EuroGlobalMap release 2019

Pan-European Database at Small Scale

Specification and Data Catalogue

Security (distribution level):	Restricted to EuroGeographics Association
Project Coordinator:	Institut National de l'Information Géographique et Forestière - France
Participant Short Name:	IGN-F (France)
Other contributors:	BKG (Germany), NLS-F (Finland), IGN-B (Belgium)
Number of pages:	92 pages
File name:	EGM_2019_DataSpecification.pdf

Keywords: Generalisation, accuracy, spatial feature, metadata, feature and attribute coding structure, topology

Abstract (for dissemination): The product defined is referred to as EuroGlobalMap. The purpose of these specifications is to provide a description of the content, accuracy and design philosophy of EuroGlobalMap. Conformance to this specification will ensure uniformity among all national mapping and cadastral agencies engaged in a co-coordinated production and maintenance program for the product range.

Change history

Status and version:	Date:	Authors:
Draft Version 1.0 (12 December 2000) is a proposal to be discussed in the EGM Technical Committee (TC) meeting.	12.12.2000	NLS-F: Ari Öysti Aaro Mikkola
Draft Version 1.1 (16 February 2001) is modified according to the EGM TC meeting on 15-16 January 2001 and it has been checked by the EGM TC.	16.02.2001	NLS-F
Version 2.0 (30 March 2001) is modified according to the EGM TC's comments to the Draft Version 1.1. Specifications for some themes (= relief portrayal and metadata) will be defined later.	30.03.2001	NLS-F
Version 2.1 (8 June 2001) is modified according to the latest comments and proposals given by Regional Co-ordinators.	08.06.2001	NLS-F
Version 2.2 (31 August 2001) corrected according to the proposals made by NLS Finland and agreed by the TC.	31.08.2001	NLS-F
Version 2.3 (18 November 2002): managing of some special cases added. Agreed by the TC.	18.11.2002	NLS-F
Version 2.4 (12 June 2003): Updated for EGM v1.0. Agreed by the TC.	12.06.2003	NLS-F
Version 2.5 (31 January 2004): Updated according the decisions made in EGM/ERM/SABE Harmonisation meeting in Frankfurt Nov 2003 (first phase)	31.01.2004	BKG, NLS-F
Version 3.0: Structure of the specs changed; common definitions usable in all platforms, not only in ArcInfo. Harmonized according the latest decisions made by the EGM/ERM/SABE Harmonisation Group and the ERM specs version 4.0.	01.08.2005	NLS-F, BKG, IGN-F, IGNB
Version 3.1. Errors found corrected and updated.	05.05.2006	NLS-F, BKG
Version 3.2a draft for comments and approval	04.08.2008	NLS-F
Version 3.2	10.11.2008	NLS-F
Version 3.3: New attributes (ICC, SN) added. Tables connected to ferry lines and ferry stations added.	10.01.2011	NLS-F Aaro Mikkola
Version 4.0	05.01.2012	IGN-F, BKG
Version 4.1	04.05.2012	IGN-F
Version 5.0	04.05.2012	IGN-F
Version 6.0	18.12.2012	IGN-F
Version 6.1	17.06.2013	IGN-F
Version 7.0	18.09.2013	IGN-F
Version 8.0	28.10.2015	IGN-F
Version 9.0	30.09.2016	IGN-F
Version 10.0	22.09.2017	IGN-F
Version 11.0	01.08.2018	IGN-F
Version 2019. All changes that apply for EGM 2019 with respect to previous release EGM v11.0 are highlighted in pink.	05.03.2019	IGN-F

Table of Contents

1. Introduction

Scope

This document defines the content and format of European topographic and administrative reference data at golbal level of detail based on requirements set at the European level.

The product defined is referred to as EuroGlobalMap.

Purpose

The purpose of these specifications is to provide a description of the content, accuracy, data format and design philosophy of EuroGlobalMap. Conformance to this specification will ensure uniformity among all mapping and cartographic agencies engaged in a co-coordinated production and maintenance program for the product range.

Reference Documents

Standards and Specifications

The following specifications and standards form a part of this document to the extent specified herein.

NIMA	United States Department of Defence MIL-V-8083 Vector Smart Map (VMAP) Level 1, 1 June 1995
DIGEST	The Digital Geographic Information Exchange Standard, Edition 2.1 September 2000, DGIWG.
EUROGEOGRAPHICS	PETIT Project: EUROMAP Product Specifications, Aug 99, REF: IMP/3035/WP6/MEG/004
EUROGEOGRAPHICS	EBM-ERM-EGM Comparison Report, edition 2.1, 30 Oct 2003

Other Publications

The documents listed in this section have been used as a reference for concepts applicable in the specifications.

EUROGEOGRAPHICS	EuroBoundaryMap, Data Product Specification v12, 2018, https://eurogeographics.org/wp-content/uploads/2018/05/EBM_v12_Specification.pdf
IUCN publication	Guidelines for Protected Area Management Categories, 2008 http://www.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf
EUROGEOGRAPHICS	EuroRegionalMap Specification and Data Catalogue for Data Production v11.1, 2018, https://eurogeographics.org/wp-content/uploads/2018/05/ERM_v11-1_DataSpecification.pdf
DFDD	DGIWG Feature and Attribute Data Registry, https://www.dgiwg.org/FAD/fdd/download.jsp?register=DFDD
ESDIN	Small and Medium Scale Data Specifications, http://www.esdin.eu/project/summary-esdin-project-public-deliverables#small
INSPIRE	INSPIRE Data Specifications, http://inspire.jrc.ec.europa.eu/index.cfm/pageid/2

2. General information

EuroGlobalMap Concept

EuroGlobalMap is a pan-European seamless topographic database at global level of detail. EuroGlobalMap is a vector-based product and is designed to support GIS applications and background display.

The EGM Database is intended to be used in map scale 1:1 000 000. This means that the data content is suitable for a map where 1 cm on the map indicates 10 km on the ground. Features saved in the database as lines or areas are in many cases generalised. Details are reduced mainly by feature selection, line simplification methods or by amalgamation for areas.

EuroGlobalMap Concept for Mandatory and Optional Data Content

The quality contract is to reach a seamless dataset where information indicated in the specifications is available for the whole Europe, harmonized and produced according to the portrayal criteria and quality criteria mentioned in the specifications. However it would be difficult to reach such a level of harmonization for the whole dataset; thus the data content has to be defined according to what is of basic importance and what is optional.

The selection criteria to decide which features and attributes are of basic or optional importance have been defined according to their rate of importance for users and the number of NMAs which can commonly provide them.

The basic or CORE content of the EuroGlobalMap dataset has to be available for the whole dataset extent and is composed of the most important features and information asked by users, or the most commonly supported features and information among NMAs. The optional content is not necessarily available for the whole dataset extent and gathers information of minor importance for users or too specific to be supported by a majority of NMAs. However, when an optional feature is populated, its mandatory attributes have to be populated as well.

Database Sources and Extent

The primary data sources used for EuroGlobalMap used to be the national data collections of the mapping agencies, possibly at similar spatial resolution. Secondary data sources, either internal or external to the mapping agencies, could also be used to fill the required information.

Since EGM v5.1 (2012), a new production process based on generalisation from EuroBoundaryMap and EuroRegionalMap has been progressively put into place. In this version, the Boundary and Hygrodraphy themes have been produced with this method.

The extent of the data set is limited to Europe.

3. Requirements

Coordinate Reference Systems

Geodetic Datum

The horizontal datum for EuroGlobalMap is ETRS89. Differences between WGS84, ITRF94 and ETRS89 (= EUREF89) coordinate systems are negligible at the scale 1:1 000 000. The ETRS89 corresponding ellipsoid is GRS80 (negligibly close to WGS84).

Vertical Datum

Some features have height or depth values stored as attributes. The vertical datum for EuroGlobalMap shall be the European Vertical Reference System EVRS. If the conversion between the national vertical datum and EVRS is not possible then the difference between these two datum is ignored and elevation values will be taken to be in reference to the Mean Sea Level. Elevation values are stored in metres. The vertical datum used should be indicated in the metadata.

Coordinate System

EuroGlobalMap data are stored using geographical coordinates in decimal degrees (longitude and latitude). All latitude coordinates north of the Equator have positive values and south of the Equator have negative values. Values range from the North Pole +90 degrees to the South Pole –90 degrees. All longitude coordinates east of the Greenwich Prime Meridian have positive values and west of the Greenwich Prime Meridian have negative values. Values range from –180 degrees to +180 degrees.

Absolute Horizontal Accuracy

The positional accuracy describes how the coordinates of the features agree with their real world values. The degree of accuracy depends on the following processing steps:

- Positional accuracy of the source dataset.
- Errors due to conversion processes.
- Errors due to the manipulation processes.

Recommended horizontal accuracy should be within 1000 metres or at least better than 2000 metres. Information about the horizontal accuracy should be included in the metadata.

Data Density Level and Selection Criteria

EuroGlobalMap data is collected at a density of detail that approximates the small scale product range (from 1:500 000 to 1:2 000 000). Portrayal criteria mentioned in the data dictionary are general guidelines. It is up to producers to settle in detail their own portrayal criteria.

Dimension

Units of Measure

Unit of measure shall be provided in metric measurement system. Z values are expressed in metres. Areas are expressed in square kilometres. Azimuth and angles are expressed in degrees clockwise with azimuth 0.

Geometric resolution

The appropriate scale for hard-copy output should be 1:1 000 000. Geometric data resolution in the density of vertices on an edge should be as low as possible keeping a realistic size and shape of the feature.

The horizontal geometric resolution should be stored to the equivalent precision of 5 metres or 0.2 arc-seconds or 0.00005 decimal degrees.

Geometric data resolution according to generalisation criteria should have minimum tolerance values. The following shows the tolerance values for geometric resolution in ground distance:

- The minimum accepted area size is **0.06 km²**.
- The matching tolerance of the geometry is **30 m**. (weed and fuzzy tolerance).
- The minimum length of an edge between two connected points should be **200 m**. If connected points distances are less than 200 m, they have to be combined into one.

4. Data Model and Structure

Terminology

Area feature: A geographic entity that encloses a region; for example, a lake, administrative area, or state.

Connected node: One of the two primitive types used to represent linked features that are zero dimensional at a particular scale. Connected nodes are always found at the ends of edges and are topologically linked to the edges. Connected nodes are used in two ways: (1) to define edges topologically (always) and (2) to represent point features that are found at a juncture of linear features, such as overpasses, locks in a canal, or underground utility access points. Under the first usage, the connected nodes are referred to as start and end nodes. Under the second usage, attributes will be associated with the point features related to the connected nodes.

Coverage: A set of feature classes that has a spatial extent and in which primitives interconnect as described by the coverage's topology.

