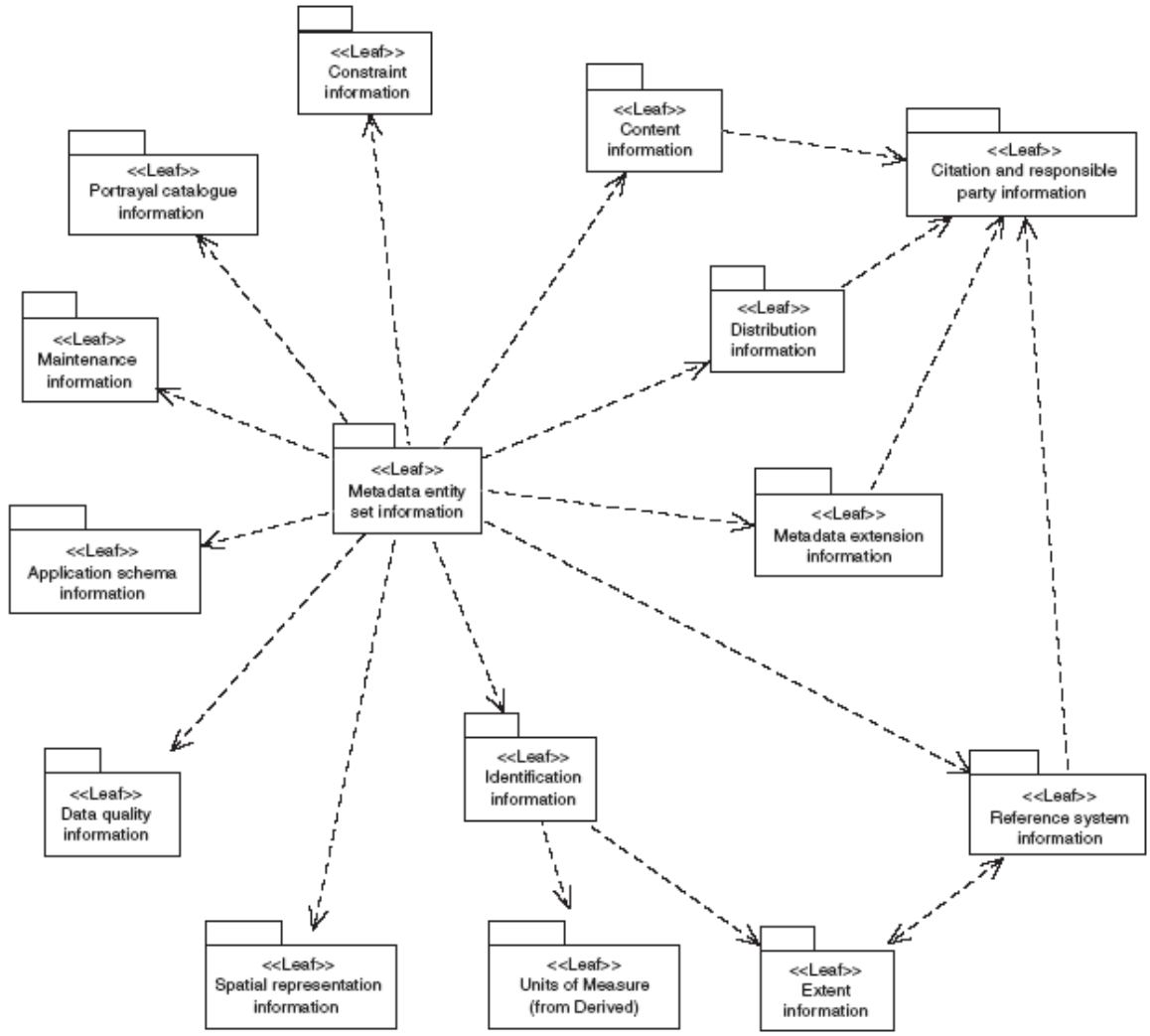


Figure 3: Metadata packages

The metadata packages defined as XSD-Files are listed in Table 2:

Metadata package	XSD (XML-Schema file)
Constraint information	DRBGIS19115_Constraints_v0_1.xsd
Data quality information	DRBGIS19115_DataQuality_v0_1.xsd
Extent information	DRBGIS19115_Extent_v0_1.xsd
Identification information	DRBGIS19115_Identification_v0_1.xsd
Maintenance information	DRBGIS19115_Maintenance_v0_1.xsd
Reference system information	DRBGIS19115_ReferenceSystem_v0_1.xsd
Spatial representation information	DRBGIS19115_SpatialRepresentation_v0_1.xsd
Metadata entity set information	DRBGIS19115_Metadata_v0_1.xsd
Citation & responsible party information	DRBGIS19115_Citation_v0_1.xsd

Table 2: XSD-schemas according to metadata packages

For the handling of basic types and codelists, further schemas are included:

Schema	XSD (XML-Schema file)
Basic types	DRBGIS19115_BasicTypes_v0_1.xsd
Codelists	DRBGIS19115_CodeLists_v0_1.xsd
XInclude	XInclude.xsd

Table 3: Further XSD-schemas according to metadata packages

The metadata root element (DRBGIS19115_metadata_v0_1) consequently contains the following metadata topics (see Figure 4: Metadata topics).

- Common metadata
- Identification information
- Data constraints
- Reference system
- Data quality
- Data details

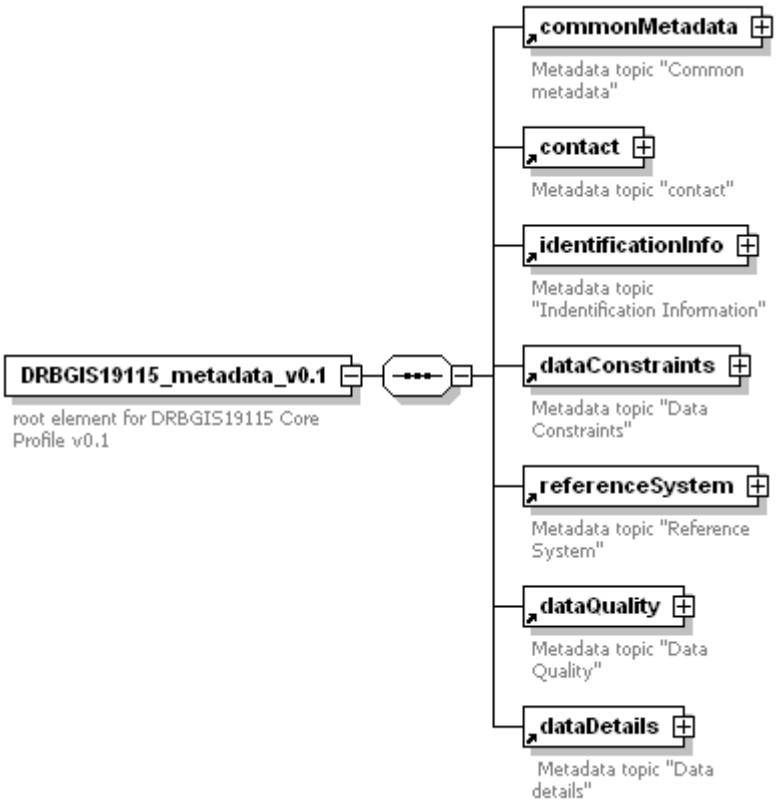


Figure 4: Metadata topics

A file documenting all schemas was automatically created with XML Spy software and is available in Annex B and on CD. A sample XML-File which conforms to the schemas and all XSD files are also provided there.

3.5 PREPARATION OF TEST DATA

In a final step, the shapefile/table templates were filled with data for testing the DRB GIS prototype. At least one test dataset for each shapefile template / table as well as some intentionally erroneous datasets were created. The test files currently consist of Austrian data and data used for the roof report 2004.

4 HARD- AND SOFTWARE

4.1 HARDWARE

The hardware necessary for this project phase (one server) has been acquired and accounted to the GEF/DRP. The server is operational since November 2005.

4.2 SOFTWARE

The Umweltbundesamt supported the ICPDR in acquiring the ArcIMS software; it was installed on the DRB GIS server in mid-December 2005. The Internet Domain www.danubegis.org was acquired for accessing the system via that address. All other software required for system development is freely available (see 5.3).

5 APPLICATION DEVELOPMENT

5.1 PRINCIPLES AND TOOLS USED

5.1.1 Design patterns

The DRB GIS application is being programmed making use of so-called design patterns. Design patterns are standard solutions to common problems in software design and as such can considerably speed up the software development process. A design pattern describes how to solve a problem that can be used in many different situations, focussing on the patterns of interaction between classes, objects, and communication flow rather than on how individual components work.

5.1.2 J2EE components[7]

Java 2 Platform, Enterprise Edition, or **J2EE**, is a programming platform - part of the Java platform - for developing and running distributed multi-tier architecture applications, based largely on modular components running on an application server. The J2EE platform is defined by a specification. J2EE is also considered informally to be a language or standard because providers must agree to certain conformance requirements in order to declare their products as J2EE compliant.

J2EE includes several API specifications, for example JDBC and client-side applets, and defines how to coordinate them. J2EE features some specifications unique to J2EE for components. These include Enterprise Java Beans, Servlets, JavaServer Pages and several Web Services technologies. This allows the developer to create an enterprise application that is portable between platforms and scalable, while integrating with several legacy technologies.

Java servlet technology lets you define HTTP-specific servlet classes. A servlet class extends the capabilities of servers that host applications that are accessed by way of a request-response programming model. Although servlets can respond to any type of request, they are commonly used to extend the applications hosted by web servers.

JavaServer Pages (JSP) technology lets you put snippets of servlet code directly into a text-based document. A JSP page is a text-based document that contains two types of text: static data (which can be expressed in any text-based format such as HTML, WML, and XML) and JSP elements, which determine how the page constructs dynamic content.

JavaServer Faces (JSF) is a Java-based web application framework that simplifies the development of user interfaces for J2EE applications. JSF teschnology includes, among others:

- A set of APIs for representing UI components and managing their state, handling events and input validation, defining page navigation, and supporting internationalization and accessibility.
- A JavaServer Pages (JSP) custom tag library for expressing a JavaServer Faces interface within a JSP page.

The **Java API for XML Processing (JAXP)** supports the processing of XML documents using Document Object Model (DOM), Simple API for XML (SAX), and Extensible Stylesheet Language Transformations (XSLT). JAXP enables applications to parse and transform XML

[7] see http://java.sun.com/j2ee/1.4/docs/tutorial/doc/Overview7.html (11. 1. 2006)

documents independent of a particular XML processing implementation. JAXP also provides namespace support, which lets you work with schemas that might otherwise have naming conflicts. In the DRB GIS, this API is used to validate the metainformation provided by the user.

JDBC (**Java Database Connectivity)**, is an API that defines how a client may access a database. It provides methods for querying and updating data in a database and lets you invoke SQL commands from Java programming language methods. The JDBC API has two parts: an application-level interface used by the application components to access a database, and a service provider interface to attach a JDBC driver to the J2EE platform.

The **Java Naming and Directory Interface (JNDI)** provides naming and directory functionality. It provides applications with methods for performing standard directory operations, such as associating attributes with objects and searching for objects using their attributes. Using JNDI, a J2EE application can store and retrieve any type of named Java object. In the DRB GIS, the JNDI mechanism was used to connect to the repository backing database.

The **Java Authentication and Authorization Service (JAAS)** provides a way for a J2EE application to authenticate and authorize a specific user or group of users to run it. In this project phase it was used to restrict public access to the DRB GIS server.

5.1.3 Geotools

For all processes concerning geodata management, the software Geotools[8] is used. Geotools is an open source GIS toolkit for developing standard compliant solutions. It is written in Java and provides implementations of several Open Geospatial Consortium (OGC) specifications. Rather than providing a finished product or appication, Geotools is a set of java libraries compliant with GeoAPI interface specifications which can perform, for example, the following tasks:

- defining the geographic models in a vector system which can be handled and displayed (= feature types)
- defining the instance of these models as effective handled objects (= features)
- storing/reading standard formats of these features in files, databases or via the internet (= datastores)
- setting coordinate systems
- defining and applying projections and coordinate transformations
- creating graphs and networks which can be walked using the visitor's pattern
- defining the concept of maps and layers where the features are placed in
- associating styles for each feature for displaying purpose
- choosing the kind of rendering system that should be used for display

[8] http://docs.codehaus.org/display/GEOTOOLS/Home (31. 10. 2005)

5.2 SYSTEM ARCHITECTURE

System architecture should remain as simple as possible and as complex as necessary to allow further system extension. J2EE was chosen as the base technology. Only the required parts of the technology and - in the case of Java Server Faces - forthcoming technologies were used.

5.2.1 Overview

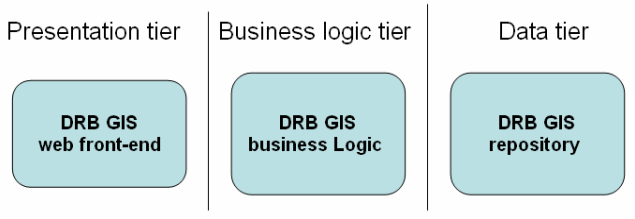


Figure 5: System architecture – overview

The DRB GIS system consists of three main parts: a data tier, a business logic tier and a presentation tier. The **data tier** stores the data in a DRB GIS repository. The **business logic tier** is the part of an application program that performs the data processing required. It refers to the routines that execute the data entry, update, query and report processing, and more specifically to the processing that takes place behind the scenes rather than the presentation logic required to display the data on the screen (GUI processing). The **presentation tier**, i.e. the web front-end, that is based on a standard web browser, handles the user interaction.

5.2.2 Technical view

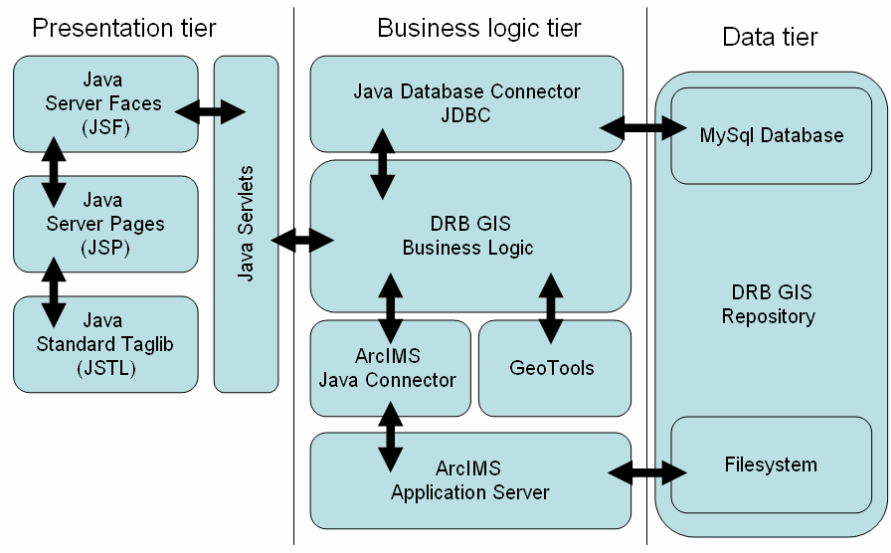


Figure 6: System architecture – technical view

The Java Server Faces (which are backed by Java Server Pages, JSP) allow the user to interact with the DRB GIS business logic via servlets. The business logic, in turn, handles data processing and uses JDBC (Java database connector) to communicate with the repository. The Geotools API is used for validating the uploaded datasets as well as for schema mapping. The ArcIMS Java Connector communicates with the ArcIMS server (which uses the repository) to generate the maps which are displayed via the client front-end.

5.2.3 Package structure

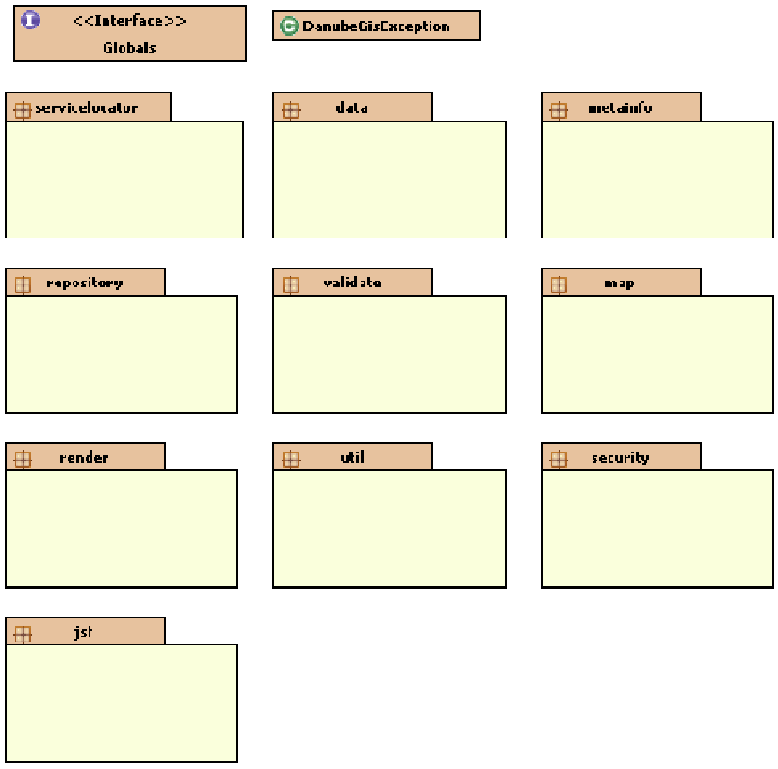


Figure 7: System architecture – package structure

The DRB GIS system consists of the following Java packages:

- The **service locator** follows the service locator design strategy and encapsulates the access to property files and the database.
- Reality has to be modelled conceptually. The **data** package contains the model of templates and datasets which are used in the DRB GIS.
- In order to check, manipulate and map datasets, it is necessary to retrieve its metainformation. This is managed in the **metainfo** package.
- The datasets of the DRB GIS system have to be stored and retrieved for further use. These actions are handled in the **repository** package.
- The **validation** package checks whether the datasets comply with the templates.
- In case schema mapping is carried out, the **map** package maps the dataset.

- The **render** package handles the web mapping. It displays selected datasets as a map.
- The **util** package groups commonly used functionality (utilities) which is used by multiple packages.
- The **security** package will handle the security constraints of the forthcoming DRB GIS system.
- The **jsf** package bridges the user interface with the DRB GIS business logic.

A more detailed view of the interface and package structure is shown in Annex C.

5.3 WEBMAPPING SERVER INSTALLATION/CUSTOMIZATION

The following components have been installed:

- Java Runtime 5 Update 6,
- Apache Tomcat 5.5.12 ,
- ArcIMS 9.1 and Service Pack 1,
- MySql 4.1.16 (as a preliminary alternative to Oracle database)

The operating system is Microsoft Windows2003 Server. Patches are installed continuously whenever necessary. The user is now able to view the uploaded datasets of a chosen topic in a simple standard Webmapping viewer.

5.4 WEB PORTAL PROGRAMMING

5.4.1 Navigation concept

A first prototype of a DRB GIS web portal (see Figure 8: DRB GIS web portal – home) has been set up according to a navigation concept that contains the following elements (see Figure 9: Navigation concept):

- The **header** contains the project title (draft logo) and a login button, that is however not functional in the prototype (security features will be implemented in further system development only; the prototype is only protected by a "general" user name and password).
- The **navigation** block on the left-hand side of the website provides a user-friendly menu. If the user moves the mouse over a topic it is highlighted; by clicking a sub-menu appears (where available) and/or the respective web page is loaded.
- The main section of the website (central part) contains the specific **content** that is currently displayed.
- The **footer** contains further general information on the project.

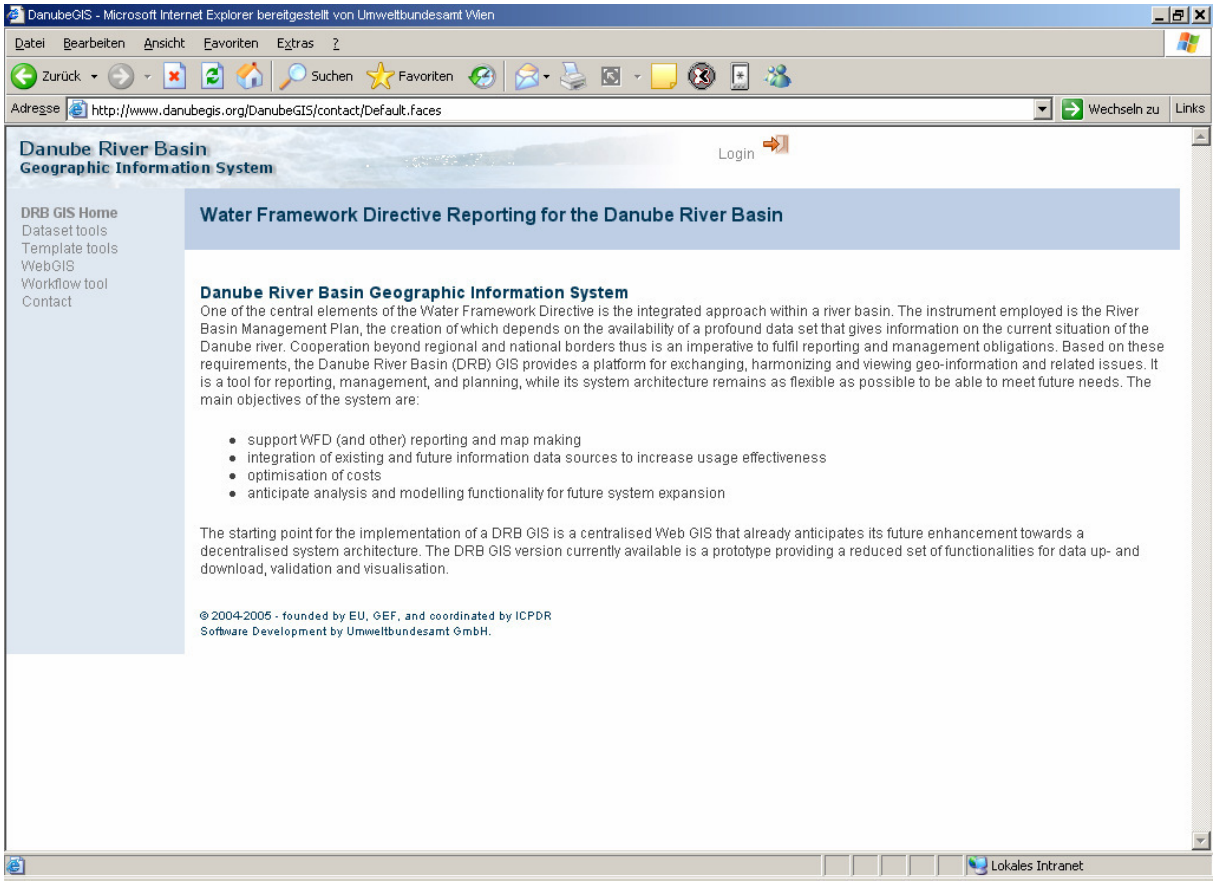


Figure 8: DRB GIS web portal – home

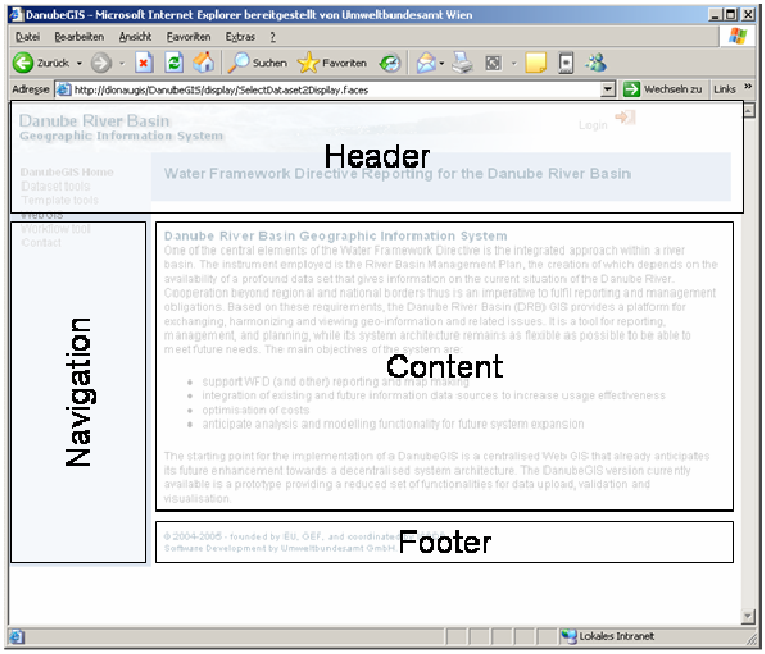


Figure 9: Navigation concept

5.4.2 Sitemap

By clicking items on the menu, the user can navigate to the system's topics (described in more detail in the following chapters).

- **DRB GIS home**: the starting page containing general information on the project
- **Dataset tools**: contains tools to up- and download datasets to/from the repository.
- **Template tools**: contains tools to up- and download templates to/from the repository.
- **WebGIS**: allows selecting and displaying datasets from the repository.
- **Workflow tool**: shows who has done what in the system (data up download, etc.)
- **Contact**: shows the logos of and links to the project partners (see Figure 10: Contact information)

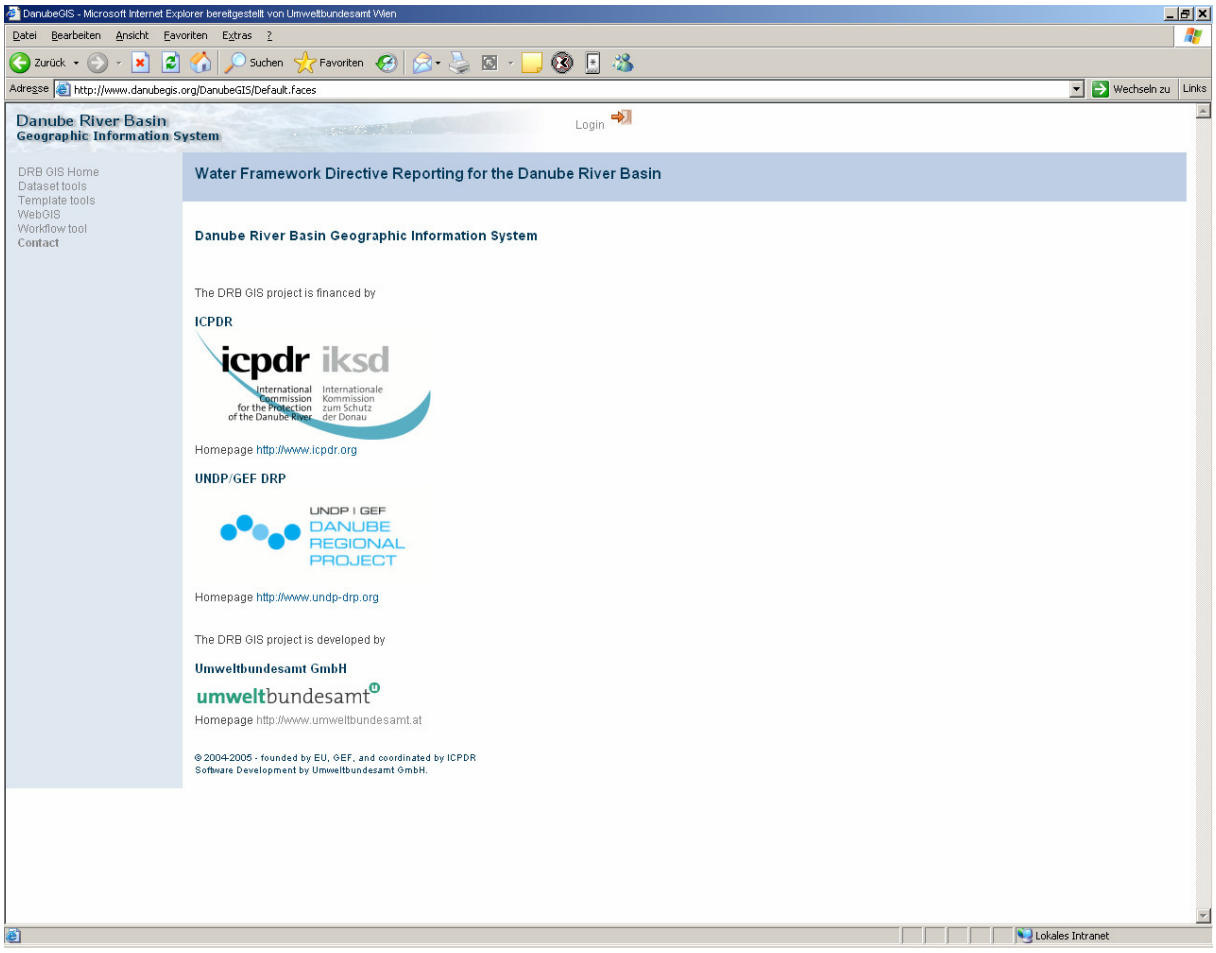


Figure 10: Contact information

5.5 DATASET TOOLS

The controlled up- and download of data to and from the central database (repository) is one of the core functionalities of the DRB GIS system. The prototype provides both functionalities and implements validation and schema mapping, the routines that guarantee that all data uploaded to the system conform to the same, predefined DRB GIS schema (see 3).

5.5.1 Upload data

To upload data to the DRB GIS system, the user first has to select a reference date (by default, the current date is highlighted), a template the data to be uploaded have to conform to (and according to which the validity of the dataset will be checked) and the data's spatial extent (i.e. a country) (see Figure 11: Data upload – select date, template and spatial extent).

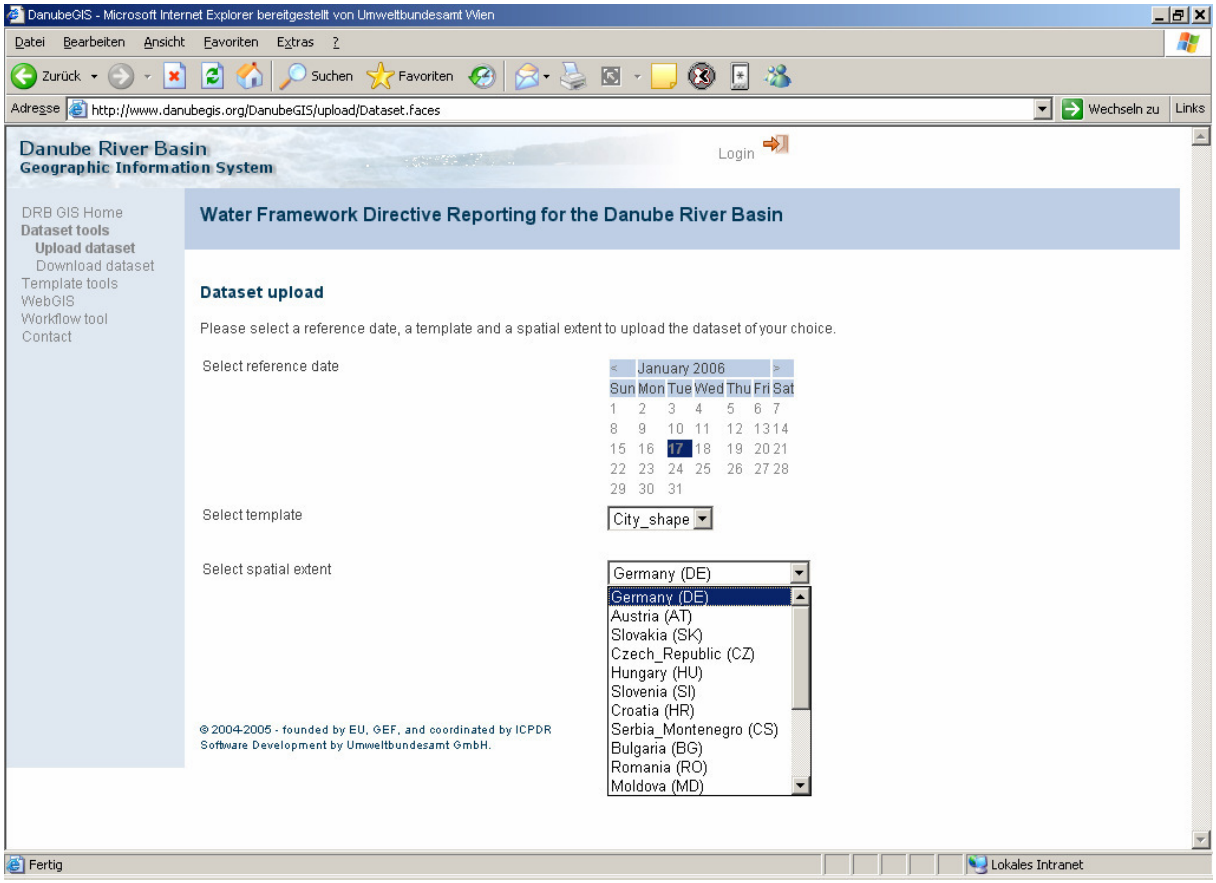


Figure 11: Data upload – select date, template and spatial extent

The user then selects the files to be uploaded (for shapefiles, an .shp, .shx, .prj and .dbf as well as a metainfo file have to be given, in case of uploading a table only a .dbf and a metainfo file have to be selected.) The path can either be typed in or searched for by clicking the respective button (see Figure 13: Data upload – select files to upload). Finally, the harmonization status can be given (ckeckboxes for all neighbouring countries, with which the dataset can/should be harmonized). By clicking the "Submit" button, the system attempts to upload the data to the system and the validation process is started.

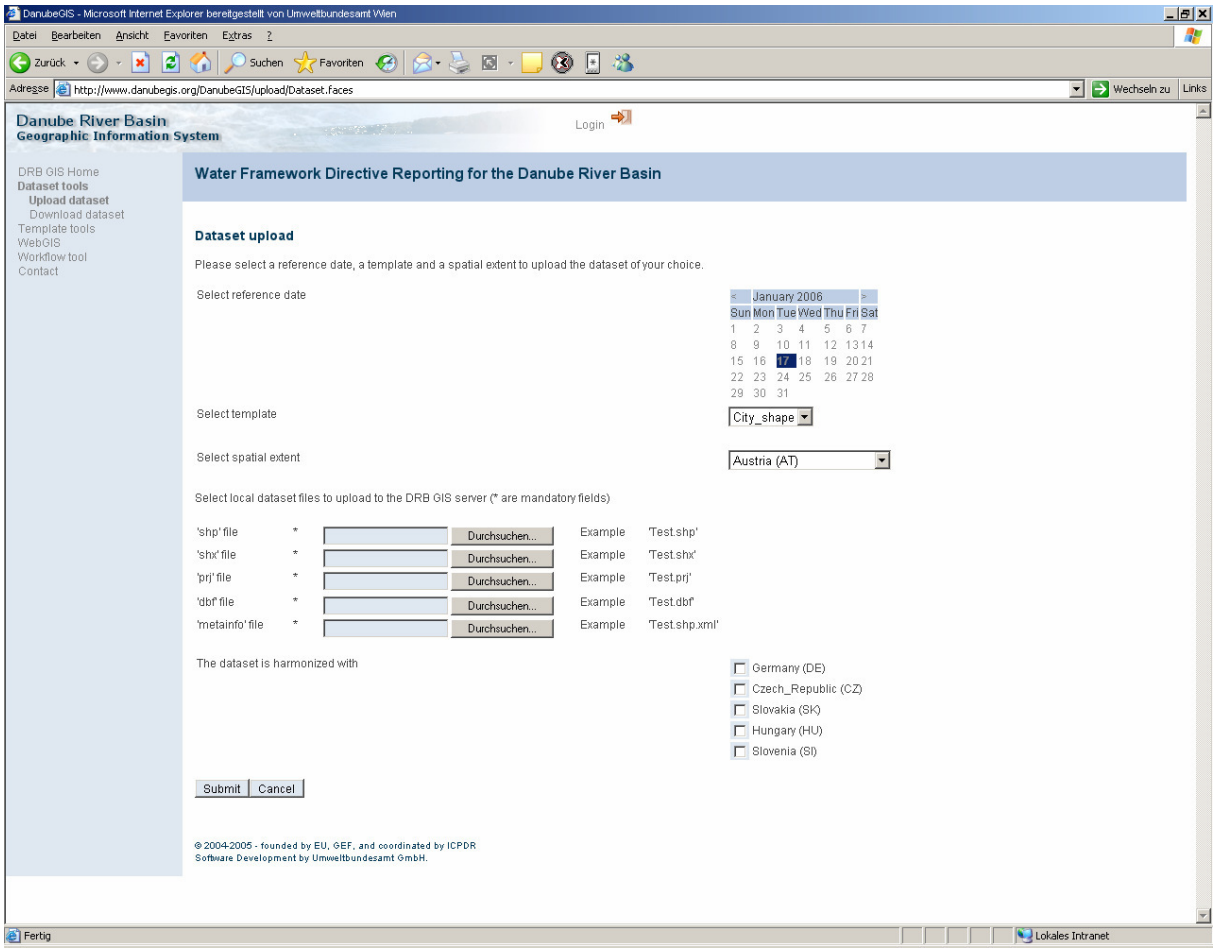


Figure 12: Data upload – select files & check harmonization

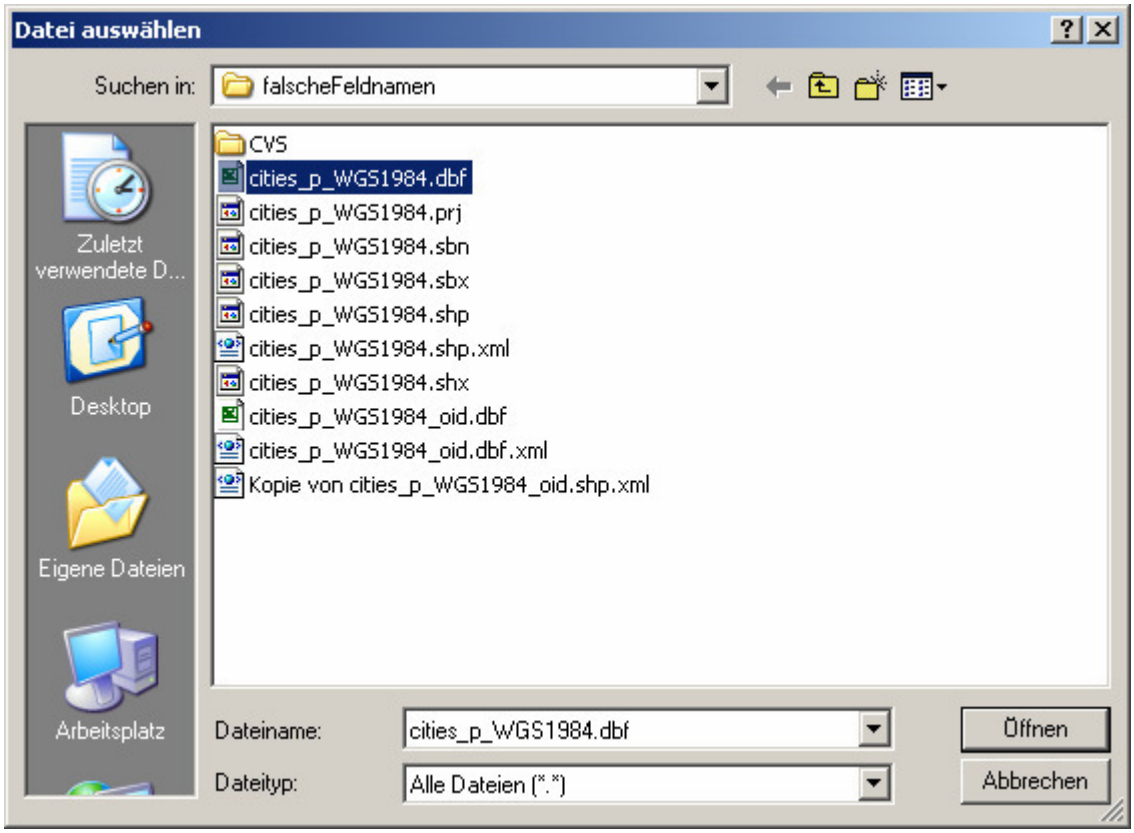


Figure 13: Data upload – select files to upload

5.5.2 Validation

As soon as data are submitted in the data upload process, the validation procedure starts the following checks:

- formal completeness: are all required files available (and readable) and do they comply with the naming conventions?
- compliance with the corresponding template: check for data types, field names and projection (in the case of shapefiles)
- compliance with the relevant codelists (domains as coded values)[9]

Information on the success or failure of the upload process is then given on the "Upload Status" site (see Figures 14 and 15). This site shows whether the data could be delivered to the DRB GIS server (i.e. the connection to the server could be made) and whether the data is valid according to all checks performed in the validation process. The final statement gives information on whether the data could successfully be added to the DRB GIS repository.

[9] As far as the field obligation is concerned, conditional fields and those dependent on reporting system are classified as "optional" in the validation process. (Since the system can only check the field in itself and can not compare it to other fields, cases like "either filed A or field B have to be filled out" can not be verified.)

Successful Upload

If the validation process returns no errors (see Figure 14: Successful data upload), the data are added to the DRB GIS repository and can thus be downloaded or viewed in the WebGIS. The workflow tool shows an entry for successful data upload (see 5.8).

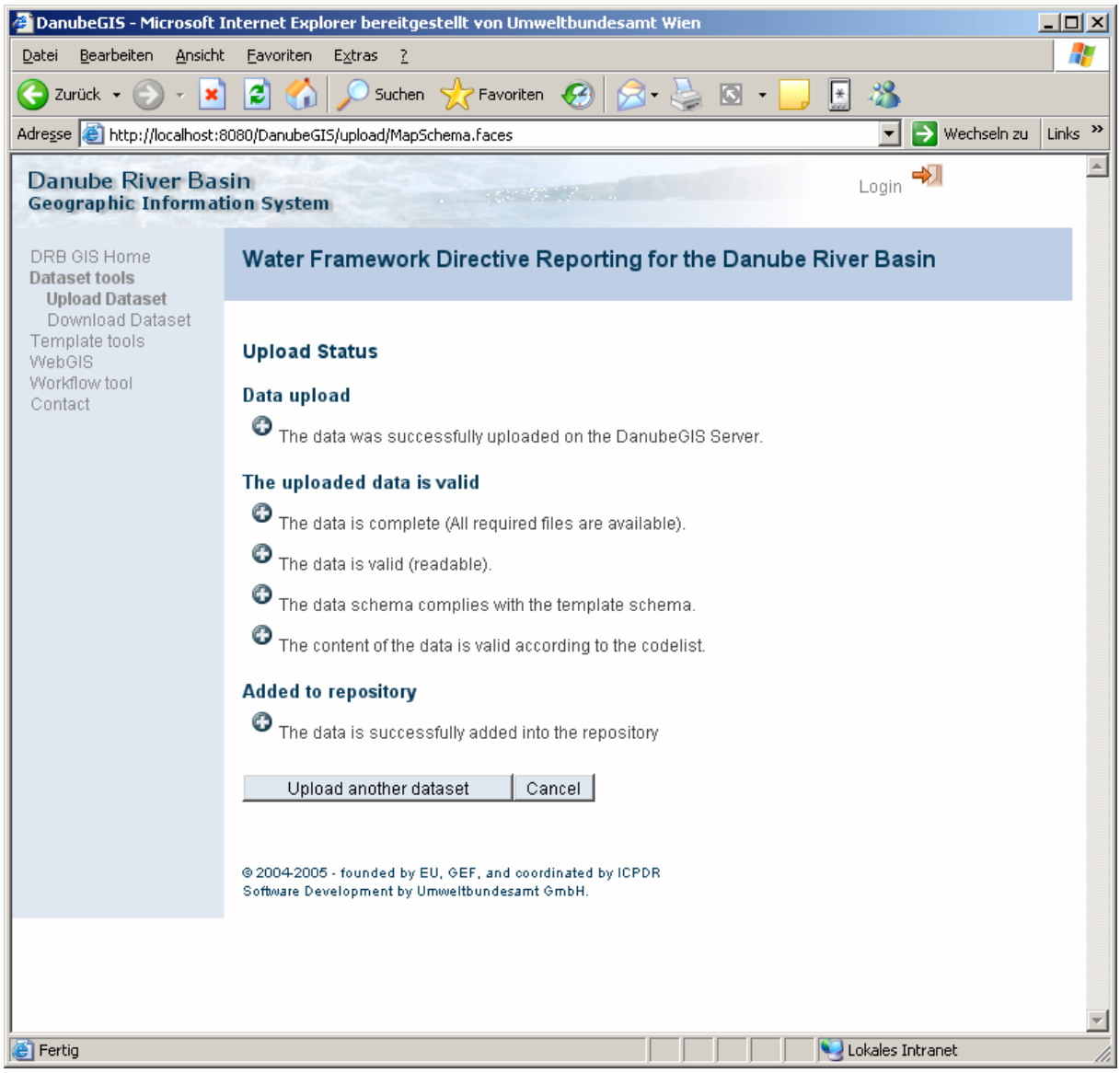


Figure 14: Successful data upload

Unsuccessful Upload

If any errors occur during the upload process, a corresponding error message is delivered. In addition to the general message on the Upload status site (see Figure 15: Unsuccessful data upload), the user is also provided with the possibility to download a detailed error message (see Figure 16: Unsuccessful data upload – error message). In case that the data could not be uploaded because the data does not comply with the schema, the schema mapping process can be started by clicking the "Map schema" button.