Edge: A one-dimensional curve primitive joining two (possibly the same) nodes used to represent the location of a linear feature and/or the borders of faces. Depending upon the level of topology, edges may be topologically linked to nodes, edges, and faces. Edges are located by an ordered collection of two or more coordinate tuples (pairs or triplets). At least two of the coordinate tuples must be distinct. The orientation of an edge can be recognized by the ordering of the coordinate tuples.

Face: A region enclosed by an edge or set of edges. Faces are topologically linked to their surrounding edges as well as to the other faces that surround them. Faces are always non-overlapping.

Feature: A geographic entity related in some way to the Earth's surface. A feature may be either of Point, Line, Area or Text type. It may be either a Simple Feature or a Complex Feature. A Simple or Complex Feature has a specific set of Attribute values. A Complex Feature consists of a number of Features (Simple and/or Complex).

Feature class: A set of features that share a homogeneous set of attributes. A feature class consists of a set of tables that includes one or more primitive tables and one or more attribute tables. A feature class has the same columns of attribute information for each feature. Every feature class has one and only one feature table. The type of EuroGlobalMap feature classes is the simple feature class. The subtypes of the simple feature classes are the point feature class, line feature class, area feature class, and text feature class.

Feature code: A unique identifier assigned to a feature. The code is composed of five characters. The first is a letter indicating the category, the second is a letter indicating the sub-category and the last three characters (numeric) indicate a serial number in the sub-category.

Geometric primitive: The basic geometric units of representation, specifically, nodes, edges and face.

Isolated node: One of the two node primitive types used to represent isolated features that are zero dimensional at a particular scale. An isolated node is never used as a start or end node. An isolated node is topologically linked to its containing face when faces are present and cannot occur on an edge. This is also known as an "Entity Node".

Layer: A layer consists of a consistent set of data of the same type. For vector data, a layer is a predefined collection of geographical features, grouped by theme, contained within a single specified level of topology (following the rules of that level topology, e.g., if it is planar graph there are no crossing lines). Layers will be composed of one or more area, line, or point features as defined by specification. A layer can also be referred to as coverage.

Line feature: A geographic entity that defines a linear (one-dimensional) structure; for example, a river, road, or a state boundary.

Node: A zero-dimensional geometric primitive that is composed of a single coordinate tuple. There are two types of nodes: isolated nodes and connected nodes. Only one node can occupy a single geographic location.

Point feature: A geographic entity that defines a zero-dimensional location; for example, a building.

Theoretical Data Model

The EuroGlobalMap vector data model is based on the DIGEST vector data model, which adheres to the geo-relational data model. Feature entities are either real items that can be identified on the earth, such as rivers or roads, or abstract items such as boundaries. Attributes may be ascribed to the features. Features may be either of Point, Line, Area or Text types. The spatial extent of features is described in terms of Isolated or Connected Node, Edge and Face elements. These primitive elements carry positional attributes.

In the EuroGlobalMap data model, the one-way relationship from simple features to primitives is restricted to many-to-one relationship. A simple feature is composed of only one primitive. A simple line feature is composed of only one edge, a simple point feature is composed of only one node and a simple area feature is composed of only one face. But several simple features can share the same primitive. For example, an island (simple area feature) is fully covered by built-up area (another area feature) and has identical area. Therefore island and built-up area share the same face.

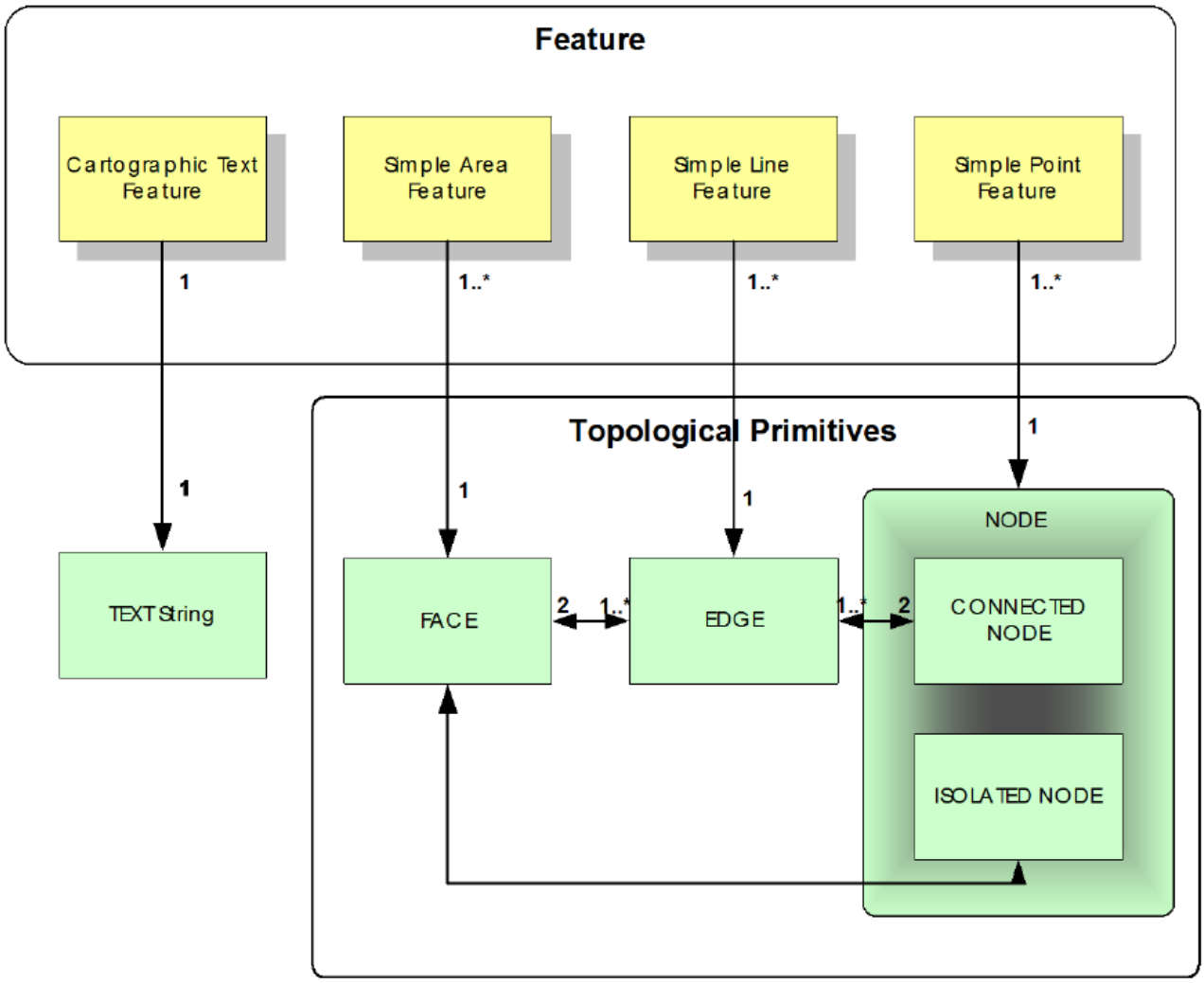

Figure 1: EuroGlobalMap Theoretical Data Model

Database topology

The basic topological relationships for EuroGlobalMap follow the DIGEST data model and are set up at the level of the geometric primitives. Topological relationships can be described as edge-to-node, face-to-edge and node-to-face. In EuroGlobalMap, the acceptable levels of topology are planar graph (level 2) or full topology (level 3) within layers.

Planar graph data (level 2) consists of a set of edges and entity points, where edges meet only at connected nodes. Edges contain start node, end node, right edge and left edge information. Full topology data (level 3) introduces the concept of face and describes face-to-edge as well as node-to-face topological relationships. A planar surface is portioned by a set of mutually exclusive and collectively exhaustive faces. Edges contain left face and right face, start node and end node, and right and left edge information. Edges meet only at connected nodes.

A text feature is a cartographic feature and exists to provide an annotation capability. Text features do not take part in topology.

Topological Rules

Topological rules are defined for the topological primitives within a layer or theme. These rules are set up for EuroGlobalMap:

- Two nodes may not occupy the same coordinate point (x, y or long, lat). Exceptions apply for Hydrographic Network Nodes.
- Two edges may not have the same geometry.
- A node will intersect edges only at their start/end point.
- No edge will intersect nor overlap any other edge, or itself.
- Two faces may not overlap.
- A face may contain any number of isolated nodes.
- As a result of the above rules, topological primitives may exist without being a component of any simple feature.
- No isolated node can be located on an edge; it has to be a connected node..

Topological Association

Functional, spatial, and logical associations are examples of relationships that can be represented and analysed in a GIS database and need to be considered and specified for the EuroGlobalMap data.

These topological associations are described at feature level within a theme or between themes.

A topological association relates to how features are attached to one another functionally, spatially, or logically for example, when they share the same geometry (i.e. river being a boundary) or when they cannot logically overlap each other (i.e. built-up area with water area).

These associations are described in Annex D.

Connectivity

Because of the potential use of the EuroGlobalMap dataset for advanced spatial analysis, road, railway and water networks (separately) should reach a full topological and geometrical connectivity in order to have a continuous network. For roads and railways this means that all lines are connected to each other by nodes. For rivers, this means that fictitious water lines through lakes and other water areas should be created.

Layer organisation

The EuroGlobalMap data are organised in thematic layers and are partitioned into tiles. There are 5 thematic layers in the dataset.

- Administrative Boundaries
- Hydrography
- Named Location
- Settlement
- Transportation

Continuity

No data overlap may exist in and between the countries. Features and edges crossing country boundaries shall be geometrically continuous whenever possible.

Where data collection procedures require individual sources and production lines, features crossing source production boundaries shall be geometrically continuous. In case of unresolved discontinuity, this will be documented in the metadata - lineage.doc file of the respective countries.

Feature and Attribute Coding Scheme

Feature and attribute coding structure is based on Digital Geographic Information Exchange Standard (DIGEST) Feature and Attribute Coding Catalogue (FACC) or its successor, the DGIWG Feature and Attribute Data Registry (DFDD). However specific features, attributes or attribute values missing in the DIGEST FACC / DFDD or not compliant have been added and are highlighted in italic in the EuroGlobalMap data catalogue.

Core feature attribution

Each feature class will be composed of a core basic attribution which is:

Attribute	Definition & Description
FCSubtype	Name of the Feature Type
inspireId	External identifier of the spatial object
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set
F_CODE	The Feature CODE using the DIGEST coding, e.g. “AP030” identifying the road feature.
ICC	The ISO 3166-1 2-char Country Code defining the country dataset to which the feature is belonging. In case of more than one country, the codes are delimited by # and set in alphabetical order. In case of no country responsible (terra nullius), the ICC code is set to “XX”. This ICC attribute is added for the handling of the data in a seamless coverage.

Those attributes are not systematically listed and described in the Annex C (Definition of feature and attributes) but are well recorded in the EuroGlobalMap Data Model.

Note: The attribution of the feature class NUTS_3 does not contain FCsubtype and F_CODE.

Handling Names as Attributes

The naming convention of a name as attribute is to put the first letter of the name in upper case and the other letters in lower case. Exception: names that consist of several words are written out like: Stoke-on-Trent, North Walsham, Le Havre, and Lytham-St. Annes.

The specifications provide several possibilities to store the names of the geographical features by means of several name attributes.

Handling Character set

Names are stored in two types of attributes using a different method of spelling: a first attribute type (the NAMN series) storing the name spelled in national characters using UTF encoding (8 or 16) and a second attribute type (the NAMA series) storing the name in Latin-1 Alphabet characters without diacritical marks.

- The 7-bit ASCII letters are from 0 to 128 of the ISO 8859-1 character set.
- The Unicode character set suits all the European characters used in national language. However some vector data formats or GIS platform are able to display the Unicode Character but effectively use a certain codepage instead. Therefore it is important to indicate which character ISO code can be used to be able to properly read the names attributes without using the Unicode character set.

The information on the ISO code will be stored in the EBM_CHR language code table.

Language Code Table (EGM_CHR)

This table provide a description of languages used in EGM. It stores the ISO code of the character set that can be used to reaf properly geographical names without using the Unicode character set. For non-Latin languages the transliteration scheme is given.

ICC	NLN	Language Name (LNM)	Character Code Set (ISC)		Transliteration Scheme (TLS)
FR	FRE	French	1	ISO 8859-1 (Latin 1)	N_A
	…		2	ISO 8859-2 (Latin 2)	N_A
			3	ISO 8859-3 (Latin 3)	N_A
			4	ISO 8859-4 (Latin 4)	
			5	ISO 8859-5 (Cyrillic)	ISO 9
			6	ISO 8859-6 (Arabic)	
			7	ISO 8859-7 (Greek)	
			8	ISO 8859-8 (Hebrew)	
			9	ISO 8859-9 (Latin 5)	
			10	ISO 8859-10 (Latin 6)	
			13	ISO 8859-13 (Latin 7)	
			14	ISO 8859-14 (Latin 8)	
			15	ISO 8859-15 (Latin 9)	
			16	Unicode UTF-8	

Handling languages

The second point is the possibility to use several languages.

When a geographical feature is named in several languages, these languages have to be the official languages administratively used and spoken in this area. No more than two languages are allowed for a name.

The NAMN1 and NAMA1 attributes store the name of the feature in the official primary language spoken. The NAMN2 and NAMA2 attributes store the name of the feature in the official secondary language spoken.

To translate names from national characters to ASCII ones, some languages use transliteration rules according to national standards or recommendations by the UN, especially for non-Latin alphabets. Those rules must be applied and need to be described in the metadata (lineage.doc).

Notice:

If the name of a geographical feature does not really exist, all the name attributes describing the feature are populated with the value ‘N_A’ (not applicable).

Text Features

EuroGlobalMap may contain cartographic text for named locations which are not portrayed geometrically (for instance, a mountain range or a maritime bay) but can be useful for general viewing and localisation. The cartographic text feature type will carry the following information: font, colour and height.

The source for the text feature will be the names written in national characters using UTF codification.

Missing Attribute Values

Missing values or null values can be populated in a way that can indicate to the data user the reason why the information is missing, e.g. the information doesn't exist or the information exists but has not been collected by the producer.
The following attribute values are used for explaining missing attribution:

Null/No value

The "Null/No value" attribution is used to fill an attribute which is not relevant or does not exist in the real world for a set of features from a given feature class. For instance, some feature classes are used to store different feature types and it is possible that an attribute relevant for one feature type is logically impossible to fill for another one. In that case, the "Null/No value" value is used to fill the attribute for the second feature type. This is however not only reserved to feature types, sometimes it is only sets of particular features which are in this situation.

For example fictitious river axes across lakes are recorded using the same feature class as ordinary rivers. These axes cannot however have reasonable value for instance for the attributes "width ranges" (WD7 and WD8).

Unknown

This value is used when it is not possible to determine the value of an attribute for an object. Objects with missing attribute information have values "UNK" or 0 and other objects have actual values or classification code values to indicate the classification.

For example when the "Elevation of the water body above the sea level" of a certain lake has not been measured, then this attribute value is unknown.

'Unknown' is used normally for a single attribute value of individual objects in a layer.

Unpopulated

This value is used when this attribute information exists in the real world but the data producer does not have this attribute information and has left the attribute field empty. Values "N_P" or 997 indicate an empty attribute field. For example when the attribute "National hydrological identification code" for rivers and lakes has been defined but the EGM data producer does not have this information and has left this attribute field empty, then this attribute value should be used.

'Unpopulated' is normally used for a set of objects in a layer, not for individual ones. Data producers should avoid unpopulating an attribute. It can be used for cases when attribute values are extractable from accessible data source, but the data producer has good reason not to capture the information (for example expenses for capturing the data are too high).

'Unpopulated' should not be confused with 'Unknown'. A subset of objects of the same feature class (i.e. lakes) for which the usage of 'Unpopulated' might be appropriate should have clearly distinct properties (f.i. small lakes with a specified maximum size or a specified class of rivers) from the ones with known attribute values. The specifics of the subset have to be described in the metadata.

Not Applicable

The “Not applicable” value is used when the information simply does not exist in the real world for that specified feature. This could be the case for the naming of islands, lakes or the secondary name of built-up area or for example in the case of roads when the road section does not have a “European route number”. Typically, ”Not applicable” cases often occur when secondary attribute values are concerned.

Missing information (= data, values) for attributes will be populated consistently with DIGEST data model and according to the following rules:

Attribute value Attribute Type	**Null/No Value**	**Unknown**	**Unpopulated**	**Not Applicable**
Meaning in the real world context	*Information cannot be applied*	*Information is missing*	*Information exists but has not been collected*	*Information doesn’t exist*
Text	*N/A*	*UNK*	*N_P*	*N_A*
Integer Coded	*-32768*	*0*	*997*	*998*
Integer Actual Value	*-32768*	*-29999*	*-29997*	*-29998*

5. Data Dictionary

Metadata Files

Metadata

Metadata is data about a dataset. It gives information that allows a better understanding of the data and enables the user to determine whether the data is useful for the application in question and to use the data in the most efficient way. It also enables the data producer to document and characterise the data produced.

Metadata levels

The EuroGlobalMap database covers most of Europe and producers and users are located all over Europe therefore an international standard for the metadata was adopted. Additionally the requirements of the other EuroGeographics projects and databases and other European wide initiatives had to be taken into account. Therefore the following decisions and conditions were stated at the beginning of the project:

- The EuroGlobalMap metadata follows the ISO standard 19115 and it contains information about the whole database and also about the national datasets.
- The metadata for EuroGlobalMap database will be defined, taking into account coherence needs with EuroRegionalMap and the INSPIRE initiative findings.

EuroGlobalMap consists of the national contribution of the participating countries produced according to common specifications. This leads to a hierarchical structure of the metadata with two levels:

1. EuroGlobalMap database
2. National contributions

The metadata for the EuroGlobalMap database contains all the information that applies to the whole dataset. The metadata for the national contributions contains information about the used national databases and any specialities that apply only for one country. There is a metadata set for each participating country and one for the EuroGlobalMap database. The metadata set for the EuroGlobalMap database contains all the metadata elements; for the national contributions only part of the elements apply.

The metadata will be stored in a database (e.g. a table). It is structured in packages, entities and elements (with sub-elements). There are mandatory, optional and conditional elements. Most elements are text, some elements can be coded values, dates, integers, URLs or other data types.

The item "Obligation" shows if an element is mandatory (M), optional (O) or conditional (C). If the entity is optional and no information is given then even the mandatory elements are left empty. If information is given for this entity or the entity is mandatory then at least the mandatory elements have to be filled in.

For each country, the metadata file is provided with a lineage.doc file giving additional information that cannot be really classified in the ISO metadata mainly on data quality and data processing.

Data Layers

The data layers hold geographic dataset information.

Thematic Layer	Layer name
Administrative boundaries	BND
Hydrography	HYDRO
Named Location	NAME
Settlement	POP
Transportation	TRANS

Specific tables

Complementary information is stored in tables that can be related to the EGM vector data. These tables are:

- EBM_NAM storing the names of the administrative units
- EBM_ISN storing the national hierarchical level of the administrative units

Those tables are simply borrowed from the EuroBoundaryMap dataset. The table content should be consistent with the EGM release of the same reference date.

- EGM_CHR storing the ISO character sets used to be able to read the national characters of the names attributes
- FERRY_LINK linking ferry stations and ferry lines
- FERRY_LINES storing thematic identifier of the ferry crossings as well as the names and thematic identifiers of the destination ports
- WATRCRS_MDC providing classification of rivers by size of drainage basin
- LAKERES_WBSC providing classification of lakes/reservoirs by area size
- CountryCodes holding the relation between the country codes of ISO, EU, and EuroGeographics

The tables are described in ANNEX F.

Annex A: List of Features Classes and Features Codes in the Data Layers

Coverage name	Feature class name	Feature class type	Feature codes
BND	POLBNDA	Area	FA001
	POLBNDL	Line	FA000
	NUTS_3	Area	–
HYDRO	COASTA	Area	BA020
	COASTL	Line	BA010, XX500
	DAMC	Point	BI020, BI030
	DAML	Line	BI020, BI030
	HYNODEC	Point	BH503
	LAKERESA	Area	BH080, BH130
	LANDICEA	Area	BJ030, BJ100
	LANDMASKA	Area	XX501
	ISLANDA	Area	BA030
	SEAA	Area	BA040
	SHOREL	Line	BH210
	SPRINGP	Point	BH170
	SPRINGC	Point	BH170
	WATRCRSA	Area	BH502
	WATRCRSL	Line	BH502
NAME	GNAMEP	Point	ZD040
	GNAMET	Text	ZD040
POP	BUILTUPA	Area	AL020
	BUILTUPP	Point	AL020, AL022
TRANS	AIRFLDP	Point	GB005
	EXITC	Point	AQ090
	FERRYC	Point	AQ080
	FERRYL	Line	AQ070
	INTERCC	Point	AP020
	LEVELCC	Point	AQ062, AQ063
	RAILRDC	Point	AQ125
	RAILRDL	Line	AN010, AN500
	RESTC	Point	AQ135
	ROADL	Line	AP030, AP500

Annex B: List of Features and Attributes in the Data Coverages

This list holds all the features and attributes of the EuroGlobalMap data set v10.0.