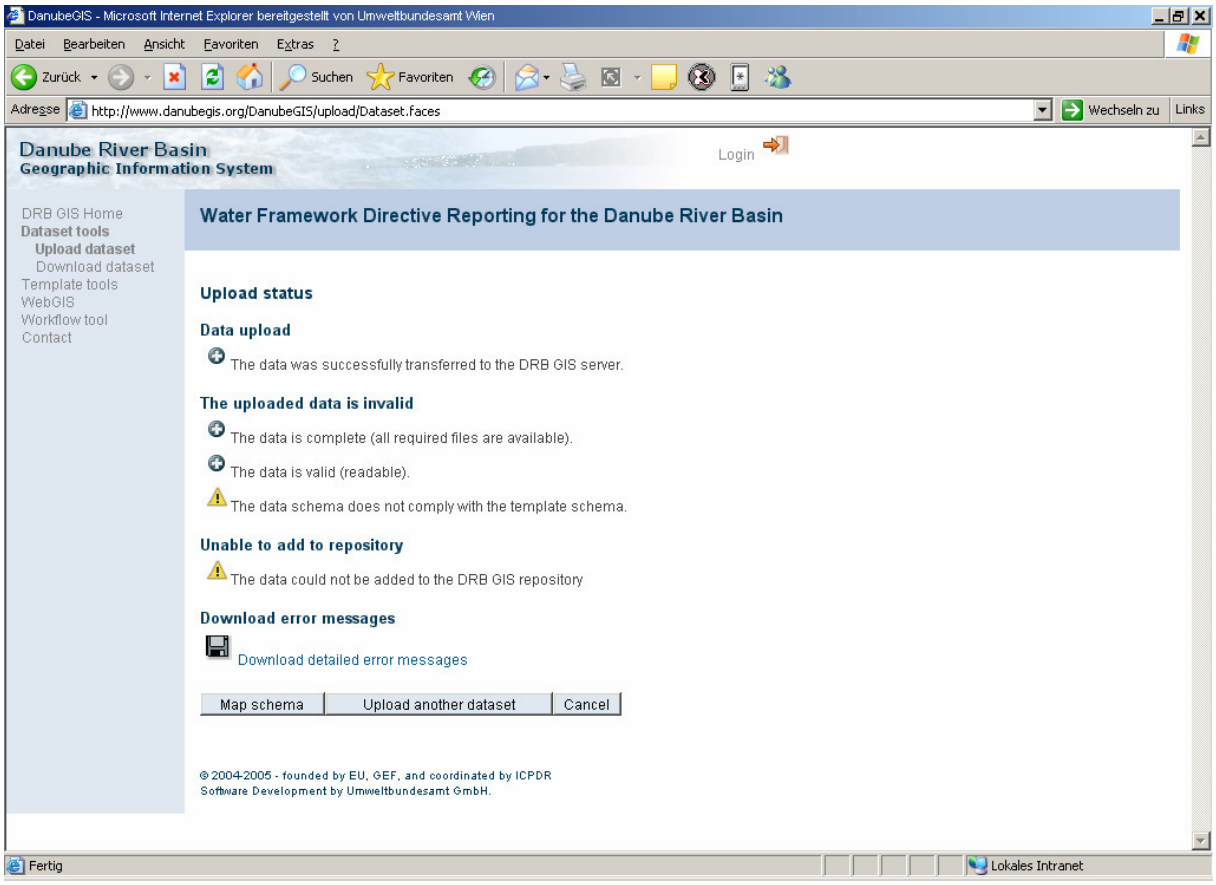


Figure 15: Unsuccessful data upload

Figure 16: Unsuccessful data upload – error message

5.5.3 Schema mapping

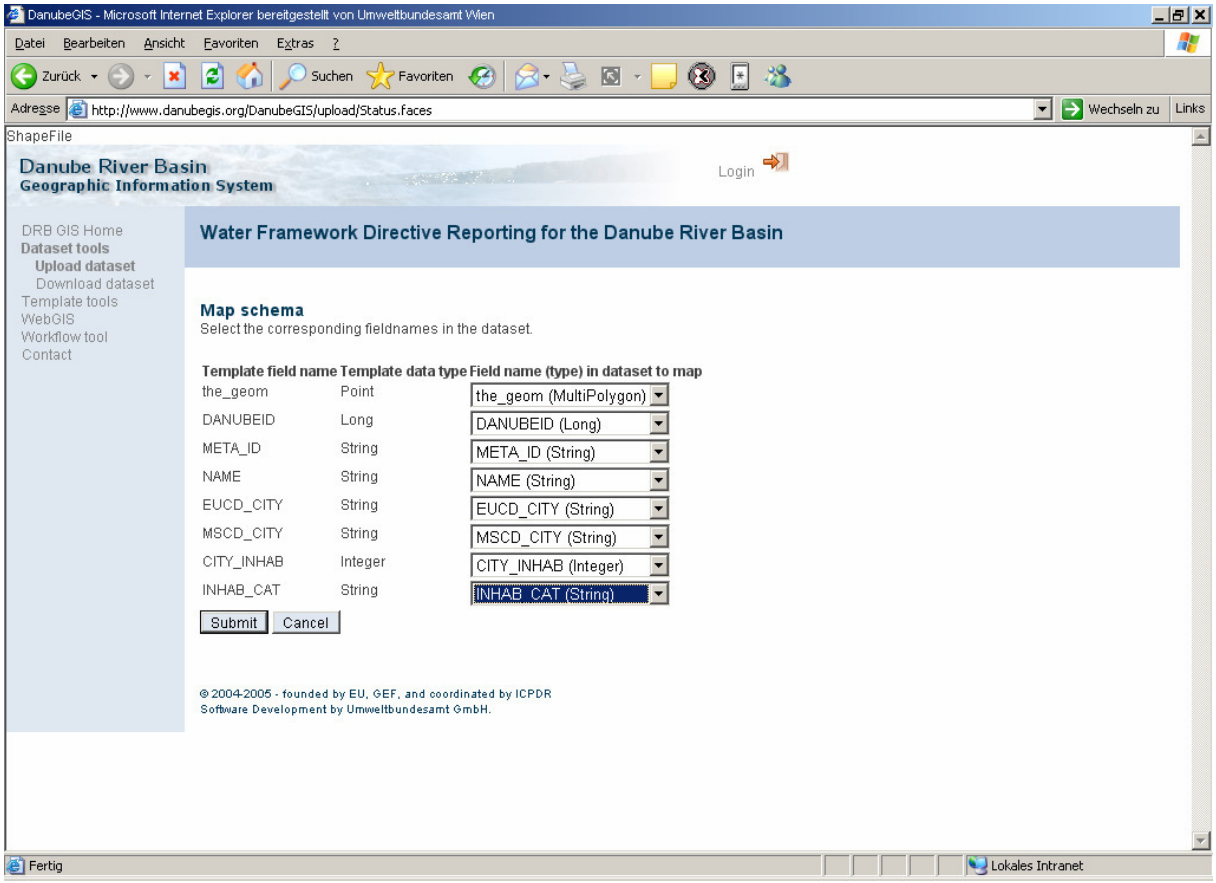


Figure 17: Schema mapping

The user can call the schema mapping process whenever data upload is not successful because of a schema mismatch. Schema mapping sets up a relationship between a specific template dataset and its fields in the repository and a dataset a DRB GIS user wants to integrate.

As the system lists the fields in the template for the data the user attempts to upload, the user can select the fields in his/her dataset that correspond to the template fields. On pressing the "Submit" button, the Upload status page reappears, giving information on whether the mapping process was successful and the data could thus be added to the DRB GIS repository. In case mapping was not successful, the process can be repeated.

5.5.4 Download data

The data download process adheres to the same logic as the data upload: The user selects a reference date, the dataset name and the spatial extent (country) and then has the choice to download either the latest or the latest harmonized dataset (see Figure 18: Data download). If the dataset required is available, the user is prompted to state whether the dataset should be opened or stored (see Figure 19: Data download – open or store).

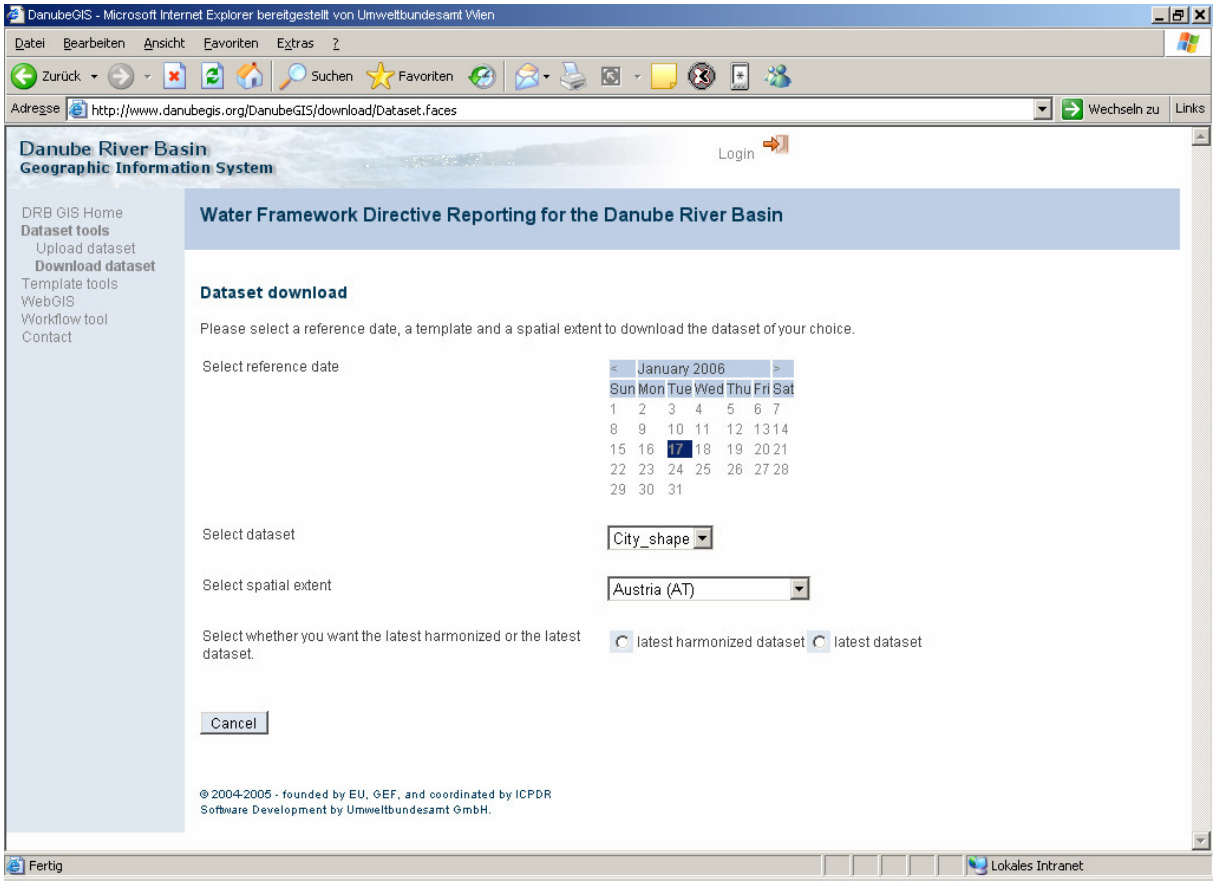


Figure 18: Data download – select parameters

Figure 19: Data download – open or store

5.6 TEMPLATE TOOLS

The template tools work in the same manner as the data up- and download tools.

5.6.1 Download template

To download a template, the user selects a reference date (as templates may change, several versions may exist) and the template name and is then prompted to open or save the data (see Figure 20: Template download).

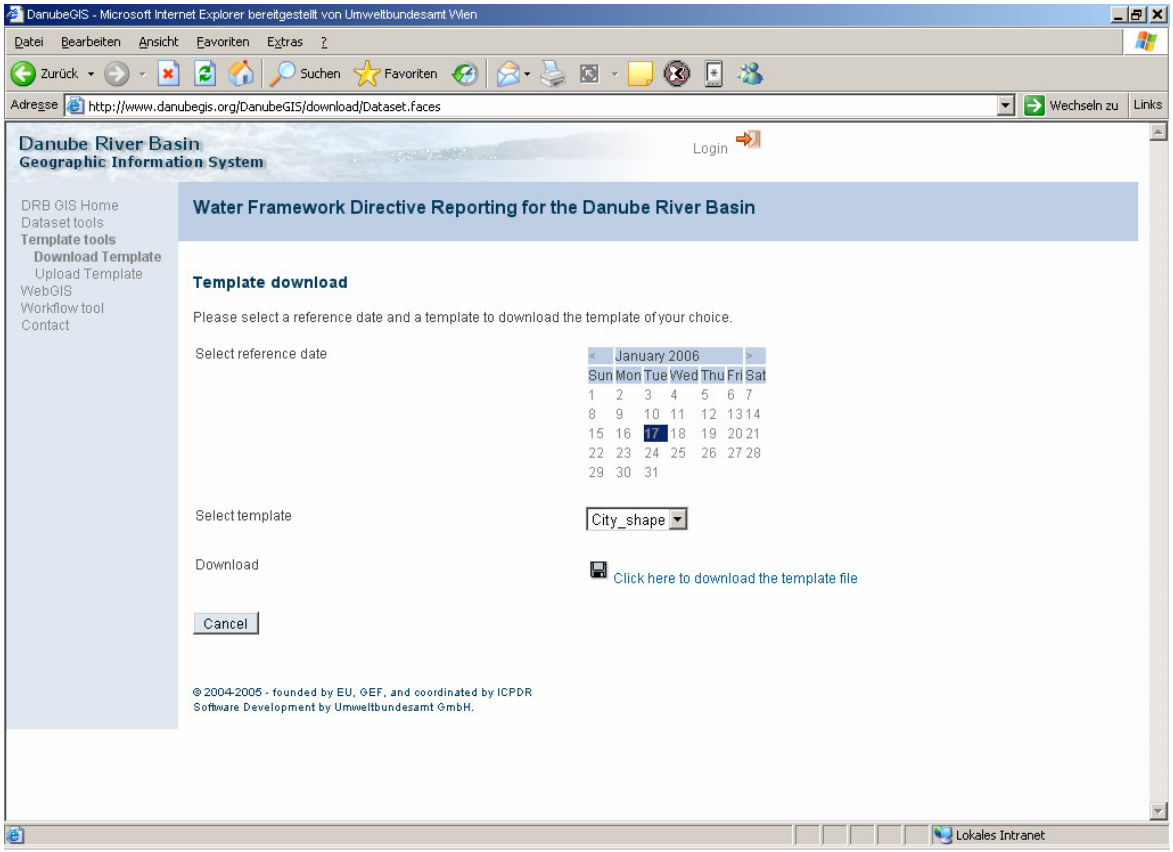


Figure 20: Template download

5.6.2 Upload template

All templates currently defined have been uploaded to the system, but to allow uploading further templates (and since it can not be presumed that template upload will always be performed by the system administrator), also a template upload tool is provided.

To upload a new template version, the user selects a reference date and the template name and can then select the required files (.shp, .shx, .dbf, metainfo and codelist files for shapefiles, .dbf, metainfo and codelist for tables) (see Figure 21: Upload template). Like the data upload, the template upload triggers the validation process. Since the templates contain no data, only the availability of all files can be checked.

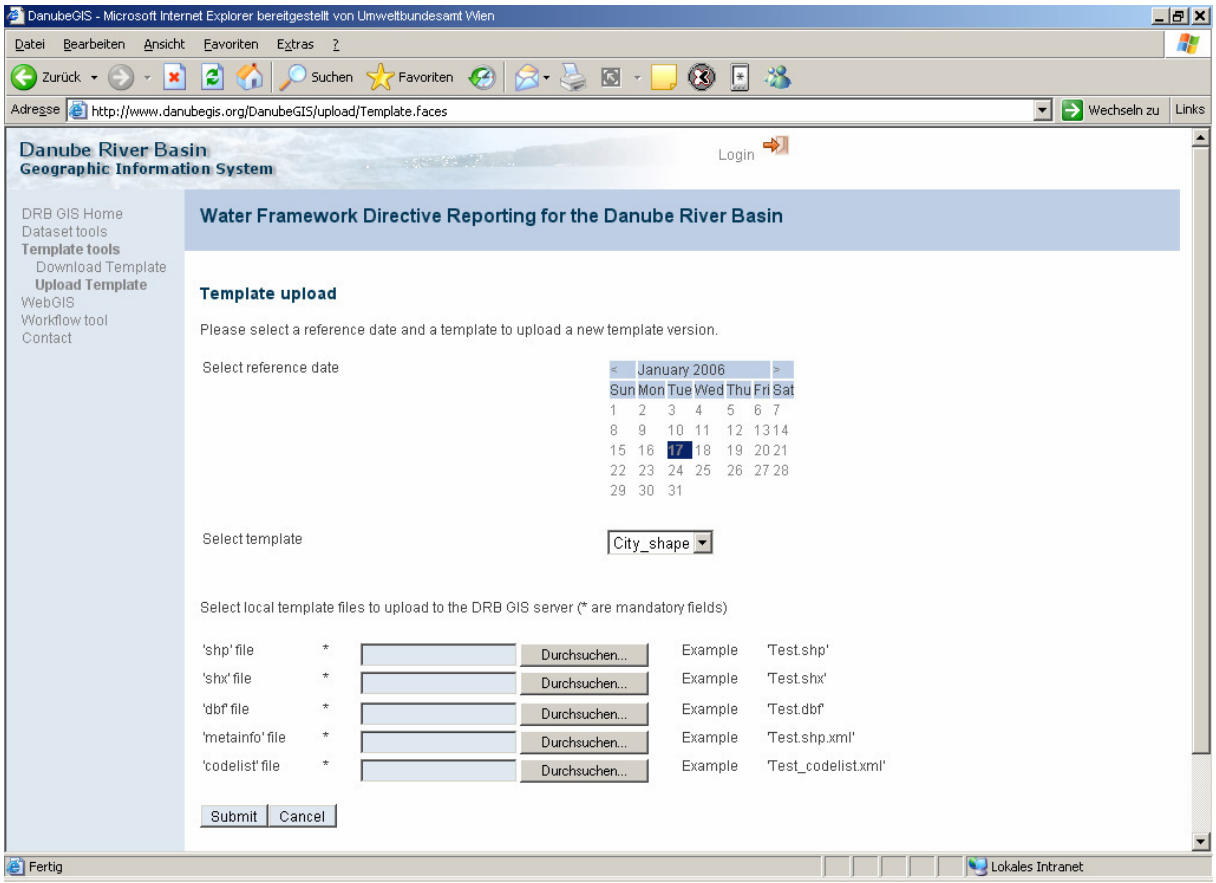


Figure 21: Upload template

5.7 WEBGIS (WEBMAPPING CLIENT)/ESRI IMAGE SERVICE

Via the WebGIS tool the user is able to view the uploaded datasets of a chosen topic. To do so, the user selects a reference date and the dataset to be displayed (see Figure 22: Select dataset to display). If one or more datasets for the chosen template are found, the map can be displayed. As has been pointed out in the description of the prototype already, data are displayed in a very simple viewer with basic zoom and pan functions. Cartographic display and professional web design are not an issue at the moment; the task is to prove concept that the uploaded datasets can be displayed in a viewer in the form of ESRI Image services (see Figure 23: WebGIS).

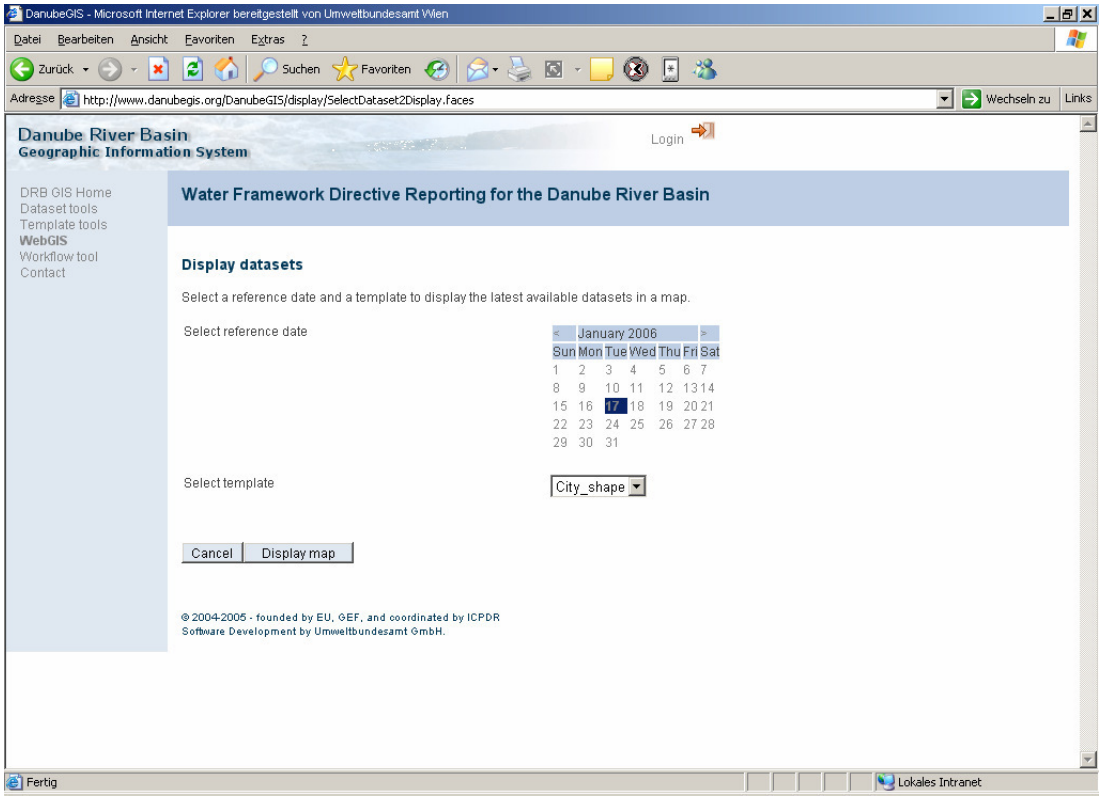


Figure 22: Select dataset to display

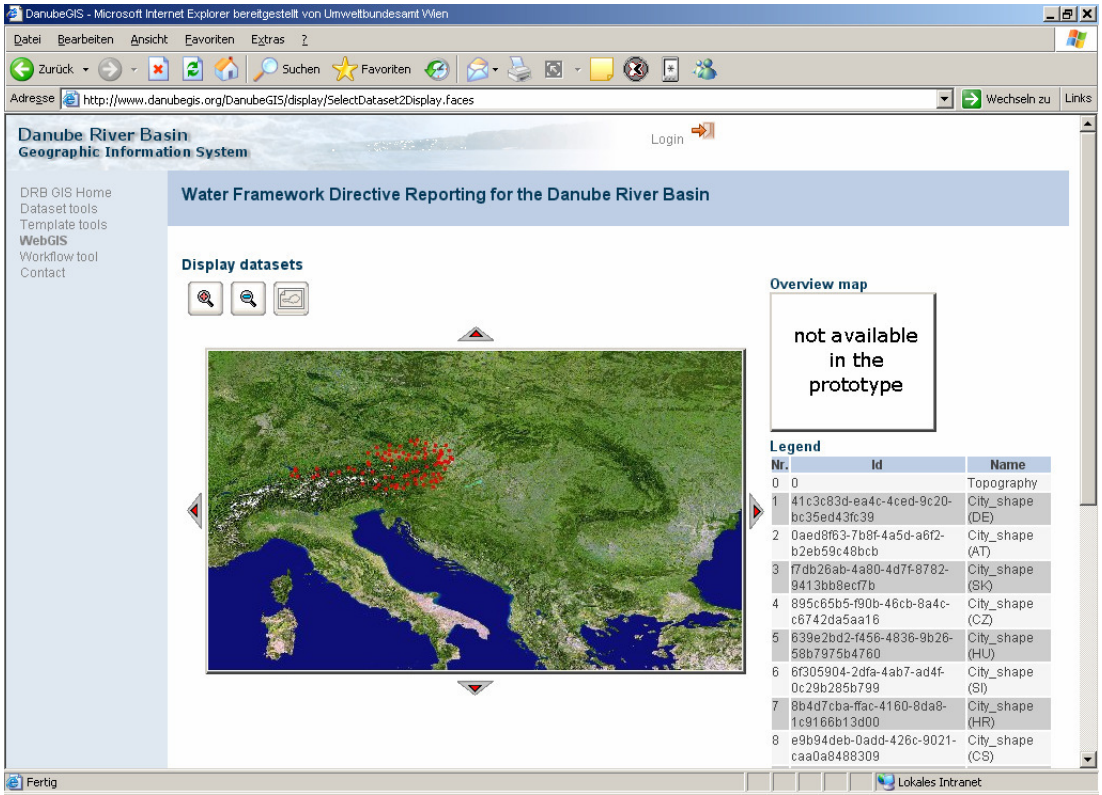


Figure 23: WebGIS

5.8 WORKFLOW TOOL

The workflow tool lists all datasets and templates that have been up- or downloaded to/from the system by giving the date and time of the process, a description of the action performed and a detailed message of what has happened. Instead of the username (which can only be listed once a security mechanism is implemented for the system), a "dummy" user-id is automatically generated. A user-friendly scrolling tool allows browsing the workflow list by jumping to the next and previous and to the first and the last entry or from page to page. In a further project phase, filters can be implemented which will allow the user to filter the actions of his or her interest.

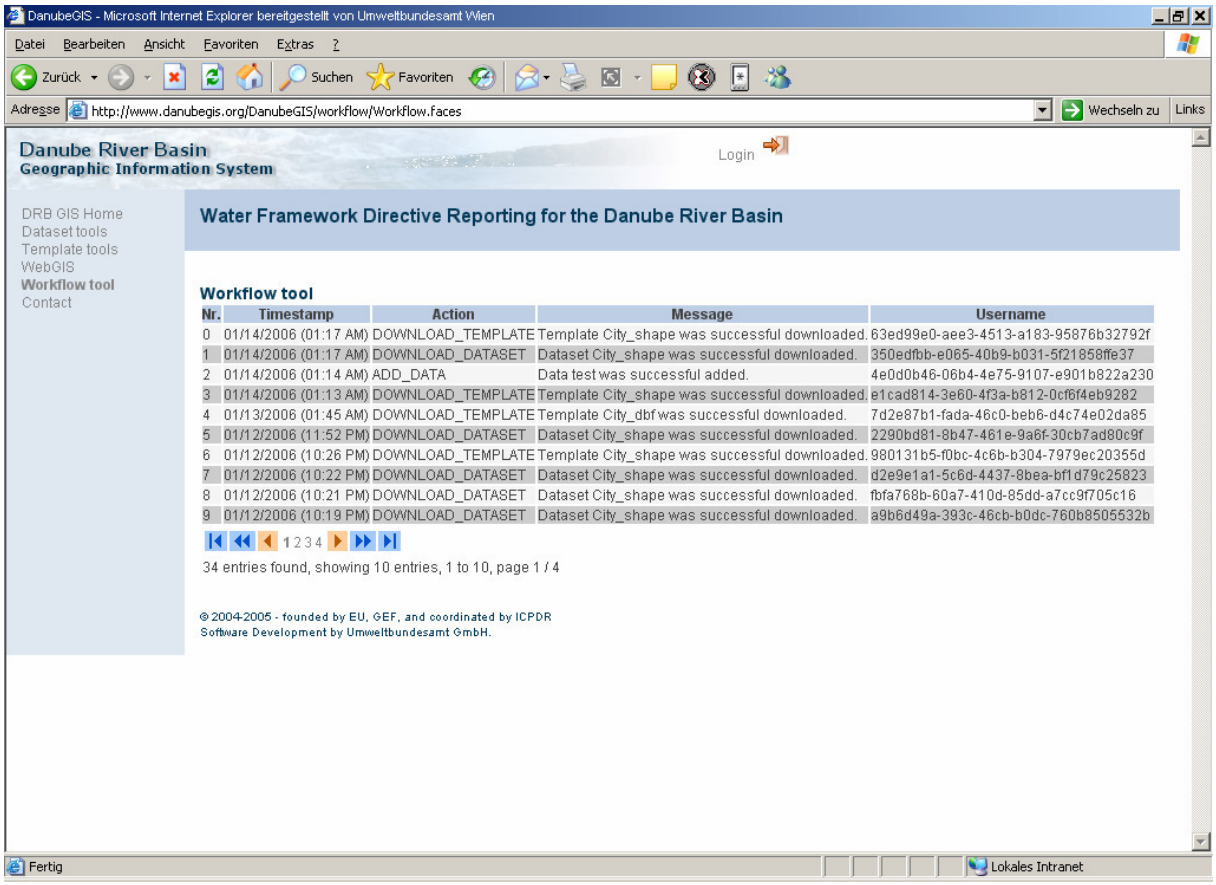


Figure 24: Workflow management tool

6 PROJECT MANAGEMENT

6.1 QUALITY ASSURANCE

To guarantee the highest level of quality, software development was continuously monitored. Automated tests based on the industry standard JUnit Framework[10] were carried out perpetually. JUnit is an open source Java testing framework used to write and run repeatable tests. It is an instance of the xUnit architecture for unit testing frameworks. JUnit features include:

- assertions for testing expected results
- test fixtures for sharing common test data
- test suites for easily organizing and running tests
- graphical and textual test runners

More than 122 tests were carried out (see Figure 25: Automated application testing).

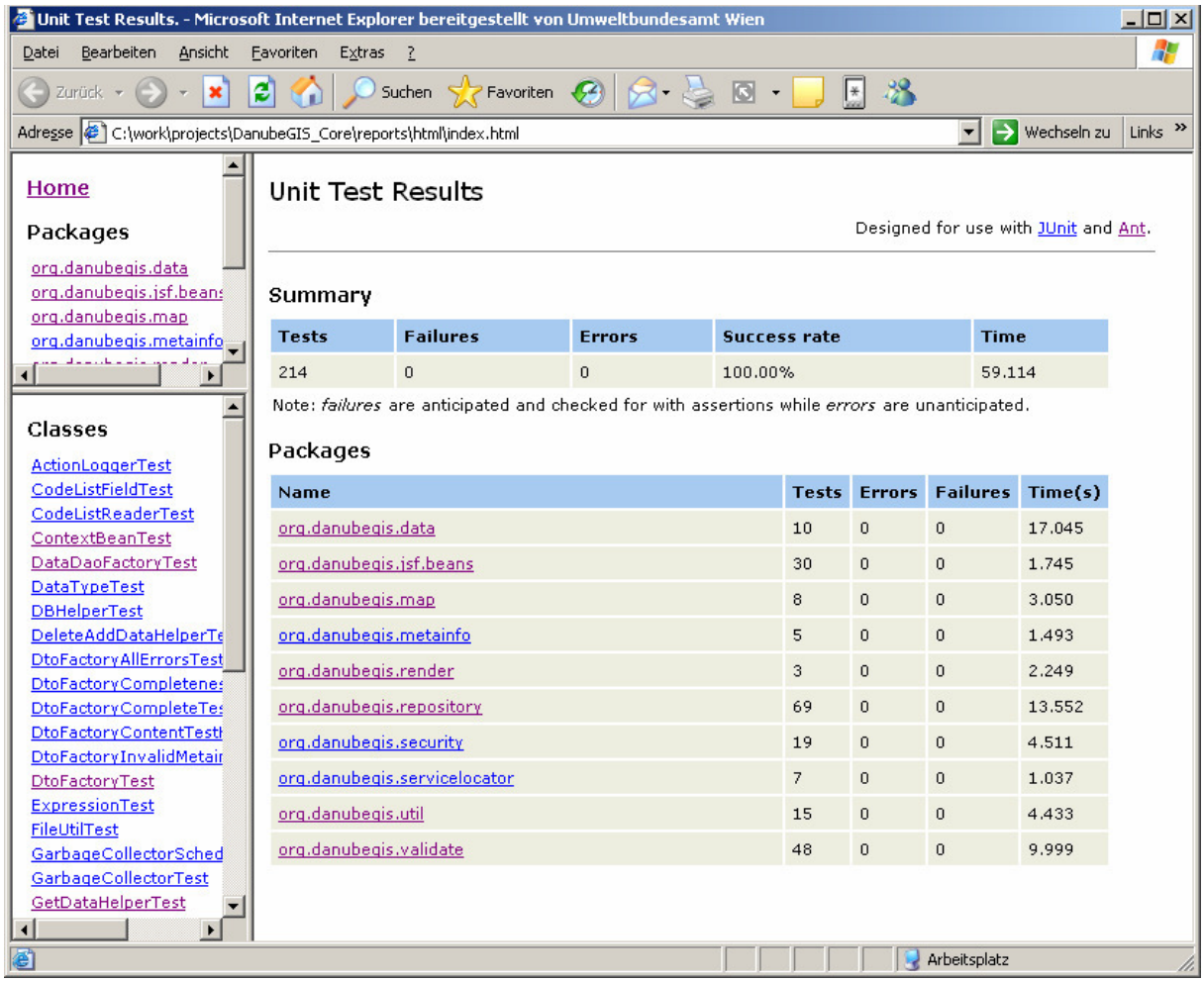


Figure 25: Automated application testing

[10] http://www.junit.org (31. 10 2005)

The final DRB GIS V0.1 was tested by several users before going online. It has to be kept in mind though that the DRB GIS V0.1 is a prototype and thus not meant to provide all functions in a perfect and finished manner. It should rather be a first draft of the system that will be adapted according to user needs.

6.2 DOCUMENTATION

All documentation (for the data model, templates and codelists, metadata and system architecture) is available in the Annexes to this report and/or on CD.

6.3 COORDINATION & MEETINGS

The Umweltbundesamt project team has kept close contact with the Secretariat to clarify all open questions. On the 13th Meeting of the GIS ESG in Sofia 7/8 November 2005, the prototype development status was presented and discussed. A short presentation was given on the 8th Ordinary Meeting of the ICPDR on 12 December 2005.

7 NEXT STEPS

The prevalent question currently is financing further system development. To be able to guarantee a continuous development process, it is highly recommended that this issue is clarified as soon as possible

As soon as funding is secured (or even parallel to the fundraising process), test users (from the GIS ESG) should be nominated to test the DRB GIS V0.1 and thus provide input for the next development stage. It is advisable to schedule the next GIS ESG meeting accordingly.

ANNEX A:

Shapefile templates documentation

DRB GIS Version 0.1

Template Documentation

Umweltbundesamt, 13 January 2006

general information:

this file includes the documentation of all templates for the Danube River Basin GIS Version 0.1

The following spreadsheets include
1) a list of all templates (including the naming conventions for the shapefiles to be delivered which corresponds to a template's metadata_ID)
2) a compilation of the domains used (i.e. admissible field values)
3) a spreadsheet for each shapefile template documenting, explaining and exemplifying its attributes

comments:

)* esrifieldtypes:
precision: total length of field
scale: decimal places

)** m = mandatory, o = optional, c = conditional

)*** date of the report for which the data must be uploaded; if no date is stated, the obligation applies for every upload

how to read the description of values and codelists:

"text with quotation marks"	textpart to be part of the field
Domain	name of the domain
&	add one texpart to another
[MSCD]	name of an attribute

template_list

template_name	template_desc	geometry_type	naming_convention (for shapefile/table and metadata)	name_example
AdminBound	Codes for administrative boundaries (includes information on administrative entities)	line	"AdminBound_" & ISO3166_CD Domain & RBDCode Domain	AdminBound_AT1000
AuthGroup	Table for the m:n relationship between competent authorities and RDBs	table	"AuthGroup_" & ISO3166_CD Domain & RBDCode Domain	AuthGroup_AT1000
Catchment	Catchments	polygon	"Catchment_" & ISO3166_CD Domain & RBDCode Domain	Catchment_AT1000
City_a	Cities (represented as areas)	polygon	"City_a_" & ISO3166_CD Domain & RBDCode Domain	City_a_AT1000
City_p	Cities (represented as points)	point	"City_p_" & ISO3166_CD Domain & RBDCode Domain	City_p_AT1000
Compauth	Competent authorities	polygon	"Compauth_" & ISO3166_CD Domain & RBDCode Domain	Compauth_AT1000
ContSite_a	Contaminated sites (represented as areas)	polygon	"ContSite_a_" & ISO3166_CD Domain & RBDCode Domain	ContSite_a_AT1000
ContSite_p	Contaminated sites (represented as points)	point	"ContSite_p_" & ISO3166_CD Domain & RBDCode Domain	ContSite_p_AT1000
CWBody	Coastal water bodies	polygon	"CWBody_" & ISO3166_CD Domain & RBDCode Domain	CWBody_RO1000
CWType	Coastal water body types	table	"CWType_" & ISO3166_CD Domain & RBDCode Domain	CWType_RO1000
Ecoreg	Ecoregions	polygon	"Ecoreg_" & ISO3166_CD Domain & RBDCode Domain	Ecoreg_AT1000
Geology	Geology	polygon	"Geology_" & ISO3166_CD Domain & RBDCode Domain	Geology_AT1000
GWBody	Groundwater bodies	polygon	"GWBody_" & ISO3166_CD Domain & RBDCode Domain	GWBody_AT1000
GWStn	Groundwater monitoring stations	point	"GWStn_" & ISO3166_CD Domain & RBDCode Domain	GWStn_AT1000
Harbour_a	Harbours (represented as areas)	polygon	"Harbour_a_" & ISO3166_CD Domain & RBDCode Domain	Harbour_a_AT1000
Harbour_p	Harbours (represented as points)	point	"Harbour_p_" & ISO3166_CD Domain & RBDCode Domain	Harbour_p_AT1000
HydroStruc	Hydrologicals structures	point	"HydroStruc_" & ISO3166_CD Domain & RBDCode Domain	HydroStruc_AT1000
LWBody	Lake water bodies - Link to LWseg	table	"LWBody_" & ISO3166_CD Domain & RBDCode Domain	LWBody_AT1000
LWSeg	Lake segments	polygon	"LWSeg_" & ISO3166_CD Domain & RBDCode Domain	LWSeg_AT1000
LWType	Lake water body types	table	"LWType_" & ISO3166_CD Domain & RBDCode Domain	LWType_AT1000

template_name	template_desc	geometry_type	naming_convention (for shapefile/table and metadata)	name_example
PA_Bird	Bird protection area	polygon	"PA_Bird_" & ISO3166_CD Domain & RBDCode Domain	PA_Bird_AT1000
PA_Drink_a	Drinking water protection area (represented as areas)	polygon	"PA_Drink_a_" & ISO3166_CD Domain & RBDCode Domain	PA_Drink_a_AT1000
PA_Drink_p	Drinking water protection area (represented as points)	point	"PA_Drink_p_" & ISO3166_CD Domain & RBDCode Domain	PA_Drink_p_AT1000
PA_EcoSp_a	Economically significant aquatic species protection area (represented as areas)	polygon	"PA_EcoSp_a_" & ISO3166_CD Domain & RBDCode Domain	PA_EcoSp_a_AT1000
PA_EcoSp_l	Economically significant aquatic species protection area (represented as lines)	line	"PA_EcoSp_p_" & ISO3166_CD Domain & RBDCode Domain	PA_EcoSp_p_AT1000
PA_Habitat	Habitat protection area (FFH)	polygon	"PA_Habitat_" & ISO3166_CD Domain & RBDCode Domain	PA_Habitat_AT1000
PA_Nutritio	Nutrition-sensitive areas	polygon	"PA_Nutritio_" & ISO3166_CD Domain & RBDCode Domain	PA_Nutritio_AT1000
PA_Recr_a	Recreational waters (represented as areas)	polygon	"PA_Recr_a_" & ISO3166_CD Domain & RBDCode Domain	PA_Recr_a_AT1000
PA_Recr_p	Recreational waters (represented as points)	point	"PA_Recr_p_" & ISO3166_CD Domain & RBDCode Domain	PA_Recr_p_AT1000
PointSourc	Point sources	point	"PointSourc_" & ISO3166_CD Domain & RBDCode Domain	PointSourc_AT1000
RBD	River basin district	polygon	"RBD_"& ISO3166_CD Domain & RBDCode Domain	RBD_AT1000
RiskSpot_a	Accident risk spots (represented as areas)	polygon	"RiskSpot_a_" & ISO3166_CD Domain & RBDCode Domain	RiskSpot_a_AT1000
RiskSpot_p	Accident risk spots (represented as points)	point	"RiskSpot_p_" & ISO3166_CD Domain & RBDCode Domain	RiskSpot_p_AT1000
Rivbasin	River basins	polygon	"RB_" & ISO3166_CD Domain & RBDCode Domain	RB_AT1000
River	Rivers - Link to RWseg	polygon	"River_" & ISO3166_CD Domain & RBDCode Domain	River_AT1000
RWBody	River water bodies - Link to RWseg	table	"RWBody_" & ISO3166_CD Domain & RBDCode Domain	RWBody_AT1000
RWSeg	River segments	line	"RWSeg_" & ISO3166_CD Domain & RBDCode Domain	RWSeg_AT1000
RWType	River water body types	table	"RWType_" & ISO3166_CD Domain & RBDCode Domain	RWType_AT1000
Settlement	Settlement Area	polygon	"Settlement_" & ISO3166_CD Domain & RBDCode Domain	Settlement_AT1000
State	State description codes and parameters	polygon	"State_" & ISO3166_CD Domain & RBDCode Domain	State_AT1000

template_list

template_name	template_desc	geometry_type	naming_convention (for shapefile/table and metadata)	name_example
SWStn	Surface water monitoring stations	point	"SWStn_" & ISO3166_CD Domain & RBDCode Domain	SWStn_AT1000
TWBody	Transitional water bodies	polygon	"TWBody_" & ISO3166_CD Domain & RBDCode Domain	TWBody_RO1000
TWType	Transitional water body types	table	"TWType_" & ISO3166_CD Domain & RBDCode Domain	TWType_AT1000
Wetland	Wetlands	polygon	"Wetland_" & ISO3166_CD Domain & RBDCode Domain	Wetland_AT1000

DomainID	DomainName	Value	Description
1	AE_Type Domain	level0	State
1	AE_Type Domain	level1	First level of administrative entities in a state
1	AE_Type Domain	level2	Second level of administrative entities in a state
1	AE_Type Domain	level3	Third level of administrative entities
1	AE_Type Domain	level4	Fourth level of administrative entities
2	AltitudeTyp Domain	HIGH	High
2	AltitudeTyp Domain	MID	Mid
2	AltitudeTyp Domain	LOW	Low
3	BND_Type Domain	level0	State
3	BND_Type Domain	level1	First level of administrative entities in a state
3	BND_Type Domain	level2	Second level of administrative entities in a state
3	BND_Type Domain	level3	Third level of administrative entities
3	BND_Type Domain	level4	Fourth level of administrative entities
3	BND_Type Domain	"" or 0	River Segment isn't part of any boundary
4	ChemStatus Domain	G	Good
4	ChemStatus Domain	F	Failing
5	ClassificationStatus Domain	H	High
5	ClassificationStatus Domain	G	Good
5	ClassificationStatus Domain	M	Moderate
5	ClassificationStatus Domain	P	Poor
5	ClassificationStatus Domain	B	Bad
6	Compliant Domain	C	Compliant
6	Compliant Domain	N	Non-compliant
7	Conf_Level Domain	H	High
7	Conf_Level Domain	M	Medium
7	Conf_Level Domain	L	Low
8	Continua Domain	Y	Imaginary link segment to maintain network topology (e.g. imaginary rivers through lakes)
8	Continua Domain	N	Real river reach
9	Depth_CatC Domain	S	Shallow: < 30 m
9	Depth_CatC Domain	I	Intermediate: 30 - 200 m
9	Depth_CatC Domain	D	Deep: > 200 m
10	DepthL Domain	V	Very Shallow: < 3 m
10	DepthL Domain	S	Shallow: 3 - 15 m
10	DepthL Domain	D	Deep: > 15 m
11	Designation Domain	F	Final
11	Designation Domain	P	Preliminary
12	EcoReg Domain	0	Clear allocation not possible
12	EcoReg Domain	3	Italy, Corsica and Malta
12	EcoReg Domain	4	Alps
12	EcoReg Domain	5	Dinaric western Balkan
12	EcoReg Domain	6	Hellenic western Balkan
12	EcoReg Domain	7	Eastern Balkan
12	EcoReg Domain	8	Western highlands

DomainID	DomainName	Value	Description
12	EcoReg Domain	9	Central highlands
12	EcoReg Domain	10	The Carpathians
12	EcoReg Domain	11	Hungarian lowlands
12	EcoReg Domain	12	Pontic province
12	EcoReg Domain	13	Western plains
12	EcoReg Domain	14	Central plains
12	EcoReg Domain	16	Eastern plains
12	EcoReg Domain	ME	Mediterranean Sea
13	FlowDir Domain	W	Flow direction with digitized direction
13	FlowDir Domain	A	Flow direction against digitized direction
14	GeologyTyp Domain	C	Calcareous
14	GeologyTyp Domain	S	Siliceous
14	GeologyTyp Domain	O	Organic
15	HS_Type Domain	D	Dam
15	HS_Type Domain	W	Weir
15	HS_Type Domain	O	Other
16	ICPDRStatus Domain	FM	FullMember
16	ICPDRStatus Domain	AM	AssociatedMember
16	ICPDRStatus Domain	NM	NoMember
17	Inhab_Cat Domain	XXS	< 50,000 inhabitants
17	Inhab_Cat Domain	XS	50,000 - < 10,000 inhabitants (for Part B report)
17	Inhab_Cat Domain	S	100,000 - < 250,000 inhabitants
17	Inhab_Cat Domain	M	250,000 - 1 Mio inhabitants
17	Inhab_Cat Domain	L	> 1 Mio inhabitants
18	ISO3166_CD Domain	AL	Albania
18	ISO3166_CD Domain	AT	Austria
18	ISO3166_CD Domain	BA	Bosnia and Herzegovina
18	ISO3166_CD Domain	BG	Bulgaria
18	ISO3166_CD Domain	HR	Croatia
18	ISO3166_CD Domain	CZ	Czech Republic
18	ISO3166_CD Domain	DE	Germany
18	ISO3166_CD Domain	HU	Hungary
18	ISO3166_CD Domain	IT	Italy
18	ISO3166_CD Domain	MK	Macedonia, the former yugoslav republic of
18	ISO3166_CD Domain	MD	Moldova, Republic of
18	ISO3166_CD Domain	PL	Poland
18	ISO3166_CD Domain	RO	Romania
18	ISO3166_CD Domain	CS	Serbia and Montenegro
18	ISO3166_CD Domain	SK	Slovakia
18	ISO3166_CD Domain	SI	Slovenia
18	ISO3166_CD Domain	CH	Switzerland
18	ISO3166_CD Domain	UA	Ukraine
19	M1 Domain	A-1	Sites known to have been used for hazardous waste disposal

DomainID	DomainName	Value	Description
19	M1 Domain	A-2	Sites suspected of having been used for hazardous waste disposal and for which there is strong evidence (circumstantial or otherwise) that environmental pollution is occurring (such as unexplained poor surface water quality downstream of the site, unexplained morbidity in livestock on neighbouring farms or a significant incidence of historical contaminative activities in the catchment area of the site)
19	M1 Domain	B-1	Sites suspected of having been used for historical hazardous waste disposal and for which there is some evidence that environmental pollution is occurring
19	M1 Domain	B-2	Sites about which very little information is available but which are considered to be suspect (based on desk-study results). It is consistent with the precautionary principle that these sites be included in this category as there is no evidence to suggest that they do not represent an environmental risk
19	M1 Domain	C-1	Sites which are known to have been used for historical waste disposal but which are unlikely to contain significant deposits of hazardous waste
19	M1 Domain	C-2	Sites which are suspected of having been used for historical waste disposal but for which there was no significant incidence of historical contaminative activities in the catchment area
19	M1 Domain	Z	unknown
20	PointSourceType Domain	A	Agricultural
20	PointSourceType Domain	I	Industrial
20	PointSourceType Domain	M	Municipal
20	PointSourceType Domain	N	Nuclear
20	PointSourceType Domain	O	Other
21	ProtArea Domain	D	Drinking
21	ProtArea Domain	R	Recreational
21	ProtArea Domain	E	Economic Species
21	ProtArea Domain	N	Nutrient
21	ProtArea Domain	H	Habitat
21	ProtArea Domain	B	Bird
22	RBDCode Domain	1000	Danube
23	Risk Domain	3	At risk
23	Risk Domain	2	Possibly at risk
23	Risk Domain	1	Not at risk
24	Salinity Domain	F	Freshwater
24	Salinity Domain	O	Oligohaline
24	Salinity Domain	M	Mesohaline
24	Salinity Domain	P	Polyhaline
24	Salinity Domain	E	Euhaline
25	SizeL Domain	S	Small: 0.5 to 1 km2
25	SizeL Domain	M	Medium: >1 to 10 km2
25	SizeL Domain	L	Large: >10 to 100 km2
25	SizeL Domain	XL	Very large: > 100 km2
26	SizeTyp Domain	S	Small: 10 to 100 km2
26	SizeTyp Domain	M	Medium: >100 to 1000 km2
26	SizeTyp Domain	L	Large: >1000 to 10000 km2
26	SizeTyp Domain	XL	Very large: > 10000 km2

domain_values

DomainID	DomainName	Value	Description
27	Status Domain	G	Good
27	Status Domain	P	Poor
28	SystemAB Domain	A	System A
28	SystemAB Domain	B	System B
29	TidalT Domain	micro	Mikrotidal: <2m
29	TidalT Domain	meso	Mesotidal: 2 to 4 m
29	TidalT Domain	macro	Makrotidal: >4m
30	Trend Domain	U	Upward
30	Trend Domain	D	Downward
30	Trend Domain	S	Static
31	Waterway Domain	IV	IV
31	Waterway Domain	Va	Va
31	Waterway Domain	Vb	Vb
31	Waterway Domain	VIa	VIa
31	Waterway Domain	VIb	VIb
31	Waterway Domain	VIc	VIc
31	Waterway Domain	VII	VII
32	YesNo Domain	Y	True
32	YesNo Domain	N	False
33	YesNoUnknown Domain	Y	True
33	YesNoUnknown Domain	N	False
33	YesNoUnknown Domain	U	Unknown
34	SWTypeDomain	CW	Coastal Water body
34	SWTypeDomain	TW	Transitional Water body
34	SWTypeDomain	RW	River Water body
34	SWTypeDomain	LW	Lake Water body
34	SWTypeDomain	GW	Groundwater body
34	SWTypeDomain	AW	Artificial Water body

domain_assignment

Domain	ObjectClassType	ObjectClassName	Field
AE_Type Domain	FeatureClass	AdminBound	BOUND_TYPE
AE_Type Domain	FeatureClass	Compauth	AE_LEVEL
AltitudeTyp Domain	Table	LWType	ALT_CAT
AltitudeTyp Domain	Table	LWBody	ALT_CAT
AltitudeTyp Domain	Table	RWType	ALT_CAT
AltitudeTyp Domain	Table	RWBody	ALT_CAT
BND_Type Domain	FeatureClass	RWSeg	BND_Type
ChemStatus Domain	FeatureClass	GWBody	CHEM_STAT
ChemStatus Domain	FeatureClass	CWBody	CHEM_STAT
ChemStatus Domain	Table	LWBody	CHEM_STAT
ChemStatus Domain	FeatureClass	TWBody	CHEM_STAT
ChemStatus Domain	Table	RWBody	CHEM_STAT
ClassificationStatus Domain	FeatureClass	CWBody	PHYTO
ClassificationStatus Domain	FeatureClass	CWBody	MAC_ALGAE
ClassificationStatus Domain	FeatureClass	CWBody	ANGIO
ClassificationStatus Domain	FeatureClass	CWBody	BEN_INV
ClassificationStatus Domain	FeatureClass	CWBody	FISH
ClassificationStatus Domain	FeatureClass	CWBody	TIDAL_REG
ClassificationStatus Domain	FeatureClass	CWBody	MORPH_COND
ClassificationStatus Domain	FeatureClass	CWBody	ECO_STAT
ClassificationStatus Domain	FeatureClass	CWBody	ECO_POT
ClassificationStatus Domain	FeatureClass	CWBody	GEN_COND
ClassificationStatus Domain	FeatureClass	CWBody	SYNTH
ClassificationStatus Domain	FeatureClass	CWBody	NON_SYNTH
ClassificationStatus Domain	Table	LWBody	BEN_INV
ClassificationStatus Domain	Table	LWBody	ECO_POT
ClassificationStatus Domain	Table	LWBody	ECO_STAT
ClassificationStatus Domain	Table	LWBody	FISH
ClassificationStatus Domain	Table	LWBody	GEN_COND
ClassificationStatus Domain	Table	LWBody	HYDRO_REG
ClassificationStatus Domain	Table	LWBody	MAC_PHYTO
ClassificationStatus Domain	Table	LWBody	MORPH_COND
ClassificationStatus Domain	Table	LWBody	NON_SYNTH
ClassificationStatus Domain	Table	LWBody	PHYTO
ClassificationStatus Domain	Table	LWBody	RIV_CONT