The column “Obligation” shows if an element is mandatory (M) or optional (O) or conditional (C). When the entity is optional and information is not given then the elements even the mandatory are left empty. If you want to give information for this entity then at least the mandatory elements have to be filled in. When the entity is mandatory then at least the mandatory elements have to be filled.

The column “Responsibility” indicates if an element is created at European level by the EGM Product Management Team during the finalisation phase (F) of the EuroGlobalMap production. All other elements have to be derived from the EuroRegionalMap database, collected and provided by the data producers according to the given obligation.

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsability
BND	**POLBNDL**	**FA000**	**Administrative Boundary**	M	
		BST	Boundary Status Type	M	
		USE	Usage	M	
BND	**POLBNDA**	**FA001**	**Administrative Area**	**M**	
		SHN0	*EBM Hierarchical Number*	*M*	
		SHN1	*EBM Hierarchical Number*	*M*	
		SHN2	*EBM Hierarchical Number*	*M*	
		SHN3	*EBM Hierarchical Number*	*M*	
		SHN4	*EBM Hierarchical Number*	*M*	
		TAA	*Type of administrative area*	*M*	
BND	**NUTS_3**	–	**NUTS regions of level 3**	**O**	
		NUTS_CODE	Code of NUTS region	M	
		NUTS_LABEL	Name of NUTS region	M	
		TAA	Type of administrative area	M	
HYDRO	**COASTL**	**BA010**	**Coastline / Shoreline**	**M**	**F**
HYDRO	**COASTL**	**XX500**	**Sea Limit**	**M**	**F**
HYDRO	**COASTA**	**BA020**	**Foreshore**	**M**	
		MCC	Material Composition Category	M	
		NAMN1	*Name in first national language*	*O*	
		NAMN2	*Name in second national language*	*O*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*O*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*O*	
		NLN1	*3-Char Language Code*	*O*	
		NLN2	*3-Char Language Code*	*O*	
HYDRO	**ISLANDA**	**BA030**	**Island**	**M**	**F**[2]
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
HYDRO	**SEAA**	**BA040**	**Water (except inland)**	**M**	**F**
HYDRO	**LAKERESA**	**BH080**	**Lake / Pond**	**M**	
		HYP	Hydrological Persistence	M	
		HydroID	*Hydrologic Identifier*	*M*	
		NHI	*National Hydrological Identification*	*O*	

[2] Inland islands (in rivers or lakes) are derived from ERM.

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsability
			Code		
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		TID	Tidal/Non-Tidal Category	M	
		ZV2	Highest Z-Value	O	
HYDRO	**LAKERESA**	**BH130**	**Reservoir**	**M**	
		HYP	Hydrological Persistence	M	
		HydroID	*Hydrologic Identifier*	*M*	
		NHI	*National Hydrological Identification Code*	*O*	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		ZV2	Highest Z-Value	O	
HYDRO	**SPRINGP, SPRINGC**	**BH170**	**Spring / Water Hole**	**O**	
		SWT	Well/Spring Feature Type	M	
HYDRO	**SHOREL**	**BH210**	**Inland Shoreline**	**M**	**F**
HYDRO	**WATRCRSL**	**BH502**	**Watercourse**	**M**	
		NVS	Navigability Information Code	M	
		HOC	Hydrographical Origin Category	M	
		HYP	Hydrological Persistence	M	
		LDV	*Link Direction Value*	*O*	
		LOC	Location Category	M	
		HydroID	*Hydrologic Identifier*	*M*	
		NHI	*National Hydrological Identification Code*	*O*	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		TID	Tidal/Non-Tidal Category	M	
		WD7	*Width Lower Range*	*M*	
		WD8	*Width Upper Range*	*M*	
HYDRO	**WATRCRSA**	**BH502**	**Watercourse**	**M**	
		NVS	Navigability Information Code	M	
		HOC	Hydrographical Origin Category	M	
		HYP	Hydrological Persistence	M	
		HydroID	*Hydrologic Identifier*	*M*	
		NHI	*National Hydrological Identification Code*	*O*	

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsability
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		TID	Tidal/Non-Tidal Category	M	
HYDRO	**HYNODEC**	**BH503**	**Hydrographic Network Node**	**M**	**F**
		HydroID	*Hydrologic Identifier*	*M*	
		HNC	*Hydro node category*	*M*	
HYDRO	**DAMC, DAML**	**BI020**	**Dam / Weir**	**M**	
		HydroID	*Hydrologic Identifier*	*M*	
		NAMN1	*Name in first national language*	*O*	
		NAMN2	*Name in second national language*	*O*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*O*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*O*	
		NLN1	*3-Char Language Code*	*O*	
		NLN2	*3-Char Language Code*	*O*	
HYDRO	**DAMC, DAML**	**BI030**	**Lock**	**M**	
		HydroID	*Hydrologic Identifier*	*M*	
		NAMN1	*Name in first national language*	*O*	
		NAMN2	*Name in second national language*	*O*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*O*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*O*	
		NLN1	*3-Char Language Code*	*O*	
		NLN2	*3-Char Language Code*	*O*	
HYDRO	**LANDICEA**	**BJ030**	**Glacier**	**M**	
		NAMN1	*Name in first national language*	*O*	
		NAMN2	*Name in second national language*	*O*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*O*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*O*	
		NLN1	*3-Char Language Code*	*O*	
		NLN2	*3-Char Language Code*	*O*	
HYDRO	**LANDICEA**	**BJ100**	**Snow field / Ice field**	**O**	
		NAMN1	*Name in first national language*	*O*	
		NAMN2	*Name in second national language*	*O*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*O*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*O*	
		NLN1	*3-Char Language Code*	*O*	
		NLN2	*3-Char Language Code*	*O*	
HYDRO	**LANDMASKA**	**XX501**	**Landmask Area**	**M**	**F**
NAME	**GNAMEP, GNAMEL**	**ZD040**	**Named Location**	**M**	
		CNL	*Category code for the named location*	*M*	
		NAMN1	*Name in first national language*	*M*	

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsability
		NAMN2	*Second Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
POP	**BUILTUPA**	**AL020**	**Built-up Area**	**M**	
		PopulatedPlaceID	*Populated place identifier*	*M*	
POP	**BUILTUPP**	**AL020**	**Built-up Area**	**M**	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASC (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		PPL	Populated Place Category	O/M[3]	
		PP1	*Population Lower Range*	*O/M*[4]	
		PP2	*Population Higher Range*	*O/M*[4]	
		USE	Usage	M/O[5]	
		PopulatedPlaceID	*Populated place identifier*	*M*	
POP	**BUILTUPP**	**AL022**	**Populated Place**	**M**	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASC (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		PPL	Populated Place Category	O/M[3]	
		PP1	*Population Lower Range*	*O/M*[4]	
		PP2	*Population Higher Range*	*O/M*[4]	
		USE	Usage	M/O[5]	
		PopulatedPlaceID	*Populated place identifier*	*M*	
TRANS	**RAILRDL**	**AN010**	**Railway**	**M**	
		EXS	Existence Category	M	
		FCO	Feature Configuration	M	
		GAW	Gauge Width	O	
		LLE	*Location Level*	*M*	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASC (ASCII-7bit)*	*M*	

[3] M if PP1 and PP2 not populated.
[4] M if PPL not populated
[5] Mandotory for country capitals; optional for others

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsability
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		RCO	Railrdoad Code	O	
		RGC	Railroad Gauge Category	M	
		RRA	Railroad Power Source	M	
		RRC	Railroad Category	M	
		RSD	*Railroad Speed Class*	*O*	
		RSU	*Seasonal availability*	*O*	
		TEN	*TransEuropean Transport Network*	*M*	
		TUC	Transportation Use Category	M	
TRANS	**RAILRDL**	**AN500**	**Railway Network Link**	**M**	
		TEN	*TransEuropean Transport Network*	*M*	
TRANS	**INTERCC**	**AP020**	**Interchange**	**M**	
		NAMN1	*Name in first national language*	*O*	
		NAMN2	*Name in second national language*	*O*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*O*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*O*	
		NLN1	*3-Char Language Code*	*O*	
		NLN2	*3-Char Language Code*	*O*	
		RJC	*Road Junction Category*	*M*	
TRANS	**ROADL**	**AP030**	**Road**	**M**	
		COR	*Category of Road*	*M*	
		EXS	Existence Category	M	
		LLE	*Location Level*	*M*	
		LTN	Lane/Track Number	M	
		MED	Median Category	M	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASC (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		RST	Road Surface Type	M	
		RSU	*Seasonal availability*	*O*	
		RTE	*Route Number (Int.)*	*M*	
		RTN	Route Number (Nat.)	M	
		RTT	Route Intended Use	M	
		TEN	*TransEuropean Transport Network*	*M*	
		TOL	Toll Category	M	
		TUC	Transportation Use Category	M	
TRANS	**ROADL**	**AP500**	**Road Network Link**	**M**	
		TEN	*TransEuropean Transport Network*	*M*	
TRANS	**LEVELCC**	**AQ062**	**Level Crossing**	**M**	
TRANS	**LEVELCC**	**AQ063**	**Road Intersection**	**M**	
TRANS	**FERRYL**	**AQ070**	**Ferry Crossing**	**M**	
		DETN	*Destination in first national language*	*M*	
		DETA	*Destination in first national language with ASCII-characters*	*M*	
		DNLN	*3-Char Language Code*	*M*	
		RSU	*Seasonal availability*	*O*	

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsability
		TEN	*TransEuropean Transport Network*	*M*	
		USE	Usage	M	
		FerryID	*Ferry line Identifier*	*M*	
TRANS	**FERRYC**	**AQ080**	**Ferry Station**	**M**	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		FStationID	*Ferry Station Identifier*	*M*	
TRANS	**EXITC**	**AQ090**	**Entrance / Exit**	**O**	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
TRANS	**RAILRDC**	**AQ125**	**Railway Station**	**M**	
		TFC	Transportation Facility Type	M	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		TUC	Transportation Use Category	O	
		RStationID	*Railway Station Identifier*	*M*	
TRANS	**RESTC**	**AQ135**	**Vehicle Stopping Area / Rest Area**	**M**	
		AFA	Available Facilities	M	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Second Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
TRANS	**AIRFLDP**	**GB005**	**Airport / Airfield**	**M**	
		CAA	Controlling Authority	M	
		EXS	Existence Category	O	
		FUC	Functional Use Category	O	
		IAT	*IATA code*	*M*	
		IKO	ICAO designator	M	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	
		NAMA1	*Name in first national language*	*M*	

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsability
			(ASCII-7bit)		
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		TUC	Transportation Use Category	M	
		USE	Usage	O	
		ZV3	Airfield elevation	O	

Annex C: Definition of Features and Attributes

Boundaries BND

Administrative Boundary FA000

Definition: A line of demarcation between controlled areas.
Feature class: POLBNDL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Boundary of an entity controlled by an administrative authority, this entity can be composed of several areas; international boundary. If a country has national administrative levels below a country level, then in EU-countries all levels from country level to a level equivalent to NUTS3 are stored and in other countries all levels from country level to a comparable level (f.i. LEVEL4 for CEEC countries) are stored. This feature type is used also to close the administrative areas in those cases, when the location of the real international boundary is not stored on sea area.
Quality criteria: International boundaries have to be geometrically consistent with topographical features mainly the hydrographical ones. Geometrical consistency is recommended at lower level.

Attributes:

BST	Boundary Status Type	*Data type:*	Short integer
		Domain:	Coded value
		1	Definite
		2	Indefinite
		3	In dispute
		-32768	Null value
			(For Use = 984)
USE	Usage	*Data type:*	Short integer
		Domain:	Coded value
		23	International
		26	Primary/ 1rst order
		30	Secondary/2nd order
		31	Tertiary/3rd order
		111	Quaternary/4th order
		984	*For all lines closing the polygons of administrative units in those cases, where the international boundary is not portrayed in the dataset*

Administrative Area FA001

Definition: An area controlled by an administrative authority.
Feature class: POLBNDA
Feature type: Area
Primitive type: Face
Portrayal criteria: Each administrative unit consists of one main area and occasionally of one main area with exclave(s). Exclaves bigger than 3 km^2 included. If a country has national administrative levels below a country level, then the lowest level in EU-countries is a level equivalent to NUTS3 level and in other countries the lowest level is comparable to this level.

Attributes:

SHN0	*EBM Hierarchical Number (International)*	*Data type:*	(refers to ISO 3166) Character
		Domain:	Coded value 14 characters
SHN1	*EBM Hierarchical Number (1st Order)*	*Data type:*	(refers to ISO 3166) Character
		Domain:	Coded value 14 characters
SHN2	*EBM Hierarchical Number (2nd Order)*	*Data type:*	(refers to ISO 3166) Character
		Domain:	Coded value 14 characters
SHN3	*EBM Hierarchical Number (3rd Order)*	*Data type:*	(refers to ISO 3166) Character
		Domain:	Coded value 14 characters
SHN4	*EBM Hierarchical Number (4th Order)*	*Data type:*	(refers to ISO 3166) Character
		Domain:	Coded value 14 characters
TAA	*Type of Administrative Area*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*Main area*
		3	*Branch area*
		4	*Special area*
		5	*Coastal water*
		7	*Inland water*
		8	*In dispute area*

NUTS3 Region of Level 3 —

Definition: Territorial unit for statistics defined in the framework of the Regulation (EU) No 31/2011 of the European Parliament and of the Council of 17 January 2011.
Feature class: NUTS_3
Feature type: Area
Primitive type: Face
Portrayal criteria: NUTS regions are defined and published by Eurostat. The NUTS Regulation has been set up for EU countries, but it covers also EU candidate countries and EFTA countries.
The NUTS Regulation subdivides the European countries into comparable statistical units, from small regions for specific diagnoses (NUTS 3) up to major socio-economic regions (NUTS 1).
In most cases, NUTS regions refer to national administrative levels. For some countries, NUTS regions are defined independent from the national administrative hierarchy. The differences between administrative units and NUTS regions are explained in EuroBoundaryMap Data Production Specifications.

Attributes:

NUTS_CODE	Unique code of the NUTS region as Definied and published by Eurostat	Data type: Domain:	Identifier Text 5 characters
NUTS_LABEL	Name of the NUTS region as defi-Ned and pusblished by Eurostat	Data type: Domain:	Character Text 80 characters
TAA	Type of the administrative area	Data type: Domain: 2 7	Short integer Coded value Land area Inland water

Related Tables: EBM_NAM and EBM_ISN must be provided with the administrative data theme (see description in ANNEX F)

Hydrography HYDRO

Coastline / Shoreline BA010

Definition: The line where a land mass is in contact with a body of water.
Feature class: COASTL
Feature type: Line
Primitive type: Edge
Portrayal criteria: The vertical datum for the shoreline should be mean sea high water in tidal maritime zone or normal water in non-tidal zone.

Attributes: none

Foreshore BA020

Definition: The part of the shore or beach which lies between the low water mark and the coastline / shoreline. The same condition may exist in non-contiguous offshore areas.
Feature class: COASTA
Feature type: Area
Primitive type: Face
Portrayal criteria: Foreshore area where the average horizontal distance between MLW and MHW is more than 1000 meters. Tidal channels can fragment the foreshore area.

Attributes:

MCC	Material Composition Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		8	Boulders
		16	Clay
		46	Gravel
		65	Mud
		84	Rock / rocky
		88	Sand
		98	Shingle
		108	Stone
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Island BA030

Definition: A land mass smaller than a continent and surrounded by water.
Feature class: ISLANDA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 3 km² for islands in seawater.
Smaller islands in inland water area can be portrayed if considered as landmark.
Note: If there is a lake or reservoir (> 0.5 km²) inside an island, then the island is portrayed even when the size is less than 3 km².

Quality criteria: At least all islands ≥ 3 km² have to be named when existing.

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Water (except inland) BA040

Definition: An area of water that normally has tidal fluctuations.
Feature class: SEAA
Feature type: Area
Primitive type: Face
Portrayal criteria: Usually the sea or ocean area.

Attributes: none

Lake / Pond BH080

Definition: A body of water surrounded by land
Feature class: LAKERESA
Feature type: Area
Primitive type: Face
Portrayal criteria: Water with area ≥ 0.5 km².
Smaller lakes or ponds can be portrayed when significant to determine land occupation.
Lakes being part of the water network have to be topologically connected to watercourses.
Quality criteria: At least all lakes ≥ 0.5 km² have to be named when existing. ZV2 attribute does not necessarily have to be populated for smaller lakes.

Attributes:

HYP	Hydrological Persistence	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Perennial
		2	Intermittent
		3	Ephemeral
		4	Dry
HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NHI	*National Hydrological Identification code*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

TID	Tidal / Non-Tidal Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Non-tidal
		2	Tidal / tidal fluctuating
ZV2	Highest Z-Value	Data type:	Short integer
		Measurement units:	1 meter
		Domain:	Actual value
		-29999	Unknown
		-29997	Unpopulated

Related Table: LAKERES_WBSC must be provided with the Hydro theme (see description in ANNEX F)

Reservoir BH130

Definition: A man-made enclosure or area formed for the storage of water.
Feature class: LAKERESA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 0.5 km²
Reservoirs being part of the water network have to be topologically connected to watercourses.
Quality criteria: All reservoirs should be named.

Attributes:

HYP	Hydrological Persistence	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Perennial
		2	Intermittent
		3	Ephemeral
		4	Dry
HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NHI	*National Hydrological Identification code*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

ZV2	Highest Z-Value	Data type:	Short integer
		Measurement units:	1 meter
		Domain:	Actual value
		-29999	Unknown
		-29997	Unpopulated

Related Table: LAKERES_WBSC must be provided with the Hydro theme (see description in ANNEX F)

Spring / Water Hole BH170

Definition: A natural outflow of water from below the ground surface.
Feature class: SPRINGP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Springs that are considered as landmark by their location or size, or have a tourist interest and are not connected to the water network.

Attributes:

SWT	Well/Spring Feature Type	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Geyser
		2	Hot spring
		3	Fumarole
		999	Other

Spring / Water Hole BH170

Definition: A natural outflow of water from below the ground surface.
Feature class: SPRINGC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: Springs that are considered as landmark by their location or size, or have a tourist interest and are connected to the water network.

Attributes:

SWT	Well/Spring Feature Type	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Geyser
		2	Hot spring
		3	Fumaroles
		999	Other

Inland Shoreline BH210

Definition: The land-water boundary of an inland body of water.
Feature class: SHOREL
Feature type: Line
Primitive type: Edge
Portrayal criteria: The boundary where any inland water (watercourse, lake, reservoir) represented in EGM touches land (including islands).

Attributes: None

Watercourse BH502

Definition: A natural or man-made flowing watercourse or stream.
Feature class: WATRCRSA
Feature type: Area
Primitive type: Face
Portrayal criteria: Watercourses that form up a logical water network with width ≥ 500 m.
Quality criteria: All watercourses should be named.
The HydroID should be populated at least for watercourses with drainage basin ≥ 3000 km².

Attributes:

NVS	Navigability Information Code	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		3	Navigable
		5	Not Navigable
HOC	Hydrographical Origin Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		4	Man-made
		5	Natural
HYP	Hydrological Persistence	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Perennial
		2	Intermittent
		3	Ephemeral
		4	Dry
HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NHI	*National Hydrological Identification code*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable724
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable

NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
TID	Tidal / Non-Tidal Category	Data type:	Short integer
		Domain:	Coded value
		0	Unknown
		1	Non-tidal
		2	Tidal / tidal fluctuating

Watercourse BH502

Feature class: WATRCRSL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Watercourses that form up a logical water network with width < 500 m.
Quality criteria: Full connection of the water network requires to portray fictitious axis or underground watercourses.
All watercourses should be named.
The HydroID should be populated at least for watercourses with drainage basin ≥ 3000 km².

Attributes:

NVS	Navigability Information Code	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		3	Navigable
		5	Not Navigable
HOC	Hydrographical Origin Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		4	Man-made
		5	Natural
HYP	Hydrological Persistence	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Perennial
		2	Intermittent
		3	Ephemeral
		4	Dry
LDV	*Link Direction Value*	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	*Both directions*
		2	*In direction*
		3	*In opposite direction*
		997	*Unpopulated*
LOC	Location Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		8	On ground surface
		25	Suspended or elevated above ground or water surface (bridge)
		40	Underground
		984	*Fictitious axes through water area*
HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NHI	*National Hydrological Identification code*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated

		<N_A>	Not applicable
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
TID	Tidal / Non-Tidal Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Non-tidal
		2	Tidal / tidal fluctuating
WCH	*National Watercourse Hierarchy*	*Data Type*	*Short integer*
		Domain	*Coded value*
		0	*Unknown*
		1	*Main / First*
		2	*Second*
		3	*Third*
		4	*Fourth*
		5	*Fifth*
		9	*All other watercourses*
		997	*Not populated*
WD7	*Width Lower Range*	*Data type:*	Short integer
		Measurement units:	1 meter
		Domain:	Range value, ≥ 1
		-29999	Unknown
WD8	*Width Upper Range*	*Data type:*	Short integer
		Measurement units:	1 meter
		Domain:	Range value, ≤ 125
		-29999	Unknown

Related Table: WATRCRS_MDC must be provided with the Hydro theme (see description in ANNEX F)

Hydrographic Network Node BH503

Definition: A node within the hydrographic network.
Feature class: HYNODEC
Feature type: Point
Primitive type: Connected Node
Portrayal criteria: Start and end points of watercourses as well as confluences (Confluence, Source, Mouth, Boundary).