Domain	ObjectClassType	ObjectClassName	Field
ClassificationStatus Domain	Table	LWBody	SYNTH
ClassificationStatus Domain	Table	RWBody	BEN_INV
ClassificationStatus Domain	Table	RWBody	ECO_POT
ClassificationStatus Domain	Table	RWBody	ECO_STAT
ClassificationStatus Domain	Table	RWBody	FISH
ClassificationStatus Domain	Table	RWBody	GEN_COND
ClassificationStatus Domain	Table	RWBody	HYDRO_REG
ClassificationStatus Domain	Table	RWBody	MAC_PHYTO
ClassificationStatus Domain	Table	RWBody	MORPH_COND
ClassificationStatus Domain	Table	RWBody	NON_SYNTH
ClassificationStatus Domain	Table	RWBody	PHYTO
ClassificationStatus Domain	Table	RWBody	RIV_CONT
ClassificationStatus Domain	Table	RWBody	SYNTH
ClassificationStatus Domain	FeatureClass	TWBody	PHYTO
ClassificationStatus Domain	FeatureClass	TWBody	MAC_ALGAE
ClassificationStatus Domain	FeatureClass	TWBody	ANGIO
ClassificationStatus Domain	FeatureClass	TWBody	BEN_INV
ClassificationStatus Domain	FeatureClass	TWBody	FISH
ClassificationStatus Domain	FeatureClass	TWBody	TIDAL_REG
ClassificationStatus Domain	FeatureClass	TWBody	MORPH_COND
ClassificationStatus Domain	FeatureClass	TWBody	ECO_STAT
ClassificationStatus Domain	FeatureClass	TWBody	ECO_POT
ClassificationStatus Domain	FeatureClass	TWBody	GEN_COND
ClassificationStatus Domain	FeatureClass	TWBody	SYNTH
ClassificationStatus Domain	FeatureClass	TWBody	NON_SYNTH
Compliant Domain	FeatureClass	CWBody	NON_COMP
Compliant Domain	Table	LWBody	NON_COMP
Compliant Domain	Table	RWBody	NON_COMP
Compliant Domain	FeatureClass	TWBody	NON_COMP
Conf_Level Domain	FeatureClass	GWBody	CONF_LEVEL
Continua Domain	FeatureClass	RWSeg	CONTINUA
Depth_CatC Domain	Table	CWType	DEPTH
DepthL Domain	Table	LW_Types	DEPTH_CAT
DepthL Domain	Table	LWBody	DEPTH_CAT
Designation Domain	FeatureClass	GWBody	FINAL

Domain	ObjectClassType	ObjectClassName	Field
EcoReg Domain	Table	CWType	ECOREG_CD
EcoReg Domain	FeatureClass	GWBody	ECOREG_CD
EcoReg Domain	Table	LWType	ECOREG_CD
EcoReg Domain	Table	LWBody	ECOREG_CD
EcoReg Domain	Table	RWType	ECOREG_CD
EcoReg Domain	Table	RWBody	ECOREG_CD
EcoReg Domain	Table	TWType	ECOREG_CD
EcoReg Domain	FeatureClass	CWBody	ECOREG_CD
EcoReg Domain	FeatureClass	TWBody	ECOREG_CD
FlowDir Domain	FeatureClass	RWSeg	FLOWDIR
GeologyTyp Domain	Table	LWType	GEOL_CAT
GeologyTyp Domain	Table	LWBody	GEOL_CAT
GeologyTyp Domain	Table	RWType	GEOL_CAT
GeologyTyp Domain	Table	RWBody	GEOL_CAT
GeologyTyp Domain	FeatureClass	Geology	GEOL_CAT
HS_Type Domain	FeatureClass	HydroStruc	HS_TYPE
ICPDRStatus Domain	FeatureClass	State	ICPDR
Inhab_Cat Domain	FeatureClass	City_a	INHAB_CAT
Inhab_Cat Domain	FeatureClass	City_p	INHAB_CAT
ISO3166_CD Domain	FeatureClass	RBD	C_CD
ISO3166_CD Domain	FeatureClass	State	ISO3166_CD
M1 Domain	FeatureClass	ContSite_a	CS_Class
M1 Domain	FeatureClass	ContSite_p	CS_Class
PointSourceType Domain	FeatureClass	PointSourc	PS_CLASS
ProtArea Domain	FeatureClass	PA_Bird	PROT_TYPE
ProtArea Domain	FeatureClass	PA_Drink_a	PROT_TYPE
ProtArea Domain	FeatureClass	PA_Drink_p	PROT_TYPE
ProtArea Domain	FeatureClass	PA_EcoSp_a	PROT_TYPE
ProtArea Domain	FeatureClass	PA_EcoSp_l	PROT_TYPE
ProtArea Domain	FeatureClass	PA_Habitat	PROT_TYPE
ProtArea Domain	FeatureClass	PA_Nutritio	PROT_TYPE
ProtArea Domain	FeatureClass	PA_Recr_a	PROT_TYPE
ProtArea Domain	FeatureClass	PA_Recr_p	PROT_TYPE
RBDCode Domain	FeatureClass	RBD	EUCD_RBD
RBDCode Domain	FeatureClass	Catchment	EUCD_RBD

Domain	ObjectClassType	ObjectClassName	Field
RBDCode Domain	Table	CWType	EUCD_RBD
RBDCode Domain	FeatureClass	TWType	EUCD_RBD
RBDCode Domain	FeatureClass	RWType	EUCD_RBD
RBDCode Domain	FeatureClass	LWType	EUCD_RBD
RBDCode Domain	FeatureClass	Rivbasin	EUCD_RBD
Risk Domain	FeatureClass	GWBody	RISK_CHEM
Risk Domain	FeatureClass	GWBody	RISK_QUANT
Risk Domain	FeatureClass	GWBody	RISK_TOTAL
Risk Domain	FeatureClass	CWBody	RISK_CHEM
Risk Domain	FeatureClass	CWBody	RISK_ECOL
Risk Domain	FeatureClass	CWBody	RISK_TOTAL
Risk Domain	FeatureClass	TWBody	RISK_CHEM
Risk Domain	FeatureClass	TWBody	RISK_ECOL
Risk Domain	FeatureClass	TWBody	RISK_TOTAL
Risk Domain	Table	LWBody	RISK_CHEM
Risk Domain	Table	LWBody	RISK_ECOL
Risk Domain	Table	LWBody	RISK_TOTAL
Risk Domain	Table	RWBody	RISK_CHEM
Risk Domain	Table	RWBody	RISK_ECOL
Risk Domain	Table	RWBody	RISK_TOTAL
Salinity Domain	Table	CWType	SALINITY
Salinity Domain	Table	TWType	SALINITY
SizeL Domain	Table	LWType	SIZE_CAT
SizeL Domain	Table	LWBody	SIZE_CAT
SizeTyp Domain	Table	RWType	SIZE_CAT
SizeTyp Domain	Table	RWBody	SIZE_CAT
Status Domain	FeatureClass	GWBody	QUANT_STAT
SystemAB Domain	Table	CWType	SYSTEM
SystemAB Domain	Table	LWType	SYSTEM
SystemAB Domain	Table	LWBody	SYSTEM
SystemAB Domain	Table	RWType	SYSTEM
SystemAB Domain	Table	RWBody	SYSTEM
SystemAB Domain	Table	TWType	SYSTEM
SystemAB Domain	FeatureClass	CWBody	SYSTEM
SystemAB Domain	FeatureClass	TWBody	SYSTEM

Domain	ObjectClassType	ObjectClassName	Field
TidalT Domain	FeatureClass	CWBody	TIDAL
TidalT Domain	FeatureClass	TWBody	TIDAL
TidalT Domain	Table	CWType	TIDAL
TidalT Domain	Table	TWType	TIDAL
Trend Domain	FeatureClass	GWBody	POLL_TREND
Waterway Domain	FeatureClass	RWSeg	WATERWAY
YesNo Domain	FeatureClass	CWBody	MODIFIED
YesNo Domain	FeatureClass	CWBody	ARTIFICIAL
YesNo Domain	FeatureClass	TWBody	MODIFIED
YesNo Domain	FeatureClass	TWBody	ARTIFICIAL
YesNo Domain	Table	LWBody	MODIFIED
YesNo Domain	Table	LWBody	ARTIFICIAL
YesNo Domain	Table	RWBody	MODIFIED
YesNo Domain	Table	RWBody	ARTIFICIAL
YesNo Domain	FeatureClass	GWStn	LEVEL
YesNo Domain	FeatureClass	GWStn	OPERAT
YesNo Domain	FeatureClass	GWStn	SURVEIL
YesNo Domain	FeatureClass	SWStn	OPERAT
YesNo Domain	FeatureClass	SWStn	SURVEIL
YesNo Domain	FeatureClass	SWStn	DRINKING
YesNo Domain	FeatureClass	SWStn	INVEST
YesNo Domain	FeatureClass	SWStn	HABITAT
YesNo Domain	FeatureClass	SWStn	REFERENCE
YesNoUnknown Domain	FeatureClass	GWBody	LAYERED
YesNoUnknown Domain	FeatureClass	GWBody	OUT_OF_RBD
YesNoUnknown Domain	FeatureClass	GWBody	PA_ASSOC
YesNoUnknown Domain	FeatureClass	GWBody	RSN_ABSTR
YesNoUnknown Domain	FeatureClass	GWBody	RSN_D_POL
YesNoUnknown Domain	FeatureClass	GWBody	RSN_INTRUS
YesNoUnknown Domain	FeatureClass	GWBody	RSN_P_POL
YesNoUnknown Domain	FeatureClass	GWBody	RSN_RECHAR
YesNoUnknown Domain	FeatureClass	GWBody	SWB_ASSOC
YesNoUnknown Domain	FeatureClass	GWBody	TRANSBOUNDARY
YesNoUnknown Domain	FeatureClass	GWBody	EUCD_GROUP
YesNoUnknown Domain	FeatureClass	State	DANUBERBD

Domain	ObjectClassType	ObjectClassName	Field
YesNoUnknown Domain	FeatureClass	CWBody	GWB_ASSOC
YesNoUnknown Domain	FeatureClass	CWBody	PA_ASSOC
YesNoUnknown Domain	FeatureClass	CWBody	RSN_P_POL
YesNoUnknown Domain	FeatureClass	CWBody	RSN_D_POL
YesNoUnknown Domain	FeatureClass	CWBody	RSN_ABSTR
YesNoUnknown Domain	FeatureClass	CWBody	RSN_FLOWR
YesNoUnknown Domain	FeatureClass	CWBody	RSN_MORPH
YesNoUnknown Domain	Table	LWBody	GWB_ASSOC
YesNoUnknown Domain	Table	LWBody	PA_ASSOC
YesNoUnknown Domain	Table	LWBody	RSN_P_POL
YesNoUnknown Domain	Table	LWBody	RSN_D_POL
YesNoUnknown Domain	Table	LWBody	RSN_ABSTR
YesNoUnknown Domain	Table	LWBody	RSN_FLOWR
YesNoUnknown Domain	Table	LWBody	RSN_MORPH
YesNoUnknown Domain	Table	RWBody	GWB_ASSOC
YesNoUnknown Domain	Table	RWBody	PA_ASSOC
YesNoUnknown Domain	Table	RWBody	RSN_P_POL
YesNoUnknown Domain	Table	RWBody	RSN_D_POL
YesNoUnknown Domain	Table	RWBody	RSN_ABSTR
YesNoUnknown Domain	Table	RWBody	RSN_FLOWR
YesNoUnknown Domain	Table	RWBody	RSN_MORPH
YesNoUnknown Domain	FeatureClass	TWBody	GWB_ASSOC
YesNoUnknown Domain	FeatureClass	TWBody	PA_ASSOC
YesNoUnknown Domain	FeatureClass	TWBody	RSN_P_POL
YesNoUnknown Domain	FeatureClass	TWBody	RSN_D_POL
YesNoUnknown Domain	FeatureClass	TWBody	RSN_ABSTR
YesNoUnknown Domain	FeatureClass	TWBody	RSN_FLOWR
YesNoUnknown Domain	FeatureClass	TWBody	RSN_MORPH
SWTypeDomain	FeatureClass	SWStn	SW_TYPE

obligation

template	field name	obligation
AdminBound	DANUBEID	automatic value
AdminBound	META_ID	m
AdminBound	BOUND_TYPE	m
AuthGroup	DANUBEID	automatic value
AuthGroup	META_ID	m
AuthGroup	AUTH_GR	m
AuthGroup	EUCD_AUTH	m
Catchment	DANUBEID	automatic value
Catchment	META_ID	m
Catchment	AREAKM2	m
Catchment	NAME	m
Catchment	EUCD_CATCH	m
Catchment	MSCD_CATCH	m
Catchment	EUCD_RBD	m
City_a	DANUBEID	automatic value
City_a	META_ID	m
City_a	AREAKM2	o
City_a	NAME	m
City_a	EUCD_CITY	m
City_a	MSCD_CITY	m
City_a	CITY_INHAB	c (either the number of the inhabitants or the category [inhab_cat] have to be given)
City_a	INHAB_CAT	c (either the number of the inhabitants [City_Inhab] or the category have to be given)
City_a	LATITUDE	m
City_a	LONGITUDE	m
City_p	DANUBEID	automatic value
City_p	META_ID	m
City_p	NAME	m
City_p	EUCD_CITY	m
City_p	MSCD_CITY	m
City_p	CITY_INHAB	c (either the number of the inhabitants or the category [inhab_cat] have to be given)
City_p	INHAB_CAT	c (either the number of the inhabitants [City_Inhab] or the category have to be given)
Compauth	MSCD_AUTH	m
Compauth	AE_LEVEL	m
Compauth	LATITUDE	m
Compauth	LONGITUDE	m

template	field name	obligation
ContSite_a	DANUBEID	automatic value
ContSite_a	META_ID	m
ContSite_a	AREAKM2	o
ContSite_a	NAME	m
ContSite_a	EUCD_CS	m
ContSite_a	MSCD_CS	m
ContSite_a	CS_CLASS	m
ContSite_p	DANUBEID	automatic value
ContSite_p	META_ID	m
ContSite_p	NAME	m
ContSite_p	EUCD_CS	m
ContSite_p	MSCD_CS	m
ContSite_p	CS_CLASS	m
CWBody	DANUBEID	automatic value
CWBody	META_ID	m
CWBody	AREAKM2	m
CWBody	NAME	m
CWBody	EUCD_CWB	m
CWBody	MSCD_CWB	m
CWBody	EUCD_CWTYP	m
CWBody	ECOREG_CD	m for System = A, o for System = B
CWBody	SYSTEM	m
CWBody	INS_WHEN	m
CWBody	INS_BY	m
CWBody	EUCD_RB	m
CWBody	STATUS_YR	m
CWBody	MODIFIED	m
CWBody	ARTIFICIAL	m
CWBody	EUCD_CWTyp	m
CWBody	SALINITY	m for System = A, o for System = B
CWBody	DEPTH_CAT	m for System = A, o for System = B
CWBody	LATITUDE	m
CWBody	LONGITUDE	m
CWBody	TIDAL	m for System = A, o for System = B
CWBody	RISK_DATE	m

obligation

template	field name	obligation
CWBody	RISK_TOTAL	m
CWBody	RISK_CHEM	o
CWBody	RISK_ECO	o
CWBody	GWB_ASSOC	o
CWBody	PA_ASSOC	o
CWBody	RSN_P_POL	o
CWBody	RSN_D_POL	o
CWBody	RSN_ABSTR	o
CWBody	RSN_FLOWR	o
CWBody	RSN_MORPH	o
CWBody	SASTAT_DAT	m
CWBody	PHYTO	m
CWBody	MAC_ALGAE	m
CWBody	ANGIO	m
CWBody	BEN_INV	m
CWBody	FISH	m
CWBody	TIDAL_REG	m
CWBody	MORPH_COND	m
CWBody	SWSTAT_DAT	m
CWBody	ECO_STAT	m
CWBody	ECO_POT	m
CWBody	NON_COMP	m
CWBody	CHEM_STAT	m
CWBody	PCSTAT_DAT	m
CWBody	GEN_COND	m
CWBody	SYNTH	m
CWBody	NON_SYNTH	m
CWType	DANUBEID	automatic value
CWType	META_ID	m
CWType	EUCD_CWTYP	m
CWType	MSCD_CWTYP	m
CWType	NAME	m
CWType	EUCD_RBD	o
CWType	SYSTEM	m
CWType	ECOREG_CD	m

template	field name	obligation
CWType	SALINITY	m for System = A, c for System = B (either SALINITY or SAL_DESCR has to be filled in)
CWType	SAL_DESCR	c for System = B (either SALINITY or SAL_DESCR has to be filled in)
CWType	DEPTH_CAT	m for System = A, c for System = B (either DEPTH_CAT or DEPTH_DESC has to be filled in)
CWType	DEPTH_DESC	c for System = B (either DEPTH_CAT or DEPTH_DESC has to be filled in)
CWType	LAT_DESCR	m for System B
CWType	LON_DESCR	m for System B
CWType	TIDAL	m for System A, c for System B (either TIDAL or TIDAL_DESC)
CWType	TIDAL_DESC	c for System B (either TIDAL or TIDAL_DESC)
CWType	VELOCITY	o
CWType	WAV_EXPO	o
CWType	WATER_T_RA	o
CWType	AV_WATER_T	o
CWType	MIXING	o
CWType	TURBIDITY	o
CWType	SUBSTRATUM	o
CWType	RET_TIME	o
Ecoreg	DANUBEID	automatic value
Ecoreg	META_ID	m
Ecoreg	AREAKM2	o
Ecoreg	ECOREG_CD	m
Ecoreg	NAME	m
Geology	DANUBEID	automatic value
Geology	META_ID	m
Geology	AREAKM2	o
Geology	NAME	o
Geology	EUCD_GEOL	o
Geology	MSCD_GEOL	o
Geology	GEOL_CAT	o
GWBody	DANUBEID	automatic value
GWBody	META_ID	m
GWBody	AREAKM2	m
GWBody	NAME	m
GWBody	EUCD_GWB	m
GWBody	MSCD_GWB	m

obligation

template	field name	obligation
GWBody	EcoReg_CD	m
GWBody	INS_WHEN	m
GWBody	INS_BY	m
GWBody	TRANSBOUND	o
GWBody	EUCD_GROUP	o
GWBody	OUT_OF_RBD	o
GWBody	FINAL	o
GWBody	EUCD_RB	m
GWBody	STATUS_YR	m
GWBody	LATITUDE	m
GWBody	LONGITUDE	m
GWBody	HORIZON	o
GWBody	CAPACITY	o
GWBody	LAYERED	o
GWBody	RISK_DATE	m
GWBody	RISK_TOTAL	m
GWBody	RISK_CHEM	o
GWBody	RISK_QUANT	o
GWBody	SWB_ASSOC	o
GWBody	PA_ASSOC	o
GWBody	RSN_P_POL	o
GWBody	RSN_D_POL	o
GWBody	RSN_ABSTR	o
GWBody	RSN_RECHAR	o
GWBody	RSN_INTRUS	o
GWBody	GWSTAT_DAT	m
GWBody	QUANT_STAT	m
GWBody	CHEM_STAT	m
GWBody	POLL_TREND	m
GWBody	CONF_LEVEL	m
GWStn	DANUBEID	automatic value
GWStn	META_ID	m
GWStn	NAME	m
GWStn	EUCD_GWST	m
GWStn	MSCD_GWST	m

obligation

template	field name	obligation
GWStn	EUCD_BODY	m
GWStn	INS_WHEN	m
GWStn	INS_BY	m
GWStn	GW_LEVEL	m
GWStn	OPERAT	m
GWStn	SURVEIL	m
GWStn	DEPTH	m
Harbour_a	DANUBEID	automatic value
Harbour_a	META_ID	m
Harbour_a	AREAKM2	o
Harbour_a	NAME	m
Harbour_a	EUCD_HARBO	m
Harbour_a	MSCD_HARBO	m
Harbour_a	RKM	m
Harbour_p	DANUBEID	automatic value
Harbour_p	META_ID	m
Harbour_p	AREAKM2	o
Harbour_p	NAME	m
Harbour_p	EUCD_HARBO	m
Harbour_p	MCSD_HARBO	m
Harbour_p	RKM	m
HydroStruc	DANUBEID	automatic value
HydroStruc	META_ID	m
HydroStruc	NAME	m
HydroStruc	EUCD_HS	m
HydroStruc	MSCD_HS	m
HydroStruc	EUCD_RWSEG	m
HydroStruc	HS_TYPE	m
HydroStruc	RKM	m
LWBody	DANUBEID	automatic value
LWBody	META_ID	m
LWBody	NAME	m
LWBody	EUCD_LWB	m
LWBody	MSCD_LWB	m
LWBody	EUCD_LWTYP	m

template	field name	obligation
LWBody	ECOREG_CD	m
LWBody	SYSTEM	m
LWBody	INS_WHEN	m
LWBody	INS_BY	m
LWBody	EUCD_RB	m
LWBody	STATUS_YR	m
LWBody	MODIFIED	m
LWBody	ARTIFICIAL	m
LWBody	ALT_CAT	m for System = A, o for System = B
LWBody	GEOL_CAT	m for System = A, o for System = B
LWBody	SIZE_CAT	m for System = A, o for System = B
LWBody	DEPTH_CAT	m for System = A, o for System = B
LWBody	LATITUDE	m
LWBody	LONGITUDE	m
LWBody	RISK_DATE	m
LWBody	RISK_TOTAL	m
LWBody	RISK_CHEM	o
LWBody	RISK_ECO	o
LWBody	GWB_ASSOC	o
LWBody	PA_ASSOC	o
LWBody	RSN_P_POL	o
LWBody	RSN_D_POL	o
LWBody	RSN_ABSTR	o
LWBody	RSN_FLOWR	o
LWBody	RSN_MORPH	o
LWBody	FWSTAT_DAT	m
LWBody	PHYTO	m
LWBody	MAC_PHYTO	m
LWBody	BEN_INV	m
LWBody	FISH	m
LWBody	HYDRO_REG	m
LWBody	MORPH_COND	m
LWBody	PCSTAT_DAT	m
LWBody	GEN_COND	m
LWBody	SYNTH	m

template	field name	obligation
LWBody	NON_SYNTH	m
LWBody	SWSTAT_DAT	m
LWBody	ECO_STAT	m
LWBody	ECO_POT	m
LWBody	NON_COMP	m
LWBody	CHEM_STAT	m
LWSeg	DANUBEID	automatic value
LWSeg	META_ID	m
LWSeg	NAME	m
LWSeg	EUCD_LWSEG	m
LWSeg	MSCD_LWSEG	m
LWSeg	EUCD_LWB	m
LWSeg	AREAKM2	o
LWType	DANUBEID	automatic value
LWType	META_ID	m
LWType	EUCD_LWTYP	m
LWType	MSCD_LWTYP	m
LWType	NAME	m
LWType	EUCD_RBD	o
LWType	SYSTEM	m
LWType	ECOREG_CD	m
LWType	ALT_CAT	m for System A, c for System B (either ALT_CAT or ALT_DESCR)
LWType	ALT_DESCR	c for System B (either ALT_CAT or ALT_DESCR)
LWType	DEPTH_CAT	m for System A, c for System B (either DEPTH_CAT or DEPTH_DESC)
LWType	DEPTH_DESC	c for System B (either DEPTH_CAT or DEPTH_DESC)
LWType	GEOL_CAT	m for System A, c for System B (either GEOL_CAT or GEOL_DESCR)
LWType	GEOL_DESCR	c for System B (either GEOL_CAT or GEOL_DESCR)
LWType	SIZE_CAT	m for System A, c for System B (either SIZE_CAT or SIZE_DESCR)
LWType	SIZE_DESCR	c for System B (either SIZE_CAT or SIZE_DESCR)
LWType	LAT_DESCR	o
LWType	LON_DESCR	o
LWType	AV_DEPTH	o
LWType	LAKE_SHAPE	o
LWType	RES_TIME	o
LWType	AIR_T_RANG	o

obligation

template	field name	obligation
LWType	AV_AIR_T	o
LWType	MIXING	o
LWType	ACID_NEUT	o
LWType	NUTRIENT	o
LWType	SUBSTRATUM	o
LWType	LEVEL_FLUC	o
PA_Bird	DANUBEID	automatic value
PA_Bird	META_ID	m
PA_Bird	AREAKM2	m
PA_Bird	NAME	m
PA_Bird	PROT_TYPE	m
PA_Bird	EUCD_PA_B	m
PA_Bird	MSCD_PA_B	m
PA_Bird	LATITUDE	m
PA_Bird	LONGITUDE	m
PA_Drink_a	DANUBEID	automatic value
PA_Drink_a	META_ID	m
PA_Drink_a	AREAKM2	m
PA_Drink_a	NAME	m
PA_Drink_a	PROT_TYPE	m
PA_Drink_a	EUCD_PA_D	m
PA_Drink_a	MSCD_PA_D	m
PA_Drink_a	LATITUDE	m
PA_Drink_a	LONGITUDE	m
PA_Drink_p	DANUBEID	automatic value
PA_Drink_p	META_ID	m
PA_Drink_p	NAME	m
PA_Drink_p	PROT_TYPE	m
PA_Drink_p	EUCD_PA_D	m
PA_Drink_p	MSCD_PA_D	m
PA_Drink_p	LATITUDE	m
PA_Drink_p	LONGITUDE	m
PA_Drink_p	AREAKM2	o
PA_EcoSp_a	DANUBEID	automatic value
PA_EcoSp_a	META_ID	m

obligation

template	field name	obligation
PA_EcoSp_a	AREAKM2	m
PA_EcoSp_a	NAME	m
PA_EcoSp_a	PROT_TYPE	m
PA_EcoSp_a	EUCD_PA_E	m
PA_EcoSp_a	MSCD_PA_E	m
PA_EcoSp_a	LATITUDE	m
PA_EcoSp_a	LONGITUDE	m
PA_EcoSp_l	DANUBEID	automatic value
PA_EcoSp_l	META_ID	m
PA_EcoSp_l	NAME	m
PA_EcoSp_l	PROT_TYPE	m
PA_EcoSp_l	EUCD_PA_E	m
PA_EcoSp_l	MSCD_PA_E	m
PA_EcoSp_l	LATITUDE	m
PA_EcoSp_l	LONGITUDE	m
Pa_Habitat	DANUBEID	automatic value
Pa_Habitat	META_ID	m
Pa_Habitat	AREAKM2	m
Pa_Habitat	NAME	m
Pa_Habitat	PROT_TYPE	m
Pa_Habitat	EUCD_PA_H	m
Pa_Habitat	MSCD_PA_H	m
Pa_Habitat	LATITUDE	m
Pa_Habitat	LONGITUDE	m
PA_Nutritio	DANUBEID	automatic value
PA_Nutritio	META_ID	m
PA_Nutritio	AREAKM2	m
PA_Nutritio	NAME	m
PA_Nutritio	PROT_TYPE	m
PA_Nutritio	EUCD_PA_N	m
PA_Nutritio	MSCD_PA_N	m
PA_Nutritio	LATITUDE	m
PA_Nutritio	LONGITUDE	m
PA_Recr_a	DANUBEID	automatic value
PA_Recr_a	META_ID	m

template	field name	obligation
PA_Recr_a	AREAKM2	m
PA_Recr_a	NAME	m
PA_Recr_a	PROT_TYPE	m
PA_Recr_a	EUCD_PA_R	m
PA_Recr_a	MSCD_PA_R	m
PA_Recr_a	LATITUDE	m
PA_Recr_a	LONGITUDE	m
PA_Recr_p	DANUBEID	automatic value
PA_Recr_p	META_ID	m
PA_Recr_p	NAME	m
PA_Recr_p	PROT_TYPE	m
PA_Recr_p	EUCD_PA_R	m
PA_Recr_p	MSCD_PA_R	m
PA_Recr_p	LATITUDE	m
PA_Recr_p	LONGITUDE	m
PA_Recr_p	AREAKM2	o
PointSourc	DANUBEID	automatic value
PointSourc	META_ID	m
PointSourc	NAME	m
PointSourc	EUCD_PS	m
PointSourc	MSCD_PS	m
PointSourc	PS_CLASS	m
PointSourc	EUCD_RWSEG	m
PointSourc	RKM	m
RBD	DANUBEID	automatic value
RBD	META_ID	m
RBD	AREAKM2	o
RBD	NAME	m
RBD	EUCD_RBD	m
RBD	MSCD_RBD	m
RBD	C_CD	m
RBD	AUTH_GR	m
RBD	URL	o
Risk_Spot_a	DANUBEID	automatic value
Risk_Spot_a	META_ID	m

obligation

template	field name	obligation
Risk_Spot_a	AREAKM2	o
Risk_Spot_a	NAME	m
Risk_Spot_a	EUCD_ARS	m
Risk_Spot_a	MSCD_ARS	m
Risk_Spot_a	WRI	m
Risk_Spot_p	DANUBEID	automatic value
Risk_Spot_p	META_ID	m
Risk_Spot_p	NAME	m
Risk_Spot_p	EUCD_ARS	m
Risk_Spot_p	MSCD_ARS	m
Risk_Spot_p	WRI	m
Risk_Spot_p	AREAKM2	o
RivBasin	DANUBEID	automatic value
RivBasin	META_ID	m
RivBasin	AREAKM2	m
RivBasin	NAME	m
RivBasin	EUCD_RB	m
RivBasin	MSCD_RB	m
RivBasin	EUCD_RBD	m
River	DANUBEID	automatic value
River	META_ID	m
River	NAME	m
River	EUCD_RIV	m
River	MSCD_RIV	m
River	LENGTHKM	o
River	ALTNAME1	o
River	ALTNAME2	o
River	ALTNAME3	o
River	EUCD_RB	m
RWBody	DANUBEID	automatic value
RWBody	META_ID	m
RWBody	NAME	m
RWBody	EUCD_RWB	m
RWBody	MSCD_RWB	m
RWBody	EUCD_RWTYP	m

template	field name	obligation
RWBody	ECOREG_CD	m
RWBody	SYSTEM	m
RWBody	INS_WHEN	m
RWBody	INS_BY	m
RWBody	EUCD_RB	m
RWBody	STATUS_YR	m
RWBody	MODIFIED	m
RWBody	ARTIFICIAL	m
RWBody	ALT_CAT	m for System A
RWBody	GEOL_CAT	m for System A
RWBody	SIZE_CAT	m for System A
RWBody	LATITUDE	m
RWBody	LONGITUDE	m
RWBody	RISK_DATE	m
RWBody	RISK_TOTAL	m
RWBody	RISK_CHEM	o
RWBody	RISK_ECO	o
RWBody	GWB_ASSOC	o
RWBody	PA_ASSOC	o
RWBody	RSN_P_POL	o
RWBody	RSN_D_POL	o
RWBody	RSN_ABSTR	o
RWBody	RSN_FLOWR	o
RWBody	RSN_MORPH	o
RWBody	FWSTAT_DAT	m
RWBody	PHYTO	m
RWBody	MAC_PHYTO	m
RWBody	BEN_INV	m
RWBody	FISH	m
RWBody	HYDRO_REG	m
RWBody	RIV_CONT	m
RWBody	MORPH_COND	m
RWBody	PCSTAT_DAT	m
RWBody	GEN_COND	m
RWBody	SYNTH	m

template	field name	obligation
RWBody	NON_SYNTH	m
RWBody	SWSTAT_DAT	m
RWBody	ECO_STAT	m
RWBody	ECO_POT	m
RWBody	NON_COMP	m
RWBody	CHEM_STAT	m
RWSeg	DANUBEID	automatic value
RWSeg	META_ID	m
RWSeg	EUCD_RWSEG	m
RWSeg	MSCD_RWSEG	m
RWSeg	EUCD_RWB	m
RWSeg	EUCD_RIV	m
RWSeg	NAME	m
RWSeg	CONTINUA	m
RWSeg	FLOWDIR	m
RWSeg	WATERWAY	m
RWSeg	BND_TYPE	m
RWSeg	RKM_FROM	o
RWSeg	RKM_TO	o
RWType	DANUBEID	automatic value
RWType	META_ID	m
RWType	EUCD_RWTYP	m
RWType	MSCD_RWTYP	m
RWType	NAME	m
RWType	EUCD_RBD	o
RWType	SYSTEM	m
RWType	ECOREG_CD	m
RWType	ALT_CAT	m for System A, c for System B (either ALT_CAT or ALT_DESCR)
RWType	ALT_DESCR	c for System B (either ALT_CAT or ALT_DESCR)
RWType	GEOL_CAT	m for System A, c for System B (either GEOL_CAT or GEOL_DESCR)
RWType	GEOL_DESCR	c for System B (either GEOL_CAT or GEOL_DESCR)
RWType	SIZE_CAT	m for System A, c for System B (either SIZE_CAT or SIZE_DESCR)
RWType	SIZE_DESCR	c for System B (either SIZE_CAT or SIZE_DESCR)
RWType	LAT_DESCR	o
RWType	LON_DESCR	o

obligation

template	field name	obligation
RWType	DIST_SOURC	o
RWType	ENERGY	o
RWType	AV_WIDTH	o
RWType	AV_DEPTH	o
RWType	AV_SLOPE	o
RWType	RIV_MORPH	o
RWType	DISCHARGE	o
RWType	VAL_MORPH	o
RWType	SOLIDS	o
RWType	ACID_NEUT	o
RWType	SUBSTRATUM	o
RWType	CHLORIDE	o
RWType	AIR_T_RANG	o
RWType	AV_AIR_T	o
RWType	PPT	o
Settlement	DANUBEID	automatic value
Settlement	META_ID	m
Settlement	AREAKM2	o
Settlement	NAME	o
State	DANUBEID	automatic value
State	META_ID	m
State	NAME	o
State	ISO3166_CD	m
State	DANUBERBD	m
State	CAPITAL	o
State	GOVERNMENT	o
State	ICPDR	m
State	AREAKM2	o
SWStn	DANUBEID	automatic value
SWStn	META_ID	m
SWStn	NAME	m
SWStn	EUCD_SWST	m
SWStn	MSCD_SWST	m
SWStn	EUCD_BODY	m
SWStn	INS_WHEN	m

template	field name	obligation
SWStn	INS_BY	m
SWStn	DEPTH	o
SWStn	OPERAT	m
SWStn	SURVEIL	m
SWStn	DRINKING	m
SWStn	INVEST	m
SWStn	HABITAT	m
SWStn	REFERENCE	m
SWStn	SW_TYPE	m
TWBody	DANUBEID	automatic value
TWBody	META_ID	m
TWBody	AREAKM2	m
TWBody	NAME	m
TWBody	EUCD_TWB	m
TWBody	MSCD_TWB	m
TWBody	ECOREG_CD	m
TWBody	EUCD_TWTYP	m
TWBody	SYSTEM	m
TWBody	INS_WHEN	m
TWBody	INS_BY	m
TWBody	EUCD_RB	m
TWBody	STATUS_YR	m
TWBody	MODIFIED	m
TWBody	ARTIFICIAL	m
TWBody	SALINITY	c, m for System = A, o for System = B if use of predefined categories
TWBody	TIDAL	c, m for System = A, o for System = B if use of predefined categories
TWBody	LATITUDE	c, m if System = B
TWBody	LONGITUDE	c, m if System = B
TWBody	RISK_DATE	m
TWBody	RISK_TOTAL	m
TWBody	RISK_CHEM	o
TWBody	RISK_ECO	o
TWBody	GWB_ASSOC	o
TWBody	PA_ASSOC	o
TWBody	RSN_P_POL	o

template	field name	obligation
TWBody	RSN_D_POL	o
TWBody	RSN_ABSTR	o
TWBody	RSN_FLOWR	o
TWBody	RSN_MORPH	o
TWBody	SASTAT_DAT	m
TWBody	PHYTO	m
TWBody	MAC_ALGAE	m
TWBody	ANGIO	m
TWBody	BEN_INV	m
TWBody	FISH	m
TWBody	TIDAL_REG	m
TWBody	MORPH_COND	m
TWBody	SWSTAT_DAT	m
TWBody	ECO_STAT	m
TWBody	ECO_POT	m
TWBody	NON_COMP	m
TWBody	CHEM_STAT	m
TWBody	PCSTAT_DAT	m
TWBody	GEN_COND	m
TWBody	SYNTH	m
TWBody	NON_SYNTH	m
TWType	DANUBEID	automatic value
TWType	META_ID	m
TWType	EUCD_TWTYP	m
TWType	MSCD_TWTYP	m
TWType	NAME	m
TWType	EUCD_RBD	o
TWType	SYSTEM	m
TWType	ECOREG_CD	m
TWType	SALINITY	m for System A, c for System B (either SALINITY or SAL_DESCR)
TWType	SAL_DESCR	c for System B (either SALINITY or SAL_DESCR)
TWType	TIDAL	m for System A, c for System B (either TIDAL or TIDAL_DESC)
TWType	TIDAL_DESC	o
TWType	LAT_DESCR	o
TWType	LON_DESCR	o

template	field name	obligation
TWType	DEPTH	o
TWType	VELOCITY	o
TWType	WAV_EXPO	o
TWType	RES_TIME	o
TWType	WATER_T_RA	o
TWType	AV_WATER_T	o
TWType	MIXING	o
TWType	TURBIDITY	o
TWType	SUBSTRATUM	o
TWType	SHAPE_CHAR	o
Wetland	DANUBEID	automatic value
Wetland	META_ID	m
Wetland	AREAKM2	o
Wetland	NAME	m
Wetland	EUCD_WETL	m
Wetland	MSCD_WETL	m

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"AdminBound_" & ISO3166_CD Domain & RBDCode Domain	m		AdminBound_ AT1000	META_ID	Metadata
BoundaryType	BOUND_TYPE	string	6	Code for type of administrative boundary (e.g. state boundary, province boundary, district boundary)	AE_Type Domain	m		level0 = state boundaries		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"AuthGroup_" & ISO3166_CD Domain & RBDCode Domain	m		AuthGroup_AT 1000	META_ID	Metadata
CodeAuthoritiesGroup	AUTH_GR	String	24	Code for group of competent authorities in the RBD		m			AUTH_GR	RBD
EuropeanAuthorityCode	EUCD_AUTH	string	24	international code for the competent authority.	ISO3166_CD Domain & [MSCD_Auth]	m			EUCD_AUTH	Compauth

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"Catchment_" & ISO3166_CD Domain & RBDCode Domain	m		Catchment_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
CatchmentName	NAME	string	100	Locally used name of a Catchment		m				
EuropeanCatchmentCode	EUCD_CATCH	string	24	International code for river catchments	ISO3166_CD Domain & [MSCD_Cat]	m				
MSCatchmentCode	MSCD_CATCH	string	22	National code for river catchment		m				
EuropeanRBDCode	EUCD_RBD	string	24	International code of the RBD the Catchment belongs to	ISO3166_CD Domain & [MSCD_RBD]	m		1000	EUCD_RBD	RBD

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"City_a_" & ISO3166_CD Domain & RBDCode Domain	m		City_a_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Locally used name of the city		m		Wien		
EuropeanCityCode	EUCD_CITY	string	24	International code for the City	ISO3166_CD Domain & [MSCD_City]	m		AT8		
MSCityCode	MSCD_CITY	string	22	National code for the city		m		8		
Inhabitants	CITY_INHAB	long integer	8	Number of inhabitants of the city		c (either the number of the inhabitants or the category [inhab_cat] have to be given)		1608144		
InhabitantsCategory	INHAB_CAT	string	3	Category for the number of inhabitants of the city	Inhab_Cat Domain	c (either the number of the inhabitants [City_Inhab] or the category have to be given)		L		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents city		m		10,34343434		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents the city		m		47,45345355		

City_p

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"City_p_" & ISO3166_CD Domain & RBDCode Domain	m		City_p_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the city		m		Wien		
EuropeanCityCode	EUCD_CITY	string	24	International Code for the City	ISO3166_CD Domain & [MSCD_City]	m		AT8		
MSCityCode	MSCD_CITY	string	22	National code for the city		m		8		
Inhabitants	CITY_INHAB	long integer	8	Number of inhabitants of the city		c (either the number of the inhabitants or the category [inhab_cat] have to be given)		1608144		
InhabitantsCategory	INHAB_CAT	string	3	Category for the number of inhabitants of the city	Inhab_Cat Domain	c (either the number of the inhabitants [City_Inhab] or the category have to be given)		L		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"Compauth_" & ISO3166_CD Domain & RBDCode Domain	m		Compauth_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Locally used name		m		Umweltbundesamt		
Address	ADDRESS	string	200	Correspondence Address		m		Spittelauer Lände 5, 1090 Wien, Österreich		
EuropeanAuthorityCode	EUCD_AUTH	string	24	international code for the competent authority.	ISO3166_CD Domain & [MSCD_Auth]	m				
MSAuthorityCode	MSCD_AUTH	string	22	national code for the competent authority.		m				
AdminsitrativeEntityLevel	AE_LEVEL	string	6	Level of adminstrative entity	AE_Type Domain	m		level0 = state	BOUND_TYPE	AdminBound
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents city		m		16,3958647		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents city		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"ContSite_a_" & ISO3166_CD Domain & RBDCode Domain	m		ContSite_a_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Locally used name of the contaminated site		m				
EuropeanContaminatedSiteCode	EUCD_CS	string	24	International code for a contaminated site that forms a risk spot	ISO3166_CD Domain & [MSCD_CS]	m				
MSContaminatedSiteCode	MSCD_CS	string	22	National code for a contaminated site that forms a risk spot		m				
ContaminatedSiteClass	CS_CLASS	text	3	Code according to M1 Methodology (Methodology for Assessment of Hazardous Waste Disposal Sites (2000-MS-12-M1))	M1 Domain	m		A-1		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"ContSite_p_" & ISO3166_CD Domain & RBDCode	m		ContSite_p_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the contaminated site		m				
EuropeanContaminatedSiteCode	EUCD_CS	string	24	International code for a contaminated site that forms	ISO3166_CD Domain & [MSCD_CS]	m				
MSContaminatedSiteCode	MSCD_CS	string	22	National code for a contaminated site that forms		m				
ContaminatedSiteClass	CS_CLASS	text	3	Code according to M1 Methodology (Methodology for Assessment of Hazardous Waste Disposal Sites (2000-MS-12-M1))	M1 Domain	m		A-1		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"CWBody_" & ISO3166_CD Domain & RBDCode Domain	m		CWBody_RO1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name of the CW body		m				
EuropeanCWBCode	EUCD_CWB	string	24	International code for a CW body	ISO3166_CD Domain & [MSCD_CWB]	m				
MSCWBCode	MSCD_CWB	string	22	National code for a CW body		m				
EuropeanCWTypeCode	EUCD_CWTYP	string	24	International Code for CW Type		m			EUCD_CWTYP	CW_Types
EcoRegionCode	ECOREG_CD	string	2	Ecoregion to which a waterbody belongs	EcoReg Domain	m for System = A, o for System = B			ECOREG_CD	Ecoreg
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
InsertedWhen	INS_WHEN	date		Moment of insertion in the database	YYYYMMDDhhmmss	m				
InsertedBy	INS_BY	string	15	Acronym of operator		m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
EuropeanRBCode	EUCD_RB	string	24	The code of the parent river basin		m			EUCD_RB	RivBasin
StatusYear	STATUS_YR	string	4	Year of reporting of waterbody characterisation	YYYY	m		2004		
HeavilyModified	MODIFIED	string	1	Whether the waterbody is heavily modified	YesNoDomain	m				
Artificial	ARTIFICIAL	string	1	Whether the waterbody is artificial	YesNoDomain	m				
SalinityTypology	SALINITY	string	1	Salinity category according to WFD Annex II System A (further descritpion of types in table CW_Types)	Salinity Domain	m for System = A, o for System = B		F = Freshwater		
DepthTypology	DEPTH_CAT	string	1	Depth category based on mean depth (further descritpion of types in table CW_Types)	Depth_CatC Domain	m for System = A, o for System = B		S = Shallow (<30m)		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents CWbody		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents CWbody		m		16,3958647		
TidalTypology	TIDAL	string	5	Tidal range category according to WFD Annex II (defined for transitional waters, further descritpion of types in table CW_Types)	TidalT Domain	m for System = A, o for System = B		MICRO		
Risk_Date	RISK_DATE	date		date for the risk assessment	YYYYMMDD	m				
TotalRisk	RISK_TOTAL	integer	1	Risk for waterbody	Risk Domain	m				
RiskChemicalStatus	RISK_CHEM	integer	1	Risk category associated with the Chemical Status	Risk Domain	o				
RiskEcologicalStatus	RISK_ECO	integer	1	Risk category associated with the Ecological Status	Risk Domain	o				
GWBAssociation	GWB_ASSOC	string	1	Is the waterbody dynamically linked to any groundwater(s)	YesNoUnknown Domain	o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
ProtectedAreaAssociation	PA_ASSOC	string	1	Is the waterbody dynamically linked to any protected area(s)	YesNoUnknown Domain	o				
ReasonforRiskPointSourcePollution	RSN_P_POL	string	1	Is waterbody at risk as a result of point source pollution	YesNoUnknown Domain	o				
ReasonforRiskDiffusePollution	RSN_D_POL	string	1	Is waterbody at risk as a result of diffuse pollution	YesNoUnknown Domain	o				
ReasonforRiskWaterAbstraction	RSN_ABSTR	string	1	Is waterbody at risk as a result of water abstraction	YesNoUnknown Domain	o				
ReasonforRiskWaterFlowRegulation	RSN_FLOWR	string	1	Is waterbody at risk as a result of water flow regulations	YesNoUnknown Domain	o				
ReasonforRiskMorphologicalAlteration	RSN_MORPH	string	1	Is waterbody at risk as a result of morphological alterations	YesNoUnknown Domain	o				
SalineEcolStatDate	SASTAT_DAT	date		Date for which this saline ecological status assessment is valid	YYYYMMDD	m	2009	20050923		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
Phytoplankton	PHYTO	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009	M = moderate		
Macroalgae	MAC_ALGAE	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009	M = moderate		
Angiosperms	ANGIO	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009	M = moderate		
BenthicInvertebrates	BEN_INV	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009	M = moderate		
Fish	FISH	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009	M = moderate		
TidalRegime	TIDAL_REG	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009	M = moderate		
MorphologicalConditions	MORPH_COND	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009	M = moderate		
SWStatusDate	SWSTAT_DAT	date		Date for which this SW status assessment is valid	YYYYMMDD	m	2009	20050923		
EcologicalStatus	ECO_STAT	string	1	SW ecological status WFD Annex V	ClassificationStatus Domain	m	2009	M = moderate		
EclogicalPotential	ECO_POT	string	1	SW ecological potential WFD Annex V	ClassificationStatus Domain	m	2009	M = moderate		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
NonCompliant	NON_COMP	string	1	WFD Annex V 1.4.2 (iii) wether the water body does not comply with environmental quality standards	Compliant Domain	m	2009	C		
ChemicalStatus	CHEM_STAT	string	1	WFD Annex V	ChemStatus Domain	m	2009	F		
PhysicoChemicalStatusDate	PCSTAT_DAT	date		Date for which this physico-chemical status assessment is valid		m	2009			
GeneralConditions	GEN_COND	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009			
SyntheticPollutants	SYNTH	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009			
NonSyntheticPollutants	NON_SYNTH	string	1	WFD Annex V 1.2.4	ClassificationStatus Domain	m	2009			