Attributes:

HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
HNC	*Hydro Node Category*	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	*Boundary*
		4	*Junction*
		5	*Outlet*
		6	*Source*

Dam / Weir BI020

Definition: A permanent barrier across a watercourse used to impound water or to control its flow.
Feature class: DAMC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: All dams on watercourse portrayed as a single line.

Attributes:

HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Dam / Weir BI020

Definition: A permanent barrier across a watercourse used to impound water or to control its flow.
Feature class: DAML
Feature type: Line
Primitive type: Edge
Portrayal criteria: Dam bordering a reservoir or important dams/weirs on watercourse portrayed as area feature (having more than 500m wide).
Quality criteria: Dam bordering reservoir has to be coincident to reservoir boundary. Duplicating geometry is avoided.

Attributes:

HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Lock BI030

Definition: A permanent barrier across a watercourse used to impound water or to control its flow.
Feature class: DAMC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: All locks on watercourse portrayed as a single line.

Attributes:

HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Lock BI030

Definition: An enclosure with a pair or series of gates used for raising or lowering vessels as they pass from one water level to another.
Feature class: DAML
Feature type: Line
Primitive type: Edge
Portrayal criteria: All locks, when located on a watercourse portrayed as area feature.
Quality criteria: Dam bordering reservoir has to be coincident to reservoir boundary. Duplicating geometry is avoided.

Attributes:

HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Glacier BJ030

Definition: A large mass of snow and ice moving slowly down a slope or valley from above the snowline.
Feature class: LANDICEA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 3 km²

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Snow Field / Ice Field BJ100

Definition: A large area permanently covered by snow or ice over land or water.
Feature class: LANDICEA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 3 km²

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Sea Limit XX500

Definition: The delineation of the seaward boundary of estuaries.
Feature class: COASTL
Feature type: Line
Primitive type: Edge
Portrayal criteria: The sea limit feature represents a closing line indicating the delineation of inland water bodies and the sea area. In natural zone, the sea limit will be continuity with the natural coastline/shoreline. In man-made zone, the sea limit is determined by maritime locks or dams, or similar structure closing the estuary.

Attributes: None

Landmask Area XX501

Definition: The landmass that covers the European continent and all islands of relevant size.
Feature class: LANDMASKA
Feature type: Area
Primitive type: Face
Portrayal criteria: The landmask area is enclosed by the coastline/shoreline and sea limit. It must not depict any lakes or other inland waters.
Landmask area serves as reference layer for geometrical coherence between layers

Attributes: None

Named Location NAME

Named Location ZD040

Definition: A geographic place on earth, not normally appearing as a feature on a map, but having a name that is required to be placed on a map.
Feature class: GNAMET / GNAMEP
Feature type: Text / Point
Primitive type: Text string / Isolated node
Portrayal criteria: Cartographic text needed for named place at scale 1:1.000.000 that cannot be put into attributes. Named locations specially required are regions e.g. Mountain range, Valley, Peak, Gorge, Bay, Sea, Fjord, Inlet/cape, Sandbank, Beach, Headland/Peninsula, Sea water and forest name.
For data transfer and better data interoperability, each geographical name is represented by a line feature and by a text feature. GNAMEP is a copy of GNAMET with a different geometric representation.

Attributes:

CNL	*Category Code for the named location*	*Data type:*		Short integer
		Domain:		Coded value
		10		*Boundaries*
		20		*Hydrography*
			21	*Sea or part of sea*
			22	*Bay*
			23	*Fjord*
			24	*Part of lake*
			25	*Marsh / swamp or wetland*
			26	*Sandbank, sea area*
			27	*Beach*
		30		*Miscellaneous*
		40		*Settlement and named location*
			41	*Settlement*
			42	*Mountain range*
			43	*Highland*
			44	*Plain*
			45	*Valley*
			46	*Name of region*
			47	*Headland / peninsular*
			48	*Gorge*
			49	*Peak*
		50		*Transportation and infrastructure*
		60		*Vegetation and soil*
			61	*Ground Surface element*
			62	*Agricultural area, plantation*
			63	*Woods / forest*
NAMN1	*Name in first national language*	*Data type:*		Character
		Domain:		Actual value
		<UNK>		Unknown
		<N_A>		Not applicable
NAMN2	*Name in second national language*	*Data type:*		Character
		Domain:		Actual value
		<UNK>		Unknown
		<N_A>		Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*		Character
		Domain:		Actual value
		<UNK>		Unknown
		<N_A>		Not applicable

NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Settlement POP

Built-up Area AL020

Definition: An area containing a concentration of buildings and other structures.
Feature class: BUILTUPA
Feature type: Area
Primitive type: Face
Portrayal criteria: Population ≥ 50 000 inhabitants AND total size ≥ 0.5 km². Minimum size of a discrete area: 0.5 km² (when the same built-up area is split into several parts). Area ≥ 0.5 km² is used as only criteria when the number of inhabitants is unknown.
When a city is represented as several separated polygons, all the polygons are populated with the same identifier.
The population place identifier PopulatedPlaceID is the unique identifier of the city, referring to the populate place captured as the representation point for a built-up area.
Quality criteria: Each built-up area should have a unique population place identifier.

Attributes:

PopulatedPlaceID	*Populated Place Identifier*	*Data type:*	Character
		Domain:	Actual Value

Built-up area AL020

Definition: An area containing a concentration of buildings and other structures.
Feature class: BUILTUPP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: All built-up areas between 1 000 – 50 000 inhabitants OR if more than 50 000 but total size ≤ 0,5 km².
Built-up areas, which have less than 1000 inhabitants but are main villages or cities of the regional/local administrative units are included. In that case it should be taken care that all regional/local administrative units have at least main village or city. If the number of inhabitants is not known, then the selection criterion is size ≤ 0.5 km².
Quality criteria: All built-up areas have to be named.
When PPL is considered to be populated (including 'Unknown' value for some exceptions), it is not necessary to populate PP1 and PP2, which get the value 'Unpopulated' (-29997).
Each populated place should have a unique populated place identifier.

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
PPL	Population Place Category	*Data type:*	Long integer
		Measurment units:	1 inhabitant
		Domain	Actual value
		-29999	Unknown
		-29997	Unpopulated

PP1	*Population Lower Range*	*Data type:*	Long integer
		Measurment units:	1 inhabitant
		Domain	Range value
		-29999	Unknown
		-29997	Unpopulated
PP2	*Population Upper Range*	*Data type:*	Long integer
		Measurment units:	1 inhabitant
		Domain	Range value
		-29999	Unknown
		-29997	Unpopulated
USE	Usage	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		23	International
		26	Primary/1st order national level
		30	Secondary/2nd order national level
		31	Tertiary/3rd order national level
		111	Fourth/4th order national level
		997	Unpopulated
		998	Not applicable
Populated PlaceID	*Populated Place Identifier*	*Data type:*	Character
		Domain:	Actual Value

Populated Place AL022

Definition: A named area where people live and/or work. For example: a city, a town and a village.
Feature class: BUILTUPP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: The point representation of a built-up are used for labelling and reference.
The NAMN1 attribute stores the name of the populated place in the official primary language spoken in that populated place and administratively relevant.
The NAMN2 attribute stores the name of the populated place in the official secondary language spoken in that populated place and administratively relevant.
Quality criteria: The populated place is identified by a unique ID and holds all the attribute information. It shall be inside one of the areas forming the populated place and collected in BuiltupA.
All populated places have to be named.
When PPL is considered to be populated (including 'Unknown' value for some exceptions), it is not necessary to populate PP1 and PP2, which get the value 'Unpopulated' (-29997).
Each populated place should have a unique populated place identifier.

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
PPL	Population Place Category	*Data type:*	Long integer
		Measurment units:	1 inhabitant
		Domain	Actual value
		-29999	Unknown
		-29997	Unpopulated

PP1	*Population Lower Range*	*Data type:*	Long integer
		Measurment units:	1 inhabitant
		Domain	Range value
		-29999	Unknown
		-29997	Unpopulated
PP2	*Population Upper Range*	*Data type:*	Long integer
		Measurment units:	1 inhabitant
		Domain	Range value
		-29999	Unknown
		-29997	Unpopulated
USE	Usage	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		23	International
		26	Primary/1st order national level
		30	Secondary/2nd order national level
		31	Tertiary/3rd order national level
		111	Fourth/4th order national level
		997	Unpopulated
		998	Not applicable
Populated PlaceID	*Populated Place Identifier*	*Data type:*	Character
		Domain:	Actual Value

Transportation TRANS

Railway AN010

Definition: A rail or set of parallel rails on which a train or tram runs.
Feature class: RAILRDL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Railway routes used for regular transportation of goods and passengers. Important industry railways can be included. Metro lines (= underground urban railways), tram lines or streetcar lines inside city areas are excluded. Railways are represented by one line regardless of the number of tracks. Railway yards are excluded. Ending (dangle) railway lines shorter than 2 km are excluded (if not nationally important).

Attributes:

EXS	Existence Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		5	Under construction
		6	Abandoned / disused
		28	Operational
FCO	Feature Configuration	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		2	Multiple
		3	Single
GAW	Gauge Width	*Data type:*	Short integer
		Measurement unit*:*	1 cm
		Domain:	Actual value
		-29999	Unknown
		-29998	Not applicable (for monorails)
LLE	*Location Level*	*Data type:*	Short integer
		Domain:	Coded value
		-9	*Underground (unknown level)*
		-2	*Underground (second level)*
		-1	*Underground (first level)*
		0	*Unknown*
		1	*On ground surface*
		2	*Suspended or elevated (first level)*
		3	*Suspended or elevated (second level)*
		9	*Suspended or elevated (unknown level)*
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated

NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
RCO	Railroad Code	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
RGC	Railroad Gauge Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Broad
		2	Narrow
		3	Normal (Country Specific)
		998	Not applicable (for monorails)
RRA	Railroad Power Source	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Electrified track
		3	Overhead electrified
		4	Non-electrified
RRC	Railroad Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		16	Main line
		17	Branch line
		999	Other
RSD	*Railroad Speed Class*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*Conventional Railway Line*
		2	*Upgraded high-speed railway line (order of 200km/h)*
		3	*Dedicated high-speed railway line (≥250km/h)*
		997	*Unpopulated*

RSU	*Seasonal availability*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*All year*
		2	*Seasonal*
		997	*Unpopulated*
TEN	*TransEuropean Transport Network*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*part of TEN-T network*
		2	*not part of TEN-T network*
TUC	Transportation Use Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		25	Cargo/Freight
		26	Passenger
		45	General

Railway Network Link AN500

Definition: A link representing a railway connection to other modes of transportation (road, air, water)
Feature class: RAILRDL
Feature type: Line
Primitive type: Edge
Portrayal criteria: A railway station has to be connected to one or more railway(s) and at least one road.
A ferry station has to be connected to one or more ferry crossing(s) and either a road or a railway.
An airport point has to be connected to one or more road(s) or railway(s).