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"CWType_" & ISO3166_CD Domain & RBDCode Domain	m		CWType_RO1000	META_ID	Metadata
EuropeanCWTypeCode	EUCD_CWTYP	string	24	International code for a CW type	ISO3166_CD Domain & [MSCD_CWTYP]	m			EUCD_CWTYP	CWBody
MSCWTypeCode	MSCD_CWTYP	string	22	National code for a CW type		m				
Name	NAME	string	200	Locally used name of the CW type		m				
EuropeanRBDCode	EUCD_RBD	string	24	Unique code for a river basin district	ISO3166_CD Domain & [MSCD_RBD]	o		AT1000		
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
EuropeanEcoRegionCode	ECOREG_CD	string	2	Ecoregion Codes as specified in WFD Annex XI	EcoReg Domain	m				
SalinityTypology	SALINITY	string	1	Salinity category according to WFD Annex II System A	Salinity Domain	m for System = A, c for System = B (either SALINITY or SAL_DESCR has to be filled in)		F = Freshwater		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
SalinityDescripton	SAL_DESCR	string	100	Salinity according to WFD Annex II System B		c for System = B (either SALINITY or SAL_DESCR has to be filled in)				
Depth	DEPTH_CAT	string	1	Depth category according to WFD Annex II System A	DepthCatC Domain	m for System = A, c for System = B (either DEPTH_CAT or DEPTH_DESC has to be filled in)				
DepthDescription	DEPTH_DESC	string	100	Depth according to WFD Annex II System B		c for System = B (either DEPTH_CAT or DEPTH_DESC has to be filled in)				
LatitudeDescription	LAT_DESCR	string	100	Latitude according to WFD Annex II System B		m for System B				
LongitudeDescription	LON_DESCR	string	100	Longitude according to WFD Annex II System B		m for System B				
TidalTypology	TIDAL	string	5	Tidal range category according to WFD Annex II System A		m for System A, c for System B (either TIDAL or TIDAL_DESC)				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
TidalDescription	TIDAL_DESC	string	100	Tidal range according to WFD Annex II System B		c for System B (either TIDAL or TIDAL_DESC)				
CurrentVelocity	VELOCITY	string	100	Tidal range according to WFD Annex II System B		o				
WaveExposure	WAV_EXPO	string	100	Wave exposure according to WFD Annex II System B		o				
WaterTempRange	WATER_T_RA	string	100	Water temperature range according to WFD Annex II System B		o				
MeanWaterTemp	AV_WATER_T	string	100	Meant water temperture according to WFD Annex II System B		o				
MixingCharac	MIXING	string	100	mixing characteristics according to WFD Annex II System B		o				
Turbidity	TURBIDITY	string	100	Turbidity according to WFD Annex II System B		o				
MeanSubstratComp	SUBSTRATUM	string	100	Mean substratum composition according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
RetentionTime	RET_TIME	string	100	Retention time (of enclosed bays) according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"Ecoreg_" & ISO3166_CD Domain & RBDCode Domain	m		Ecoreg_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
EuropeanEcoRegionCode	ECOREG_CD	string	2	Ecoregion Codes as specified in WFD Annex XI	EcoReg Domain	m				
Name	NAME	string	100	Locally used name of the Ecoregion		m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"Geology_" & ISO3166_CD Domain & RBDCode Domain	m		Geology_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Description of geological characteristics (until further codelist additional to the geology type domain have been developed)		o				
EuropeanGeologyCode	EUCD_GEOL	string	24	International code for the geological unit	ISO3166_CD Domain & [MSCD_Geol]	o				
MSGeologyCode	MSCD_GEOL	string	22	National code for the geological unit		o				
GeologyCategory	GEOL_CAT	string	1	Geological category according to WFD Annex II	Geology Type Domain	o		C = Calcareous		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"GWBody_" & ISO3166_CD Domain & RBDCode Domain	m		GWBody_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name of the Gwbody		m				
EuropeanGWBCode	EUCD_GWB	string	24	International code for a GW body	ISO3166_CD Domain & [MSCD_GWB]	m				
MSGWBCode	MSCD_GWB	string	22	National code for a GW body		m				
EcoRegionCode	EcoReg_CD	string	2	Ecoregion to which a waterbody belongs	EcoReg Domain	m			ECOREG_CD	Ecoreg
InsertedWhen	INS_WHEN	date		Moment of insertion in the database	YYYYMMDD	m				
InsertedBy	INS_BY	string	15	Acronym of operator		m				
Transboundary	TRANSBOUND	string	1	Does the groundwater body cross a country border	YesNoUnknown Domain	o				
GroupOfGWB	EUCD_GROUP	string	24	International code for a Group of GWBodies	YesNoUnknown Domain	o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
OutOfRBD	OUT_OF_RBD	string	1	Indicator if any part of GW falls outside RBD	YesNoUnknown Domain	o				
FinalDesignation	FINAL	string	1	Final or preliminary identification of GWB	Designation Domain	o				
EuropeanRBCode	EUCD_RB	string	24	Code of the parent riverbasin		m				
StatusYear	STATUS_YR	string	4	Year of reporting of waterbody characterisation		m				
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents GWbody		m		48,2015468		
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents GWbody		m		16,3958647		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
Horizon	HORIZON	integer	2	Unique identifier for the horizon where separate, overlying bodies exist. NULL or 0 in case that only one main horizon exists. The uppermost horizon starts with 1, the lower the horizon the greater the number		o				
Capacity	CAPACITY	double	10,8	Capacity of WB in m3		o				
Indicatorfor LayerdGWB	LAYERED	string	1	Indicator for groundwater bodies with deeper relevant layers 0 = no deeper layers 1 = deeper aquifer layers		o				
Risk_Date	RISK_DATE	date		date for the risk assessment	YYYYMMDD	m				
TotalRisk	RISK_TOTAL	integer	1	Risk for waterbody	Risk Domain	m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
RiskChemicalStatus	RISK_CHEM	integer	1	Risk category associated with the Chemical Status	Risk Domain	o				
RiskQuantitativeStatus	RISK_QUANT	integer	1	Risk category associated with the Quanitative Status	Risk Domain	o				
SWBAssociation	SWB_ASSOC	string	1	Is the waterbody dynamically linked to any surfacewater(s)	YesNoUnknown Domain	o				
ProtectedAreaAssociation	PA_ASSOC	string	1	Is the waterbody dynamically linked to any protected area(s)	YesNoUnknown Domain	o				
ReasonforRiskPointSourcePollution	RSN_P_POL	string	1	Is waterbody at risk as a result of point source pollution	YesNoUnknown Domain	o				
ReasonforRiskDiffusePollution	RSN_D_POL	string	1	Is waterbody at risk as a result of diffuse pollution	YesNoUnknown Domain	o				
ReasonforRiskWaterAbstraction	RSN_ABSTR	string	1	Is waterbody at risk as a result of water abstraction	YesNoUnknown Domain	o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
ReasonforRiskWaterRecharge	RSN_RECHAR	string	1	Is waterbody at risk as a result of water recharge	YesNoUnknown Domain	o				
ReasonforRiskSaltWaterFlowIntrusion	RSN_INTRUS	string	1	Is waterbody at risk as a result of salt water intrusion	YesNoUnknown Domain	o				
GWStatusDate	GWSTAT_DAT	date		Date for which this GW status assessment is valid	YYYYMMDD	m				
QuantitativeStatus	QUANT_STAT	string	1	WFD Annex V 2.1	Status Domain	m	2009			
ChemicalStatus	CHEM_STAT	string	1	WFD Annex V 2.1	ChemStatus Domain	m	2009			
PollutantTrend	POLL_TREND	string	1	WFD Annex V 2.4 not defined	Trend Domain	m	2009			
ConfidenceLevel	CONF_LEVEL	string	1	WFD Annex V 2.4 not defined	Conf_Level Domain	m	2009			

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"GWstn_" & ISO3166_CD Domain & RBDCode Domain	m		GWStn_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the GW Station		m				
EuropeanGWStCode	EUCD_GWST	string	24	International code for the GW station	ISO3166_CD Domain & [MSCD_GWst]	m	2006			
MSGWStCode	MSCD_GWST	string	22	National code for the GW station		m	2006			
EuropeanWaterBodyCode	EUCD_BODY	string	24	Unique code of parent GW Body		m	2006		EUCD_GWB	GWbody
InsertedWhen	INS_WHEN	date		Moment of insertion in the database	YYYYMMDDhhmmss	m	2006			
InsertedBy	INS_BY	string	15	Acronym of operator		m	2006			
Level	GW_LEVEL	string	1	Monitoring station of the groundwater level monitoring network for the quantitative status	YesNo Domain	m	2006			
Operational	OPERAT	string	1	Station Type (operational monitoring)	YesNo Domain	m	2006			

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
Surveillance	SURVEIL	string	1	Station Type (surveillance monitoring)	YesNo Domain	m	2006			
Depth	DEPTH	double	4	Depth in metres		m	2006			

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"Harbour_a_" & ISO3166_CD Domain & RBDCode Domain	m		Harbour_a_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Locally used name of the harbour		m				
EuropeanHarbourCode	EUCD_HARBO	string	24	European code for the harbour	ISO3166_CD Domain & [MSCD_HARBO]	m				
MSHarbourCode	MSCD_HARBO	string	22	National code for the harbour		m				
RiverKilometer	RKM	float	7,3	River km where the harbour is located		m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"Harbour_p_" & ISO3166_CD Domain & RBDCode Domain	m		Harbour_p_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Locally used name of the harbour		m				
EuropeanHarbourCode	EUCD_HARBO	string	24	International code for the harbour	ISO3166_CD Domain & [MSCD_HARBO]	m				
MSHarbourCode	MCSD_HARBO	string	22	National code for the harbour		m				
RiverKilometer	RKM	float	7,3	River km where the harbour is located		m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"HydroStruc_" & ISO3166_CD Domain & RBDCode Domain	m		HydroStruc_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the hydrological structure		m				
EuropeanHydrologicalStructureCode	EUCD_HS	string	24	International code for the hydrological structure	ISO3166_CD Domain & [MSCD_HS]	m				
MSHydrologicalStructureCode	MSCD_HS	string	22	National code for the hydrological structure		m				
EuropeanRWSegCode	EUCD_RWSEG	string	50	Unique code for the river segment where the hydrological structure is located or where it forms its endpoint	ISO3166_CD Domain & [MSCD_RWSeg]	m			EUCD_RWSEG	RWSeg
HydrologicalStructureType	HS_TYPE	string	2	Classification of Hydrological Structure	HS_Type Domain	m		D = Dam		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
RiverKilometer	RKM	float	7,3	river km where the hydrological structure is located		m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"LWBody_" & ISO3166_CD Domain & RBDCode Domain	m		LWBody_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the LW body		m				
EuropeanLWBCode	EUCD_LWB	string	24	International code for a LW body	ISO3166_CD Domain & [MSCD_LWB]	m				
MSLWBCode	MSCD_LWB	string	22	National code for a LW body		m				
EuropeanLWTypeCode	EUCD_LWTYP	string	24	International Code for LW Type		m			EUCD_LWTYP	LW_Types
EuropeanEcoRegionCode	ECOREG_CD	string	2	Ecoregion Codes as specified in WFD Annex XI	EcoReg Domain	m				
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
InsertedWhen	INS_WHEN	date		Moment of insertion in the database	YYYYMMDDhhmmss	m				
InsertedBy	INS_BY	string	15	Acronym of operator		m				
EuropeanRBCode	EUCD_RB	string	24	The code of the parent river basin (see coding system)		m			EUCD_RB	RivBasin

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
StatusYear	STATUS_YR	string	4	Year of reporting of waterbody characterisation	YYYY	m				
HeavilyModified	MODIFIED	string	1	Whether the waterbody is heavily modified	YesNo Domain	m				
Artificial	ARTIFICIAL	string	1	Whether the waterbody is artificial	YesNo Domain	m				
AltitudeTypology	ALT_CAT	string	4	Altitude category according to WFD Annex II	AltitudeTyp Domain	m for System = A, o for System = B				
GeologyTypology	GEOL_CAT	string	1	Geological category according to WFD Annex II	GeologyType Domain	m for System = A, o for System = B				
SizeTypology	SIZE_CAT	string	2	Size based on catchment area according to WFD Annex II	SizeL Domain	m for System = A, o for System = B				
DepthTypology	DEPTH_CAT	string	1	Depth category based on mean depth	DepthL Domain	m for System = A, o for System = B				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents LWbody		m		16,3958647		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents LWbody		m		48,2015468		
Risk_Date	RISK_DATE	date		date for the risk assessment	YYYYMMDD	m				
TotalRisk	RISK_TOTAL	integer	1	Risk of waterbody	Risk Domain	m				
RiskChemicalStatus	RISK_CHEM	integer	1	Risk category associated with the Chemical Status	Risk Domain	o				
RiskEcologicalStatus	RISK_ECO	integer	1	Risk category associated with the Ecological Status	Risk Domain	o				
GWBAssociation	GWB_ASSOC	string	1	Is the waterbody dynamically linked to any groundwater(s)	YesNoUnknown Domain	o				
ProtectedAreaAssociation	PA_ASSOC	string	1	Is the waterbody dynamically linked to any protected area(s)	YesNoUnknown Domain	o				
ReasonforRiskPointSourcePollution	RSN_P_POL	string	1	Is waterbody at risk as a result of point source pollution	YesNoUnknown Domain	o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
ReasonforRiskDiffusePollution	RSN_D_POL	string	1	Is waterbody at risk as a result of diffuse pollution	YesNoUnknown Domain	o				
ReasonforRiskWaterAbstraction	RSN_ABSTR	string	1	Is waterbody at risk as a result of water abstraction	YesNoUnknown Domain	o				
ReasonforRiskWaterFlowRegulation	RSN_FLOWR	string	1	Is waterbody at risk as a result of water flow regulations	YesNoUnknown Domain	o				
ReasonforRiskMorphological Alteration	RSN_MORPH	string	1	Is waterbody at risk as a result of morphological alterations	YesNoUnknown Domain	o				
FWStatusDate	FWSTAT_DAT	date		Date for which this FW status assessment is valid		m				
Phytoplankton	PHYTO	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009	M = moderate		
Macrophyto	MAC_PHYTO	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009	M = moderate		
BenthicInvertebrates	BEN_INV	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009	M = moderate		
Fish	FISH	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009	M = moderate		
HydrologicalRegime	HYDRO_REG	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009	M = moderate		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
MorphologicalConditions	MORPH_COND	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009	M = moderate		
PhysicoChemicalStatusDate	PCSTAT_DAT	date		Date for which this physico-chemical status assessment is valid		m	2009			
GeneralConditions	GEN_COND	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009			
SyntheticPollutants	SYNTH	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009			
NonSyntheticPollutants	NON_SYNTH	string	1	WFD Annex V 1.2.2	ClassificationStatus Domain	m	2009			
SWStatusDate	SWSTAT_DAT	date		Date for which this SW status assessment is valid	YYYYMMDD	m	2009	20050923		
EcologicalStatus	ECO_STAT	string	1	WFD Annex V	ClassificationStatus Domain	m	2009	G = good		
EcologicalPotential	ECO_POT	string	1	WFD Annex V	ClassificationStatus Domain	m	2009	M = moderate		
NonCompliant	NON_COMP	string	1	WFD Annex V 1.4.2 (iii) wether the water body does not comply with environmental quality standards	Compliance Domain	m	2009	C		
ChemicalStatus	CHEM_STAT	string	1	WFD Annex V	ChemStatus Domain	m	2009	G		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"LWSeg_" & ISO3166_CD Domain & RBDCode Domain	m		LWSeg_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name		m				
EuropeanLWSegCode	EUCD_LWSEG	string	24	Unique code for the segment at EU level	ISO3166_CD Domain & [MSCD_LWSeg]	m				
MSLWSegCode	MSCD_LWSEG	string	22	Unique code for the segment within MS		m				
EuropeanLWBCode	EUCD_LWB	string	24	Unique Code of Lake Water Body to which this segment belongs		m			EUCD_LWB	LWBody
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"LWType_" & ISO3166_CD Domain & RBDCode Domain	m		LWType_AT1000	META_ID	Metadata
EuropeanLWTypeCode	EUCD_LWTYP	string	24	International code for a LW type	ISO3166_CD Domain & [MSCD_LWTYP]	m			EUCD_LWTYP	LWBody
MSLWTypeCode	MSCD_LWTYP	string	22	National code for a LW type		m				
Name	NAME	string	200	Locally used name of the LW type		m				
EuropeanRBDCode	EUCD_RBD	string	24	Unique code for a river basin district	ISO3166_CD Domain & [MSCD_RBD]	o		AT1000		
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
EuropeanEcoRegionCode	ECOREG_CD	string	2	Ecoregion Codes as specified in WFD Annex XI	EcoReg Domain	m				
AltitudeTypology	ALT_CAT	string	4	Altitude category according to WFD Annex II	Altitude Domain	m for System A, c for System B (either ALT_CAT or ALT_DESCR)				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
AltitudeTypologyDescription	ALT_DESCR	string	100	Altitude according to WFD Annex II System B		c for System B (either ALT_CAT or ALT_DESCR)				
DepthTypology	DEPTH_CAT	string	1	Depth category based on mean depth	DepthL Domain	m for System A, c for System B (either DEPTH_CAT or DEPTH_DESC)				
DepthTypologyDescription	DEPTH_DESC	string	100	Depth according to WFD Annex II System B		c for System B (either DEPTH_CAT or DEPTH_DESC)				
GeologyTypology	GEOL_CAT	string	1	Geological category according to WFD Annex II	GeologyType Domain	m for System A, c for System B (either GEOL_CAT or GEOL_DESCR)				
GeologyTypologyDescription	GEOL_DESCR	string	100	Geology according to WFD Annex II System B		c for System B (either GEOL_CAT or GEOL_DESCR)				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
SizeTypology	SIZE_CAT	string	2	Size based on catchment area according to WFD Annex II	SizeL Domain	m for System A, c for System B (either SIZE_CAT or SIZE_DESCR)				
SizeTypologyDescription	SIZE_DESCR	string	100	Size according to WFD Annex II System B		c for System B (either SIZE_CAT or SIZE_DESCR)				
LongitudeDescription	LON_DESCR	string	100	Longitude according to WFD Annex II System B		o				
LatitudeDescription	LAT_DESCR	string	100	Latitude according to WFD Annex II System B		o				
MeanDepth	AV_DEPTH	string	100	Mean water depth according to WFD Annex II System B		o				
LakeShape	LAKE_SHAPE	string	100	Lake shape according to WFD Annex II System B		o				
ResidenceTime	RES_TIME	string	100	Residence time according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
AirTempRange	AIR_T_RANG	string	100	Air temperature range according to WFD Annex II System B		o				
MeanAirTemp	AV_AIR_T	string	100	Mean air temperature according to WFD Annex II System B		o				
MixingCharac	MIXING	string	100	Mixing characteristics (e.g. monomictic, dimictic, polymictic) according to WFD Annex II System B		o				
AcidNeutCapacity	ACID_NEUT	string	100	Acid neutralising capacity according to WFD Annex II System B		o				
NutrientStatus	NUTRIENT	string	100	Background nutrient status according to WFD Annex II System B		o				
MeanSubstratComp	SUBSTRATUM	string	100	Mean substratum composition according to WFD Annex II System B		o				

LWType

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
WaterLevelFluct	LEVEL_FLUC	string	100	Water level fluctuation according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_Bird_" & ISO3166_CD Domain & RBDCode Domain	m		PA_Bird_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		B = Bird		
EuropeanPaBCode	EUCD_PA_B	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_B]	m				
MSPaBCode	MSCD_PA_B	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_Drink_a_" & ISO3166_CD Domain & RBDCode Domain	m		PA_Drink_a_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		D= Drinking		
EuropeanPaDCode	EUCD_PA_D	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_D]	m				
MSPaDCode	MSCD_PA_D	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_Drink_p_" & ISO3166_CD Domain & RBDCode Domain	m		PA_Drink_p_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		D= Drinking		
EuropeanPaDCode	EUCD_PA_D	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_D]	m				
MSPaDCode	MSCD_PA_D	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_EcoSp_a_" & ISO3166_CD Domain & RBDCode Domain	m		PA_EcoSp_a_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		E=Economic Species		
EuropeanPaECode	EUCD_PA_E	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_E]	m				
MSPaECode	MSCD_PA_E	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_EcoSp_p_" & ISO3166_CD Domain & RBDCode Domain	m		PA_EcoSp_p_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		E=Economic Species		
EuropeanPaECode	EUCD_PA_E	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_E]	m				
MSPaECode	MSCD_PA_E	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_Habitat_" & ISO3166_CD Domain & RBDCode Domain	m		PA_Habitat_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		H=Habitat		
EuropeanPaHCode	EUCD_PA_H	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_H]	m				
MSPaHCode	MSCD_PA_H	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_Nutritio_" & ISO3166_CD Domain & RBDCode Domain	m		PA_Nutritio_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		N=Nutrition-sensitive		
EuropeanPaNCode	EUCD_PA_N	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_N]	m				
MSPaNCode	MSCD_PA_N	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_Recr_a_" & ISO3166_CD Domain & RBDCode Domain	m		PA_Recr_a_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		R = Recreational		
EuropeanPaRCode	EUCD_PA_R	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_R]	m				
MSPaRCode	MSCD_PA_R	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"PA_Recr_p_" & ISO3166_CD Domain & RBDCode Domain	m		PA_Recr_p_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name		m				
ProtectedAreaType	PROT_TYPE	string	1	Category of the protected area	ProtArea Domain	m		R = Recreational		
EuropeanPaRCode	EUCD_PA_R	string	24	Unique code for a station at EU level	ISO3166_CD Domain & [MSCD_PA_R]	m				
MSPaRCode	MSCD_PA_R	string	22	Unique code for a station at MS level		m				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents PA		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents PA		m		48,2015468		
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"PointSourc_" & ISO3166_CD Domain & RBDCode Domain	m		PointSourc_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the Point Source		m				
EuropeanPointSourceCode	EUCD_PS	string	24	International code for point source of pollution - Link to Parameter Tables in EMIS	ISO3166_CD Domain & [MSCD_PS]	m				
MSPointSourceCode	MSCD_PS	string	22	National code for point source of pollution - Link to Parameter Tables in EMIS		m				
PointSourceClass	PS_CLASS	String	1	Type of Point Source	PointSource Type Domain	m		A = Agricultural		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
EuropeanRWSegCode	EUCD_RWSEG	string	24	Unique code for the river segment which is recipient of the discharger (for lakes the imaginary river through the lake is the recipient)	ISO3166_CD Domain & [MSCD_RWSeg]	m			EUCD_RWSEG	RWSeg
RiverKilometer	RKM	float	7,3	River km where the point source is located		m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"RBD_" & ISO3166_CD Domain & RBDCode Domain	m		RBD_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Locally used name for RBD		m		Donau		
EuropeanRBDCode	EUCD_RBD	string	24	Unique code for a river basin district at EU level	ISO3166_CD Domain & [MSCD_RBD]	m		AT1000		
MSRBDCode	MSCD_RBD	string	22	Unique code for a river basin district within MS	RBDCode Domain	m		1000		
CountryCode	C_CD	String	2	Code for the MS the part of the river basin district is lying in	ISO3166_CD Domain	m		AT		
CodeAuthoritiesGroup	AUTH_GR	string	24	Code for group of competent authorities in the RBD		m			AUTH_GR	AUTH_Group
URL	URL	string	200	URL for integration of MS own Internet system		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"RiskSpot_a_" & ISO3166_CD Domain & RBDCode Domain	m		RiskSpot_a_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
Name	NAME	string	100	Locally used name of the risk spot		m				
EuropeanAcRiskSpotCode	EUCD_ARS	string	24	International code for the Industrial site that forms a risk spot	ISO3166_CD Domain & [MSCD_ARS]	m				
MSAcRiskSpotCode	MSCD_ARS	string	22	National code for a Industrial site that forms a risk spot		m				
WaterRiskIndex	WRI	float	4,1	Water risk index (sum of WRC 3-equivalents, calculated logarithmically)		m		8,8		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"RiskSpot_p_" & ISO3166_CD Domain & RBDCode Domain	m		RiskSpot_p_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the risk spot		m				
EuropeanAcRiskSpotCode	EUCD_ARS	string	24	International code for a Industrial site that forms a risk spot	ISO3166_CD Domain & [MSCD_ARS]	m				
MSAcRiskSpotCode	MSCD_ARS	string	22	National code for a Industrial site that forms a risk spot		m				
WaterRiskIndex	WRI	float	4,1	Water risk index (sum of WRC 3-equivalents, calculated logarithmically)		m		8,8		
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	number	24	Link to metadata	"RB_" & ISO3166_CD Domain & RBDCode Domain	m		RB_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	100	Locally used name for River basin		m		Traun		
EuropeanRBCode	EUCD_RB	string	24	Unique code for a river basin at EU level	ISO3166_CD Domain & [MSCD_RB]	m				
MSRBCode	MSCD_RB	string	22	Unique code for a river basin within MS		m				
EuropeanRBDCode	EUCD_RBD	string	24	Code for River Basin District the basin belongs to		m		1000	EUCD_RBD	RBD

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"River_" & ISO3166_CD Domain & RBDCode Domain	m		River_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the River		m				
EuropeanRiverCode	EUCD_RIV	string	24	International code for teh River	ISO3166_CD Domain & [MSCD_Riv]	m			EUCD_RIV	RWSeg
MSRiverCode	MSCD_RIV	string	22	National code for the River		m				
Length	LENGTHKM	double	9,2	Total length of the river		o				
AternativeName1	ALTNAME1	string	100	Alias 1 of the River, e.g. other writing or foreign name for rivers at boarder		o				
AlternativeName2	ALTNAME2	string	100	Alias 2 of the River		o				
AlternativeName3	ALTNAME3	string	100	Alias 1 of the River		o				
EuropeanRBCode	EUCD_RB	string	24	The code of the parent river basin (see coding system)		m			EUCD_RB	RivBasin

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"RWBody_" & ISO3166_CD Domain & RBDCode Domain	m		RWBody_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of the RW body		m				
EuropeanRWBCode	EUCD_RWB	string	24	International code for a RW body	ISO3166_CD Domain & [MSCD_RWB]	m				
MSRWBCode	MSCD_RWB	string	22	National code for a RW body		m				
EuropeanRWTypeCode	EUCD_RWTYP	string	24	International code for a RW type	ISO3166_CD Domain & [MSCD_RWTYP]	m			EUCD_RWTYP	RW_Types
EuropeanEcoRegionCode	ECOREG_CD	string	2	Ecoregion Codes as specified in WFD Annex XI	EcoReg Domain	m				
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
InsertedWhen	INS_WHEN	date		Moment of insertion in the database		m				
InsertedBy	INS_BY	string	15	Acronym of operator		m				
EuropeanRBCode	EUCD_RB	string	24	Unique code for a river basin at EU level	ISO3166_CD Domain & [MSCD_RB]	m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
StatusYear	STATUS_YR	string	4	Year of reporting of waterbody characterisation	YYYY	m				
HeavilyModified	MODIFIED	string	1	Whether the waterbody is heavily modified	YesNo Domain	m				
Artificial	ARTIFICIAL	string	1	Whether the waterbody is artificial	YesNo Domain	m				
AltitudeTypology	ALT_CAT	string	4	Altitude category according to WFD Annex II	AltitudeTyp Domain	m for System A				
GeologyTypology	GEOL_CAT	string	1	Geological category according to WFD Annex II	GeologyType Domain	m for System A				
SizeTypology	SIZE_CAT	string	2	Size based on catchment area according to WFD Annex II	SizeTyp Domain	m for System A				
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents LWbody		m		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents LWbody		m		48,2015468		
Risk_Date	RISK_DATE	date		date for the risk assessment	YYYYMMDD	m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
TotalRisk	RISK_TOTAL	integer	1	Risk of waterbody	Risk Domain	m				
RiskChemicalStatus	RISK_CHEM	integer	1	Risk category associated with the Chemical Status	Risk Domain	o				
RiskEcologicalStatus	RISK_ECO	integer	1	Risk category associated with the Ecological Status	Risk Domain	o				
GWBAssociation	GWB_ASSOC	string	1	Is the waterbody dynamically linked to any groundwater(s)	YesNoUnknown Domain	o				
ProtectedAreaAssociation	PA_ASSOC	string	1	Is the waterbody dynamically linked to any protected area(s)	YesNoUnknown Domain	o				
ReasonforRiskPointSourcePollution	RSN_P_POL	string	1	Is waterbody at risk as a result of point source pollution	YesNoUnknown Domain	o				
ReasonforRiskDiffusePollution	RSN_D_POL	string	1	Is waterbody at risk as a result of diffuse pollution	YesNoUnknown Domain	o				
ReasonforRiskWaterAbstraction	RSN_ABSTR	string	1	Is waterbody at risk as a result of water abstraction	YesNoUnknown Domain	o				
ReasonforRiskWaterFlowRegulation	RSN_FLOWR	string	1	Is waterbody at risk as a result of water flow regulations	YesNoUnknown Domain	o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
ReasonforRiskMorphologicalAlteration	RSN_MORPH	string	1	Is waterbody at risk as a result of morphological alterations	YesNoUnknown Domain	o				
FWStatusDate	FWSTAT_DAT	date		Date for which this FW status assessment is valid		m	2009			
Phytoplankton	PHYTO	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009	M = moderate		
Macrophyto	MAC_PHYTO	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009	M = moderate		
BenthicInvertebrates	BEN_INV	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009	M = moderate		
Fish	FISH	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009	M = moderate		
HydrologicalRegime	HYDRO_REG	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009	M = moderate		
RiverContinuity	RIV_CONT	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m				
MorphologicalConditions	MORPH_COND	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009	M = moderate		
PhysicoChemicalStatusDat	PCSTAT_DAT	date		Date for which this physico-chemical status assessment is valid		m	2009			
GeneralConditions	GEN_COND	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009			
SyntheticPollutants	SYNTH	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009			
NonSyntheticPollutants	NON_SYNTH	string	1	WFD Annex V 1.2.1	ClassificationStatus Domain	m	2009			
SWStatusDate	SWSTAT_DAT	date		Date for which this SW status assessment is valid	YYYYMMDD	m	2009	20050923		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
EcologicalStatus	ECO_STAT	string	1	WFD Annex V	ClassificationStatus Domain	m	2009	G = good		
EcologicalPotential	ECO_POT	string	1	WFD Annex V	ClassificationStatus Domain	m	2009	M = moderate		
NonCompliant	NON_COMP	string	1	WFD Annex V 1.4.2 (iii) wether the water body does not comply with environmental quality standards	Compliance Domain	m	2009	C		
ChemicalStatus	CHEM_STAT	string	1	WFD Annex V	ChemStatus Domain	m	2009	G		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"RWSeg_" & ISO3166_CD Domain & RBDCode Domain	m		RWSeg_AT1000	META_ID	Metadata
EuropeanRWSegCode	EUCD_RWSEG	string	50	International code for the river segment	ISO3166_CD Domain & [MSCD_RWSeg]	m				
MSRWSegCode	MSCD_RWSEG	string	48	National code for the segment		m				
EuropeanRWBCode	EUCD_RWB	string	24	International code of river water body to which this segment belongs	same as in table RWbody field EUCD_RWB	m			EUCD_RWB	RWbody
EuropeanRiverCode	EUCD_RIV	string	24	International code of River to which segment belongs	same as in table River field EUCD_Riv	m			EUCD_RIV	River
Name	NAME	string	100	Locally used name		m				
Continua	CONTINUA	string	1	Wheter river segment is and imaginary link segment to maintain network topology (e.g. imaginary rivers through lakes)	Continua Domain	m		Y		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
FlowDirection	FLOWDIR	string	1	Flow direction with respect to digitized direction	FlowDir Domain	m		W = With Digitized Direction		
WaterwayClass	WATERWAY	string	3	Classification of european inland waterways (ECE/TRANS/SC.3/131)	Waterway Domain	m		IV		
BoundaryType	BND_TYPE	string	6	Code for type of administrative boundary (e.g. state boundary, province boundary) that is part of the RWseg	BND_Type Domain	m		level0 = state boundaries		
RKMFrom	RKM_FROM	double	8,3	lower river km of the segment		o				
RKMTo	RKM_TO	double	8,3	higher river km of the segment		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"RWType_" & ISO3166_CD Domain & RBDCode Domain	m		RWType_AT1000	META_ID	Metadata
EuropeanRWTypeCode	EUCD_RWTYP	string	24	International code for a RW type	ISO3166_CD Domain & [MSCD_RWTYP]	m			EUCD_RWTYP	RWBody
MSLWTypeCode	MSCD_RWTYP	string	22	National code for a RW type		m				
Name	NAME	string	200	Locally used name of the RW type		m				
EuropeanRBDCode	EUCD_RBD	string	24	Unique code for a river basin district	ISO3166_CD Domain & [MSCD_RBD]	o		AT1000		
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
EuropeanEcoRegionCode	ECOREG_CD	string	2	Ecoregion Codes as specified in WFD Annex XI	EcoReg Domain	m				
AltitudeTypology	ALT_CAT	string	4	Altitude category according to WFD Annex II	AltitudeType Domain	m for System A, c for System B (either ALT_CAT or ALT_DESCR)				
AltitudeTypologyDescription	ALT_DESCR	string	100	Altitude according to WFD Annex II System B		c for System B (either ALT_CAT or ALT_DESCR)				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
GeologyTypology	GEOL_CAT	string	1	Geological category according to WFD Annex II	GeologyType Domain	m for System A, c for System B (either GEOL_CAT or GEOL_DESCR)				
GeologyTypologyDescription	GEOL_DESCR	string	100	Geology according to WFD Annex II System B		c for System B (either GEOL_CAT or GEOL_DESCR)				
SizeTypology	SIZE_CAT	string	2	Size based on catchment area according to WFD Annex II	SizeTyp Domain	m for System A, c for System B (either SIZE_CAT or SIZE_DESCR)				
SizeTypologyDescription	SIZE_DESCR	string	100	Size according to WFD Annex II System B		c for System B (either SIZE_CAT or SIZE_DESCR)				
LongitudeDescription	LON_DESCR	string	100	Longitude according to WFD Annex II System B		o				
LatitudeDescription	LAT_DESCR	string	100	Latitude according to WFD Annex II System B		o				
DistRiverSource	DIST_SOURC	string	100	Distance from river source according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
FlowEnergy	ENERGY	string	100	Flow energy according to WFD Annex II System B		o				
MeanWidth	AV_WIDTH	string	100	Mean water width according to WFD Annex II System B		o				
MeanDepth	AV_DEPTH	string	100	Mean water depth according to WFD Annex II System B		o				
MeanSlope	AV_SLOPE	string	100	Mean water slope according to WFD Annex II System B		o				
RiverMorphology	RIV_MORPH	string	100	Form and shape of main river bed according to WFD Annex II System B		o				
DischargeCategory	DISCHARGE	string	100	River discharge (flow) category according to WFD Annex II System B		o				
ValleyMorphology	VAL_MORPH	string	100	Valley shape according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
SolidsTransport	SOLIDS	string	100	Transport of solids according to WFD Annex II System B		o				
AcidNeutCapacity	ACID_NEUT	string	100	Acid neutralising capacity according to WFD Annex II System B		o				
MeanSubstratComp	SUBSTRATUM	string	100	Mean substratum composition according to WFD Annex II System B		o				
Chloride	CHLORIDE	string	100	Chloride according to WFD Annex II System B		o				
AirTempRange	AIR_T_RANG	string	100	Air temperature range according to WFD Annex II System B		o				
MeanAirTemp	AV_AIR_T	string	100	Mean air temperature according to WFD Annex II System B		o				
Precipitation	PPT	string	100	Precipitation according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"Settlement_" & ISO3166_CD Domain & RBDCode Domain	m		Settlement_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		o				
SettlementName	NAME	string	100	Locally used name or other description of the settlement		o				

State

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to metadata	"State_" & ISO3166_CD Domain & RBDCode Domain	m		State_AT1000	META_ID	Metadata
Name	NAME	string	30	Locally used name of the state		o		Österreich		
StateNameCode	ISO3166_CD	string	2	code for state names ISO3166_CD	ISO3166_CD Domain	m		AT		
PartOfDanubeRBD	DANUBERBD	string	1	shows if state has part of DRBD	YesNoUnknown Domain	m		Y = part of the Danube RBD		
Capital	CAPITAL	string	24	EU code for the capital city		o		AT8	EUCD_CITY	Cities
Government_Seat	GOVERNMENT	string	24	EU code for government seat		o		AT8	EUCD_CITY	Cities
ICPDR_Status	ICPDR	string	2	member status in ICPDR	ICPDRStatus Domain	m		FM = full member		
AreaKM2	AREAKM2	double	9,2	official size of the state in sqkm		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value	2006			
MetadataID	META_ID	string	24	Link to Metadata	"SWstn_" & ISO3166_CD Domain & RBDCode Domain	m	2006	SWStn_AT1000	META_ID	Metadata
Name	NAME	string	100	Locally used name of SWstation		m	2006			
EuropeanSWStCode	EUCD_SWST	string	24	International code for the SW station	ISO3166_CD Domain & [MSCD_SWSt]	m	2006			
MSSWStCode	MSCD_SWST	string	22	National code for the SW station		m	2006			
EuropeanWaterBodyCode	EUCD_BODY	string	24	Unique code of parent waterbody		m	2006		EUCD_RWB, EUCD_LWB, EUCD_CWB, EUCD_TWB	RWbody, LWBody, CWbody, TWbody
InsertedWhen	INS_WHEN	date		Moment of insertion in the database	YYYYMMDDhhmmss	m	2006			
InsertedBy	INS_BY	string	15	Acronym of operator		m	2006			
Depth	DEPTH	double	4	Depth in metres		o	2006			
Operational	OPERAT	string	1	Station Type	YesNo Domain	m	2006			
Surveillance	SURVEIL	string	1	Station Type	YesNo Domain	m	2006			
Drinking	DRINKING	string	1	Station Type	YesNo Domain	m	2006			
Investigative	INVEST	string	1	Station Type	YesNo Domain	m	2006			
Habitat	HABITAT	string	1	Station Type	YesNo Domain	m	2006			
Reference	REFERENCE	string	1	Station Type	YesNo Domain	m	2006			

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
SWType	SW_TYPE	string	2	Station for which type of surface water (e.g. river, lake)	SW Type Domain	m	2006	RW		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"TWBody_" & ISO3166_CD Domain & RBDCode Domain	m		TWBody_RO1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in square kilometers		m				
Name	NAME	string	10,0	Locally used name of the TW body		m				
EuropeanTWBCode	EUCD_TWB	string	24	International code for a TW body	ISO3166_CD Domain & [MSCD_TWB]	m				
MSTWBCode	MSCD_TWB	string	22	National code for a TW body		m				
EcoRegionCode	ECOREG_CD	string	2	Ecoregion to which a waterbody belongs		m			ECOREG_CD	Ecoreg
EuropeanTWTypeCode	EUCD_TWTYP	string	24	International Code for TW Type		m			EUCD_TWTYP	TW_Types
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
InsertedWhen	INS_WHEN	date		Moment of insertion in the database	YYYYMMDDhhmmss	m				
InsertedBy	INS_BY	string	15	Acronym of operator		m				
EuropeanRBCode	EUCD_RB	string	24	The code of the parent river basin (see coding system)		m			EUCD_RB	RivBasin

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
StatusYear	STATUS_YR	string	4	Year of reporting of waterbody characterisation	YYYY	m				
HeavilyModified	MODIFIED	string	1	Whether the waterbody is heavily modified	YesNo Domain	m				
Artificial	ARTIFICIAL	string	1	Whether the waterbody is artificial	YesNo Domain	m				
SalinityTypology	SALINITY	string	1	Salinity category according to WFD Annex II	Salinity Domain	c, m for System = A, o for System = B if use of predefined categories		F = Freshwater		
TidalTypology	TIDAL	string	5	Tidal range category according to WFD Annex II	TidalT Domain	c, m for System = A, o for System = B if use of predefined categories		MICRO		
Longitude	LONGITUDE	double	10,7	Longitude (decimal degree) in ETRS89 that represents TWbody		c, m if System = B		16,3958647		
Latitude	LATITUDE	double	10,7	Latitude (decimal degree) in ETRS89 that represents TWbody		c, m if System = B		48,2015468		
Risk_Date	RISK_DATE	date		date for the risk assessment	YYYYMMDD	m				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
TotalRisk	RISK_TOTAL	integer	1	Risk of waterbody	Risk Domain	m				
RiskChemicalStatus	RISK_CHEM	integer	1	Risk category associated with the Chemical Status	Risk Domain	o				
RiskEcologicalStatus	RISK_ECO	integer	1	Risk category associated with the Ecological Status	Risk Domain	o				
GWBAssociation	GWB_ASSOC	string	1	Is the waterbody dynamically linked to any groundwater(s)	YesNoUnknown Domain	o				
ProtectedAreaAssociation	PA_ASSOC	string	1	Is the waterbody dynamically linked to any protected area(s)	YesNoUnknown Domain	o				
ReasonforRiskPointSourcePollution	RSN_P_POL	string	1	Is waterbody at risk as a result of point source pollution	YesNoUnknown Domain	o				
ReasonforRiskDiffusePollution	RSN_D_POL	string	1	Is waterbody at risk as a result of diffuse pollution	YesNoUnknown Domain	o				
ReasonforRiskWaterAbstraction	RSN_ABSTR	string	1	Is waterbody at risk as a result of water abstraction	YesNoUnknown Domain	o				
ReasonforRiskWaterFlowRegulation	RSN_FLOWR	string	1	Is waterbody at risk as a result of water flow regulations	YesNoUnknown Domain	o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
ReasonforRiskMorphologicalAlteration	RSN_MORPH	string	1	Is waterbody at risk as a result of morphological alterations	YesNoUnknown Domain	o				
SalineEcolStatDate	SASTAT_DAT	date		Date for which this saline ecological status assessment is valid	YYYYMMDD	m	2009	20050923		
Phytoplankton	PHYTO	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009	M = moderate		
Macroalgae	MAC_ALGAE	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009	M = moderate		
Angiosperms	ANGIO	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009	M = moderate		
BenthicInvertebrates	BEN_INV	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009	M = moderate		
Fish	FISH	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009	M = moderate		
TidalRegime	TIDAL_REG	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009	M = moderate		
MorphologicalConditions	MORPH_COND	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009	M = moderate		
SWStatusDate	SWSTAT_DAT	date		Date for which this SW status assessment is valid	YYYYMMDD	m	2009	20050923		
EcologicalStatus	ECO_STAT	string	1	WFD Annex V	ClassificationStatus Domain	m	2009	G = good		
EclogicalPotential	ECO_POT	string	1	WFD Annex V	ClassificationStatus Domain	m	2009	M = moderate		

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
NonCompliant	NON_COMP	string	1	WFD Annex V 1.4.2 (iii) wether the water body does not comply with environmental quality standards	Compliant Domain	m	2009	C		
ChemicalStatus	CHEM_STAT	string	1	WFD Annex V	ChemStatus Domain	m	2009	G		
PhysicoChemicalStatusDa	PCSTAT_DAT	date		Date for which this physico-chemical status assessment is valid		m	2009			
GeneralConditions	GEN_COND	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009			
SyntheticPollutants	SYNTH	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009			
NonSyntheticPollutants	NON_SYNTH	string	1	WFD Annex V 1.2.3	ClassificationStatus Domain	m	2009			

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"TWType_" & ISO3166_CD Domain & RBDCode Domain	m		TWType_RO1000	META_ID	Metadata
EuropeanTWTypeCode	EUCD_TWTYP	string	24	International code for a TW type	ISO3166_CD Domain & [MSCD_TWTYP]	m				
MSTWTypeCode	MSCD_TWTYP	string	22	National code for a TW type		m				
Name	NAME	string	200	Locally used name of the TW type		m				
EuropeanRBDCode	EUCD_RBD	string	24	Unique code for a river basin district	ISO3166_CD Domain & [MSCD_RBD]	o		AT1000		
System	SYSTEM	string	1	Type of characterization of a waterbody	SystemAB Domain	m		A		
EuropeanEcoRegionCode	ECOREG_CD	string	2	Ecoregion Codes as specified in WFD Annex XI	EcoReg Domain	m				
SalinityTypology	SALINITY	string	1	Salinity category according to WFD Annex II System A	Salinity Domain	m for System A, c for System B (either SALINITY or SAL_DESCR)		F = Freshwater		
SalinityTypologyDescription	SAL_DESCR	string	100	Salinity according to WFD Annex II System B		c for System B (either SALINITY or SAL_DESCR)				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
TidalTypology	TIDAL	string	5	Tidal range category according to WFD Annex II System A	Tidal Domain	m for System A, c for System B (either TIDAL or TIDAL_DESC)				
TidalTypologyDescription	TIDAL_DESC	string	100	Tidal range according to WFD Annex II System B		o				
LatitudeDescription	LAT_DESCR	string	100	Latitude according to WFD Annex II System B		o				
LongitudeDescription	LON_DESCR	string	100	Longitude according to WFD Annex II System B		o				
Depth	DEPTH	string	100	Depth according to WFD Annex II System B		o				
CurrentVelocity	VELOCITY	string	100	Current velocity according to WFD Annex II System B		o				
WaveExposure	WAV_EXPO	string	100	Wave exposure according to WFD Annex II System B		o				
ResidenceTime	RES_TIME	string	100	Depth according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
WaterTemperatureRange	WATER_T_RA	string	100	Water temperature range according to WFD Annex II System B		o				
MeanWaterTemperature	AV_WATER_T	string	100	Mean water temperature according to WFD Annex II System B		o				
MixingCharacteristics	MIXING	string	100	Mixing cahracteristics according to WFD Annex II System B		o				
Turbidity	TURBIDITY	string	100	Turbidity according to WFD Annex II System B		o				
MeanSubstratComp	SUBSTRATUM	string	100	mean substratum composition according to WFD Annex II System B		o				
ShapeCharacter	SHAPE_CHAR	string	100	Shape according to WFD Annex II System B		o				

template description									info for database	
attribute name	**field name**	**field type***		**description of the attribute**	**values and codelists**	**obligation****	**obligation date according to WFD*****	**example values**	**key_to_field**	**linked_table**
DatabaseInternalKey	DANUBEID	double	10,0	Unique identifier for features in data set	automatic value	automatic value				
MetadataID	META_ID	string	24	Link to Metadata	"Wetland_" & ISO3166_CD Domain & RBDCode Domain	m		Wetland_AT1000	META_ID	Metadata
AreaKM2	AREAKM2	double	9,2	Area in sqare kilometers		o				
Name	NAME	string	100	Locally used name of the wetland		m				
EuropeanWetlandCode	EUCD_WETL	string	24	International wetland code	ISO3166_CD Domain & [MSCD_Wetl]	m				
MSWetlandCode	MSCD_WETL	string	22	National wetland code		m				

ANNEX B:

Metadata schema documentation

Schema **DRBGIS19115_metadata_v0_1.xsd**

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_metadata_v0_1.xsd
targetNamespace: **http://www.danubegis.org/metadata**

Elements
commonMetadata
DRBGIS19115_metadata_v0.1
hierarchyLevel
metadataCharacterSet
metadataContact
metadataDateStamp
metadataFileIdentifier
metadataLanguage
metadataStandardName
metadataStandardVersion

Complex types
MD_Metadata

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_CodeLists_v0_1.xsd
targetNamespace: **http://www.danubegis.org/metadata**

Simple types
CI_DateTypeCode
CI_RoleCode
ISO3166_countryCodes
ISO3166_countryNames
ISO639_2_languagesCodes
MD_CharacterSetCode
MD_ClassificationCode
MD_GeometricObjectTypeCode
MD_ProgressCode
MD_RestrictionCode
MD_ScopeCode
MD_SpatialRepresentationTypeCode
MD_TopicCategoryCode
MD_TopologyLevelCode
UomLength

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_basicTypes_v0_1.xsd
targetNamespace: **http://www.danubegis.org/metadata**

Simple types
LatitudeRangeType
LatitudeType
LongitudeRangeType
LongitudeType
NullEnumeration

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_Identification_v0_1.xsd
targetNamespace: **http://www.danubegis.org/metadata**

Elements
abstract
authority
characterSet
citation

Complex types
MD_DataIdentification
MD_Identification
MD_Identifier
MD_Keywords

code	MD_Resolution
dataExtent	
distance	
identificationInfo	
keyword	
language	
pointOfContact	
referenceDate	
resourceConstraints	
resourceMaintenance	
spatialRepresentationType	
spatialResolution	
status	
topicCategory	

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_Citation_v0_1.xsd
targetNamespace: **http://www.danubegis.org/metadata**

Elements	Complex types
address	CI_AddressType
alternateTitle	CI_CitationType
citedResponsibleParty	CI_ContactType
city	CI_DateType
contact	CI_ResponsiblePartyType
contactInfo	CI_TelephoneType
contactInstructions	CI_OnlineResourceType
country	
date	
dateType	
deliveryPoint	
edition	
editionDate	
electronicMailAddress	
facsimile	
hoursOfService	
individualName	
linkage	
onlineResource	
organisationName	
phone	
postalCode	
resourceIdentifier	
resourceIdentifierType	
role	
title	
voice	

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_Constraints_v0_1.xsd
targetNamespace: **http://www.danubegis.org/metadata**

Elements	Complex types
accessConstraints	MD_Constraints
classification	MD_LegalConstraints
dataConstraints	MD_SecurityConstraints
legalConstraints	

otherConstraints
securityConstraints
useConstraints
useLimitation
userNote

schema location: **V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_ReferenceSystem_v0_1.xsd**
targetNamespace: **http://www.danubegis.org/metadata**

Elements	Complex types
axisUnits	**MD_CRS**
codeSpace	**MD_EllipsoidParameters**
denominatorOfFlatteningRatio	**MD_GeometricObjects**
ellipsoid	**MD_ProjectionParameters**
falseEasting	**MD_ReferenceSystem**
falseEastingNorthingUnits	**RS_Identifier**
falseNorthing	**RS_ReferenceSystem**
geometricObject	
latitudeOfProjectionOrigin	
longitudeOfCentralMeridian	
name	
projection	
referenceSystem	
scaleFactorAtCenterLine	
scaleFactorAtEquator	
scaleFactorAtProjectionOrigin	
semiMajorAxis	
standardParallel	
zone	

schema location: **V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_Maintenance_v0_1.xsd**
targetNamespace: **http://www.danubegis.org/metadata**

Elements	Complex types
maintenanceNote	**MD_MaintenanceInformation**

schema location: **V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_Extent_v0_1.xsd**
targetNamespace: **http://www.danubegis.org/metadata**

Elements	Complex types
eastBoundLongitude	**EX_GeographicBoundingBoxType**
northBoundLatitude	
southBoundLatitude	
westBoundLongitude	

schema location: **V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_DataQuality_v0_1.xsd**
targetNamespace: **http://www.danubegis.org/metadata**

Elements	Complex types
dataQuality	**DQ_DataQuality**

level
scope
statement

DQ_Scope
LI_Lineage

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\DRBGIS19115_SpatialRepresentation_v0_1.xsd
targetNamespace: **http://www.danubegis.org/metadata**

Elements	Complex types
dataDetails	MD_GeometricObjectsType
topologyLevel	MD_SpatialRepresentation
	MD_VectorSpatialRepresentation

schema location: V:\Metadaten\DRBGIS19115_v01_webapp\XInclude.xsd
targetNamespace: **http://www.w3.org/2003/XInclude**

Elements	Complex types	Simple types
fallback	fallbackType	parseType
include	includeType	

element **commonMetadata**

diagram

namespace http://www.danubegis.org/metadata

type **MD_Metadata**

children **metadataFileIdentifier** **metadataLanguage** **metadataCharacterSet** **hierarchyLevel** **metadataDateStamp** **metadataStandardName** **metadataStandardVersion** **metadataContact**

used by element **DRBGIS19115_metadata_v0.1**

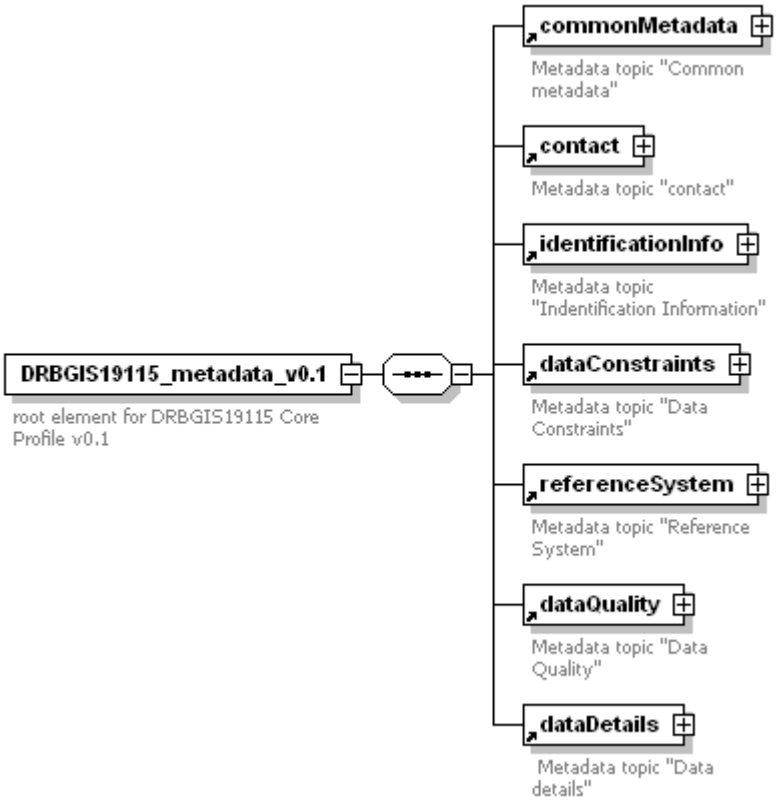
annotation documentation Metadata topic "Common metadata"

source

```
<xs:element name="commonMetadata" type="MD_Metadata">
 <xs:annotation>
  <xs:documentation>Metadata topic "Common metadata"</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **DRBGIS19115_metadata_v0.1**

diagram



namespace http://www.danubegis.org/metadata

children **commonMetadata** **contact** **identificationInfo** **dataConstraints** **referenceSystem** **dataQuality** **dataDetails**

annotation documentation root element for DRBGIS19115 Core Profile v0.1

source

```
<xs:element name="DRBGIS19115_metadata_v0.1">
 <xs:annotation>
  <xs:documentation>root element for DRBGIS19115 Core Profile v0.1</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="commonMetadata"/>
   <xs:element ref="contact"/>
   <xs:element ref="identificationInfo"/>
   <xs:element ref="dataConstraints"/>
   <xs:element ref="referenceSystem"/>
   <xs:element ref="dataQuality"/>
   <xs:element ref="dataDetails"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **hierarchyLevel**

diagram

namespace http://www.danubegis.org/metadata

type **MD_ScopeCode**

used by
- complexType **MD_Metadata**

facets
- enumeration attribute
- enumeration attributeType
- enumeration collectionHardware
- enumeration collectionSession
- enumeration dataset
- enumeration series
- enumeration nonGeographicDataset
- enumeration dimensionGroup
- enumeration feature
- enumeration featureType
- enumeration propertyType
- enumeration fieldSession
- enumeration software
- enumeration service
- enumeration model
- enumeration nationalContribution

annotation
- documentation 6: Metadata hierarchy level

source

```
<xs:element name="hierarchyLevel" type="MD_ScopeCode" id="mdHrLv">
 <xs:annotation>
  <xs:documentation>6: Metadata hierarchy level</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **metadataCharacterSet**

diagram

namespace http://www.danubegis.org/metadata

type **MD_CharacterSetCode**

used by
- complexType **MD_Metadata**

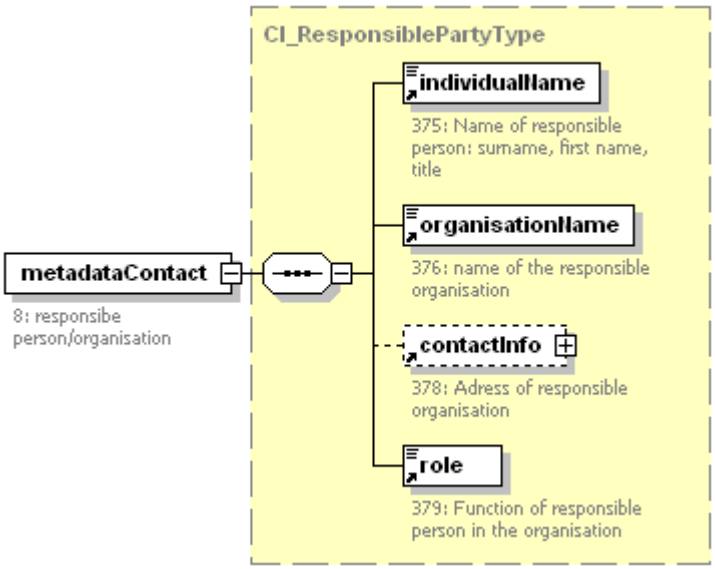
facets
- enumeration ucs2
- enumeration ucs4
- enumeration utf7
- enumeration utf8
- enumeration utf16
- enumeration 8859part1
- enumeration 8859part2
- enumeration 8859part3
- enumeration 8859part4
- enumeration 8859part5
- enumeration 8859part6
- enumeration 8859part7
- enumeration 8859part8
- enumeration 8859part9
- enumeration 8859part11
- enumeration 8859part14
- enumeration 8859part15
- enumeration jis
- enumeration shiftJIS
- enumeration eucJP
- enumeration usAscii
- enumeration ebcdic
- enumeration eucKR
- enumeration big5
- enumeration 8859part10
- enumeration 8859part13

annotation documentation 4: Metadata character set

source
```
<xs:element name="metadataCharacterSet" type="MD_CharacterSetCode" nillable="true" id="mdChar">
  <xs:annotation>
    <xs:documentation>4: Metadata character set</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **metadataContact**

diagram



namespace http://www.danubegis.org/metadata

type **CI_ResponsiblePartyType**

children **individualName** **organisationName** **contactInfo** **role**

used by complexType **MD_Metadata**

annotation documentation 8: responsibe person/organisation

source
```
<xs:element name="metadataContact" type="CI_ResponsiblePartyType" id="mdContact">
  <xs:annotation>
    <xs:documentation>8: responsibe person/organisation</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **metadataDateStamp**

diagram

namespace http://www.danubegis.org/metadata

type **xs:dateTime**

used by complexType **MD_Metadata**

annotation documentation 9: Date of metadata creation

source
```
<xs:element name="metadataDateStamp" type="xs:dateTime" id="mdDateSt">
  <xs:annotation>
    <xs:documentation>9: Date of metadata creation</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **metadataFileIdentifier**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **MD_Metadata**

annotation documentation 2: Unique identifier for the metadata file

source

```
<xs:element name="metadataFileIdentifier" type="xs:string" id="mdFileID">
 <xs:annotation>
  <xs:documentation>2: Unique identifier for the metadata file</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **metadataLanguage**

diagram

namespace http://www.danubegis.org/metadata

type **ISO639_2_languagesCodes**

used by complexType **MD_Metadata**

facets
enumeration alb
enumeration bos
enumeration bul
enumeration cze
enumeration dan
enumeration dut
enumeration eng
enumeration est
enumeration fin
enumeration fre
enumeration ger
enumeration gre
enumeration hun
enumeration ita
enumeration lav
enumeration lit
enumeration mac
enumeration mlt
enumeration mol
enumeration pol
enumeration por
enumeration rum
enumeration scc
enumeration scr
enumeration slo
enumeration slv
enumeration spa
enumeration swe
enumeration ukr

annotation documentation 3: metadata language

source

```
<xs:element name="metadataLanguage" type="ISO639_2_languagesCodes" id="mdLang">
 <xs:annotation>
  <xs:documentation>3: metadata language</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **metadataStandardName**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by
- complexType **MD_Metadata**

annotation
- documentation 10: Metadata standard name

source

```
<xs:element name="metadataStandardName" type="xs:string" id="mdStanName">
  <xs:annotation>
    <xs:documentation>10: Metadata standard name</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **metadataStandardVersion**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by
- complexType **MD_Metadata**

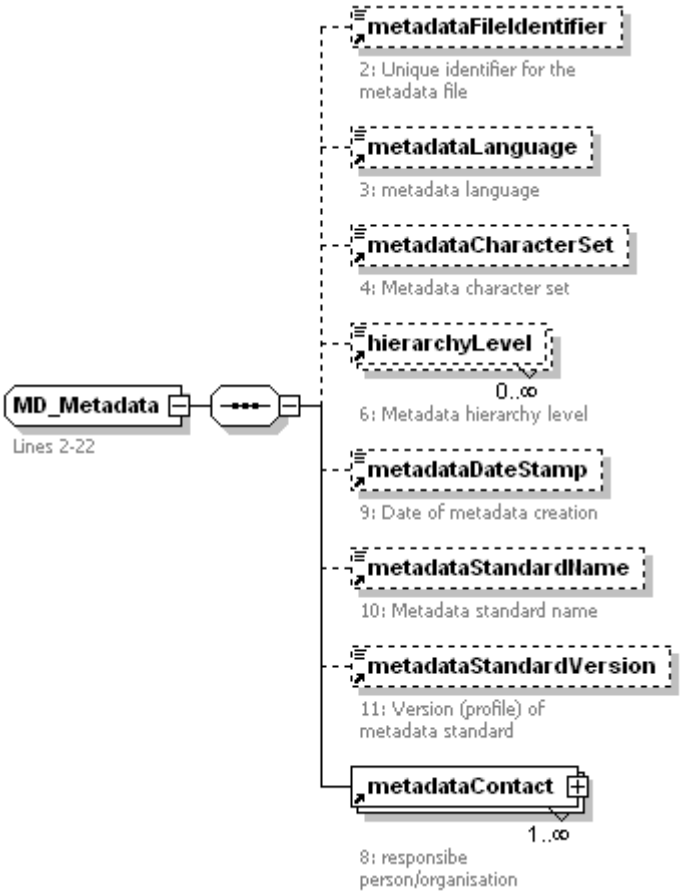
annotation
- documentation 11: Version (profile) of metadata standard

source

```
<xs:element name="metadataStandardVersion" type="xs:string" id="mdStanVer">
  <xs:annotation>
    <xs:documentation>11: Version (profile) of
metadata standard</xs:documentation>
  </xs:annotation>
</xs:element>
```

complexType **MD_Metadata**

diagram



namespace http://www.danubegis.org/metadata

children **metadataFileIdentifier** **metadataLanguage** **metadataCharacterSet** **hierarchyLevel** **metadataDateStamp** **metadataStandardName** **metadataStandardVersion** **metadataContact**

used by element **commonMetadata**

annotation documentation Lines 2-22

source

```
<xs:complexType name="MD_Metadata">
  <xs:annotation>
    <xs:documentation>Lines 2-22</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="metadataFileIdentifier" minOccurs="0"/>
    <xs:element ref="metadataLanguage" minOccurs="0"/>
    <xs:element ref="metadataCharacterSet" minOccurs="0"/>
    <xs:element ref="hierarchyLevel" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element ref="metadataDateStamp" minOccurs="0"/>
    <xs:element ref="metadataStandardName" minOccurs="0"/>
    <xs:element ref="metadataStandardVersion" minOccurs="0"/>
    <xs:element ref="metadataContact" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

simpleType **CI_DateTypeCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **dateType**

facets
enumeration creationDate
enumeration publicationDate
enumeration revisionDate

enumeration referenceDate

annotation documentation CI_DateTypeCode Code-List (B.5.2):
creation (001): date identifies when the resource was brought into existence
publication (002): date identifies when the resource was issued
revision (003): date identifies when the resource was examined or re-examined and improved or amended

source
```
<xs:simpleType name="CI_DateTypeCode">
 <xs:annotation>
  <xs:documentation>CI_DateTypeCode Code-List (B.5.2):
creation (001): date identifies when the resource was brought into existence
publication (002): date identifies when the resource was issued
revision (003): date identifies when the resource was examined or re-examined and improved or amended</xs:documentation>
 </xs:annotation>
 <xs:restriction base="xs:string">
  <xs:enumeration value="creationDate"/>
  <xs:enumeration value="publicationDate"/>
  <xs:enumeration value="revisionDate"/>
  <xs:enumeration value="referenceDate"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **CI_RoleCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **role**

facets
enumeration resourceProvider
enumeration custodian
enumeration owner
enumeration user
enumeration distributor
enumeration originator
enumeration pointOfContact
enumeration principalInvestigator
enumeration processor
enumeration publisher

annotation documentation CI_RoleCode CodeList (B.5.5): function performed by responsible party:
resourceProvider (001): party that supplies the resource
custodian (002): party that accepts accountability and responsibility for the data and ensures appropriate care and maintenance of the resource
owner (003): party that owns the resource
user (004): party who uses the resource
distributor (005): party who distributes the resource
originator (006): party who created the resource
pointOfContact (007): party who can be contacted for acquiring knowledge about or acquisition of the resource
principalInvestigator (008): key party responsible for gathering information and conducting research
processor (009): party who has processed the data in a manner such that the resource has been modified
publisher (010): party who published the resource

source
```
<xs:simpleType name="CI_RoleCode">
 <xs:annotation>
  <xs:documentation>CI_RoleCode CodeList (B.5.5): function performed by responsible party:
resourceProvider (001): party that supplies the resource
custodian (002): party that accepts accountability and responsibility for the data and ensures appropriate care and
maintenance of the resource
owner (003): party that owns the resource
user (004): party who uses the resource
distributor (005): party who distributes the resource
originator (006): party who created the resource
pointOfContact (007): party who can be contacted for acquiring knowledge about or acquisition of the resource
principalInvestigator (008): key party responsible for gathering information and conducting research
processor (009): party who has processed the data in a manner such that the resource has been modified
```

```
                                        publisher (010): party who published the resource
                                        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
      <xs:enumeration value="resourceProvider"/>
      <xs:enumeration value="custodian"/>
      <xs:enumeration value="owner"/>
      <xs:enumeration value="user"/>
      <xs:enumeration value="distributor"/>
      <xs:enumeration value="originator"/>
      <xs:enumeration value="pointOfContact"/>
      <xs:enumeration value="principalInvestigator"/>
      <xs:enumeration value="processor"/>
      <xs:enumeration value="publisher"/>
    </xs:restriction>
  </xs:simpleType>
```

simpleType **ISO3166_countryCodes**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **country**

facets
- enumeration AL
- enumeration AT
- enumeration BA
- enumeration BG
- enumeration CH
- enumeration CS
- enumeration CZ
- enumeration DE
- enumeration HR
- enumeration HU
- enumeration IT
- enumeration MD
- enumeration MK
- enumeration PL
- enumeration RO
- enumeration SI
- enumeration SK
- enumeration UA

annotation documentation ISO3166: alpha-2 codes list, restricted to DRBGIS relevant countries

source

```
  <xs:simpleType name="ISO3166_countryCodes">
    <xs:annotation>
      <xs:documentation>ISO3166: alpha-2 codes list, restricted to DRBGIS relevant countries
                                        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
      <xs:enumeration value="AL"/>
      <xs:enumeration value="AT"/>
      <xs:enumeration value="BA"/>
      <xs:enumeration value="BG"/>
      <xs:enumeration value="CH"/>
      <xs:enumeration value="CS"/>
      <xs:enumeration value="CZ"/>
      <xs:enumeration value="DE"/>
      <xs:enumeration value="HR"/>
      <xs:enumeration value="HU"/>
      <xs:enumeration value="IT"/>
      <xs:enumeration value="MD"/>
      <xs:enumeration value="MK"/>
      <xs:enumeration value="PL"/>
      <xs:enumeration value="RO"/>
      <xs:enumeration value="SI"/>
      <xs:enumeration value="SK"/>
      <xs:enumeration value="UA"/>
    </xs:restriction>
  </xs:simpleType>
```

simpleType **ISO3166_countryNames**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

facets
- enumeration Albania
- enumeration Austria
- enumeration Bosnia and Herzegovina
- enumeration Bulgaria
- enumeration Switzerland
- enumeration Serbia and Montenegro
- enumeration Czech Republic
- enumeration Germany
- enumeration Croatia
- enumeration Hungary
- enumeration Italy
- enumeration Moldova, Republic of
- enumeration Macedonia, The former Yugoslav Republic of
- enumeration Poland
- enumeration Romania
- enumeration Slovenia
- enumeration Slovakia
- enumeration Ukraine

annotation
- documentation ISO3166: country names list, restricted to DRBGIS relevant countries

source

```
<xs:simpleType name="ISO3166_countryNames">
 <xs:annotation>
  <xs:documentation>ISO3166: country names list, restricted to DRBGIS relevant countries
                    </xs:documentation>
 </xs:annotation>
 <xs:restriction base="xs:string">
  <xs:enumeration value="Albania"/>
  <xs:enumeration value="Austria"/>
  <xs:enumeration value="Bosnia and Herzegovina"/>
  <xs:enumeration value="Bulgaria"/>
  <xs:enumeration value="Switzerland"/>
  <xs:enumeration value="Serbia and Montenegro"/>
  <xs:enumeration value="Czech Republic"/>
  <xs:enumeration value="Germany"/>
  <xs:enumeration value="Croatia"/>
  <xs:enumeration value="Hungary"/>
  <xs:enumeration value="Italy"/>
  <xs:enumeration value="Moldova, Republic of"/>
  <xs:enumeration value="Macedonia, The former Yugoslav Republic of"/>
  <xs:enumeration value="Poland"/>
  <xs:enumeration value="Romania"/>
  <xs:enumeration value="Slovenia"/>
  <xs:enumeration value="Slovakia"/>
  <xs:enumeration value="Ukraine"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **ISO639_2_languagesCodes**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by
- elements **language** **metadataLanguage**

facets
- enumeration alb
- enumeration bos
- enumeration bul
- enumeration cze
- enumeration dan
- enumeration dut
- enumeration eng
- enumeration est
- enumeration fin
- enumeration fre
- enumeration ger
- enumeration gre
- enumeration hun
- enumeration ita

enumeration lav
enumeration lit
enumeration mac
enumeration mlt
enumeration mol
enumeration pol
enumeration por
enumeration rum
enumeration scc
enumeration scr
enumeration slo
enumeration slv
enumeration spa
enumeration swe
enumeration ukr

annotation documentation ISO639-2: language code list, restricted to DRBGIS relevant countries:
dan (001): Danish
ger (002): German
eng (003): English
est (004): Estonian
fin (005): Finnish
fre (006): French
gre (007): Greek
ita (008): Italian
lav (009): Latvian
lit (010): Lithuanian
mlt (011): Maltese
dut (012): Dutch, Flemish
pol (013): Polish
por (014): Portuguese
swe (015): Swedish
slo (016): Slovak
slv (017): Slovenian
spa (018): Spanish
cze (019): Czech
hun (020): Hungarian
alb (021): Albanian
bos (022): Bosnian
bul (023): Bulgarian
scr (024): Croatian
mac (025): Macedonian
mol (026): Moldovian
rum (027): Romanian
scc (028): Serbian
ukr (029): Ukrainian

source
```
<xs:simpleType name="ISO639_2_languagesCodes">
  <xs:annotation>
    <xs:documentation>ISO639-2: language code list, restricted to DRBGIS relevant countries:
dan (001): Danish
ger (002): German
eng (003): English
est (004): Estonian
fin (005): Finnish
fre (006): French
gre (007): Greek
ita (008): Italian
lav (009): Latvian
lit (010): Lithuanian
mlt (011): Maltese
dut (012): Dutch, Flemish
pol (013): Polish
por (014): Portuguese
swe (015): Swedish
slo (016): Slovak
slv (017): Slovenian
spa (018): Spanish
cze (019): Czech
hun (020): Hungarian
alb (021): Albanian
bos (022): Bosnian
bul (023): Bulgarian
scr (024): Croatian
mac (025): Macedonian
mol (026): Moldovian
rum (027): Romanian
```

```
                                scc (028): Serbian
                                ukr (029): Ukrainian
                                </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
     <xs:enumeration value="alb"/>
     <xs:enumeration value="bos"/>
     <xs:enumeration value="bul"/>
     <xs:enumeration value="cze"/>
     <xs:enumeration value="dan"/>
     <xs:enumeration value="dut"/>
     <xs:enumeration value="eng"/>
     <xs:enumeration value="est"/>
     <xs:enumeration value="fin"/>
     <xs:enumeration value="fre"/>
     <xs:enumeration value="ger"/>
     <xs:enumeration value="gre"/>
     <xs:enumeration value="hun"/>
     <xs:enumeration value="ita"/>
     <xs:enumeration value="lav"/>
     <xs:enumeration value="lit"/>
     <xs:enumeration value="mac"/>
     <xs:enumeration value="mlt"/>
     <xs:enumeration value="mol"/>
     <xs:enumeration value="pol"/>
     <xs:enumeration value="por"/>
     <xs:enumeration value="rum"/>
     <xs:enumeration value="scc"/>
     <xs:enumeration value="scr"/>
     <xs:enumeration value="slo"/>
     <xs:enumeration value="slv"/>
     <xs:enumeration value="spa"/>
     <xs:enumeration value="swe"/>
     <xs:enumeration value="ukr"/>
    </xs:restriction>
   </xs:simpleType>
```

simpleType **MD_CharacterSetCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by elements **characterSet** **metadataCharacterSet**

facets
- enumeration ucs2
- enumeration ucs4
- enumeration utf7
- enumeration utf8
- enumeration utf16
- enumeration 8859part1
- enumeration 8859part2
- enumeration 8859part3
- enumeration 8859part4
- enumeration 8859part5
- enumeration 8859part6
- enumeration 8859part7
- enumeration 8859part8
- enumeration 8859part9
- enumeration 8859part11
- enumeration 8859part14
- enumeration 8859part15
- enumeration jis
- enumeration shiftJIS
- enumeration eucJP
- enumeration usAscii
- enumeration ebcdic
- enumeration eucKR
- enumeration big5
- enumeration 8859part10
- enumeration 8859part13

annotation documentation MD_CharacterSetCode: Annex B, Code-List (B.5.10):
ucs2 (001): 16-bit fixed size Universal Character Set, based on ISO/IEC 10646
ucs4 (002): 32-bit fixed size Universal Character Set, based on ISO/IEC 10646
utf7 (003): 7-bit variable size UCS Transfer Format, based on ISO/IEC

10646
utf8 (004): 8-bit variable size UCS Transfer Format, based on ISO/IEC 10646
utf16 (005): 16-bit variable size UCS Transfer Format, based on ISO/IEC 10646
8859part1 (006): ISO/IEC 8859-1, Information technology – 8-bit single-byte coded graphic character sets – Part 1 Latin alphabet No. 1
8859part2 (007): ISO/IEC 8859-2, Information technology – 8-bit single-byte coded graphic character sets – Part 2 Latin alphabet No. 2
8859part3 (008): ISO/IEC 8859-3, Information technology – 8-bit single-byte coded graphic character sets – Part 3 Latin alphabet No. 3
8859part4 (009): ISO/IEC 8859-4, Information technology – 8-bit single-byte coded graphic character sets – Part 4 Latin alphabet No. 4
8859part5 (010): ISO/IEC 8859-5, Information technology – 8-bit single-byte coded graphic character sets – Part 5 Latin/Cyrillic alphabet
8859part6 (011): ISO/IEC 8859-6, Information technology – 8-bit single-byte coded graphic character sets – Part 6 Latin/Arabic alphabet
8859part7 (012): ISO/IEC 8859-7, Information technology – 8-bit single-byte coded graphic character sets – Part 7 Latin/Greek alphabet
8859part8 (013): ISO/IEC 8859-8, Information technology – 8-bit single-byte coded graphic character sets – Part 8 Latin/Hebrew alphabet
8859part9 (014): ISO/IEC8859-9, Information technology – 8-bit single-byte coded graphiccharacter sets – Part 9 Latin alphabet No. 5
8859part11 (015): thai code set
8859part14 (016): latin-8 code set
8859part15 (017): latin-9 code set
jis (018): japanese code set used for electronic transmission
shiftJIS (019): japanese code set used on MS-DOS based machines
eucJP (020): japanese code set used on UNIX based machines
usAscii (021): united states ASCII code set (ISO 646 US)
ebcdic (022): ibm mainframe code set
eucKR (023): korean code set
big5 (024): taiwanese code set
8859part10 (025): latin-6 code set
8859part13 (026): latin-7 code set

source

```
<xs:simpleType name="MD_CharacterSetCode">
  <xs:annotation>
    <xs:documentation>MD_CharacterSetCode: Annex B, Code-List (B.5.10):
                      ucs2 (001): 16-bit fixed size Universal Character Set, based on ISO/IEC 10646
                      ucs4 (002): 32-bit fixed size Universal Character Set, based on ISO/IEC 10646
                      utf7 (003): 7-bit variable size UCS Transfer Format, based on ISO/IEC 10646
                      utf8 (004): 8-bit variable size UCS Transfer Format, based on ISO/IEC 10646
                      utf16 (005): 16-bit variable size UCS Transfer Format, based on ISO/IEC 10646
                      8859part1 (006): ISO/IEC 8859-1, Information technology – 8-bit single-byte coded
graphic character sets – Part 1 Latin alphabet No. 1
                      8859part2 (007): ISO/IEC 8859-2, Information technology – 8-bit single-byte coded
graphic character sets – Part 2 Latin alphabet No. 2
                      8859part3 (008): ISO/IEC 8859-3, Information technology – 8-bit single-byte coded
graphic character sets – Part 3 Latin alphabet No. 3
                      8859part4 (009): ISO/IEC 8859-4, Information technology – 8-bit single-byte coded
graphic character sets – Part 4 Latin alphabet No. 4
                      8859part5 (010): ISO/IEC 8859-5, Information technology – 8-bit single-byte coded
graphic character sets – Part 5 Latin/Cyrillic alphabet
                      8859part6 (011): ISO/IEC 8859-6, Information technology – 8-bit single-byte coded
graphic character sets – Part 6 Latin/Arabic alphabet
                      8859part7 (012): ISO/IEC 8859-7, Information technology – 8-bit single-byte coded
graphic character sets – Part 7 Latin/Greek alphabet
                      8859part8 (013): ISO/IEC 8859-8, Information technology – 8-bit single-byte coded
graphic character sets – Part 8 Latin/Hebrew alphabet
                      8859part9 (014): ISO/IEC8859-9, Information technology – 8-bit single-byte coded
graphiccharacter sets – Part 9 Latin alphabet No. 5
                      8859part11 (015): thai code set
                      8859part14 (016): latin-8 code set
                      8859part15 (017): latin-9 code set
                      jis (018): japanese code set used for electronic transmission
                      shiftJIS (019): japanese code set used on MS-DOS based machines
                      eucJP (020): japanese code set used on UNIX based machines
                      usAscii (021): united states ASCII code set (ISO 646 US)
                      ebcdic (022): ibm mainframe code set
                      eucKR (023): korean code set
                      big5 (024): taiwanese code set
                      8859part10 (025): latin-6 code set
                      8859part13 (026): latin-7 code set
                      </xs:documentation>
  </xs:annotation>
```

```
    <xs:restriction base="xs:string">
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      <xs:enumeration value="ucs4"/>
      <xs:enumeration value="utf7"/>
      <xs:enumeration value="utf8"/>
      <xs:enumeration value="utf16"/>
      <xs:enumeration value="8859part1"/>
      <xs:enumeration value="8859part2"/>
      <xs:enumeration value="8859part3"/>
      <xs:enumeration value="8859part4"/>
      <xs:enumeration value="8859part5"/>
      <xs:enumeration value="8859part6"/>
      <xs:enumeration value="8859part7"/>
      <xs:enumeration value="8859part8"/>
      <xs:enumeration value="8859part9"/>
      <xs:enumeration value="8859part11"/>
      <xs:enumeration value="8859part14"/>
      <xs:enumeration value="8859part15"/>
      <xs:enumeration value="jis"/>
      <xs:enumeration value="shiftJIS"/>
      <xs:enumeration value="eucJP"/>
      <xs:enumeration value="usAscii"/>
      <xs:enumeration value="ebcdic"/>
      <xs:enumeration value="eucKR"/>
      <xs:enumeration value="big5"/>
      <xs:enumeration value="8859part10"/>
      <xs:enumeration value="8859part13"/>
    </xs:restriction>
  </xs:simpleType>
```

simpleType **MD_ClassificationCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **classification**

facets
- enumeration unclassified
- enumeration restricted
- enumeration confidential
- enumeration secret

annotation documentation MD_ClassificationCode Code-List (B.5.11)
unclassified (001): available for general disclosure
restricted (002): not for general disclosure
confidential (003): available for someone who can be entrusted with information
secret (004): kept or meant to be kept private, unknown or hidden from all but a selected group of people

source

```
<xs:simpleType name="MD_ClassificationCode">
  <xs:annotation>
    <xs:documentation>MD_ClassificationCode  Code-List (B.5.11)
                      unclassified (001): available for general disclosure
                      restricted (002): not for general disclosure
                      confidential (003): available for someone who can be entrusted with information
                      secret (004): kept or meant to be kept private, unknown or hidden from all but a selected
group of people
                      </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="unclassified"/>
    <xs:enumeration value="restricted"/>
    <xs:enumeration value="confidential"/>
    <xs:enumeration value="secret"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **MD_GeometricObjectTypeCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by elements **MD_GeometricObjects/geometricObject** **dataDetails/geometricObjects**
MD_VectorSpatialRepresentation/geometricObjects
MD_GeometricObjectsType/geometricObjectType

facets
enumeration complex
enumeration composite
enumeration curve
enumeration point
enumeration solid
enumeration surface

annotation documentation MD_MD_GeometricObjectTypeCode-List (B.5.11)
complex (001): set of geometric primitives such that their boundaries can be represented as a union of other primitives
composite (002): connected set of curves, solids or surfaces
curve (003): bounded, 1-dimensional geometric primitive, representing the continuous image of a line
point (004): zero-dimensional geometric primitive, representing a position but not having an extent
solid (005): bounded, connected 3-dimensional geometric primitive, representing the continuous image of a region of space
surface (006): bounded, connected 2-dimensional geometric primitive, representing the continuous image of a region of a plane

source

```
<xs:simpleType name="MD_GeometricObjectTypeCode">
 <xs:annotation>
  <xs:documentation>MD_MD_GeometricObjectTypeCode-List (B.5.11)
complex (001): set of geometric primitives such that their boundaries can be represented as a union of other primitives
composite (002): connected set of curves, solids or surfaces
curve (003): bounded, 1-dimensional geometric primitive, representing the continuous image of a line
point (004): zero-dimensional geometric primitive, representing a position but not having an extent
solid (005): bounded, connected 3-dimensional geometric primitive, representing the continuous image of a region of space
surface (006): bounded, connected 2-dimensional geometric primitive, representing the continuous image of a region of a plane
  </xs:documentation>
 </xs:annotation>
 <xs:restriction base="xs:string">
  <xs:enumeration value="complex"/>
  <xs:enumeration value="composite"/>
  <xs:enumeration value="curve"/>
  <xs:enumeration value="point"/>
  <xs:enumeration value="solid"/>
  <xs:enumeration value="surface"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **MD_ProgressCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **status**

facets
enumeration completed
enumeration historicalArchive
enumeration owner
enumeration onGoing
enumeration planned
enumeration required
enumeration underDevelopment

annotation documentation MD_ProgressCode Code-List (B.5.23):
completed (001): production of the data has been completed
historicalArchive (002): data has been stored in an offline storage facility
obsolete (003): data is no longer relevant
onGoing (004): data is continually being updated
planned (005): fixed date has been established upon or by which the data will be created or updated
required (006): data needs to be generated or updated

underDevelopment (007): data is currently in the process of being created

source

```
<xs:simpleType name="MD_ProgressCode">
 <xs:annotation>
  <xs:documentation>MD_ProgressCode  Code-List (B.5.23):
                    completed (001):  production of the data has been completed
                    historicalArchive (002): data has been stored in an offline storage facility
                    obsolete (003): data is no longer relevant
                    onGoing (004): data is continually being updated
                    planned (005): fixed date has been established upon or by which the data will be created or updated
                    required (006): data needs to be generated or updated
                    underDevelopment (007): data is currently in the process of being created
                    </xs:documentation>
 </xs:annotation>
 <xs:restriction base="xs:string">
  <xs:enumeration value="completed"/>
  <xs:enumeration value="historicalArchive"/>
  <xs:enumeration value="owner"/>
  <xs:enumeration value="onGoing"/>
  <xs:enumeration value="planned"/>
  <xs:enumeration value="required"/>
  <xs:enumeration value="underDevelopment"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **MD_RestrictionCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by elements **accessConstraints** **useConstraints**

facets
- enumeration copyright
- enumeration patent
- enumeration patentPending
- enumeration trademark
- enumeration license
- enumeration intellectualPropertyRights
- enumeration restricted
- enumeration otherRestrictions

annotation documentation MD_RestrictionCode Code-List (B.5.24)
copyright (001): exclusive right to the publication, production, or sale of the rights to a literary, dramatic, musical, or artistic work, or to the use of a commercial print or label, granted by law for a specified period of time to an author, composer, artist, distributor
patent (002): government has granted exclusive right to make, sell, use or license an invention or discovery
patentPending (003): produced or sold information awaiting a patent
trademark (004): a name, symbol, or other device identifying a product, officially registered and legally restricted to the use of the owner or manufacturer
license (005): formal permission to do something
intellectualPropertyRights (006): rights to financial benefit from and control of distribution of non-tangible property that is a result of creativity
restricted (007): withheld from general circulation or disclosure
otherRestrictions (008): limitation not listed

source

```
<xs:simpleType name="MD_RestrictionCode">
 <xs:annotation>
  <xs:documentation>MD_RestrictionCode  Code-List (B.5.24)
                    copyright (001): exclusive right to the publication, production, or sale of the rights to a literary, dramatic, musical, or artistic work, or to the use of a commercial print or label, granted by law for a specified period of time to an author, composer, artist, distributor
                    patent (002): government has granted exclusive right to make, sell, use or license an invention or discovery
                    patentPending (003): produced or sold information awaiting a patent
                    trademark (004): a name, symbol, or other device identifying a product, officially registered and legally restricted to the use of the owner or manufacturer
                    license (005): formal permission to do something
                    intellectualPropertyRights (006): rights to financial benefit from and control of distribution of non-tangible property that is a result of creativity
                    restricted (007): withheld from general circulation or disclosure
```

```
                                otherRestrictions (008): limitation not listed
                                </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
      <xs:enumeration value="copyright"/>
      <xs:enumeration value="patent"/>
      <xs:enumeration value="patentPending"/>
      <xs:enumeration value="trademark"/>
      <xs:enumeration value="license"/>
      <xs:enumeration value="intellectualPropertyRights"/>
      <xs:enumeration value="restricted"/>
      <xs:enumeration value="otherRestrictions"/>
    </xs:restriction>
  </xs:simpleType>
```

simpleType **MD_ScopeCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by elements **hierarchyLevel** **level**

facets
- enumeration attribute
- enumeration attributeType
- enumeration collectionHardware
- enumeration collectionSession
- enumeration dataset
- enumeration series
- enumeration nonGeographicDataset
- enumeration dimensionGroup
- enumeration feature
- enumeration featureType
- enumeration propertyType
- enumeration fieldSession
- enumeration software
- enumeration service
- enumeration model
- enumeration nationalContribution

annotation documentation

```
MD_ScopeCodeType (B.5.25) Hierarchy level code,
                                class of information to which the referencing entityapplies
                                attribute (001): information applies to the attribute class
                                attributeType (002): information applies to the characteristic of a
feature
                                collectionHardware (003): information applies to the collection
hardware class
                                collectionSession (004): information applies to the collection session
                                dataset (005): information applies to the dataset
                                series (006): information applies to the series
                                nonGeographicDataset (007): information applies to non-geographic
data
                                dimensionGroup (008): information applies to a dimension group
                                feature (009): information applies to a feature
                                featureType (010): information applies to a feature type
                                propertyType (011): information applies to a property type
                                fieldSession (012): information applies to a field session
                                software (013): information applies to a computer program or routine
                                service (014): information applies to a capability which a service
provider entity makes available to a service user
                                                entity through a set of interfaces that define a
behaviour, such as a use case
                                model (015): information applies to a copy or imitation of an existing or
hypothetical object
                                nationalContribution (016): information applies to the national
contribution to the dataset
```

source

```
<xs:simpleType name="MD_ScopeCode">
  <xs:annotation>
    <xs:documentation>MD_ScopeCodeType (B.5.25) Hierarchy level code,
                                class of information to which the referencing entityapplies
                                attribute (001): information applies to the attribute class
                                attributeType (002): information applies to the characteristic of a feature
                                collectionHardware (003): information applies to the collection hardware class
                                collectionSession (004): information applies to the collection session
                                dataset (005): information applies to the dataset
                                series (006): information applies to the series
```

nonGeographicDataset (007): information applies to non-geographic data
dimensionGroup (008): information applies to a dimension group
feature (009): information applies to a feature
featureType (010): information applies to a feature type
propertyType (011): information applies to a property type
fieldSession (012): information applies to a field session
software (013): information applies to a computer program or routine
service (014): information applies to a capability which a service provider entity makes available to a service user
entity through a set of interfaces that define a behaviour, such as a use case
model (015): information applies to a copy or imitation of an existing or hypothetical object
nationalContribution (016): information applies to the national contribution to the dataset
</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
<xs:enumeration value="attribute"/>
<xs:enumeration value="attributeType"/>
<xs:enumeration value="collectionHardware"/>
<xs:enumeration value="collectionSession"/>
<xs:enumeration value="dataset"/>
<xs:enumeration value="series"/>
<xs:enumeration value="nonGeographicDataset"/>
<xs:enumeration value="dimensionGroup"/>
<xs:enumeration value="feature"/>
<xs:enumeration value="featureType"/>
<xs:enumeration value="propertyType"/>
<xs:enumeration value="fieldSession"/>
<xs:enumeration value="software"/>
<xs:enumeration value="service"/>
<xs:enumeration value="model"/>
<xs:enumeration value="nationalContribution"/>
</xs:restriction>
</xs:simpleType>

simpleType **MD_SpatialRepresentationTypeCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **spatialRepresentationType**

facets
enumeration vector
enumeration grid
enumeration textTable
enumeration tin
enumeration stereoModel
enumeration video

annotation documentation MD_SpatialRepresentationTypeCode Code-List (B.5.26)
vector (001): vector data is used to represent geographic data
grid (002): grid data is used to represent geographic data
textTable (003): textual or tabular data is used to represent geographic data
tin (004): triangulated irregular network
stereoModel (005): three-dimensional view formed by the intersecting homologous rays of an overlapping pair of images
video (006): scene from a video recording

source
<xs:simpleType name="MD_SpatialRepresentationTypeCode">
<xs:annotation>
<xs:documentation>MD_SpatialRepresentationTypeCode Code-List (B.5.26)
vector (001): vector data is used to represent geographic data
grid (002): grid data is used to represent geographic data
textTable (003): textual or tabular data is used to represent geographic data
tin (004): triangulated irregular network
stereoModel (005): three-dimensional view formed by the intersecting homologous rays of an overlapping pair of images
video (006): scene from a video recording
</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
<xs:enumeration value="vector"/>
<xs:enumeration value="grid"/>
<xs:enumeration value="textTable"/>
<xs:enumeration value="tin"/>

```
    <xs:enumeration value="stereoModel"/>
    <xs:enumeration value="video"/>
   </xs:restriction>
  </xs:simpleType>
```

simpleType **MD_TopicCategoryCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **topicCategory**

facets
- enumeration farming
- enumeration biota
- enumeration boundaries
- enumeration climatologyMeteorologyAtmosphere
- enumeration economy
- enumeration elevation
- enumeration environment
- enumeration geoscientificInformation
- enumeration health
- enumeration imageryBaseMapsEarthCover
- enumeration intelligenceMilitary
- enumeration inland Waters
- enumeration location
- enumeration oceans
- enumeration planningCadastre
- enumeration society
- enumeration structure
- enumeration transportation
- enumeration utilitiesCommunication

annotation
documentation MD_TopicCategoryCode Code-List (B.5.27):
farming (001): rearing of animals and/or cultivation of plants, Examples: agriculture, irrigation, aquaculture, plantations, herding, pests and diseases affecting crops and livestock
biota (002): flora and/or fauna in natural environment, Examples: wildlife, vegetation, biological sciences, ecology, wilderness, sealife, wetlands, habitat
boundaries (003): legal land descriptions Examples: political and administrative boundaries
climatologyMeteorologyAtmosphere (004): processes and phenomena of the atmosphere, Examples: cloud cover, weather, climate, atmospheric conditions, climate change, precipitation
economy (005): economic activities, conditions and employment, Examples: production, labour, revenue, commerce, industry, tourism and ecotourism, forestry, fisheries, commercial or subsistence hunting, exploration and exploitation of resources such as minerals, oil and gas
elevation (006): height above or below sea level Examples: altitude, bathymetry, digital elevation models, slope, derived products
environment (007): environmental resources, protection and conservation Examples: environmental pollution, waste storage and treatment, environmental,impact assessment, monitoring environmental risk, nature reserves, landscape
geoscientificInformation (008): information pertaining to earth sciences, Examples: geophysical features and processes, geology, minerals, sciences,dealing with the composition, structure and origin of the earth's rocks, risks of earthquakes, volcanic activity, landslides, gravity information, soils, permafrost, hydrogeology, erosion
health (009): health, health services, human ecology, and safety, Examples: disease and illness, factors affecting health, hygiene, substance abuse, mental and physical health, health services
imageryBaseMapsEarthCover (010): base maps Examples: land cover, topographic maps, imagery, unclassified images, annotations
intelligenceMilitary (011): military bases, structures, activities, Examples: barracks, training grounds, military transportation, information collection

source