Attributes:

TEN	*TransEuropean Transport Network*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*part of TEN-T network*
		2	*not part of TEN-T network*

Interchange AP020

Definition: A connection designed to provide traffic access from one road to another.
Feature class: INTERCC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: Restricted to roads connected at different level crossing as i.e. at intersections of motorways or at exits of motorways.
Quality criteria: All exits of highways and interchanges on highways have to be portrayed and named when existing.

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
RJC	*Road Junction Category*	Data type:	Short integer
		Domain:	Coded value
		0	Unknown
		1	*Interchange (between motorways)*
		2	*Access/exit (from motorway to road)*
		3	*Mixed (complex)*

Road AP030

Definition: An open way maintained for vehicular use.
Feature class: ROADL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Roads that form up a logical transportation network at a map scale 1:1 000 000. Roads can be omitted for cartographic reasons in those areas where the road network is very dense. Low-class roads can be added if these roads are important routes in settlement structure. Roads are represented by one line regardless of the number of lanes or carriageways. Road lines shorter than 2 km are excluded. All European roads (E-roads) are included.

Attributes:

COR	*Category of Road*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*Motorway*
		2	*Road inside built-up area*
		997	*Unpopulated*
		999	*Other road (outside built-up area)*
EXS	Existence Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		5	Under construction
		28	Operational
LLE	*Location Level*	*Data type:*	Short integer
		Domain:	Coded value
		-9	*Underground (unknown level)*
		-2	*Underground (second level)*
		-1	*Underground (first level)*
		0	*Unknown*
		1	*On ground surface*
		2	*Suspended or elevated (first level)*
		3	*Suspended or elevated (second level)*
		9	*Suspended or elevated (unknown level)*
LTN	Lane/Track Number	*Data type:*	Short integer
		Measurement unit*:*	1 lane
		Domain:	Actual value
		-29999	Unknown
MED	Median Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	With median
		2	Without median
RST	Road Surface Type	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Hard/Paved

		2	Loose/Unpaved
RSU	*Seasonal availability*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*All year*
		2	*Seasonal*
		997	*Unpopulated*
RTE	*Route Number (Internat.)*	*Data type:*	*Character*
		Domain:	*Actual value*
		<UNK>	*Unknown*
		<N_A>	*Not applicable*
RTN	Route Number (National)	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
RTT	Route Intended Use	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		14	Primary route
		15	Secondary route
		16	National Motorway
		984	Local route
TEN	*TransEuropean Transport Network*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*part of TEN-T network*
		2	*not part of TEN-T network*
TOL	Toll Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Road generally free of charge
		2	Toll road
		3	Vignette
TUC	Transportation Use Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		7	Through route
		36	Slip road / access road

Road Network Link AP500

Definition: A link representing road connection to other modes of transportation (rail, air, water).
Feature class: ROADL
Feature type: Line
Primitive type: Edge
Portrayal criteria: A railway station has to be connected to one or more railway(s) and at least one road.
A ferry station has to be connected to one or more ferry crossing(s) and either a road or a railway.
An airport point has to be connected to one or more road(s) or railway(s).

Attributes:

TEN	*TransEuropean Transport Network*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*part of TEN-T network*
		2	*not part of TEN-T network*

Attributes: None

Level Crossing AQ062

Definition: The location where a railway and a road transportation routes intersect at the same vertical level.
Feature class: LEVELCC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: A point where a railway crosses a road at the same level. The level crossing will be associated both to the road and railway network.

Attributes: None

Road Intersection AQ063

Definition: The location where road transportation routes intersect or cross at the same vertical level.
Feature class: LEVELCC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: A point where two or more roads intersect or cross at the same vertical level.

Attributes: None

Ferry Crossing AQ070

Definition: A route in a body of water where a ferry crosses from one shoreline to another.
Feature class: FERRYL
Feature type: Line
Primitive type: Edge
Portrayal criteria: All important regular international ferry routes. All national ferry routes having major importance in connecting the national road or railway network. Have to be connected to a ferry station.
DETN attribute stores the named place of destination in the way <to place of destination>(country code). The language to name the destination place shall be in the national language of the destination country.
The FerryID is the unique identification number of the ferry line referring to the Ferry_link and FERRY_LINES tables which give the link between the ferry crossing and departure/destination ports.

Attributes:

DETN	*Destination in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
DETA	*Destination in first national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
DNLN	*ISO 639-2/B 3-Char Language Code for DETN*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
RSU	*Seasonal availability*	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	All year
		2	Seasonal
		997	Unpopulated
TEN	*TransEuropean Transport Network*	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	part of TEN-T network
		2	not part of TEN-T network
USE	Usage	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		4	National
		23	International
FerryID	*Ferry line Identifier*	*Data type:*	Character
		Domain:	Actual value

Ferry Station AQ080

Definition: A point where a ferry takes on or discharges its load.
Feature class: FERRYC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: The ferry station shall be identified for each ferry line and connected to them. There can be several ferry lines connected to one ferry station. The ferry station shall be connected to railway or road and the corresponding ferry line.
The FStationID is the unique identification number of the ferry station referring to the Ferry_link and FERRY_LINES tables which give the link between the ferry crossing and departure/destination ports.

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
FStationID	*Ferry Station Identifier*	*Data type:*	Character
		Domain:	Actual value

Related Table: The Ferry_link and FERRY_LINES tables must be provided with ferry lines and ferry stations (see description in ANNEX F)

Entrance / Exit AQ090

Definition: A point of entrance or exit.
Feature class: EXITC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: A point where a road or a railway goes across an international boundary and traffic across the boundary is allowed and there is a real customs or other kind of official facility. Node for representing border-crossing point is placed at the international boundary. Used outside Schengen area only.

Attributes:

NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Railway Station AQ125

Definition: A stopping place for the transfer of passengers and/or freight.
Feature class: RAILRDC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: All railway stations and stopping places used for passenger and/or freight traffic are portrayed.
Quality criteria: All stations and stopping places have to be named. The RStationID is the unique identification number of the railway station.

Attributes:

TFC	Transportation Facility Type	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		15	Railway Station
		31	*Joint Railway Station*
		32	*Halt*
		33	*Marshalling Yard*
		34	*Intermodal Rail Transport Terminal*
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
TUC	Transportation Use Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		25	Cargo/Freight
		26	Passenger
		45	General
		997	Unpopulated

RStationID	*Railway station Identifier*	Data type:	Character
		Domain:	Actual value

Vehicle Stopping Area / Rest Area AQ135

Definition: A roadside place usually having facilities for people and/or vehicles.
Feature class: RESTC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: Mainly on motorways.

Attributes:

AFA	Available Facilities	*Data type:*	Character
		Domain:	Coded value
		0	Unknown
		9	Fuel station
		999	Other (no fuel)
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable

Airport / Airfield GB005

Definition: A defined area of land or water used for landing, take-off, and movement of aircraft including associated buildings and facilities.
Feature class: AIRFLDP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: All airports having regular passenger traffic.

Attributes:

CAA	Controlling Authority	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		5	Military
		7	Joint Military/Civilian
		16	Civilian
EXS	Existence Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		5	Under construction
		6	Abandoned/Disused
		28	Operational
		997	Unpopulated
FUC	Functional Use Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		2	Commercial
		13	Recreational
		997	Unpopulated
		998	Not applicable (for military)
IAT	*IATA Code*	*Data type:*	Character
		Domain:	Coded value (3 char.)
		<UNK>	Unknown
		<N_A>	Not applicable
IKO	ICAO Code	*Data type:*	Character
		Domain:	Coded value (4 char.)
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMN2	*Name in second national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable

NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
TUC	Transportation Use Category	Data type:	Short Integer
		Domain:	Coded value
		0	Unknown
		25	Cargo/Freight
		26	Passenger
		45	General
		998	Not applicable (for military)
USE	Usage	Data type:	Short Integer
		Domain:	Coded value
		0	Unknown
		4	National
		23	International
		113	Regional
		997	Unpopulated
ZV3	Airfield Elevation	Data type:	Short Integer
		Domain:	Actual value
		-29999	Unknown
		-29997	Unpopulated

ANNEX D: Topological associations

This annex describes topological relationships at feature level that need to be specified in the data schema of EuroGlobalMap or to be considered for quality insurance.

Boundaries BND

These topological relationships set up at feature class level are required and should be specified in the data schema:

Feature class	Topological association	Related feature class	Description
POLBNDA	Boundary must be covered by	POLBNDL	Boundaries of administrative entities (area) must be covered by the lines of the administrative boundaries.
	Must not overlap		Administrative entities as polygons must not overlap between them.
	Must have no gap		Administrative entities must form a continuous coverage and must not have a void area between them.
POLBNDL	Must not intersect or touch interior		Administrative boundaries can only touch at their ends and must not overlap each other.
	Must not have isolated start node and/or end node		Administrative boundaries lines must touch one other administrative boundary line and cannot be isolated.
	Must not have pseudo-nodes		The end of a line cannot touch the end of ONLY one other line but several.
	Must be covered by boundary of	POLBNDA	Lines of the administrative boundaries must be covered by boundaries of area administrative entities.

Hydrography HYDRO

These topological relationships set up at feature class level are required and should be specified in the data schema:

Feature class	Topological association	Related feature class	Description
COASTA	Must not overlap with	COASTA ISLANDA LAKERESA LANDICEA	Foreshore area must not overlap with itself and island area, lake area, ice area.
COASTA	Must be covered by	WATRCRSA or SEAA	The foreshore SHALL overlap either the sea or a watercourse area.