```
<xs:simpleType name="MD_TopicCategoryCode">
 <xs:annotation>
  <xs:documentation>MD_TopicCategoryCode Code-List (B.5.27):
                    farming (001): rearing of animals and/or cultivation of plants, Examples: agriculture,
irrigation, aquaculture,
                    plantations, herding, pests and diseases affecting crops and livestock
                    biota (002): flora and/or fauna in natural environment, Examples: wildlife, vegetation,
biological sciences, ecology,
                    wilderness, sealife, wetlands, habitat
                    boundaries (003): legal land descriptions Examples: political and administrative
boundaries
                    climatologyMeteorologyAtmosphere (004): processes and
phenomena of the atmosphere, Examples: cloud cover,
                    weather, climate,
atmospheric conditions, climate change, precipitation
                    economy (005): economic activities, conditions and employment, Examples: production,
labour, revenue, commerce,
                    industry, tourism and ecotourism, forestry, fisheries, commercial or
subsistence hunting, exploration and
                    exploitation of resources such as minerals, oil and gas
                    elevation (006): height above or below sea level Examples: altitude, bathymetry, digital
elevation models, slope,
                    derived products
                    environment (007): environmental resources, protection and conservation Examples:
environmental pollution, waste
                    storage and treatment,
environmental,impact assessment, monitoring environmental risk, nature reserves,
          landscape
                    geoscientificInformation (008): information pertaining to earth sciences, Examples:
geophysical features and
                    processes, geology, minerals, sciences,dealing
with the composition, structure and origin of the earth's
                    rocks, risks of
earthquakes, volcanic activity, landslides, gravity information, soils, permafrost,
          hydrogeology, erosion
                    health (009): health, health services, human ecology, and safety, Examples: disease and
illness, factors affecting
                    health, hygiene, substance abuse, mental and physical health, health
services
                    imageryBaseMapsEarthCover (010): base maps Examples: land cover, topographic maps,
imagery, unclassified
                    images, annotations
                    intelligenceMilitary (011): military bases, structures, activities, Examples: barracks, training
grounds, military
                    transportation, information collection
                    </xs:documentation>
 </xs:annotation>
 <xs:restriction base="xs:string">
  <xs:enumeration value="farming"/>
  <xs:enumeration value="biota"/>
  <xs:enumeration value="boundaries"/>
  <xs:enumeration value="climatologyMeteorologyAtmosphere"/>
  <xs:enumeration value="economy"/>
  <xs:enumeration value="elevation"/>
  <xs:enumeration value="environment"/>
  <xs:enumeration value="geoscientificInformation"/>
  <xs:enumeration value="health"/>
  <xs:enumeration value="imageryBaseMapsEarthCover"/>
  <xs:enumeration value="intelligenceMilitary"/>
  <xs:enumeration value="inland Waters"/>
  <xs:enumeration value="location"/>
  <xs:enumeration value="oceans"/>
  <xs:enumeration value="planningCadastre"/>
  <xs:enumeration value="society"/>
  <xs:enumeration value="structure"/>
  <xs:enumeration value="transportation"/>
  <xs:enumeration value="utilitiesCommunication"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **MD_TopologyLevelCode**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **topologyLevel**

facets
- enumeration geometryOnly
- enumeration topology1D
- enumeration planarGraph
- enumeration fullPlanarGraph
- enumeration surfaceGraph
- enumeration fullSurfaceGraph
- enumeration topology3D

enumeration fullTopology3D
enumeration abstract
annotation documentation MD_TopologyLevel Code-List (B.5.28)
geometryOnly (001): geometry objects without any additional structure which describes topology
topology1D (002): 1-dimensional topological complex – commonly called “chain-node” topology
planarGraph (003): 1-dimensional topological complex that is planar. (A planar graph is a graph that can be drawn in a plane in such a way that no two edges intersect except at a vertex.)
fullPlanarGraph (004): 2-dimensional topological complex that is planar. (A 2-dimensional topological complex is commonly called “full topology” in a cartographic 2D environment.)
surfaceGraph (005): 1-dimensional topological complex that is isomorphic to a subset of a surface. (A geometric complex is isomorphic to a topological complex if their elements are in a one-to-one, dimensional-and boundrypreserving correspondence to one another.)
fullSurfaceGraph (006): 2-dimensional topological complex that is isomorphic to a subset of a surface
topology3D (007): 3-dimensional topological complex. (A topological complex is a collection of topological primitives that are closed under the boundary operations.)
fullTopology3D (008): complete coverage of a 3D Euclidean coordinate space
abstract (009): topological complex without any specified geometric realisation

source

```
<xs:simpleType name="MD_TopologyLevelCode">
  <xs:annotation>
    <xs:documentation>MD_TopologyLevel Code-List (B.5.28)
                      geometryOnly (001): geometry objects without any additional structure which describes topology
                      topology1D (002): 1-dimensional topological complex – commonly called “chain-node” topology
                      planarGraph (003): 1-dimensional topological complex that is planar. (A planar graph is a graph that can be drawn in a plane in such a way that no two edges intersect except at a vertex.)
                      fullPlanarGraph (004): 2-dimensional topological complex that is planar. (A 2-dimensional topological complex is commonly called “full topology” in a cartographic 2D environment.)
                      surfaceGraph (005): 1-dimensional topological complex that is isomorphic to a subset of a surface. (A geometric complex is isomorphic to a topological complex if their elements are in a one-to-one, dimensional-and boundrypreserving correspondence to one another.)
                      fullSurfaceGraph (006): 2-dimensional topological complex that is isomorphic to a subset of a surface
                      topology3D (007): 3-dimensional topological complex. (A topological complex is a collection of topological primitives that are closed under the boundary operations.)
                      fullTopology3D (008): complete coverage of a 3D Euclidean coordinate space
                      abstract (009): topological complex without any specified geometric realisation
                      </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="geometryOnly"/>
    <xs:enumeration value="topology1D"/>
    <xs:enumeration value="planarGraph"/>
    <xs:enumeration value="fullPlanarGraph"/>
    <xs:enumeration value="surfaceGraph"/>
    <xs:enumeration value="fullSurfaceGraph"/>
    <xs:enumeration value="topology3D"/>
    <xs:enumeration value="fullTopology3D"/>
    <xs:enumeration value="abstract"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **UomLength**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

used by element **axisUnits**

facets enumeration meters

annotation documentation ISO19103: UomLength used for Reference System axis units

source
```
<xs:simpleType name="UomLength">
  <xs:annotation>
    <xs:documentation>ISO19103: UomLength used for Reference System axis units</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="meters"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **LatitudeRangeType**

namespace http://www.danubegis.org/metadata

type restriction of **xs:float**

used by simpleType **LatitudeType**

facets minInclusive -90.0
maxInclusive 90.0

annotation documentation Type of a latitude value

source
```
<xs:simpleType name="LatitudeRangeType">
  <xs:annotation>
    <xs:documentation>Type of a latitude value</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:float">
    <xs:minInclusive value="-90.0"/>
    <xs:maxInclusive value="90.0"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **LatitudeType**

namespace http://www.danubegis.org/metadata

type union of (**NullEnumeration**, **LatitudeRangeType**)

used by elements **northBoundLatitude** **southBoundLatitude**

source
```
<xs:simpleType name="LatitudeType">
  <xs:union memberTypes="NullEnumeration LatitudeRangeType"/>
</xs:simpleType>
```

simpleType **LongitudeRangeType**

namespace http://www.danubegis.org/metadata

type restriction of **xs:float**

used by simpleType **LongitudeType**

facets minInclusive -180.0
maxInclusive 180.0

annotation documentation Type of a longitude value

source
```
<xs:simpleType name="LongitudeRangeType">
  <xs:annotation>
    <xs:documentation>Type of a longitude value</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:float">
    <xs:minInclusive value="-180.0"/>
    <xs:maxInclusive value="180.0"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **LongitudeType**

namespace http://www.danubegis.org/metadata

type union of (**NullEnumeration**, **LongitudeRangeType**)

used by elements **eastBoundLongitude** **westBoundLongitude**

source
```
<xs:simpleType name="LongitudeType">
  <xs:union memberTypes="NullEnumeration LongitudeRangeType"/>
</xs:simpleType>
```

simpleType **NullEnumeration**

namespace http://www.danubegis.org/metadata

type restriction of **xs:string**

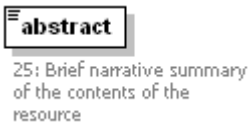
used by
- simpleTypes **LatitudeType** **LongitudeType**

facets
- enumeration inapplicable
- enumeration missing
- enumeration template
- enumeration unknown
- enumeration withheld

source
```
<xs:simpleType name="NullEnumeration">
  <xs:restriction base="xs:string">
    <xs:enumeration value="inapplicable"/>
    <xs:enumeration value="missing"/>
    <xs:enumeration value="template"/>
    <xs:enumeration value="unknown"/>
    <xs:enumeration value="withheld"/>
  </xs:restriction>
</xs:simpleType>
```

element **abstract**

diagram



namespace http://www.danubegis.org/metadata

type **xs:string**

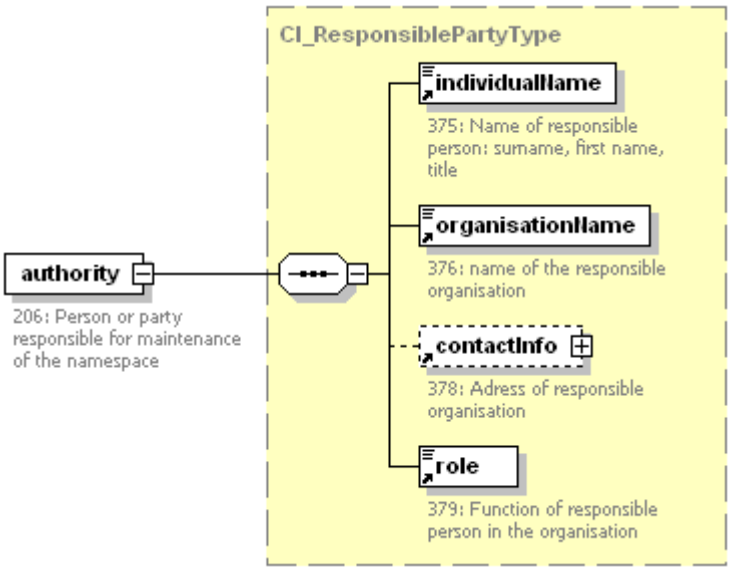
used by
- complexType **MD_Identification**

annotation
- documentation 25: Brief narrative summary of the contents of the resource

source
```
<xs:element name="abstract" type="xs:string" id="idAbs">
  <xs:annotation>
    <xs:documentation>25: Brief narrative summary of the contents of the resource</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **authority**

diagram



namespace http://www.danubegis.org/metadata

type **CI_ResponsiblePartyType**

children **individualName** **organisationName** **contactInfo** **role**

used by complexType **MD_Identifier**

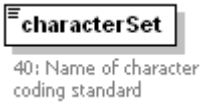
annotation documentation 206: Person or party responsible for maintenance of the namespace

source

```
<xs:element name="authority" type="CI_ResponsiblePartyType" id="identAuth">
  <xs:annotation>
    <xs:documentation>206: Person or party responsible for maintenance of the namespace</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **characterSet**

diagram



namespace http://www.danubegis.org/metadata

type **MD_CharacterSetCode**

used by complexType **MD_DataIdentification**

facets

enumeration	ucs2
enumeration	ucs4
enumeration	utf7
enumeration	utf8
enumeration	utf16
enumeration	8859part1
enumeration	8859part2
enumeration	8859part3
enumeration	8859part4
enumeration	8859part5
enumeration	8859part6
enumeration	8859part7
enumeration	8859part8
enumeration	8859part9
enumeration	8859part11
enumeration	8859part14
enumeration	8859part15
enumeration	jis
enumeration	shiftJIS

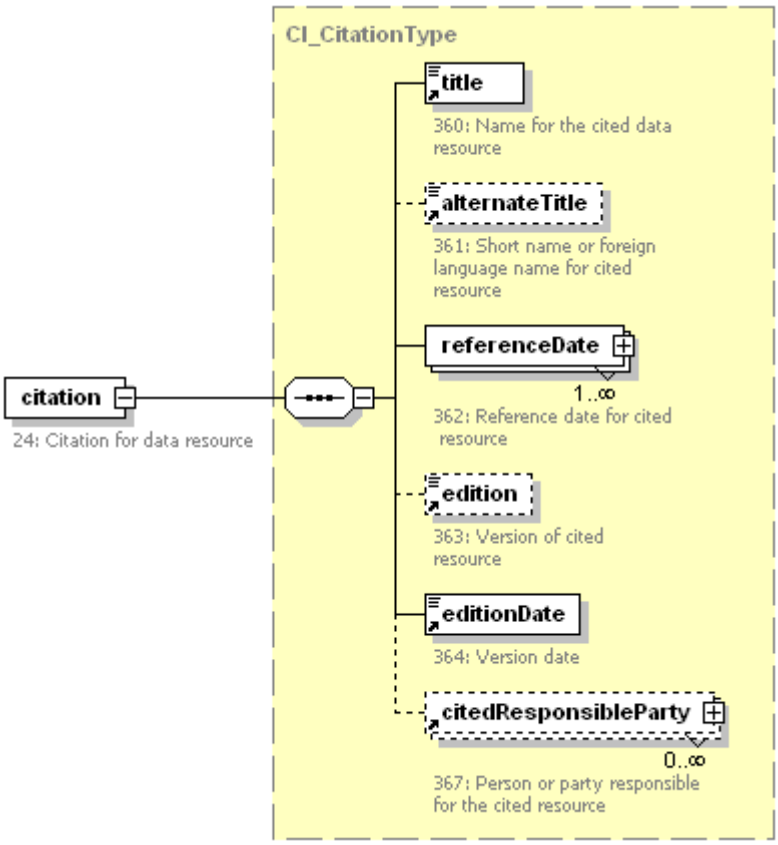
enumeration eucJP
enumeration usAscii
enumeration ebcdic
enumeration eucKR
enumeration big5
enumeration 8859part10
enumeration 8859part13

annotation documentation 40: Name of character coding standard

source
```
<xs:element name="characterSet" type="MD_CharacterSetCode" id="dataChar">
 <xs:annotation>
  <xs:documentation>40: Name of character coding standard</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **citation**

diagram



namespace http://www.danubegis.org/metadata

type **CI_CitationType**

children **title** **alternateTitle** **referenceDate** **edition** **editionDate** **citedResponsibleParty**

used by complexType **MD_Identification**

annotation documentation 24: Citation for data resource

source
```
<xs:element name="citation" type="CI_CitationType" id="idCitation">
 <xs:annotation>
  <xs:documentation>24: Citation for data resource</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **code**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

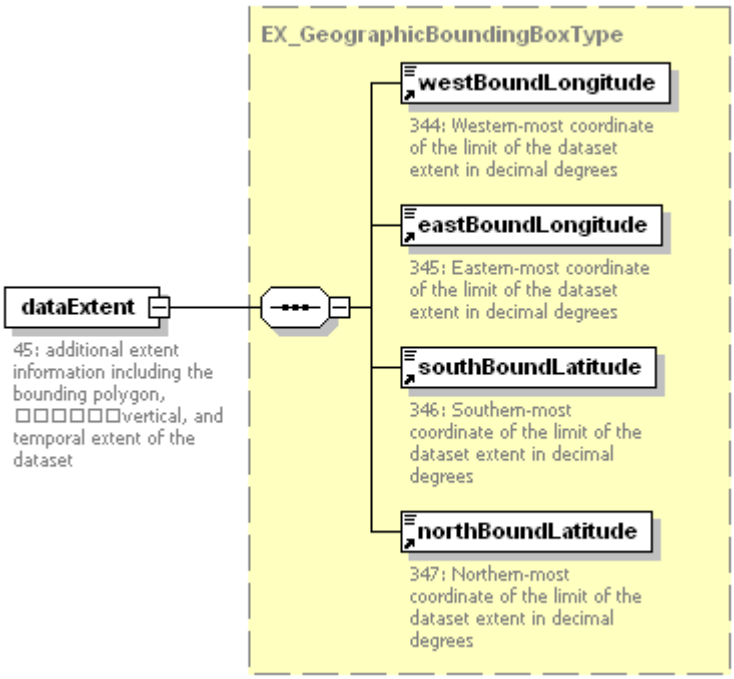
used by complexType **MD_Identifier**

annotation documentation 207: Alphanumeric value indentifying an instance in the namespace

source
```
<xs:element name="code" type="xs:string" id="identCode">
  <xs:annotation>
    <xs:documentation>207: Alphanumeric value indentifying an instance in the namespace</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **dataExtent**

diagram



namespace http://www.danubegis.org/metadata

type **EX_GeographicBoundingBoxType**

children **westBoundLongitude** **eastBoundLongitude** **southBoundLatitude** **northBoundLatitude**

annotation documentation 45: additional extent information including the bounding polygon, vertical, and temporal extent of the dataset

source
```
<xs:element name="dataExtent" type="EX_GeographicBoundingBoxType">
  <xs:annotation>
    <xs:documentation>45: additional extent information including the bounding polygon,
                      vertical, and temporal extent of the
dataset</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **distance**

diagram

namespace http://www.danubegis.org/metadata

used by complexType **MD_Resolution**

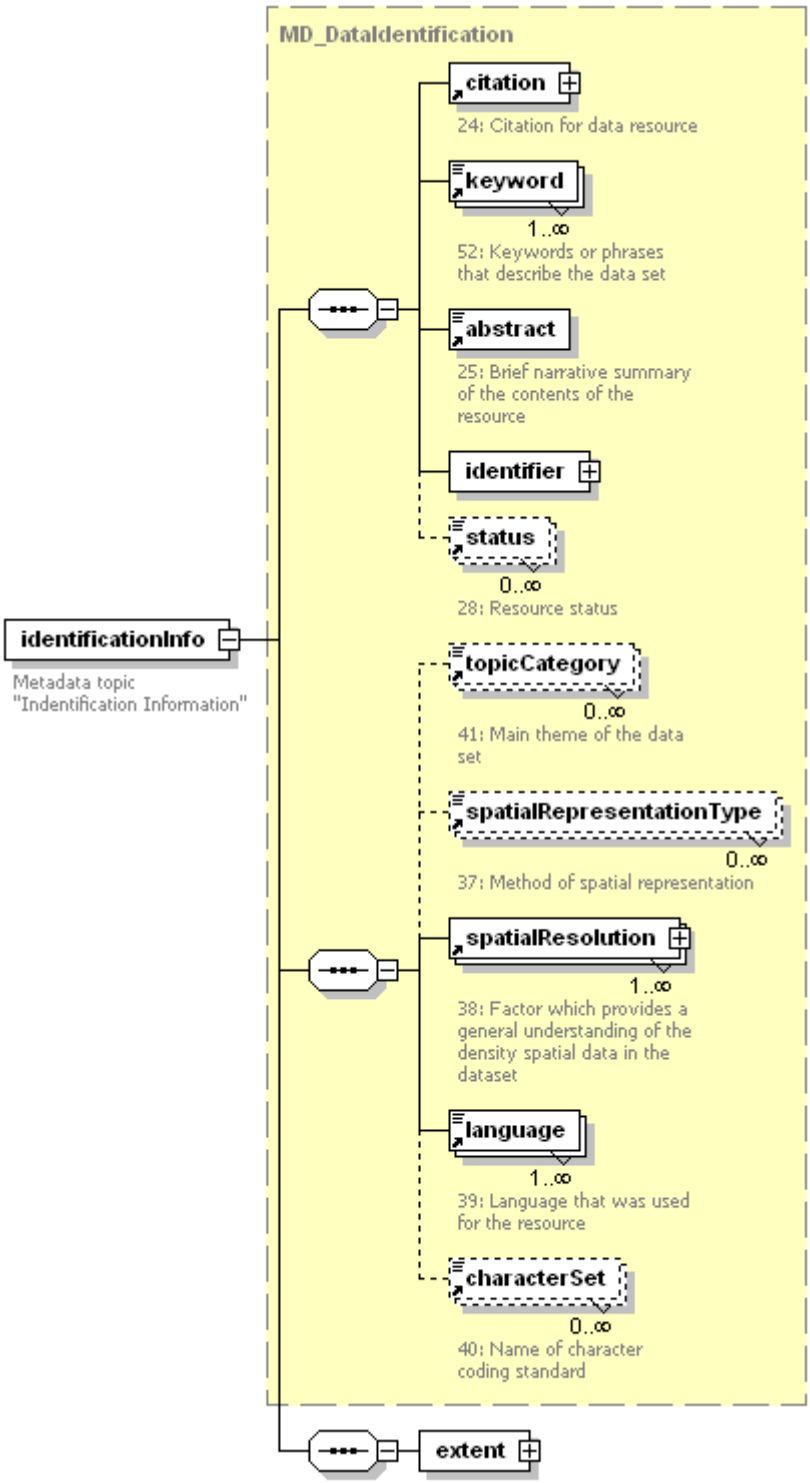
annotation documentation 61: Ground sample distance

source

```
<xs:element name="distance" id="scaleDist">
  <xs:annotation>
    <xs:documentation>61: Ground sample distance</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **identificationInfo**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_DataIdentification**

children **citation** **keyword** **abstract** **identifier** **status** **topicCategory** **spatialRepresentationType** **spatialResolution** **language** **characterSet** **extent**

used by element **DRBGIS19115_metadata_v0.1**

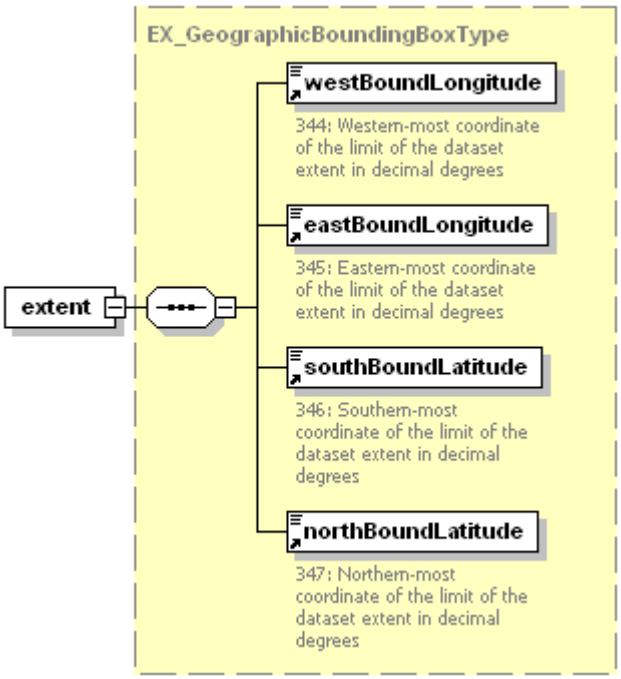
annotation documentation Metadata topic "Indentification Information"

source
```
<xs:element name="identificationInfo">
  <xs:annotation>
```

```
    <xs:documentation>Metadata topic "Indentification Information"</xs:documentation>
   </xs:annotation>
   <xs:complexType>
    <xs:complexContent>
     <xs:extension base="MD_DataIdentification">
      <xs:sequence>
       <xs:element name="extent" type="EX_GeographicBoundingBoxType"/>
      </xs:sequence>
     </xs:extension>
    </xs:complexContent>
   </xs:complexType>
  </xs:element>
```

element **identificationInfo/extent**

diagram



namespace http://www.danubegis.org/metadata

type **EX_GeographicBoundingBoxType**

children **westBoundLongitude** **eastBoundLongitude** **southBoundLatitude** **northBoundLatitude**

source

```
<xs:element name="extent" type="EX_GeographicBoundingBoxType"/>
```

element **keyword**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexTypes **MD_Identification** **MD_Keywords**

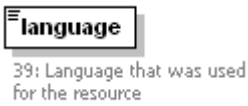
annotation documentation 52: Keywords or phrases that describe the data set

source

```
<xs:element name="keyword" type="xs:string" id="keyword">
 <xs:annotation>
  <xs:documentation>52: Keywords or phrases that describe the data set</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **language**

diagram



namespace http://www.danubegis.org/metadata

type **ISO639_2_languagesCodes**

used by complexType **MD_DataIdentification**

facets
enumeration alb
enumeration bos
enumeration bul
enumeration cze
enumeration dan
enumeration dut
enumeration eng
enumeration est
enumeration fin
enumeration fre
enumeration ger
enumeration gre
enumeration hun
enumeration ita
enumeration lav
enumeration lit
enumeration mac
enumeration mlt
enumeration mol
enumeration pol
enumeration por
enumeration rum
enumeration scc
enumeration scr
enumeration slo
enumeration slv
enumeration spa
enumeration swe
enumeration ukr

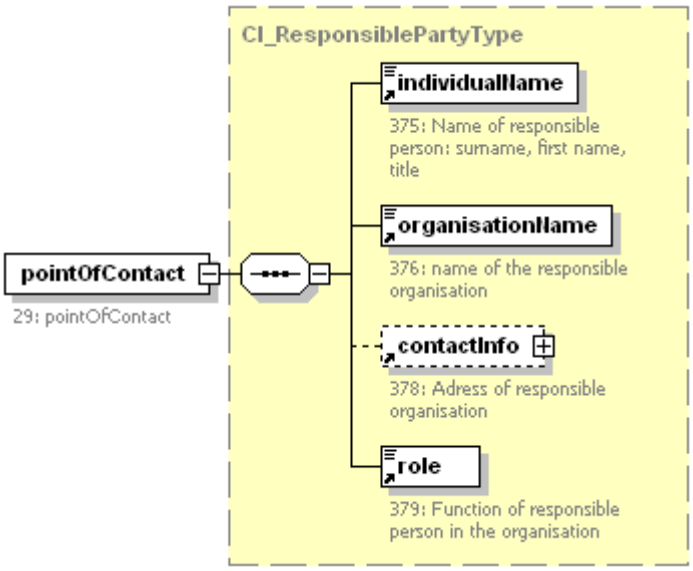
annotation documentation 39: Language that was used for the resource

source

```
<xs:element name="language" type="ISO639_2_languagesCodes" id="dataLang">
  <xs:annotation>
    <xs:documentation>39: Language that was used for the resource</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **pointOfContact**

diagram



namespace http://www.danubegis.org/metadata

type **CI_ResponsiblePartyType**

children **individualName** **organisationName** **contactInfo** **role**

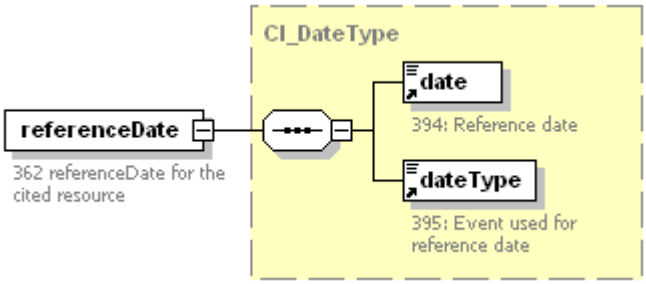
annotation
documentation 29: pointOfContact

source

```
<xs:element name="pointOfContact" type="CI_ResponsiblePartyType">
  <xs:annotation>
    <xs:documentation>29: pointOfContact</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **referenceDate**

diagram



namespace http://www.danubegis.org/metadata

type **CI_DateType**

children **date** **dateType**

attributes

Name	Type	Use	Default	Fixed	Annotation
calendar	xs:string		Julian Calendar		

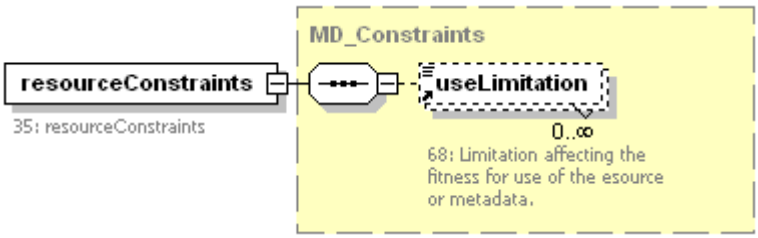
annotation
documentation 362 referenceDate for the cited resource

source

```
<xs:element name="referenceDate" type="CI_DateType">
  <xs:annotation>
    <xs:documentation>362 referenceDate for the cited resource</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **resourceConstraints**

diagram



namespace http://www.danubegis.org/metadata

type **MD_Constraints**

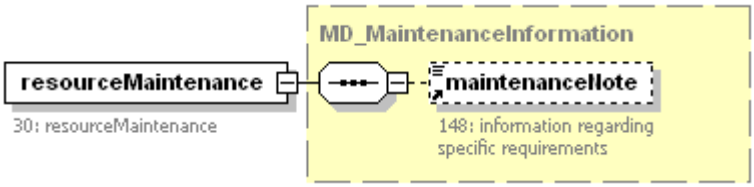
children **useLimitation**

annotation
documentation 35: resourceConstraints

source
```
<xs:element name="resourceConstraints" type="MD_Constraints">
 <xs:annotation>
  <xs:documentation>35: resourceConstraints</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **resourceMaintenance**

diagram



namespace http://www.danubegis.org/metadata

type **MD_MaintenanceInformation**

children **maintenanceNote**

annotation
documentation 30: resourceMaintenance

source
```
<xs:element name="resourceMaintenance" type="MD_MaintenanceInformation">
 <xs:annotation>
  <xs:documentation>30: resourceMaintenance</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **spatialRepresentationType**

diagram

namespace http://www.danubegis.org/metadata

type **MD_SpatialRepresentationTypeCode**

used by
complexType **MD_DataIdentification**

facets
enumeration vector
enumeration grid
enumeration textTable
enumeration tin
enumeration stereoModel
enumeration video

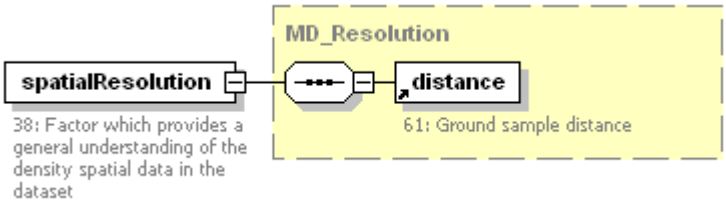
annotation
documentation 37: Method of spatial representation

source
```
<xs:element name="spatialRepresentationType" type="MD_SpatialRepresentationTypeCode" id="spatRpType">
 <xs:annotation>
```

```
    <xs:documentation>37: Method of spatial representation</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **spatialResolution**

diagram



namespace http://www.danubegis.org/metadata

type **MD_Resolution**

children **distance**

used by
- complexType **MD_DataIdentification**

annotation
- documentation 38: Factor which provides a general understanding of the density spatial data in the dataset

source

```
<xs:element name="spatialResolution" type="MD_Resolution" id="dataScale">
  <xs:annotation>
    <xs:documentation>38: Factor which provides a general understanding of the density spatial data in the
dataset</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **status**

diagram

namespace http://www.danubegis.org/metadata

type **MD_ProgressCode**

used by
- complexType **MD_Identification**

facets
- enumeration completed
- enumeration historicalArchive
- enumeration owner
- enumeration onGoing
- enumeration planned
- enumeration required
- enumeration underDevelopment

annotation
- documentation 28: Resource status

source

```
<xs:element name="status" type="MD_ProgressCode" id="idStatus">
  <xs:annotation>
    <xs:documentation>28: Resource status</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **topicCategory**

diagram

namespace http://www.danubegis.org/metadata

type **MD_TopicCategoryCode**

used by
- complexType **MD_DataIdentification**

facets
- enumeration farming
- enumeration biota
- enumeration boundaries
- enumeration climatologyMeteorologyAtmosphere
- enumeration economy
- enumeration elevation
- enumeration environment
- enumeration geoscientificInformation
- enumeration health
- enumeration imageryBaseMapsEarthCover
- enumeration intelligenceMilitary
- enumeration inland Waters
- enumeration location
- enumeration oceans
- enumeration planningCadastre
- enumeration society
- enumeration structure
- enumeration transportation
- enumeration utilitiesCommunication

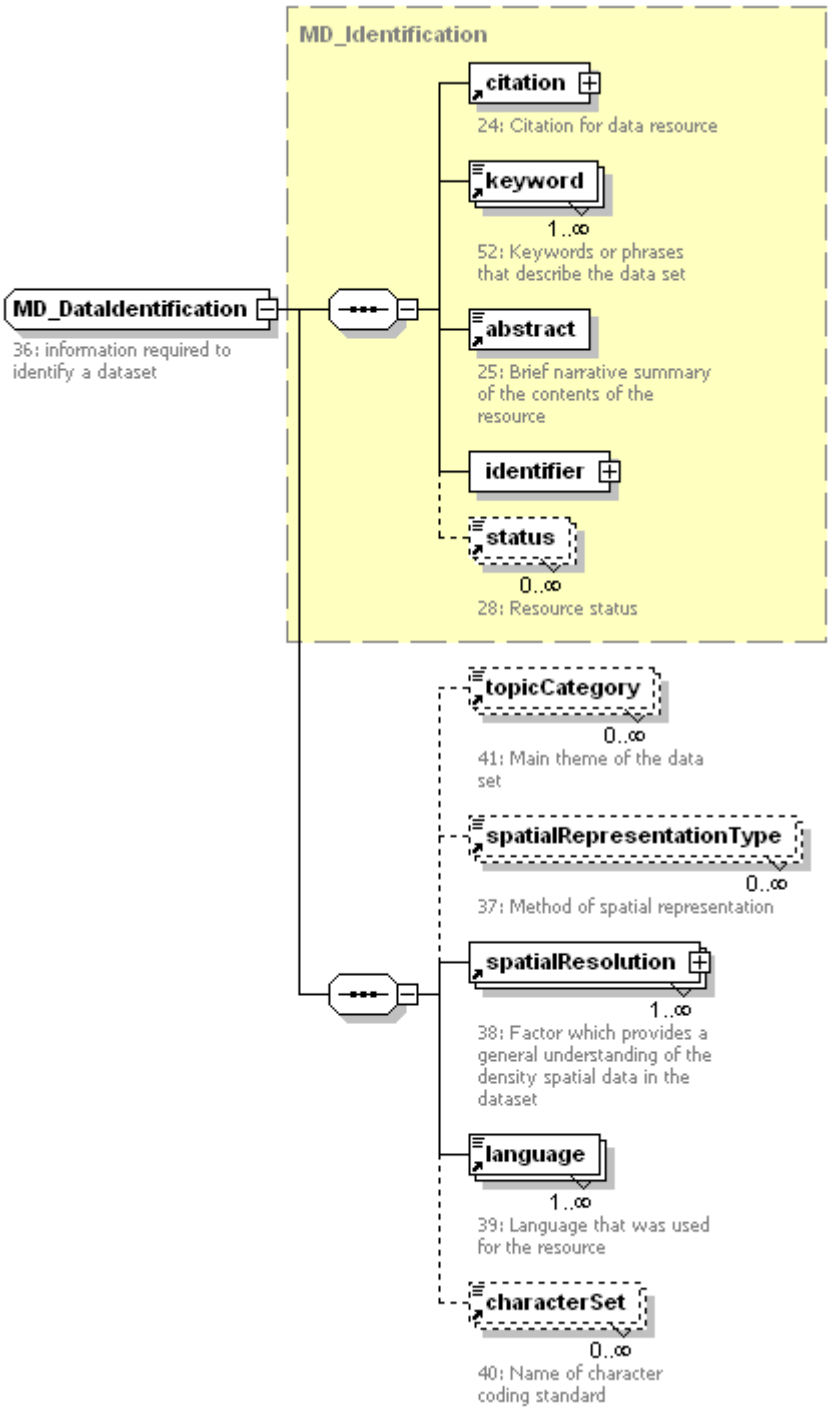
annotation
- documentation 41: Main theme of the data set

source

```
<xs:element name="topicCategory" type="MD_TopicCategoryCode" id="tpCat">
  <xs:annotation>
    <xs:documentation>41: Main theme of the data set</xs:documentation>
  </xs:annotation>
</xs:element>
```

complexType **MD_DataIdentification**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_Identification**

children **citation** **keyword** **abstract** **identifier** **status** **topicCategory** **spatialRepresentationType** **spatialResolution** **language** **characterSet**

used by element **identificationInfo**

annotation documentation 36: information required to identify a dataset

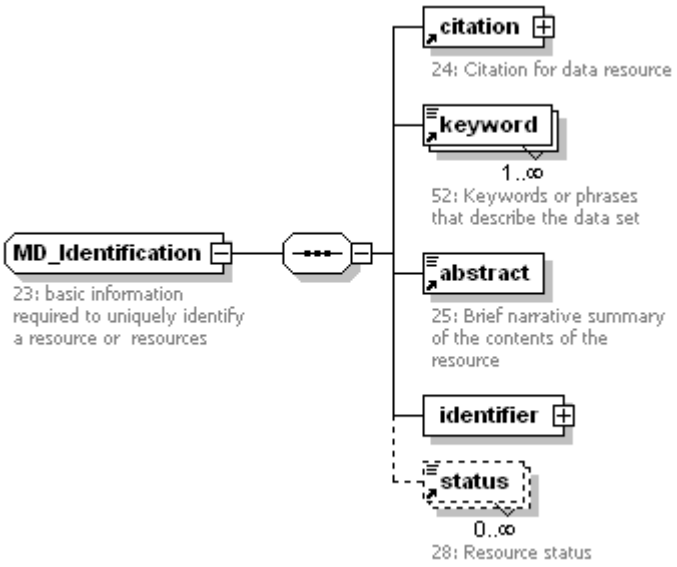
source

```
<xs:complexType name="MD_DataIdentification">
  <xs:annotation>
    <xs:documentation>36: information required to identify a dataset</xs:documentation>
  </xs:annotation>
```

```
  <xs:complexContent>
   <xs:extension base="MD_Identification">
    <xs:sequence>
     <xs:element ref="topicCategory" minOccurs="0" maxOccurs="unbounded"/>
     <xs:element ref="spatialRepresentationType" minOccurs="0" maxOccurs="unbounded"/>
     <xs:element ref="spatialResolution" maxOccurs="unbounded"/>
     <xs:element ref="language" maxOccurs="unbounded"/>
     <xs:element ref="characterSet" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
   </xs:extension>
  </xs:complexContent>
 </xs:complexType>
```

complexType **MD_Identification**

diagram



namespace http://www.danubegis.org/metadata

children **citation** **keyword** **abstract** **identifier** **status**

used by complexType **MD_DataIdentification**

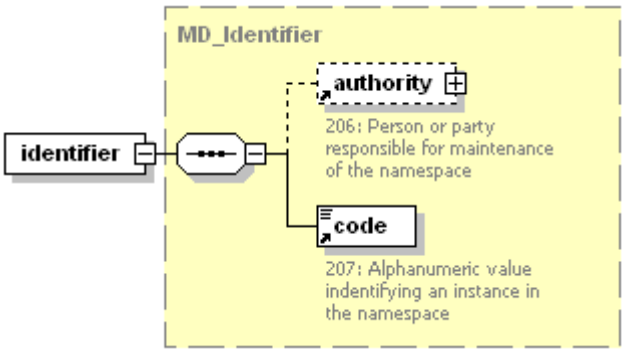
annotation documentation 23: basic information required to uniquely identify a resource or resources

source

```
<xs:complexType name="MD_Identification">
 <xs:annotation>
  <xs:documentation>23: basic information required to uniquely identify a resource or  resources</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="citation"/>
  <xs:element ref="keyword" maxOccurs="unbounded"/>
  <xs:element ref="abstract"/>
  <xs:element name="identifier" type="MD_Identifier"/>
  <xs:element ref="status" minOccurs="0" maxOccurs="unbounded"/>
 </xs:sequence>
</xs:complexType>
```

element **MD_Identification/identifier**

diagram



namespace http://www.danubegis.org/metadata

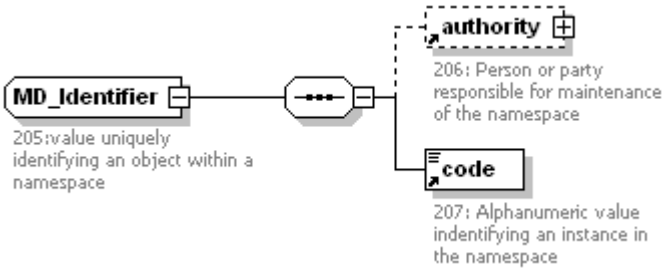
type **MD_Identifier**

children **authority** **code**

source
```
<xs:element name="identifier" type="MD_Identifier"/>
```

complexType **MD_Identifier**

diagram



namespace http://www.danubegis.org/metadata

children **authority** **code**

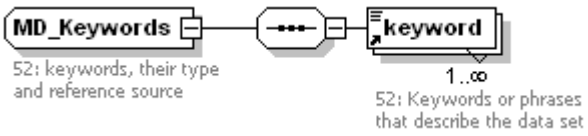
used by
- element **MD_Identification/identifier**
- complexType **RS_Identifier**

annotation
- documentation 205:value uniquely identifying an object within a namespace

source
```
<xs:complexType name="MD_Identifier">
 <xs:annotation>
  <xs:documentation>205:value uniquely identifying an object within a namespace</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="authority" minOccurs="0"/>
  <xs:element ref="code"/>
 </xs:sequence>
</xs:complexType>
```

complexType **MD_Keywords**

diagram



namespace http://www.danubegis.org/metadata

children **keyword**

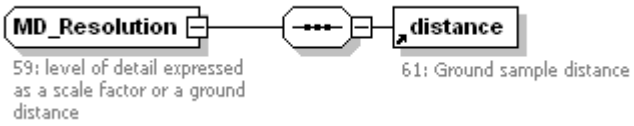
annotation
- documentation 52: keywords, their type and reference source

source
```
<xs:complexType name="MD_Keywords">
```

```
  <xs:annotation>
    <xs:documentation>52: keywords, their type and reference source</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="keyword" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

complexType **MD_Resolution**

diagram



namespace http://www.danubegis.org/metadata

children **distance**

used by element **spatialResolution**

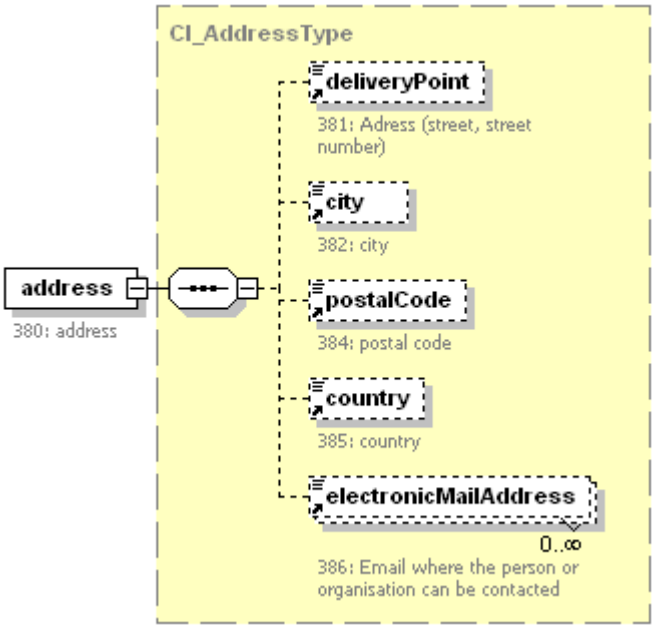
annotation documentation 59: level of detail expressed as a scale factor or a ground distance

source

```
<xs:complexType name="MD_Resolution">
  <xs:annotation>
    <xs:documentation>59: level of detail expressed as a scale factor or a ground distance</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="distance"/>
  </xs:sequence>
</xs:complexType>
```

element **address**

diagram



namespace http://www.danubegis.org/metadata

type **CI_AddressType**

children **deliveryPoint** **city** **postalCode** **country** **electronicMailAddress**

used by complexType **CI_ContactType**

annotation documentation 380: address

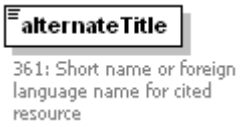
source

```
<xs:element name="address" type="CI_AddressType">
  <xs:annotation>
    <xs:documentation>380: address</xs:documentation>
```

```
  </xs:annotation>
 </xs:element>
```

element **alternateTitle**

diagram



namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_CitationType**

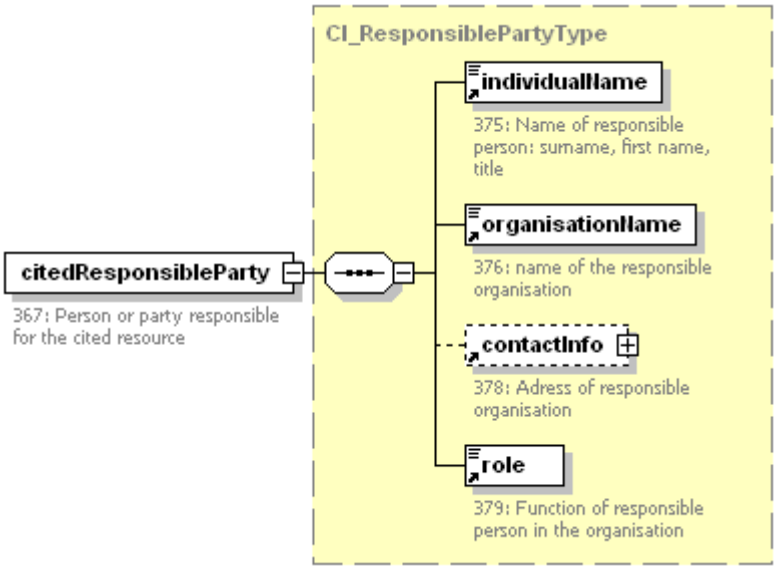
annotation documentation 361: Short name or foreign language name for cited resource

source

```
<xs:element name="alternateTitle" type="xs:string" id="resAltTitle">
 <xs:annotation>
  <xs:documentation>361: Short name or foreign language name for cited resource</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **citedResponsibleParty**

diagram



namespace http://www.danubegis.org/metadata

type **CI_ResponsiblePartyType**

children **individualName** **organisationName** **contactInfo** **role**

used by complexType **CI_CitationType**

annotation documentation 367: Person or party responsible for the cited resource

source

```
<xs:element name="citedResponsibleParty" type="CI_ResponsiblePartyType" id="citRespParty">
 <xs:annotation>
  <xs:documentation>367: Person or party responsible for the cited resource</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **city**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

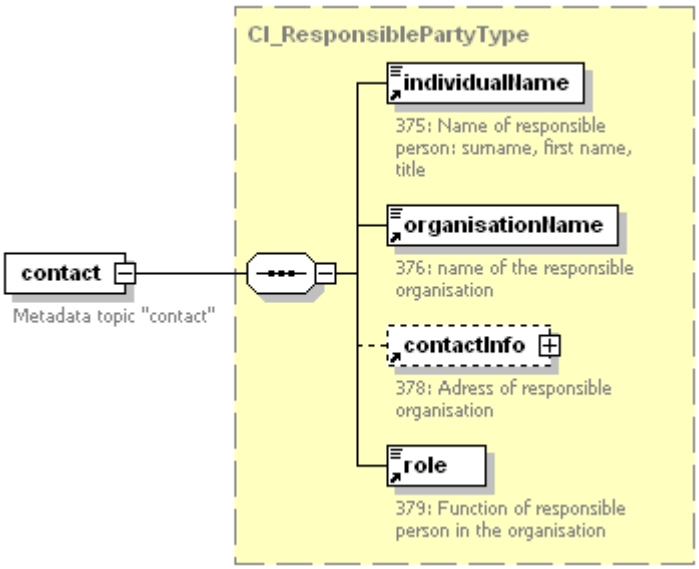
used by complexType **CI_AddressType**

annotation documentation 382: city

source
```
<xs:element name="city" type="xs:string" id="city">
  <xs:annotation>
    <xs:documentation>382: city</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **contact**

diagram



namespace http://www.danubegis.org/metadata

type **CI_ResponsiblePartyType**

children **individualName** **organisationName** **contactInfo** **role**

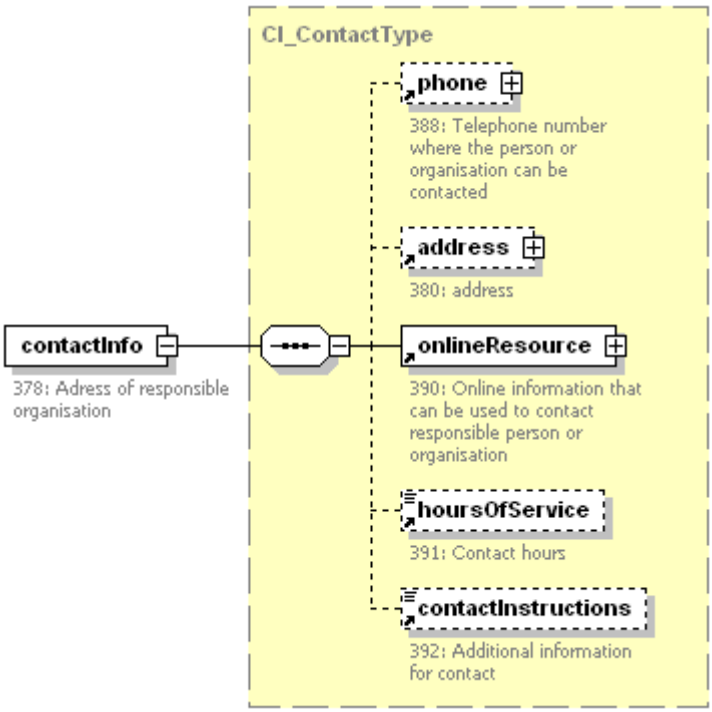
used by element **DRBGIS19115_metadata_v0.1**

annotation documentation Metadata topic "contact"

source
```
<xs:element name="contact" type="CI_ResponsiblePartyType">
  <xs:annotation>
    <xs:documentation>Metadata topic "contact"</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **contactInfo**

diagram



namespace http://www.danubegis.org/metadata

type **CI_ContactType**

children **phone** **address** **onlineResource** **hoursOfService** **contactInstructions**

used by complexType **CI_ResponsiblePartyType**

annotation documentation 378: Adress of responsible organisation

source

```
<xs:element name="contactInfo" type="CI_ContactType" id="rpCntInfo">
  <xs:annotation>
    <xs:documentation>378: Adress of responsible
organisation</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **contactInstructions**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_ContactType**

annotation documentation 392: Additional information for contact

source

```
<xs:element name="contactInstructions" type="xs:string" id="cntInstr">
  <xs:annotation>
    <xs:documentation>392: Additional information for contact</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **country**

diagram 

namespace http://www.danubegis.org/metadata

type **ISO3166_countryCodes**

used by complexType **CI_AddressType**

facets
enumeration AL
enumeration AT
enumeration BA
enumeration BG
enumeration CH
enumeration CS
enumeration CZ
enumeration DE
enumeration HR
enumeration HU
enumeration IT
enumeration MD
enumeration MK
enumeration PL
enumeration RO
enumeration SI
enumeration SK
enumeration UA

annotation documentation 385: country

source
```
<xs:element name="country" type="ISO3166_countryCodes" id="country">
  <xs:annotation>
    <xs:documentation>385: country</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **date**

diagram 

namespace http://www.danubegis.org/metadata

type **xs:dateTime**

used by complexType **CI_DateType**

annotation documentation 394: Reference date

source
```
<xs:element name="date" type="xs:dateTime" id="refDate">
  <xs:annotation>
    <xs:documentation>394: Reference date</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **dateType**

diagram 

namespace http://www.danubegis.org/metadata

type **CI_DateTypeCode**

used by complexType **CI_DateType**

facets enumeration creationDate

enumeration publicationDate
enumeration revisionDate
enumeration referenceDate

annotation documentation 395: Event used for reference date

source
```
<xs:element name="dateType" type="CI_DateTypeCode" id="refDateType">
 <xs:annotation>
  <xs:documentation>395: Event used for reference date</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **deliveryPoint**

diagram 

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_AddressType**

annotation documentation 381: Adress (street, street number)

source
```
<xs:element name="deliveryPoint" type="xs:string" id="delPoint">
 <xs:annotation>
  <xs:documentation>381: Adress (street, street number)</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **edition**

diagram 

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_CitationType**

annotation documentation 363: Version of cited resource

source
```
<xs:element name="edition" type="xs:string" id="resEd">
 <xs:annotation>
  <xs:documentation>363: Version of cited resource</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **editionDate**

diagram 

namespace http://www.danubegis.org/metadata

type **xs:dateTime**

used by complexType **CI_CitationType**

annotation documentation 364: Version date

source
```
<xs:element name="editionDate" type="xs:dateTime" id="resEdDate">
 <xs:annotation>
  <xs:documentation>364: Version date</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **electronicMailAddress**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_AddressType**

annotation documentation 386: Email where the person or organisation can be contacted

source

```
<xs:element name="electronicMailAddress" type="xs:string" id="eMailAdd">
 <xs:annotation>
  <xs:documentation>386: Email where the person or
organisation can be contacted</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **facsimile**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_TelephoneType**

annotation documentation 409: number of a facsimile machine

source

```
<xs:element name="facsimile" type="xs:string" id="faxNum">
 <xs:annotation>
  <xs:documentation>409: number of a facsimile machine</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **hoursOfService**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_ContactType**

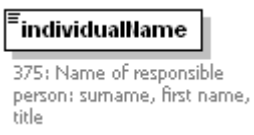
annotation documentation 391: Contact hours

source

```
<xs:element name="hoursOfService" type="xs:string" id="cntHours">
 <xs:annotation>
  <xs:documentation>391: Contact hours</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **individualName**

diagram



namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_ResponsiblePartyType**

annotation documentation 375: Name of responsible person: surname, first name, title

source
```
<xs:element name="individualName" type="xs:string" id="rpIndName">
 <xs:annotation>
  <xs:documentation>375: Name of responsible person: surname, first name, title</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **linkage**

diagram

namespace http://www.danubegis.org/metadata

type **xs:anyURI**

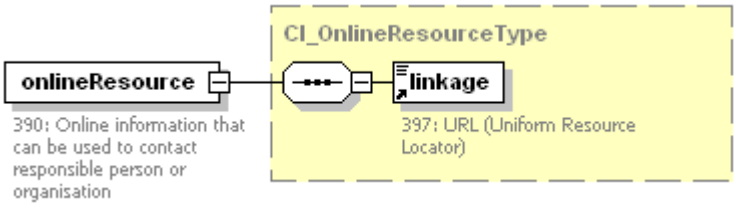
used by complexType **CI_OnlineResourceType**

annotation documentation 397: URL (Uniform Resource Locator)

source
```
<xs:element name="linkage" type="xs:anyURI" id="linkage">
 <xs:annotation>
  <xs:documentation>397: URL (Uniform Resource Locator)</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **onlineResource**

diagram



namespace http://www.danubegis.org/metadata

type **CI_OnlineResourceType**

children **linkage**

used by complexType **CI_ContactType**

annotation documentation 390: Online information that can be used to contact responsible person or organisation

source
```
<xs:element name="onlineResource" type="CI_OnlineResourceType" id="cntOnlineRes">
 <xs:annotation>
  <xs:documentation>390: Online information that can be used to contact responsible person or
organisation</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **organisationName**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

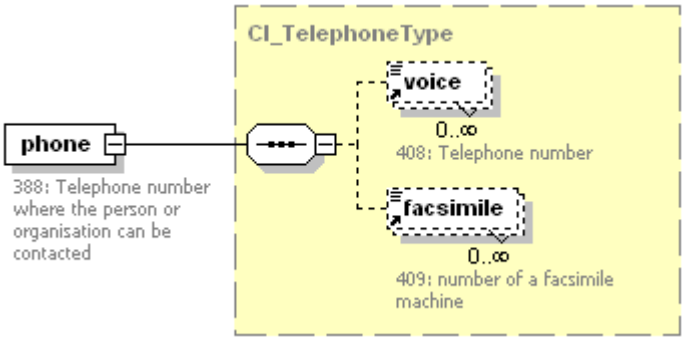
used by complexType **CI_ResponsiblePartyType**

annotation documentation 376: name of the responsible organisation

source
```
<xs:element name="organisationName" type="xs:string" id="rpOrgName">
 <xs:annotation>
  <xs:documentation>376: name of the responsible organisation</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **phone**

diagram



namespace http://www.danubegis.org/metadata

type **CI_TelephoneType**

children **voice** **facsimile**

used by complexType **CI_ContactType**

annotation documentation 388: Telephone number where the person or organisation can be contacted

source
```
<xs:element name="phone" type="CI_TelephoneType" id="cntPhone">
 <xs:annotation>
  <xs:documentation>388: Telephone number where the person or organisation can be contacted</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **postalCode**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_AddressType**

annotation documentation 384: postal code

source
```
<xs:element name="postalCode" type="xs:string" id="postCode">
 <xs:annotation>
  <xs:documentation>384: postal code</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **resourceIdentifier**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

annotation documentation 365: unique identifier for the resource

source
```
<xs:element name="resourceIdentifier" type="xs:string">
  <xs:annotation>
    <xs:documentation>365: unique identifier for the resource</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **resourceIdentifierType**

diagram

namespace http://www.danubegis.org/metadata

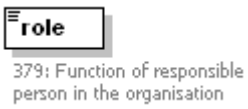
type **xs:string**

annotation documentation 366: reference form of the unique identifier

source
```
<xs:element name="resourceIdentifierType" type="xs:string">
  <xs:annotation>
    <xs:documentation>366: reference form of the unique identifier</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **role**

diagram



namespace http://www.danubegis.org/metadata

type **CI_RoleCode**

used by complexType **CI_ResponsiblePartyType**

facets
- enumeration resourceProvider
- enumeration custodian
- enumeration owner
- enumeration user
- enumeration distributor
- enumeration originator
- enumeration pointOfContact
- enumeration principalInvestigator
- enumeration processor
- enumeration publisher

annotation documentation 379: Function of responsible person in the organisation

source
```
<xs:element name="role" type="CI_RoleCode" id="role">
  <xs:annotation>
    <xs:documentation>379: Function of responsible person in the organisation</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **title**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **CI_CitationType**

annotation documentation 360: Name for the cited data resource

source
```
<xs:element name="title" type="xs:string" id="resTitel">
  <xs:annotation>
    <xs:documentation>360: Name for the cited data
resource</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **voice**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

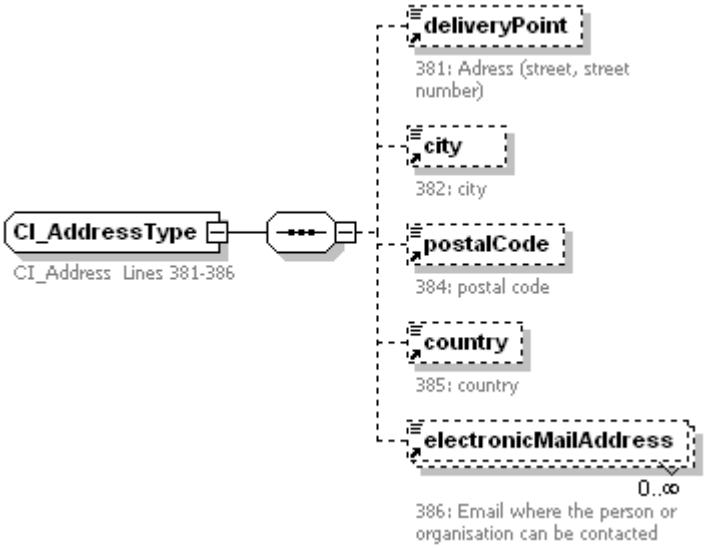
used by
- complexType **CI_TelephoneType**

annotation
- documentation 408: Telephone number

source
```
<xs:element name="voice" type="xs:string" id="voiceNum">
  <xs:annotation>
    <xs:documentation>408: Telephone number</xs:documentation>
  </xs:annotation>
</xs:element>
```

complexType **CI_AddressType**

diagram



namespace http://www.danubegis.org/metadata

children **deliveryPoint** **city** **postalCode** **country** **electronicMailAddress**

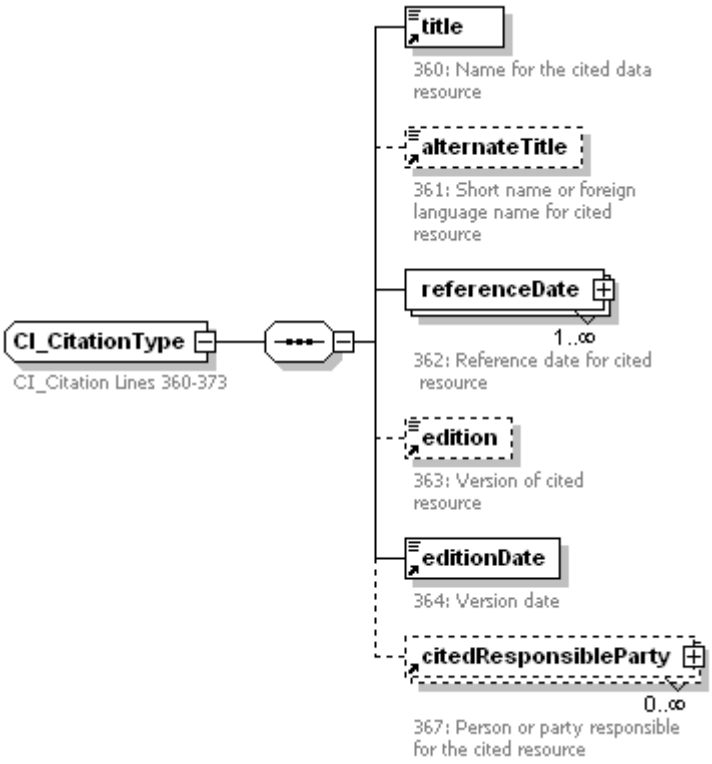
used by
- element **address**

annotation
- documentation CI_Address Lines 381-386

source
```
<xs:complexType name="CI_AddressType" id="cntAddress">
  <xs:annotation>
    <xs:documentation>CI_Address Lines 381-386</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="deliveryPoint" minOccurs="0"/>
    <xs:element ref="city" minOccurs="0"/>
    <xs:element ref="postalCode" minOccurs="0"/>
    <xs:element ref="country" minOccurs="0"/>
    <xs:element ref="electronicMailAddress" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

complexType **CI_CitationType**

diagram



namespace http://www.danubegis.org/metadata

children **title** **alternateTitle** **referenceDate** **edition** **editionDate** **citedResponsibleParty**

used by element **citation**

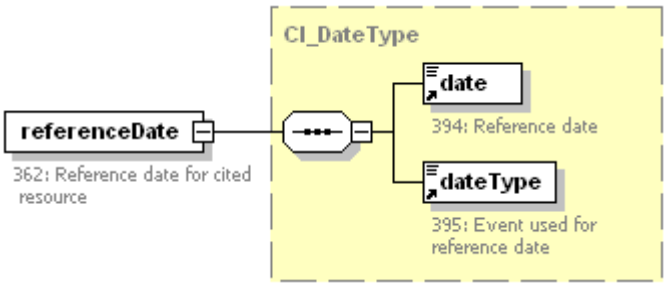
annotation documentation CI_Citation Lines 360-373

source

```
<xs:complexType name="CI_CitationType">
  <xs:annotation>
    <xs:documentation>CI_Citation Lines 360-373 </xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="title"/>
    <xs:element ref="alternateTitle" minOccurs="0"/>
    <xs:element name="referenceDate" type="CI_DateType" id="resRefDate" maxOccurs="unbounded">
      <xs:annotation>
        <xs:documentation>362: Reference date for cited  resource</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element ref="edition" minOccurs="0"/>
    <xs:element ref="editionDate"/>
    <xs:element ref="citedResponsibleParty" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

element **CI_CitationType/referenceDate**

diagram



namespace http://www.danubegis.org/metadata

type **CI_DateType**

children **date** **dateType**

attributes

Name	Type	Use	Default	Fixed	Annotation
calendar	xs:string		Julian Calendar		

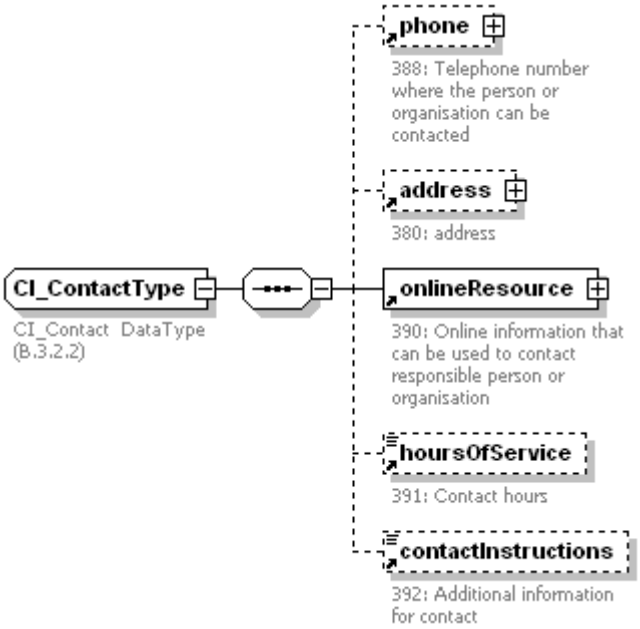
annotation documentation 362: Reference date for cited resource

source

```
<xs:element name="referenceDate" type="CI_DateType" id="resRefDate" maxOccurs="unbounded">
 <xs:annotation>
  <xs:documentation>362: Reference date for cited  resource</xs:documentation>
 </xs:annotation>
</xs:element>
```

complexType **CI_ContactType**

diagram



namespace http://www.danubegis.org/metadata

children **phone** **address** **onlineResource** **hoursOfService** **contactInstructions**

used by element **contactInfo**

annotation documentation CI_Contact DataType (B.3.2.2)

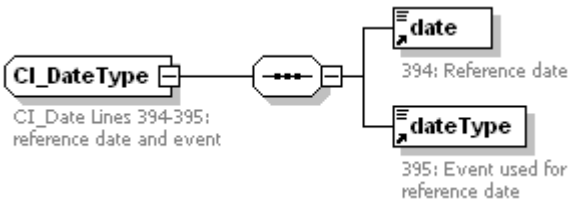
source

```
<xs:complexType name="CI_ContactType">
 <xs:annotation>
  <xs:documentation>CI_Contact  DataType (B.3.2.2)</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="phone" minOccurs="0"/>
  <xs:element ref="address" minOccurs="0"/>
```

```
    <xs:element ref="onlineResource"/>
    <xs:element ref="hoursOfService" minOccurs="0"/>
    <xs:element ref="contactInstructions" minOccurs="0"/>
   </xs:sequence>
  </xs:complexType>
```

complexType **CI_DateType**

diagram



namespace http://www.danubegis.org/metadata

children **date** **dateType**

used by
elements **referenceDate** **CI_CitationType/referenceDate**

attributes

Name	Type	Use	Default	Fixed	Annotation
calendar	xs:string		Julian Calendar		

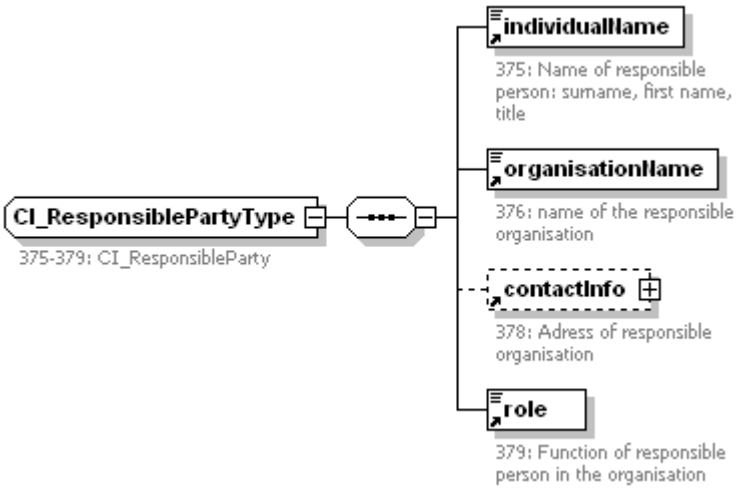
annotation
documentation CI_Date Lines 394-395: reference date and event

source

```
  <xs:complexType name="CI_DateType">
   <xs:annotation>
    <xs:documentation>CI_Date Lines 394-395: reference date and event</xs:documentation>
   </xs:annotation>
   <xs:sequence>
    <xs:element ref="date"/>
    <xs:element ref="dateType"/>
   </xs:sequence>
   <xs:attribute name="calendar" type="xs:string" default="Julian Calendar"/>
  </xs:complexType>
```

complexType **CI_ResponsiblePartyType**

diagram



namespace http://www.danubegis.org/metadata

children **individualName** **organisationName** **contactInfo** **role**

used by
elements **authority** **citedResponsibleParty** **contact** **metadataContact** **pointOfContact**

annotation
documentation 375-379: CI_ResponsibleParty

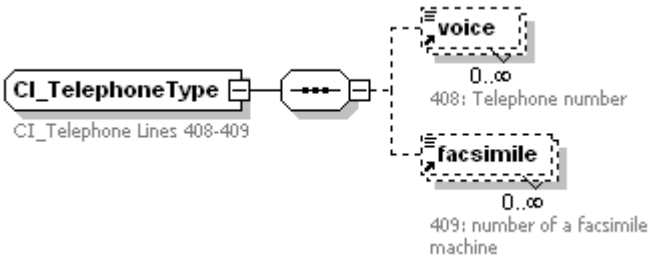
source

```
  <xs:complexType name="CI_ResponsiblePartyType">
   <xs:annotation>
    <xs:documentation> 375-379: CI_ResponsibleParty</xs:documentation>
   </xs:annotation>
   <xs:sequence>
    <xs:element ref="individualName"/>
```

```
    <xs:element ref="organisationName"/>
    <xs:element ref="contactInfo" minOccurs="0"/>
    <xs:element ref="role"/>
   </xs:sequence>
  </xs:complexType>
```

complexType **CI_TelephoneType**

diagram



namespace http://www.danubegis.org/metadata

children **voice** **facsimile**

used by element **phone**

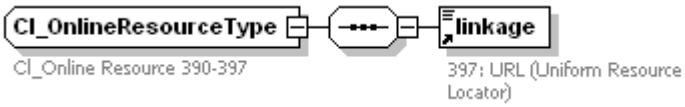
annotation documentation CI_Telephone Lines 408-409

source

```
<xs:complexType name="CI_TelephoneType">
 <xs:annotation>
  <xs:documentation>CI_Telephone Lines 408-409</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="voice" minOccurs="0" maxOccurs="unbounded"/>
  <xs:element ref="facsimile" minOccurs="0" maxOccurs="unbounded"/>
 </xs:sequence>
</xs:complexType>
```

complexType **CI_OnlineResourceType**

diagram



namespace http://www.danubegis.org/metadata

children **linkage**

used by element **onlineResource**

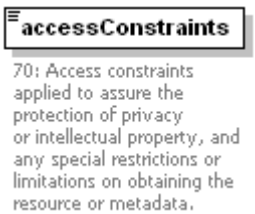
annotation documentation CI_Online Resource 390-397

source

```
<xs:complexType name="CI_OnlineResourceType">
 <xs:annotation>
  <xs:documentation>CI_Online Resource 390-397</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="linkage"/>
 </xs:sequence>
</xs:complexType>
```

element **accessConstraints**

diagram



namespace http://www.danubegis.org/metadata

type **MD_RestrictionCode**

used by complexType **MD_LegalConstraints**

facets
- enumeration copyright
- enumeration patent
- enumeration patentPending
- enumeration trademark
- enumeration license
- enumeration intellectualPropertyRights
- enumeration restricted
- enumeration otherRestrictions

annotation documentation 70: Access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the resource or metadata.

source
```
<xs:element name="accessConstraints" type="MD_RestrictionCode" id="accessConsts">
  <xs:annotation>
    <xs:documentation>70: Access constraints applied to assure the protection of privacy
or intellectual property, and any special restrictions or limitations on obtaining the resource or
metadata.</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **classification**

diagram

namespace http://www.danubegis.org/metadata

type **MD_ClassificationCode**

used by complexType **MD_SecurityConstraints**

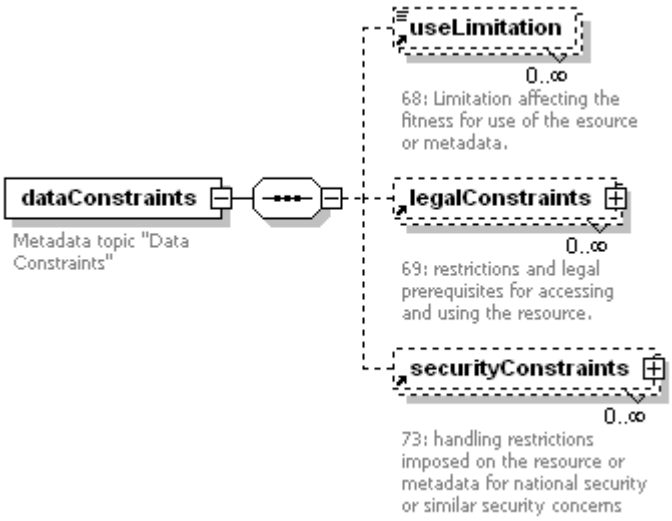
facets
- enumeration unclassified
- enumeration restricted
- enumeration confidential
- enumeration secret

annotation documentation 74: Name of restriction for data or metadata use

source
```
<xs:element name="classification" type="MD_ClassificationCode" id="class">
  <xs:annotation>
    <xs:documentation>74: Name of restriction for data or metadata use</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **dataConstraints**

diagram



namespace http://www.danubegis.org/metadata

children **useLimitation** **legalConstraints** **securityConstraints**

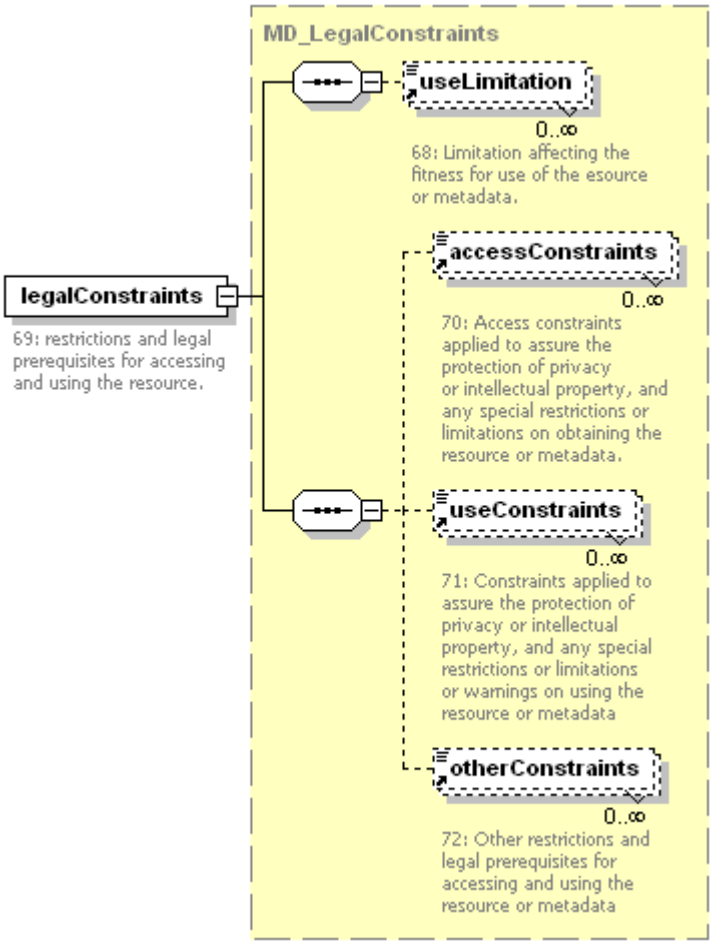
used by element **DRBGIS19115_metadata_v0.1**

annotation documentation Metadata topic "Data Constraints"

source
```
<xs:element name="dataConstraints">
 <xs:annotation>
  <xs:documentation>Metadata topic "Data Constraints"</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="useLimitation" minOccurs="0" maxOccurs="unbounded"/>
   <xs:element ref="legalConstraints" minOccurs="0" maxOccurs="unbounded"/>
   <xs:element ref="securityConstraints" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **legalConstraints**

diagram



namespace http://www.danubegis.org/metadata

type **MD_LegalConstraints**

children **useLimitation** **accessConstraints** **useConstraints** **otherConstraints**

used by element **dataConstraints**

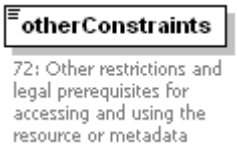
annotation documentation 69: restrictions and legal prerequisites for accessing and using the resource.

source
```
<xs:element name="legalConstraints" type="MD_LegalConstraints">
 <xs:annotation>
  <xs:documentation>69: restrictions and legal prerequisites for accessing and using the resource.</xs:documentation>
 </xs:annotation>
```

```
</xs:element>
```

element **otherConstraints**

diagram



namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **MD_LegalConstraints**

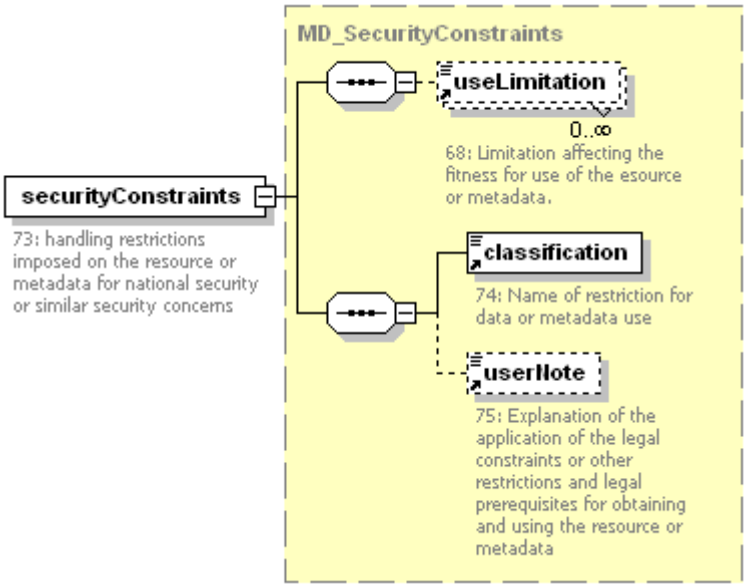
annotation documentation 72: Other restrictions and legal prerequisites for accessing and using the resource or metadata

source

```
<xs:element name="otherConstraints" type="xs:string" id="othConsts">
  <xs:annotation>
    <xs:documentation>72: Other restrictions and legal prerequisites for accessing and using the resource or metadata</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **securityConstraints**

diagram



namespace http://www.danubegis.org/metadata

type **MD_SecurityConstraints**

children **useLimitation** **classification** **userNote**

used by element **dataConstraints**

annotation documentation 73: handling restrictions imposed on the resource or metadata for national security or similar security concerns

source

```
<xs:element name="securityConstraints" type="MD_SecurityConstraints">
  <xs:annotation>
    <xs:documentation>73: handling restrictions imposed on the resource or metadata for national security or similar security concerns</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **useConstraints**

diagram

namespace http://www.danubegis.org/metadata

type **MD_RestrictionCode**

used by
- complexType **MD_LegalConstraints**

facets
- enumeration copyright
- enumeration patent
- enumeration patentPending
- enumeration trademark
- enumeration license
- enumeration intellectualPropertyRights
- enumeration restricted
- enumeration otherRestrictions

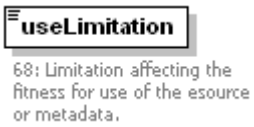
annotation
- documentation 71: Constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations or warnings on using the resource or metadata

source

```
<xs:element name="useConstraints" type="MD_RestrictionCode" id="useConsts">
  <xs:annotation>
    <xs:documentation>71: Constraints applied to assure the protection of privacy or intellectual property, and any special
restrictions or limitations
or warnings on using the
resource or metadata</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **useLimitation**

diagram



namespace http://www.danubegis.org/metadata

type **xs:string**

used by
- element **dataConstraints**
- complexType **MD_Constraints**

annotation
- documentation 68: Limitation affecting the fitness for use of the esource or metadata.

source

```
<xs:element name="useLimitation" type="xs:string" id="useLimit">
  <xs:annotation>
    <xs:documentation>68: Limitation affecting the fitness for use of the esource or metadata.</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **userNote**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

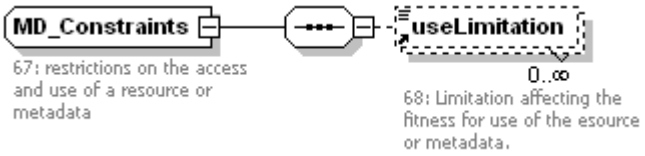
used by
complexType **MD_SecurityConstraints**

annotation
documentation 75: Explanation of the application of the legal constraints or other restrictions and legal prerequisites for obtaining and using the resource or metadata

source
```
<xs:element name="userNote" type="xs:string" id="userNote">
  <xs:annotation>
    <xs:documentation>75: Explanation of the application of the legal constraints or other restrictions and legal prerequisites for obtaining and using the resource or metadata</xs:documentation>
  </xs:annotation>
</xs:element>
```

complexType **MD_Constraints**

diagram



namespace http://www.danubegis.org/metadata

children **useLimitation**

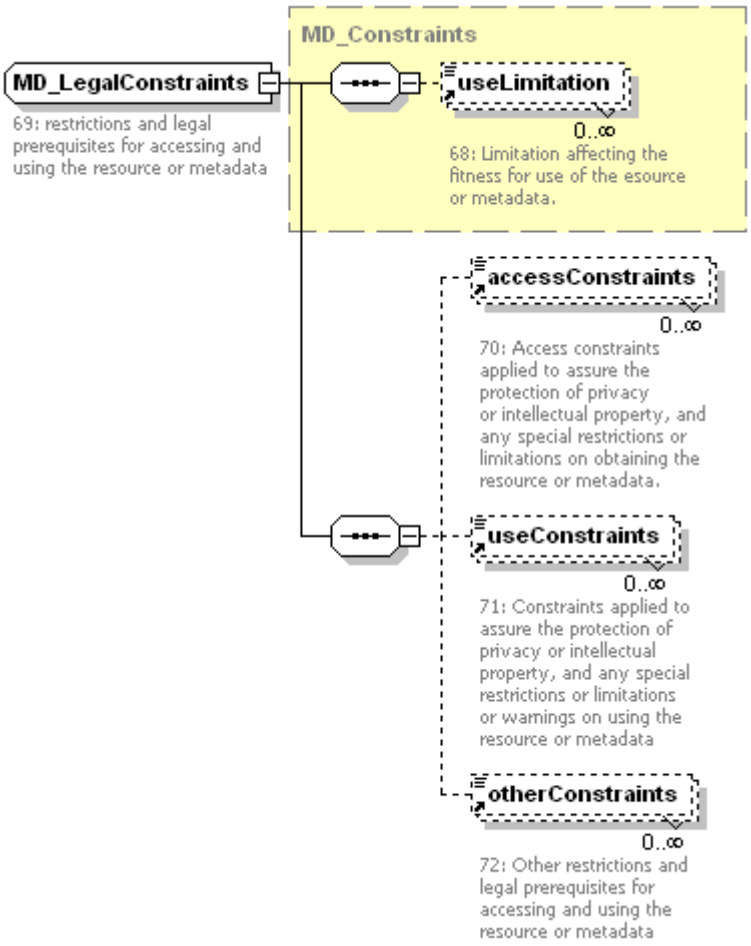
used by
element **resourceConstraints**
complexTypes **MD_LegalConstraints** **MD_SecurityConstraints**

annotation
documentation 67: restrictions on the access and use of a resource or metadata

source
```
<xs:complexType name="MD_Constraints">
  <xs:annotation>
    <xs:documentation>67: restrictions on the access and use of a resource or metadata</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="useLimitation" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

complexType **MD_LegalConstraints**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_Constraints**

children **useLimitation** **accessConstraints** **useConstraints** **otherConstraints**

used by element **legalConstraints**

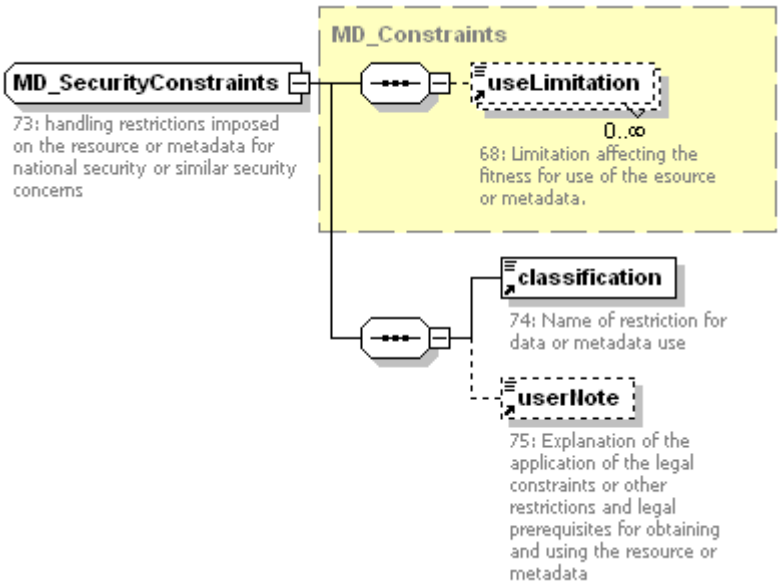
annotation documentation 69: restrictions and legal prerequisites for accessing and using the resource or metadata

source

```
<xs:complexType name="MD_LegalConstraints">
  <xs:annotation>
    <xs:documentation>69: restrictions and legal prerequisites for accessing and using the resource or
metadata</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="MD_Constraints">
      <xs:sequence>
        <xs:element ref="accessConstraints" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element ref="useConstraints" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element ref="otherConstraints" minOccurs="0" maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

complexType **MD_SecurityConstraints**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_Constraints**

children **useLimitation** **classification** **userNote**

used by element **securityConstraints**

annotation documentation 73: handling restrictions imposed on the resource or metadata for national security or similar security concerns

source

```
<xs:complexType name="MD_SecurityConstraints">
 <xs:annotation>
  <xs:documentation>73: handling restrictions imposed on the resource or metadata for national security or similar
security concerns</xs:documentation>
 </xs:annotation>
 <xs:complexContent>
  <xs:extension base="MD_Constraints">
   <xs:sequence>
    <xs:element ref="classification"/>
    <xs:element ref="userNote" minOccurs="0"/>
   </xs:sequence>
  </xs:extension>
 </xs:complexContent>
</xs:complexType>
```

element **axisUnits**

diagram

namespace http://www.danubegis.org/metadata

type **UomLength**

used by complexType **MD_EllipsoidParameters**

facets enumeration meters

annotation documentation 203: Units of the semi-major axis

source

```
<xs:element name="axisUnits" type="UomLength" id="axisUnits">
 <xs:annotation>
  <xs:documentation>203: Units of the semi-major axis</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **codeSpace**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by element **MD_ReferenceSystem/referenceSystemIdentifier**

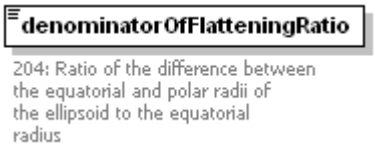
annotation documentation 208: Name or identifier of person/organisation who creates the projection name

source

```
<xs:element name="codeSpace" type="xs:string" id="identCodeSpace">
  <xs:annotation>
    <xs:documentation>208: Name or identifier of person/organisation who creates the projection
name</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **denominatorOfFlatteningRatio**

diagram



namespace http://www.danubegis.org/metadata

type **xs:float**

used by complexType **MD_EllipsoidParameters**

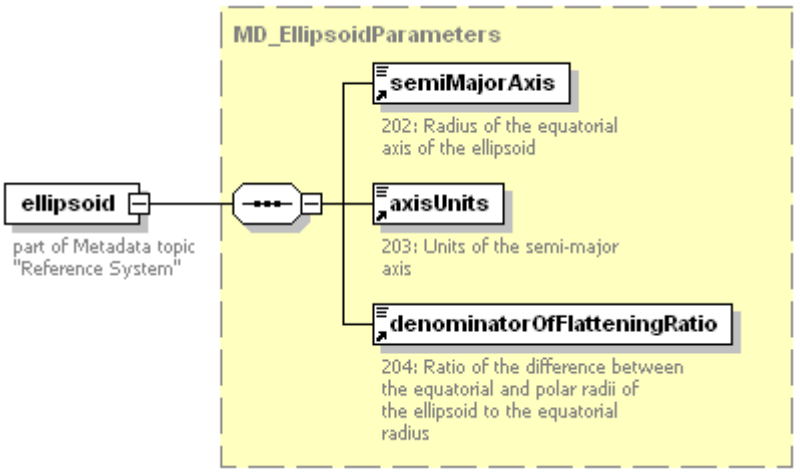
annotation documentation 204: Ratio of the difference between the equatorial and polar radii of the ellipsoid to the equatorial radius

source

```
<xs:element name="denominatorOfFlatteningRatio" type="xs:float" id="denFlatRat">
  <xs:annotation>
    <xs:documentation>204: Ratio of the difference between
the equatorial and polar radii of
the ellipsoid to the equatorial
radius</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **ellipsoid**

diagram



namespace http://www.danubegis.org/metadata

type **MD_EllipsoidParameters**

children **semiMajorAxis** **axisUnits** **denominatorOfFlatteningRatio**

used by
element **referenceSystem**
complexType **MD_CRS**

annotation
documentation part of Metadata topic "Reference System"

source
```
<xs:element name="ellipsoid" type="MD_EllipsoidParameters">
 <xs:annotation>
  <xs:documentation>part of Metadata topic "Reference System"</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **falseEasting**

diagram

namespace http://www.danubegis.org/metadata

type **xs:float**

used by
complexType **MD_ProjectionParameters**

annotation
documentation 220: False Easting

source
```
<xs:element name="falseEasting" type="xs:float" id="falEasting">
 <xs:annotation>
  <xs:documentation>220: False Easting</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **falseEastingNorthingUnits**

diagram

namespace http://www.danubegis.org/metadata

type **xs:float**

used by
complexType **MD_ProjectionParameters**

annotation
documentation 222: Units of False Easting and False Northing

source
```
<xs:element name="falseEastingNorthingUnits" type="xs:float" id="falENUnits">
  <xs:annotation>
    <xs:documentation>222: Units of False Easting and
False Northing</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **falseNorthing**

diagram

namespace http://www.danubegis.org/metadata

type **xs:float**

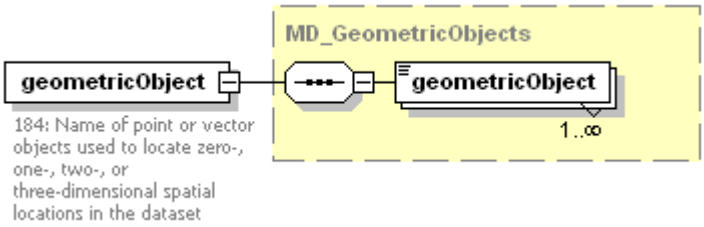
used by
- complexType **MD_ProjectionParameters**

annotation
- documentation 221: False Northing

source
```
<xs:element name="falseNorthing" type="xs:float" id="falNorthing">
  <xs:annotation>
    <xs:documentation>221: False Northing</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **geometricObject**

diagram



namespace http://www.danubegis.org/metadata

type **MD_GeometricObjects**

children **geometricObject**

annotation
- documentation 184: Name of point or vector objects used to locate zero-, one-, two-, or three-dimensional spatial locations in the dataset

source
```
<xs:element name="geometricObject" type="MD_GeometricObjects" id="geoObjTyp">
  <xs:annotation>
    <xs:documentation>184: Name of point or vector objects used to locate zero-, one-, two-, or three-dimensional spatial
locations in the dataset</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **latitudeOfProjectionOrigin**

diagram

namespace http://www.danubegis.org/metadata

type **xs:float**

used by
- complexType **MD_ProjectionParameters**

annotation
- documentation 219: Central latitude

source
```
<xs:element name="latitudeOfProjectionOrigin" type="xs:float" id="latProjOri">
  <xs:annotation>
    <xs:documentation>219: Central latitude</xs:documentation>
  </xs:annotation>
```

```
</xs:element>
```

element **longitudeOfCentralMeridian**

diagram

namespace http://www.danubegis.org/metadata

type **xs:float**

used by complexType **MD_ProjectionParameters**

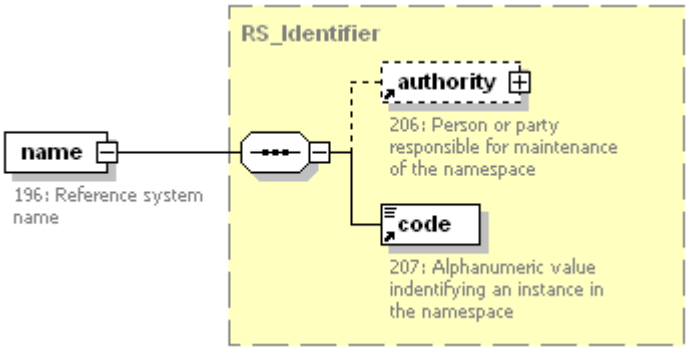
annotation documentation 218: Central meridian

source

```
<xs:element name="longitudeOfCentralMeridian" type="xs:float" id="lonCntMer">
 <xs:annotation>
  <xs:documentation>218: Central meridian</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **name**

diagram



namespace http://www.danubegis.org/metadata

type **RS_Identifier**

children **authority** **code**

used by complexType **RS_ReferenceSystem**

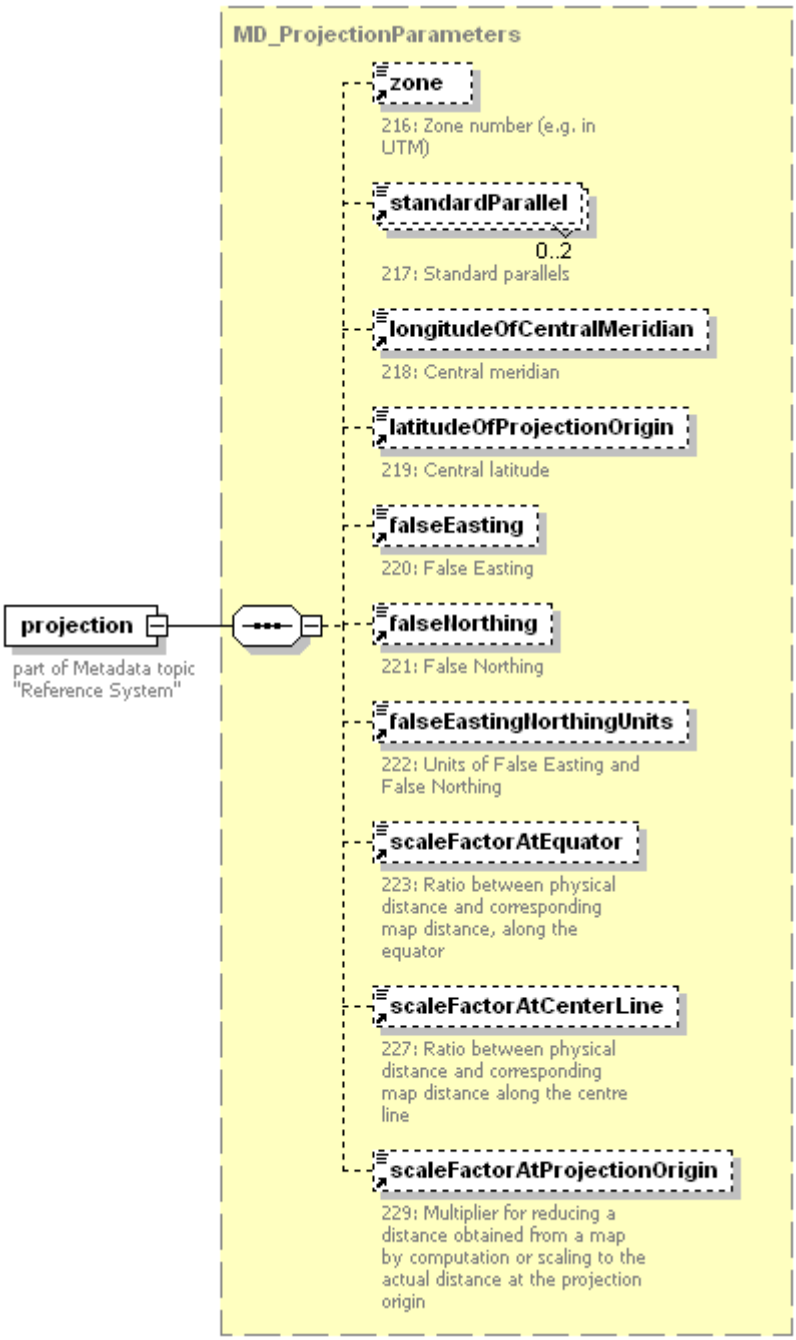
annotation documentation 196: Reference system name

source

```
<xs:element name="name" type="RS_Identifier" id="refSysName">
 <xs:annotation>
  <xs:documentation>196: Reference system name</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **projection**

diagram



namespace http://www.danubegis.org/metadata

type **MD_ProjectionParameters**

children **zone** **standardParallel** **longitudeOfCentralMeridian** **latitudeOfProjectionOrigin** **falseEasting** **falseNorthing** **falseEastingNorthingUnits** **scaleFactorAtEquator** **scaleFactorAtCenterLine** **scaleFactorAtProjectionOrigin**

used by
- element **referenceSystem**
- complexType **MD_CRS**

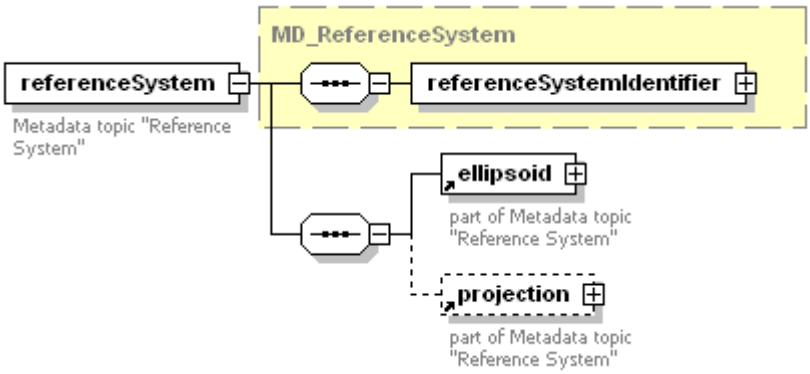
annotation
- documentation part of Metadata topic "Reference System"

source

```
<xs:element name="projection" type="MD_ProjectionParameters">
  <xs:annotation>
    <xs:documentation>part of Metadata topic "Reference System"</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **referenceSystem**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_ReferenceSystem**

children **referenceSystemIdentifier** **ellipsoid** **projection**

used by element **DRBGIS19115_metadata_v0.1**

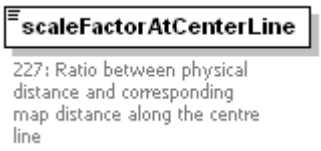
annotation documentation Metadata topic "Reference System"

source

```
<xs:element name="referenceSystem">
 <xs:annotation>
  <xs:documentation>Metadata topic "Reference System"</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:complexContent>
   <xs:extension base="MD_ReferenceSystem">
    <xs:sequence>
     <xs:element ref="ellipsoid"/>
     <xs:element ref="projection" minOccurs="0"/>
    </xs:sequence>
   </xs:extension>
  </xs:complexContent>
 </xs:complexType>
</xs:element>
```

element **scaleFactorAtCenterLine**

diagram



namespace http://www.danubegis.org/metadata

type **xs:float**

used by complexType **MD_ProjectionParameters**

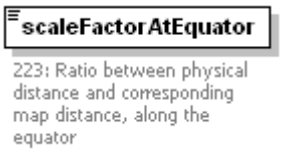
annotation documentation 227: Ratio between physical distance and corresponding map distance along the centre line

source

```
<xs:element name="scaleFactorAtCenterLine" type="xs:float" id="sclFacCnt">
 <xs:annotation>
  <xs:documentation>227: Ratio between physical
distance and corresponding
map distance along the centre
line</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **scaleFactorAtEquator**

diagram



namespace http://www.danubegis.org/metadata

type **xs:float**

used by complexType **MD_ProjectionParameters**

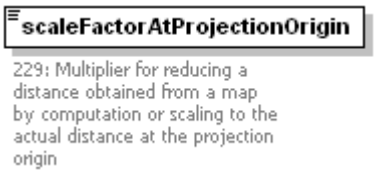
annotation documentation 223: Ratio between physical distance and corresponding map distance, along the equator

source

```
<xs:element name="scaleFactorAtEquator" type="xs:float" id="sclFacEqu">
  <xs:annotation>
    <xs:documentation>223: Ratio between physical
distance and corresponding
map distance, along the
equator</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **scaleFactorAtProjectionOrigin**

diagram



namespace http://www.danubegis.org/metadata

type **xs:float**

used by complexType **MD_ProjectionParameters**

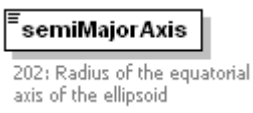
annotation documentation 229: Multiplier for reducing a distance obtained from a map by computation or scaling to the actual distance at the projection origin

source

```
<xs:element name="scaleFactorAtProjectionOrigin" type="xs:float" id="sclFacPrOr">
  <xs:annotation>
    <xs:documentation>229: Multiplier for reducing a
distance obtained from a map
by computation or scaling to the
actual distance at the projection
origin</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **semiMajorAxis**

diagram



namespace http://www.danubegis.org/metadata

type **xs:float**

used by complexType **MD_EllipsoidParameters**

annotation documentation 202: Radius of the equatorial axis of the ellipsoid

source
```
<xs:element name="semiMajorAxis" type="xs:float" id="semiMajAx">
  <xs:annotation>
    <xs:documentation>202: Radius of the equatorial axis of the ellipsoid </xs:documentation>
  </xs:annotation>
</xs:element>
```

element **standardParallel**

diagram

namespace http://www.danubegis.org/metadata

type **xs:float**

used by complexType **MD_ProjectionParameters**

annotation documentation 217: Standard parallels

source
```
<xs:element name="standardParallel" type="xs:float" id="stanParal">
  <xs:annotation>
    <xs:documentation>217: Standard parallels</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **zone**

diagram

namespace http://www.danubegis.org/metadata

type **xs:integer**

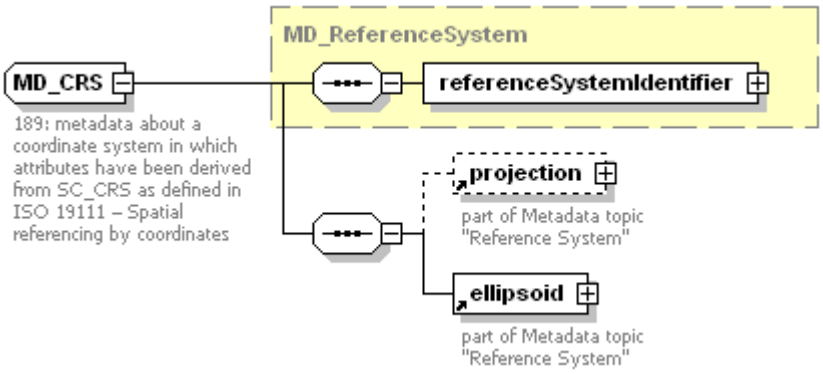
used by complexType **MD_ProjectionParameters**

annotation documentation 216: Zone number (e.g. in UTM)

source
```
<xs:element name="zone" type="xs:integer" id="zone">
  <xs:annotation>
    <xs:documentation>216: Zone number (e.g. in UTM)</xs:documentation>
  </xs:annotation>
</xs:element>
```

complexType **MD_CRS**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_ReferenceSystem**

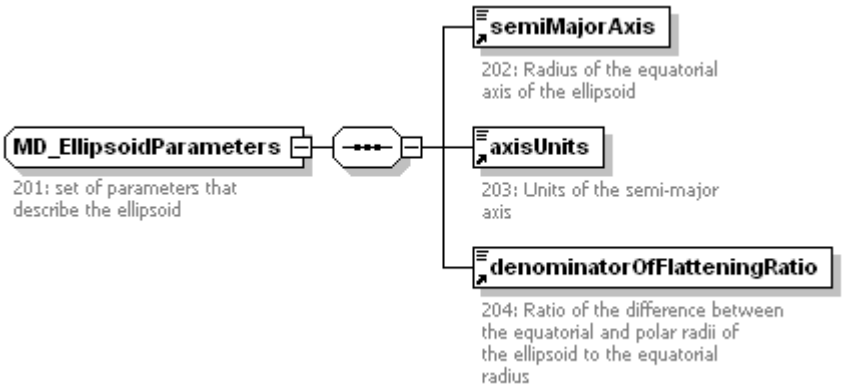
children **referenceSystemIdentifier** **projection** **ellipsoid**

annotation documentation 189: metadata about a coordinate system in which attributes have been derived from SC_CRS as defined in ISO 19111 – Spatial referencing by coordinates

source
```
<xs:complexType name="MD_CRS" id="MdCoRefSys">
 <xs:annotation>
  <xs:documentation>189: metadata about a coordinate system in which attributes have been derived from SC_CRS as defined in ISO 19111 – Spatial referencing by coordinates</xs:documentation>
 </xs:annotation>
 <xs:complexContent>
  <xs:extension base="MD_ReferenceSystem">
   <xs:sequence>
    <xs:element ref="projection" minOccurs="0"/>
    <xs:element ref="ellipsoid"/>
   </xs:sequence>
  </xs:extension>
 </xs:complexContent>
</xs:complexType>
```

complexType **MD_EllipsoidParameters**

diagram



namespace http://www.danubegis.org/metadata

children **semiMajorAxis** **axisUnits** **denominatorOfFlatteningRatio**

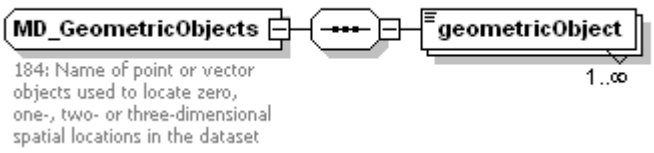
used by element **ellipsoid**

annotation documentation 201: set of parameters that describe the ellipsoid

source
```
<xs:complexType name="MD_EllipsoidParameters">
 <xs:annotation>
  <xs:documentation>201: set of parameters that describe the ellipsoid</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="semiMajorAxis"/>
  <xs:element ref="axisUnits"/>
  <xs:element ref="denominatorOfFlatteningRatio"/>
 </xs:sequence>
</xs:complexType>
```

complexType **MD_GeometricObjects**

diagram



namespace http://www.danubegis.org/metadata

children **geometricObject**

used by element **geometricObject**

annotation documentation 184: Name of point or vector objects used to locate zero, one-, two- or three-dimensional spatial locations in the dataset

source
```
<xs:complexType name="MD_GeometricObjects">
```

```
  <xs:annotation>
    <xs:documentation>184: Name of point or vector objects used to locate zero, one-, two- or three-dimensional spatial
locations in the dataset</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="geometricObject" type="MD_GeometricObjectTypeCode" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

element **MD_GeometricObjects/geometricObject**

diagram

namespace http://www.danubegis.org/metadata

type **MD_GeometricObjectTypeCode**

facets
- enumeration complex
- enumeration composite
- enumeration curve
- enumeration point
- enumeration solid
- enumeration surface

source
```
<xs:element name="geometricObject" type="MD_GeometricObjectTypeCode" maxOccurs="unbounded"/>
```

complexType **MD_ProjectionParameters**

diagram

namespace http://www.danubegis.org/metadata

children **zone** **standardParallel** **longitudeOfCentralMeridian** **latitudeOfProjectionOrigin** **falseEasting** **falseNorthing** **falseEastingNorthingUnits** **scaleFactorAtEquator** **scaleFactorAtCenterLine** **scaleFactorAtProjectionOrigin**

used by element **projection**

annotation documentation 215: set of parameters that describe the projection

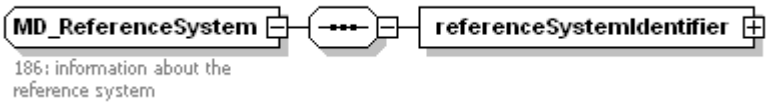
source

```
<xs:complexType name="MD_ProjectionParameters">
  <xs:annotation>
    <xs:documentation>215: set of parameters that describe the projection</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="zone" minOccurs="0"/>
    <xs:element ref="standardParallel" minOccurs="0" maxOccurs="2"/>
    <xs:element ref="longitudeOfCentralMeridian" minOccurs="0"/>
    <xs:element ref="latitudeOfProjectionOrigin" minOccurs="0"/>
    <xs:element ref="falseEasting" minOccurs="0"/>
    <xs:element ref="falseNorthing" minOccurs="0"/>
    <xs:element ref="falseEastingNorthingUnits" minOccurs="0"/>
```

```
    <xs:element ref="scaleFactorAtEquator" minOccurs="0"/>
    <xs:element ref="scaleFactorAtCenterLine" minOccurs="0"/>
    <xs:element ref="scaleFactorAtProjectionOrigin" minOccurs="0"/>
   </xs:sequence>
  </xs:complexType>
```

complexType **MD_ReferenceSystem**

diagram



namespace http://www.danubegis.org/metadata

children **referenceSystemIdentifier**

used by
- element **referenceSystem**
- complexType **MD_CRS**

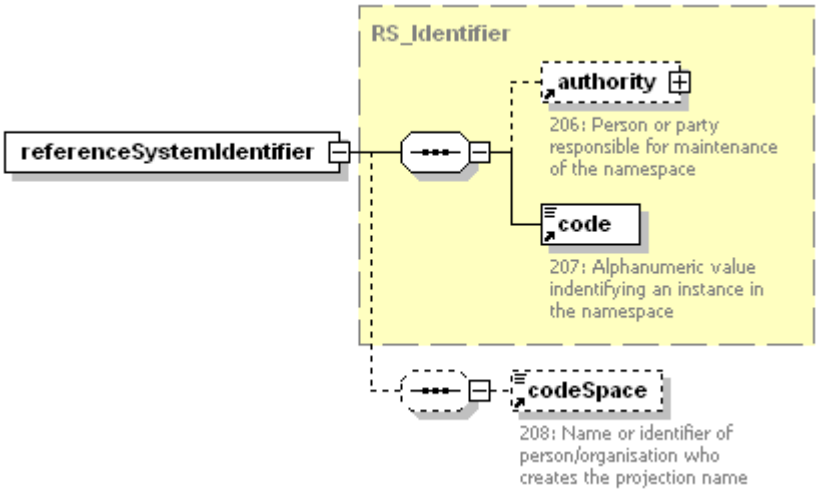
annotation
- documentation 186: information about the reference system

source

```
<xs:complexType name="MD_ReferenceSystem">
 <xs:annotation>
  <xs:documentation>186: information about the reference system</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element name="referenceSystemIdentifier">
   <xs:complexType>
    <xs:complexContent>
     <xs:extension base="RS_Identifier">
      <xs:sequence minOccurs="0">
       <xs:element ref="codeSpace" minOccurs="0"/>
      </xs:sequence>
     </xs:extension>
    </xs:complexContent>
   </xs:complexType>
  </xs:element>
 </xs:sequence>
</xs:complexType>
```

element **MD_ReferenceSystem/referenceSystemIdentifier**

diagram



namespace http://www.danubegis.org/metadata

type extension of **RS_Identifier**

children **authority** **code** **codeSpace**

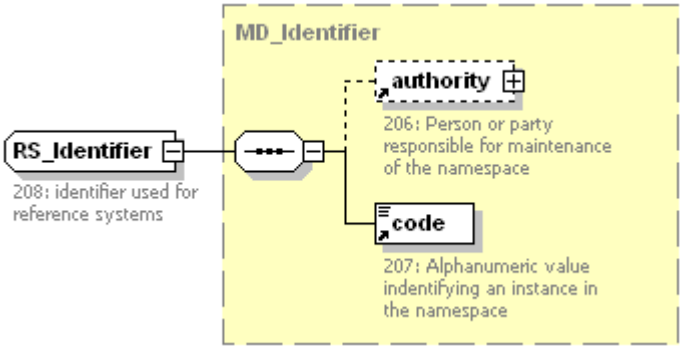
source

```
<xs:element name="referenceSystemIdentifier">
 <xs:complexType>
  <xs:complexContent>
   <xs:extension base="RS_Identifier">
```

```
      <xs:sequence minOccurs="0">
        <xs:element ref="codeSpace" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
 </xs:complexType>
</xs:element>
```

complexType **RS_Identifier**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_Identifier**

children **authority** **code**

used by elements **name** **MD_ReferenceSystem/referenceSystemIdentifier**

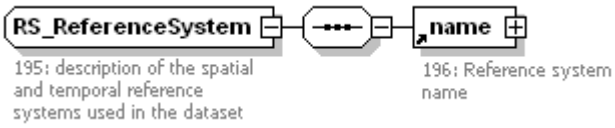
annotation documentation 208: identifier used for reference systems

source

```
<xs:complexType name="RS_Identifier">
 <xs:annotation>
  <xs:documentation>208: identifier used for reference systems</xs:documentation>
 </xs:annotation>
 <xs:complexContent>
  <xs:extension base="MD_Identifier"/>
 </xs:complexContent>
</xs:complexType>
```

complexType **RS_ReferenceSystem**

diagram



namespace http://www.danubegis.org/metadata

children **name**

annotation documentation 195: description of the spatial and temporal reference systems used in the dataset

source

```
<xs:complexType name="RS_ReferenceSystem">
 <xs:annotation>
  <xs:documentation>195: description of the spatial and temporal reference systems used in the
dataset</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="name"/>
 </xs:sequence>
</xs:complexType>
```

element **maintenanceNote**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by complexType **MD_MaintenanceInformation**

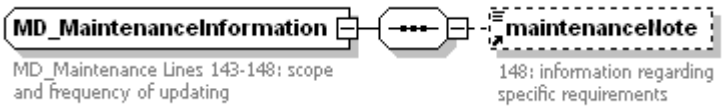
annotation documentation 148: information regarding specific requirements

source

```
<xs:element name="maintenanceNote" type="xs:string">
 <xs:annotation>
  <xs:documentation>148: information regarding specific requirements</xs:documentation>
 </xs:annotation>
</xs:element>
```

complexType **MD_MaintenanceInformation**

diagram



namespace http://www.danubegis.org/metadata

children **maintenanceNote**

used by element **resourceMaintenance**

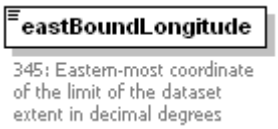
annotation documentation MD_Maintenance Lines 143-148: scope and frequency of updating

source

```
<xs:complexType name="MD_MaintenanceInformation">
 <xs:annotation>
  <xs:documentation>MD_Maintenance Lines 143-148: scope and frequency of updating</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="maintenanceNote" minOccurs="0"/>
 </xs:sequence>
</xs:complexType>
```

element **eastBoundLongitude**

diagram



namespace http://www.danubegis.org/metadata

type **LongitudeType**

used by complexType **EX_GeographicBoundingBoxType**

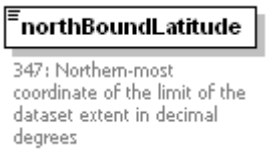
annotation documentation 345: Eastern-most coordinate of the limit of the dataset extent in decimal degrees

source

```
<xs:element name="eastBoundLongitude" type="LongitudeType" id="eastBL">
 <xs:annotation>
  <xs:documentation>345: Eastern-most coordinate of the limit of the dataset extent in decimal
degrees</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **northBoundLatitude**

diagram



namespace http://www.danubegis.org/metadata

type **LatitudeType**

used by complexType **EX_GeographicBoundingBoxType**

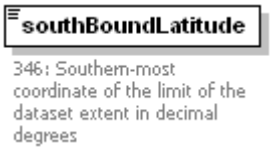
annotation documentation 347: Northern-most coordinate of the limit of the dataset extent in decimal degrees

source

```
<xs:element name="northBoundLatitude" type="LatitudeType" id="northBL">
  <xs:annotation>
    <xs:documentation>347: Northern-most coordinate of the limit of the dataset extent in decimal degrees
</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **southBoundLatitude**

diagram



namespace http://www.danubegis.org/metadata

type **LatitudeType**

used by complexType **EX_GeographicBoundingBoxType**

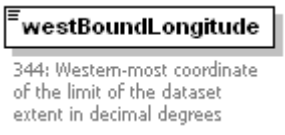
annotation documentation 346: Southern-most coordinate of the limit of the dataset extent in decimal degrees

source

```
<xs:element name="southBoundLatitude" type="LatitudeType" id="southBL">
  <xs:annotation>
    <xs:documentation>346: Southern-most coordinate of the limit of the dataset extent in decimal
degrees</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **westBoundLongitude**

diagram



namespace http://www.danubegis.org/metadata

type **LongitudeType**

used by complexType **EX_GeographicBoundingBoxType**

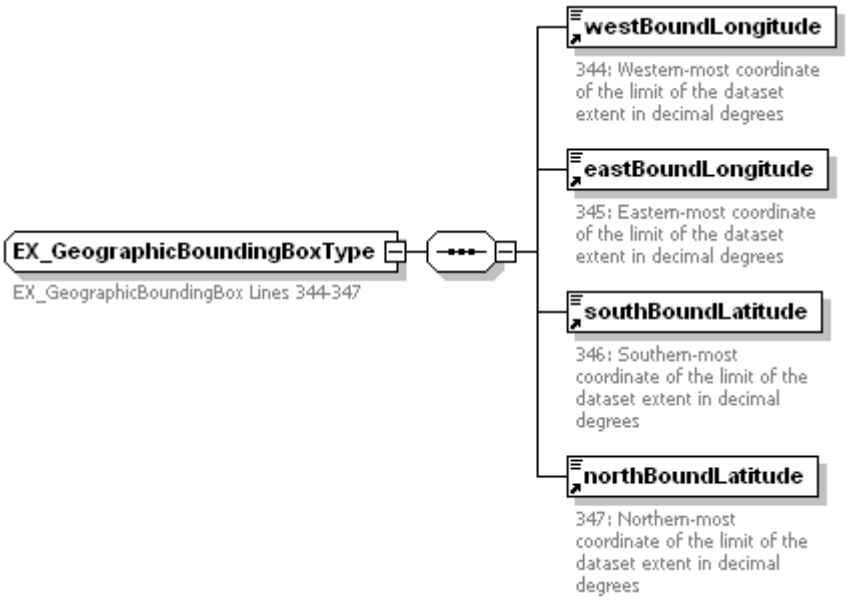
annotation documentation 344: Western-most coordinate of the limit of the dataset extent in decimal degrees

source

```
<xs:element name="westBoundLongitude" type="LongitudeType" id="westBL">
  <xs:annotation>
    <xs:documentation>344: Western-most coordinate of the limit of the dataset extent in decimal
degrees</xs:documentation>
  </xs:annotation>
</xs:element>
```

complexType **EX_GeographicBoundingBoxType**

diagram



namespace http://www.danubegis.org/metadata

children **westBoundLongitude** **eastBoundLongitude** **southBoundLatitude** **northBoundLatitude**

used by elements **dataExtent** **identificationInfo/extent**

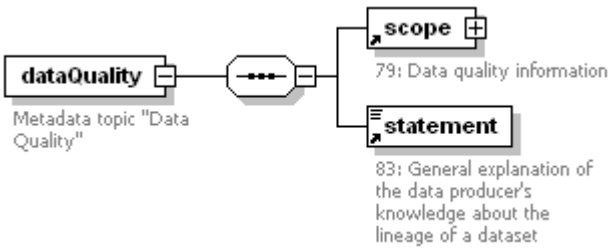
annotation documentation EX_GeographicBoundingBox Lines 344-347

source

```
<xs:complexType name="EX_GeographicBoundingBoxType">
  <xs:annotation>
    <xs:documentation>EX_GeographicBoundingBox Lines 344-347</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="westBoundLongitude"/>
    <xs:element ref="eastBoundLongitude"/>
    <xs:element ref="southBoundLatitude"/>
    <xs:element ref="northBoundLatitude"/>
  </xs:sequence>
</xs:complexType>
```

element **dataQuality**

diagram



namespace http://www.danubegis.org/metadata

children **scope** **statement**

used by element **DRBGIS19115_metadata_v0.1**

annotation documentation Metadata topic "Data Quality"

source

```
<xs:element name="dataQuality">
  <xs:annotation>
    <xs:documentation>Metadata topic "Data Quality"</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
```

```
    <xs:element ref="scope"/>
    <xs:element ref="statement"/>
   </xs:sequence>
  </xs:complexType>
 </xs:element>
```

element **level**

diagram

namespace http://www.danubegis.org/metadata

type **MD_ScopeCode**

used by
- complexType **DQ_Scope**

facets
- enumeration attribute
- enumeration attributeType
- enumeration collectionHardware
- enumeration collectionSession
- enumeration dataset
- enumeration series
- enumeration nonGeographicDataset
- enumeration dimensionGroup
- enumeration feature
- enumeration featureType
- enumeration propertyType
- enumeration fieldSession
- enumeration software
- enumeration service
- enumeration model
- enumeration nationalContribution

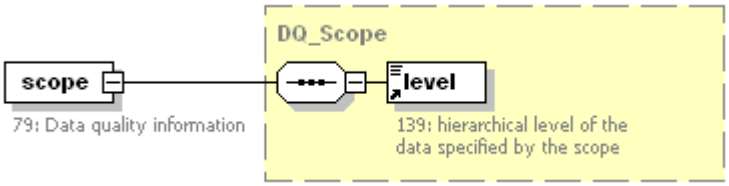
annotation
- documentation 139: hierarchical level of the data specified by the scope

source

```
<xs:element name="level" type="MD_ScopeCode" id="scpLvl">
 <xs:annotation>
  <xs:documentation>139: hierarchical level of the data specified by the scope</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **scope**

diagram



namespace http://www.danubegis.org/metadata

type **DQ_Scope**

children **level**

used by
- element **dataQuality**
- complexType **DQ_DataQuality**

annotation
- documentation 79: Data quality information

source

```
<xs:element name="scope" type="DQ_Scope" id="DataQual">
 <xs:annotation>
  <xs:documentation>79: Data quality information</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **statement**

diagram

namespace http://www.danubegis.org/metadata

type **xs:string**

used by
- element **dataQuality**
- complexType **LI_Lineage**

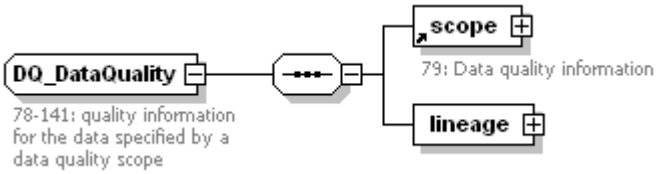
annotation
- documentation 83: General explanation of the data producer's knowledge about the lineage of a dataset

source

```
<xs:element name="statement" type="xs:string" id="statement">
 <xs:annotation>
  <xs:documentation>83: General explanation of the data producer's knowledge about the
lineage of a dataset</xs:documentation>
 </xs:annotation>
</xs:element>
```

complexType **DQ_DataQuality**

diagram



namespace http://www.danubegis.org/metadata

children **scope** **lineage**

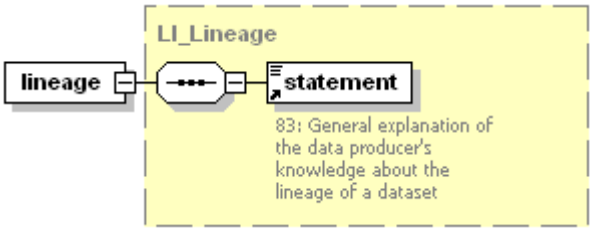
annotation
- documentation 78-141: quality information for the data specified by a data quality scope

source

```
<xs:complexType name="DQ_DataQuality">
 <xs:annotation>
  <xs:documentation>78-141: quality information for the data specified by a data quality scope</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="scope"/>
  <xs:element name="lineage" type="LI_Lineage" id="lineage"/>
 </xs:sequence>
</xs:complexType>
```

element **DQ_DataQuality/lineage**

diagram



namespace http://www.danubegis.org/metadata

type **LI_Lineage**

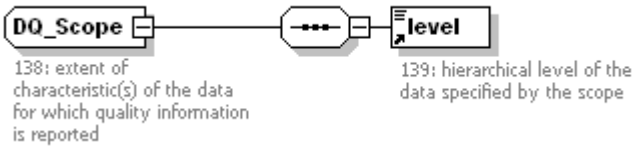
children **statement**

source

```
<xs:element name="lineage" type="LI_Lineage" id="lineage"/>
```

complexType **DQ_Scope**

diagram



namespace http://www.danubegis.org/metadata

children **level**

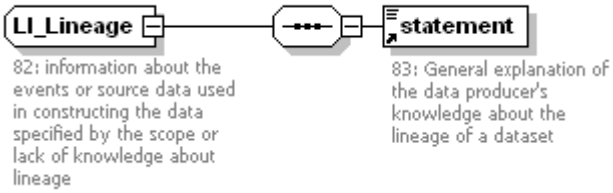
used by element **scope**

annotation documentation 138: extent of characteristic(s) of the data for which quality information is reported

source
```
<xs:complexType name="DQ_Scope">
 <xs:annotation>
  <xs:documentation>138: extent of characteristic(s) of the data for which quality information is
reported</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="level"/>
 </xs:sequence>
</xs:complexType>
```

complexType **LI_Lineage**

diagram



namespace http://www.danubegis.org/metadata

children **statement**

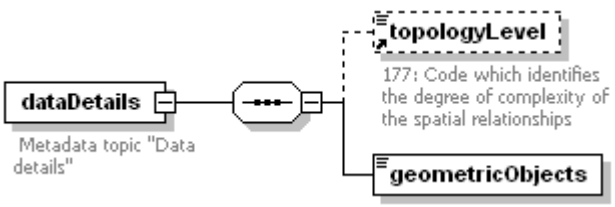
used by element **DQ_DataQuality/lineage**

annotation documentation 82: information about the events or source data used in constructing the data specified by the scope or lack of knowledge about lineage

source
```
<xs:complexType name="LI_Lineage">
 <xs:annotation>
  <xs:documentation>82: information about the events or source data used in constructing the data specified by the
scope or lack of knowledge about lineage</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element ref="statement"/>
 </xs:sequence>
</xs:complexType>
```

element **dataDetails**

diagram



namespace http://www.danubegis.org/metadata

children **topologyLevel** **geometricObjects**

used by element **DRBGIS19115_metadata_v0.1**

annotation documentation Metadata topic "Data details"

source
```
<xs:element name="dataDetails">
 <xs:annotation>
  <xs:documentation> Metadata topic "Data details"</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="topologyLevel" minOccurs="0"/>
   <xs:element name="geometricObjects" type="MD_GeometricObjectTypeCode"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **dataDetails/geometricObjects**

diagram 

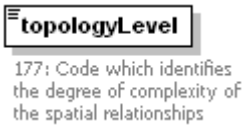
namespace http://www.danubegis.org/metadata

type **MD_GeometricObjectTypeCode**

facets
- enumeration complex
- enumeration composite
- enumeration curve
- enumeration point
- enumeration solid
- enumeration surface

source
```
<xs:element name="geometricObjects" type="MD_GeometricObjectTypeCode"/>
```

element **topologyLevel**

diagram 

namespace http://www.danubegis.org/metadata

type **MD_TopologyLevelCode**

used by
- element **dataDetails**
- complexType **MD_VectorSpatialRepresentation**

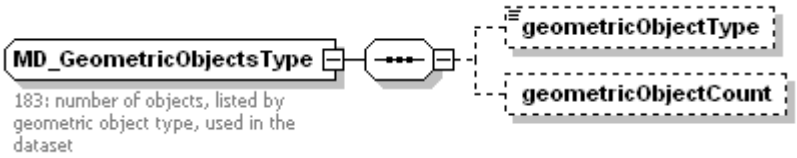
facets
- enumeration geometryOnly
- enumeration topology1D
- enumeration planarGraph
- enumeration fullPlanarGraph
- enumeration surfaceGraph
- enumeration fullSurfaceGraph
- enumeration topology3D
- enumeration fullTopology3D
- enumeration abstract

annotation documentation 177: Code which identifies the degree of complexity of the spatial relationships

source
```
<xs:element name="topologyLevel" type="MD_TopologyLevelCode" id="topLvl">
 <xs:annotation>
  <xs:documentation>177: Code which identifies the degree of complexity of the spatial
relationships</xs:documentation>
 </xs:annotation>
</xs:element>
```

complexType **MD_GeometricObjectsType**

diagram



namespace http://www.danubegis.org/metadata

children **geometricObjectType** **geometricObjectCount**

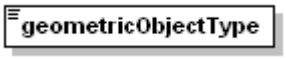
annotation
documentation 183: number of objects, listed by geometric object type, used in the dataset

source

```
<xs:complexType name="MD_GeometricObjectsType">
 <xs:annotation>
  <xs:documentation>183: number of objects, listed by geometric object type, used in the dataset</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element name="geometricObjectType" type="MD_GeometricObjectTypeCode" minOccurs="0"/>
  <xs:element name="geometricObjectCount" minOccurs="0"/>
 </xs:sequence>
</xs:complexType>
```

element **MD_GeometricObjectsType/geometricObjectType**

diagram



namespace http://www.danubegis.org/metadata

type **MD_GeometricObjectTypeCode**

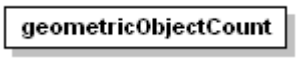
facets
enumeration complex
enumeration composite
enumeration curve
enumeration point
enumeration solid
enumeration surface

source

```
<xs:element name="geometricObjectType" type="MD_GeometricObjectTypeCode" minOccurs="0"/>
```

element **MD_GeometricObjectsType/geometricObjectCount**

diagram



namespace http://www.danubegis.org/metadata

source

```
<xs:element name="geometricObjectCount" minOccurs="0"/>
```

complexType **MD_SpatialRepresentation**

diagram

namespace http://www.danubegis.org/metadata

used by
complexType **MD_VectorSpatialRepresentation**

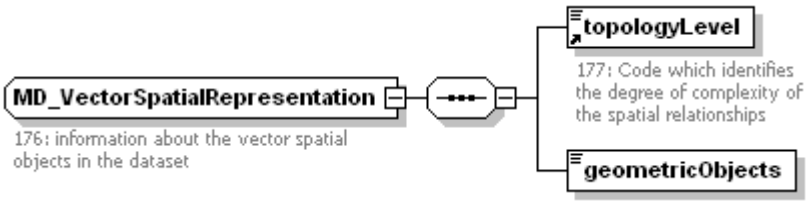
annotation
documentation 156: digital mechanism used to represent spatial information

source

```
<xs:complexType name="MD_SpatialRepresentation" abstract="true">
 <xs:annotation>
  <xs:documentation>156: digital mechanism used to represent spatial information</xs:documentation>
 </xs:annotation>
</xs:complexType>
```

complexType **MD_VectorSpatialRepresentation**

diagram



namespace http://www.danubegis.org/metadata

type extension of **MD_SpatialRepresentation**

children **topologyLevel** **geometricObjects**

annotation
documentation 176: information about the vector spatial objects in the dataset

source

```
<xs:complexType name="MD_VectorSpatialRepresentation">
 <xs:annotation>
  <xs:documentation>176: information about the vector spatial objects in the dataset</xs:documentation>
 </xs:annotation>
 <xs:complexContent>
  <xs:extension base="MD_SpatialRepresentation">
   <xs:sequence>
    <xs:element ref="topologyLevel"/>
    <xs:element name="geometricObjects" type="MD_GeometricObjectTypeCode"/>
   </xs:sequence>
  </xs:extension>
 </xs:complexContent>
</xs:complexType>
```

element **MD_VectorSpatialRepresentation/geometricObjects**

diagram

namespace http://www.danubegis.org/metadata

type **MD_GeometricObjectTypeCode**

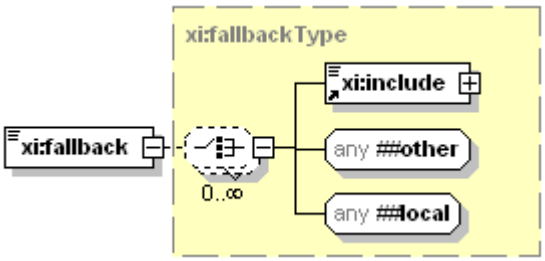
facets
enumeration complex
enumeration composite
enumeration curve
enumeration point
enumeration solid
enumeration surface

source

```
<xs:element name="geometricObjects" type="MD_GeometricObjectTypeCode"/>
```

element **xi:fallback**

diagram



namespace http://www.w3.org/2003/XInclude

type **xi:fallbackType**

children **xi:include**

used by
complexType **xi:includeType**

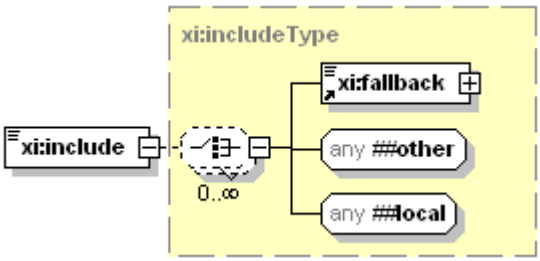
attributes

Name	Type	Use	Default	Fixed	Annotation

source
```
<xs:element name="fallback" type="xi:fallbackType"/>
```

element **xi:include**

diagram



namespace http://www.w3.org/2003/XInclude

type **xi:includeType**

children **xi:fallback**

used by
- complexType **xi:fallbackType**

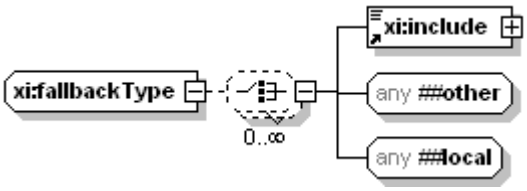
attributes

Name	Type	Use	Default	Fixed	Annotation
href	xs:anyURI	optional			
parse	xi:parseType	optional	xml		
xpointer	xs:string	optional			
encoding	xs:string	optional			
accept	xs:string	optional			
accept-language	xs:string	optional			
accept-charset	xs:string	optional			

source
```
<xs:element name="include" type="xi:includeType"/>
```

complexType **xi:fallbackType**

diagram



namespace http://www.w3.org/2003/XInclude

children **xi:include**

used by
- element **xi:fallback**

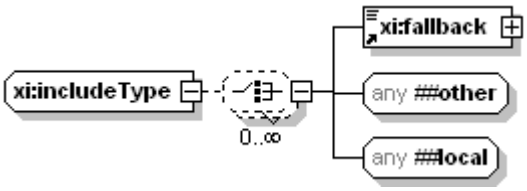
attributes

Name	Type	Use	Default	Fixed	Annotation

source
```
<xs:complexType name="fallbackType" mixed="true">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element ref="xi:include"/>
    <xs:any namespace="##other" processContents="lax"/>
    <xs:any namespace="##local" processContents="lax"/>
  </xs:choice>
  <xs:anyAttribute namespace="##other" processContents="lax"/>
</xs:complexType>
```

complexType **xi:includeType**

diagram



namespace http://www.w3.org/2003/XInclude

children **xi:fallback**

used by element **xi:include**

attributes

Name	Type	Use	Default	Fixed	Annotation
href	xs:anyURI	optional			
parse	xi:parseType	optional	xml		
xpointer	xs:string	optional			
encoding	xs:string	optional			
accept	xs:string	optional			
accept-language	xs:string	optional			
accept-charset	xs:string	optional			

source

```
<xs:complexType name="includeType" mixed="true">
 <xs:choice minOccurs="0" maxOccurs="unbounded">
  <xs:element ref="xi:fallback"/>
  <xs:any namespace="##other" processContents="lax"/>
  <xs:any namespace="##local" processContents="lax"/>
 </xs:choice>
 <xs:attribute name="href" type="xs:anyURI" use="optional"/>
 <xs:attribute name="parse" type="xi:parseType" use="optional" default="xml"/>
 <xs:attribute name="xpointer" type="xs:string" use="optional"/>
 <xs:attribute name="encoding" type="xs:string" use="optional"/>
 <xs:attribute name="accept" type="xs:string" use="optional"/>
 <xs:attribute name="accept-language" type="xs:string" use="optional"/>
 <xs:attribute name="accept-charset" type="xs:string" use="optional"/>
 <xs:anyAttribute namespace="##other" processContents="lax"/>
</xs:complexType>
```

simpleType **xi:parseType**

namespace http://www.w3.org/2003/XInclude

type restriction of **xs:token**

used by attribute **xi:includeType/@parse**

facets
enumeration xml
enumeration text

source

```
<xs:simpleType name="parseType">
 <xs:restriction base="xs:token">
  <xs:enumeration value="xml"/>
  <xs:enumeration value="text"/>
 </xs:restriction>
</xs:simpleType>
```

XML Schema documentation generated with **XMLSPY** Schema Editor **http://www.altova.com/xmlspy**

ANNEX C:

Software architecture (interface and package structure)

CLASS HIERARCHY

- java.lang.Object
  - org.danubegis.command.**AbstractCommand** (implements org.danubegis.command.Command)
    - org.danubegis.command.**AddData** (implements org.danubegis.command.UndoableCommand)
    - org.danubegis.command.**MapDataset** (implements org.danubegis.command.UndoableCommand)
  - org.danubegis.util.**ActionLogger**
  - org.danubegis.command.**AddDataUser** (implements org.danubegis.command.UndoableCommand)
  - org.danubegis.validate.**CodeListFieldImpl** (implements org.danubegis.validate.CodeListField)
  - org.danubegis.validate.**CodeListImpl** (implements org.danubegis.validate.CodeList)
  - org.danubegis.command.**CommandFactory**
  - org.danubegis.jsf.beans.**ContextBean**
  - org.danubegis.repository.**DataDaoFactory** (implements org.danubegis.repository.DataDao)
  - org.danubegis.data.**DataFactory**
  - org.danubegis.util.**DBHelper**
  - org.danubegis.jsf.beans.**FileUpload**
  - org.danubegis.util.**FileUtil**
  - org.danubegis.util.**GarbageCollector**
  - org.danubegis.util.**GarbageCollectorScheduler**
  - HttpServlet
    - org.danubegis.servlet.**GarbageCollectorServlet**
  - HttpServlet
    - org.danubegis.servlet.**DownloadServlet**
  - org.danubegis.repository.**LoadRepository**
  - org.danubegis.util.**LocaleMessageUtil**
  - org.danubegis.jsf.beans.**MapBean**
  - org.danubegis.map.**MapFactory** (implements org.danubegis.map.Map)
  - org.danubegis.jsf.beans.**MapSchema**
  - org.danubegis.metainfo.**MetaInfoFactory** (implements org.danubegis.metainfo.MetaInfo)
  - org.danubegis.render.**RenderFactory** (implements org.danubegis.render.Render)
  - org.danubegis.util.**RessourceFactory** (implements org.danubegis.util.Ressource)
  - org.danubegis.jsf.beans.**SchemaMappingRow**
  - org.danubegis.servicelocator.**ServiceLocatorFactory** (implements org.danubegis.servicelocator.ServiceLocator)
  - org.danubegis.util.**ShapeFileUtil**
  - java.lang.Throwable (implements java.io.Serializable)
    - java.lang.Exception
      - org.danubegis.**DanubeGisException**
        - org.danubegis.command.**CommandException**
        - org.danubegis.map.**MappingException**
        - org.danubegis.metainfo.**MetaInfoException**
        - org.danubegis.render.**RenderException**
        - org.danubegis.repository.**RepositoryException**
        - org.danubegis.security.**SecurityException**
        - org.danubegis.validate.**ValidateException**
          - org.danubegis.validate.**IncompleteException**

        - org.danubegis.validate.**InvalidContentException**
        - org.danubegis.validate.**InvalidDataException**
        - org.danubegis.validate.**InvalidMetaInfoException**
    - org.danubegis.jsf.beans.**User**
    - org.danubegis.security.**UserDaoFactory** (implements org.danubegis.security.UserDao)
    - org.danubegis.jsf.beans.**Validate**
    - org.danubegis.validate.**ValidateFactory** (implements org.danubegis.validate.ValidateData, org.danubegis.validate.ValidateDataset)
    - org.danubegis.validate.**ValidateMetaInfo** (implements org.danubegis.validate.ValidateData, org.danubegis.validate.ValidateDataset)
    - org.danubegis.jsf.beans.**Workflow**
    - org.danubegis.util.**XMLUtil**
    - org.danubegis.util.**ZipUtil**

INTERFACE HIERARCHY

- org.danubegis.validate.**CodeList**
- org.danubegis.validate.**CodeListField**
- org.danubegis.command.**Command**
  - org.danubegis.command.**UndoableCommand**
- org.danubegis.data.**DataDao**
  - org.danubegis.data.**Data** (also extends org.danubegis.security.UserUUID)
    - org.danubegis.data.**Dataset** (also extends org.danubegis.data.FileBasedData, org.danubegis.data.SpatialExtent, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
      - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
      - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
      - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
      - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.data.**Template** (also extends org.danubegis.data.FileBasedCodeList, org.danubegis.data.FileBasedData, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
      - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
      - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
  - org.danubegis.data.**Dataset** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedData, org.danubegis.data.SpatialExtent, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
      - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
  - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)

        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.data.**Template** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedCodeList, org.danubegis.data.FileBasedData, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
        - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
            - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
- org.danubegis.repository.**DataDao**
- org.danubegis.data.**FileBasedCodeList**
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.Template)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.data.**Template** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedData, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
        - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
            - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
- org.danubegis.data.**FileBasedData**
    - org.danubegis.data.**Dataset** (also extends org.danubegis.data.Data, org.danubegis.data.SpatialExtent, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
        - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
            - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)

        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
        - org.danubegis.data.**Template** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedCodeList, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
            - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
                - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
            - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
- org.danubegis.data.**FileBasedMetaInfo**
    - org.danubegis.data.**DbfData**
        - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset)
            - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
            - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeData**
            - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset)
            - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeData**
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
- org.danubegis.**Globals**
- org.danubegis.map.**Map**
- org.danubegis.map.**MapField**
- org.danubegis.data.**Message**
- org.danubegis.metainfo.**MetaInfo**
- org.danubegis.render.**Render**
- org.danubegis.util.**Ressource**
- org.danubegis.servicelocator.**ServiceLocator**
- org.danubegis.data.**SpatialExtent**

- org.danubegis.data.**Dataset** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedData, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
  - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
  - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
- org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
  - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
- org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)

- org.danubegis.data.**TemplateUUID**
  - org.danubegis.data.**Dataset** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedData, org.danubegis.data.SpatialExtent, org.danubegis.data.TimestampValid)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
      - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
  - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
  - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
  - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
  - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
  - org.danubegis.data.**Template** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedCodeList, org.danubegis.data.FileBasedData, org.danubegis.data.TimestampValid)
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
      - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
- org.danubegis.data.**TimestampValid**
  - org.danubegis.data.**Dataset** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedData, org.danubegis.data.SpatialExtent, org.danubegis.data.TemplateUUID)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
      - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)

- org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
  - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
- org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
  - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
- org.danubegis.data.**Harmonized** (also extends org.danubegis.security.UserUUID)
- org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
- org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
- org.danubegis.data.**Template** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedCodeList, org.danubegis.data.FileBasedData, org.danubegis.data.TemplateUUID)
  - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
  - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)

- org.danubegis.security.**UserDao**
- org.danubegis.security.**UserUUID**
  - org.danubegis.data.**Data** (also extends org.danubegis.data.DataDao)
    - org.danubegis.data.**Dataset** (also extends org.danubegis.data.FileBasedData, org.danubegis.data.SpatialExtent, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
      - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
      - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
      - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
      - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.data.**Template** (also extends org.danubegis.data.FileBasedCodeList, org.danubegis.data.FileBasedData, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)

        - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
            - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.data.**Dataset** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedData, org.danubegis.data.SpatialExtent, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
        - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.DbfData)
            - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfDataset** (also extends org.danubegis.data.Dataset, org.danubegis.data.DbfData)
        - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList, org.danubegis.data.Template)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
    - org.danubegis.data.**Harmonized** (also extends org.danubegis.data.TimestampValid)
    - org.danubegis.data.**ShapeDataset** (also extends org.danubegis.data.DbfDataset, org.danubegis.data.ShapeData)
    - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.data.**Template** (also extends org.danubegis.data.Data, org.danubegis.data.FileBasedCodeList, org.danubegis.data.FileBasedData, org.danubegis.data.TemplateUUID, org.danubegis.data.TimestampValid)
        - org.danubegis.data.**DbfTemplate** (also extends org.danubegis.data.DbfData, org.danubegis.data.FileBasedCodeList)
            - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.ShapeData)
        - org.danubegis.data.**ShapeTemplate** (also extends org.danubegis.data.DbfTemplate, org.danubegis.data.ShapeData)
    - org.danubegis.security.**User**
- org.danubegis.validate.**ValidateData**
- org.danubegis.validate.**ValidateDataset**

ENUM HIERARCHY

- java.lang.Object
  - java.lang.Enum<E> (implements java.lang.Comparable<T>, java.io.Serializable)
    - org.danubegis.validate.**ValidationType**
    - org.danubegis.data.**MessageType**
    - org.danubegis.data.**Geometry**
    - org.danubegis.data.**Extent**
    - org.danubegis.data.**DataType**
    - org.danubegis.data.**Action**