Feature class	Topological association	Related feature class	Description
	Must not have gap with	SEAA WATRCRSA	Foreshore area must not have void area with adjacent features as water area, and watercourse area.
COASTL	Must not intersect or touch interior		Coastlines/shorelines and sea limit must only touch at their ends and must not overlap each other.
	Must not overlap with	WATRCRSL	Coastlines/shorelines must not overlap with watercourse lines.
COASTL, BA010	Must be covered by boundary of	COASTA or ISLANDA or SEAA	Coastlines/shorelines and sea limit must be covered by the boundaries of foreshore polygons or island polygons or sea polygons.
COASTL, XX500	Must be covered by boundary of	SEAA	Sea limit must be covered by the boundaries of sea polygons.
COASTL, XX500	Must be covered by boundary of	WATRCRSA	Sea limit must be covered by the boundaries of watercourse polygons.
DAML	Must not intersect or touch interior		Dam/lock lines must only touch at their ends and must not overlap each other.
	Must not overlap with	COASTL, WATRCRSL	Dam lines must not overlap with coastline/shoreline, watercourse lines.
DAML, BI020	Must be covered by boundary of	LAKERESA or WATRCRSA	Dam as line feature must be covered by boundary of reservoir area or by watercourse area.
DAML, BI030	Must be covered by boundary of	WATRCRSA	Lock as line feature must be covered by boundary of watercourse area.
LAKERESA	Must not overlap with	COASTA ISLANDA LAKERESA LANDICEA SEAA WATRCRSA	Lake areas must not overlap between themselves and with foreshore areas, island areas, ice areas, sea areas, watercourse areas.
LANDICEA	Must not overlap with	COASTA ISLANDA LAKERESA LANDICEA SEAA WATRCRSA	Ice areas must not overlap between themselves and with foreshore areas, island areas, lake areas, sea areas, watercourse areas.
ISLANDA	Must not overlap with	COASTA SEAA ISLANDA WATRCRSA LAKERESA LANDICEA	Island areas must not overlap between themselves and with water area, foreshore area, watercourse area, lake area and ice area.
ISLANDA	Must not have gap with	COASTA SEAA WATRCRSA LAKERESA LANDICEA	Islands area must not have void area with foreshore area, water area, watercourse area, lake area and ice area.

Feature class	Topological association	Related feature class	Description
SEAA	Must not overlap with	ISLANDA LAKERESA WATRCRSA SEAA LANDICEA	Water (except inland) must not overlap between them, lake/reservoir area watercourse area, island area and ice area.
SEAA	Boundary must be covered by	COASTL	Boundaries of sea water (area) must be covered by the lines of the coastline/shoreline or sea limit.
SPRINGP	Must not overlap with	SPRINGP SPRINGC	Spring/water hole as isolated node must not overlap between them and with spring water (as connected).
SPRINGC	Must not overlap with	SPRINGP SPRINGC	Spring/water hole as connected node must not overlap between them and with spring water (as isolated).
	Must be covered by endpoint of	WATRCRSL	Spring/water hole as connected node must be covered by the ends of watercourse lines.
WATRCRSA	Must not overlap with	COASTA ISLANDA SEAA WATRCRSA LAKERESA LANDICEA	Watercourse areas must not overlap between themselves sea areas, land ice areas, island areas, lake areas.
	Must not have gap with	SEAA COASTA	Watercourse area must not have void area with sea area and foreshore area.
WATRCRSL	Must not intersect or touch interior		Watercourse lines must only touch at their ends and must not overlap each other.
	Must not overlap with	COASTL DAML	Watercourse lines must not overlap with shoreline, dam.

Settlements POP

These topological relationships set up at feature class level are required and should be specified in the data schema:

Feature class	Topological association	Related feature class	Description
BUILTUPA	Must not overlap		Built-up areas as area feature must not overlap between them.
BUILTUPP	Must not overlap		Built-up areas as nodes must not overlap between them.
BUILTUPP, AL020	Must not overlap	BUILTUPA	Built-up area as node feature must not overlap built-up area as area feature.
BUILTUPP, AL022	Must be inside	BUILTUPA	Population Place as point feature must be inside corresponding built-up area as area feature.

Transportation TRANS

These topological relationships set up at feature class level are required and should be specified in the data schema:

Feature class	Topology rules	Related feature class	Description
AIRFLDP	Must not overlap with	AIRFLDP EXITC INTERCC LEVELCC RAILRDC	Airfields as node must not overlap between them and with exits, interchange, level crossing, railway stations.
EXITC	Must be covered by end node of	ROADL or RAILRDL	Entrance/exit as connected nodes must be covered by end nodes of roads or railways.
	Must not overlap with	AIRFLDP EXITC INTERCC LEVELCC RAILRDC	Entrance/exit as connected node must not overlap between them and with airfield, interchange, level crossing, railway stations.
FERRYL	Must not overlap with	RAILRDL ROADL	Ferry lines must not overlap with road lines, and railroad lines.
FERRYC	Must be covered by end node of	FERRYL ROADL or RAILRDL	Ferry station as connected node must be covered by end nodes of ferrylines. Ferry station as connected node must be covered by end nodes of roads or railways.
FERRYC	Must not overlap with	AIRFLDP INTERCC LEVELCC RAILRDC FERRYC	Ferry station as node must not overlap between them and with airfields, heliport, interchange, level crossing, railway stations, control towers and rest areas.
INTERCC	Must be covered by end node of	ROADL	Interchange as connected node must be covered by end nodes of roads.
	Must not overlap with	AIRFLDP EXITC INTERCC LEVELCC RAILRDC	Interchanges, as connected node, must not overlap between them and with exits, airfield, level crossing, railway stations.
LEVELCC, AQ062	Must be covered by end node of	ROADL and RAILRDL	Level crossing as connected node must be covered by end nodes of roads and railways.
LEVELCC, AQ063	Must be covered by end node of	ROADL	Road intersection as connected node must be covered by end nodes of roads.
LEVELCC	Must not overlap with	AIRFLDP EXITC INTERCC LEVELCC RAILRDC	Level crossings, as connected node, must not overlap between them and with exits, airfield, interchange, railway stations.
RAILRDL	Must not intersect or touch interior		Railroad lines can only touch at their ends and must not overlap each other.
	Must not overlap with	ROADL FERRYL	Railroad lines must not overlap with road lines, wharfs, runways and ferry lines.

Feature class	Topology rules	Related feature class	Description
RAILRDC	Must be covered by end node of	RAILRDL and ROADL	Railroad stations as connected nodes must be covered by end nodes of railways and roads.
	Must not overlap with	AIRFLDP EXITC INTERCC LEVELCC RAILRDC	Railway station, as connected node, must not overlap between them and with exits, helifield, airfield, interchange, level crossings, control towers, and rest areas.
ROADL	Must not intersect or touch interior		Road lines can only touch at their ends and must not overlap each other.
	Must not overlap with	RAILRDL FERRYL	Road lines must not overlap with railroad lines, wharfs, runways and ferry lines.

Topological associations required between themes

Feature class	Topological association	Related feature class	Description
BUILTUPA	Must be covered by	POLBNDA	Built-up Area as area must be covered by a single polygon in administrative area.
	Must not be covered by	SEAA	Built-up Area as area must not be covered by sea area.
BUILTPP	Must be properly inside	POLBNDA	Built-up Area as nodes must be inside single polygons of administrative area.
	Must not be covered by	SEAA	Built-up Area as nodes must not be covered by sea area.
EXITC	Must be covered by boundary of Must be covered by line	POLBNDA POLBNDL with USE = 23	The exit must touch the boundaries of the administrative entities.

Topological associations needed for quality control and good consistency between features

The following topological matrices refer to topological relationships between features that should be “nice to have” for better consistency in the dataset.

Area must not overlap with area [6]

AREA / AREA	COASTA	LAKERESA	LANDICEA	ISLANDA	SEAA	WATRCRSA	BUILTUPA
COASTA							
LAKERESA							
LANDICEA							
ISLANDA							
SEAA							
WATRCRSA							
BUILTUPA							

Point must not be covered by area [7]

AREA / POINT	COASTA	LAKERESA	LANDICEA	ISLANDA	SEAA	WATRCRSA	BUILTUPA
SPRINGP SPRINGC							
AIRFLDP							
RAILRDC							
EXITC							
BUILTUPP							

Line must not overlap with area [8]

AREA / LINE	COASTA	LAKERESA	LANDICEA	ISLANDA	SEAA	WATRCRSA	BUILTUPA
DAML							
COASTL							
WATRCRSL							

[6] *Case in grey colour means that the topological relationship is required as mentioned in the tables above.*
[7] *Case in grey colour means that the topological relationship is required as mentioned in the tables above.*
[8] *Case in grey colour means that the topological relationship is required as mentioned in the tables above.*

AREA / LINE	COASTA	LAKERESA	LANDICEA	ISLANDA	SEAA	WATRCRSA	BUILTUPA
FERRYL							
RAILRDL							
ROADL							

Line must not overlap with line [9]

LINE / LINE	COASTL	DAML	WATRCRSL	FERRYL	RAILRDL	ROADL
COASTL						
DAML						
WATRCRSL						
FERRYL						
RAILRDL						
ROADL						

Isolated point must not be covered by line [10]

LINE / POINT	COASTL	DAML	WATRCRSL	FERRYL	RAILRDL	ROADL
SPRINGP						
AIRFLDP						
BUILTUPP						

Point must not be covered by point [11]

POINT / POINT	SPRINGP	SPRINGC	AIRFLDP	RAILRDC	EXITC	FERRYC	BUILTUPP
SPRINGP							
SPRINGC							
AIRFLDP							
RAILRDC							
EXITC							
FERRYC							

[9] *Case in grey colour means that the topological relationship is required as mentioned in the tables above.*
[10] *Case in grey colour means that the topological relationship is required as mentioned in the tables above.*
[11] *Case in grey colour means that the topological relationship is required as mentioned in the tables above.*

BUILTUPP							

ANNEX E: Metadata files

Four metadata files are provided for the whole database:

- EGM_2019_Metadata.xls
- EGM_2019_Lineage.pdf
- EGM_2019_Updates.xls
- EGM_2019_DataCompleteness.xls

The Metadata file is in accordance with the ISO/DIS 19115 and is structured in packages, entities and elements (with sub-elements).

packages:	**Metadata (MD_Metadata)**
entities:	**point of contact**
elements:	edition
sub-elements:	citation
	date
	date

The column “Obligation” shows if an element is mandatory (M), optional (O) or conditional (C) as given in the standard. When the entity is optional and information is not given then the elements, including the mandatory ones, are left empty. When the entity is mandatory then at least the mandatory elements have to be filled.

Only the fields marked in grey can be filled.

Lineage files Description

There are two documents: the lineage.doc file and the lineage.xls file

The documents contain producer's information as well as special extraction rules and peculiarities which provide complementary information to the metadata regarding the data quality of the EGM dataset.

The documents will be filled by the producers and will be set up by area of responsibility of producers. If a producer is in charge of the production of several countries derived from the same data sources, this should be described in a same document.

The following topics are covered in each producer's lineage:

1. **Contact information**

The contact information of the data provider shall be described similarly like the point of contact ISO-29 of the metadata. This should be obviously the same point of contact.

2. **Short description of the process applied to derive the national EGM contribution**

The data provider shall describe the data sources used, the conversion process used to derive EGM, the GIS platform and GIS software used to derive or manage EGM.

3. **Deviation from the specifications**

Deviations will be considered when the selection or portrayal criteria for some feature classes have not been according to the specifications. This deviation will be described and structured by theme.

4. **National specificities in populating features and attributes**

Specific ways to populate attributes at national level, helping the user to understand and interpret the national contributions including specific information about unpopulated and non-applicable attributes. The information is only given if not covered by the specification.

National specificities will include:

A description of the national classifications used mainly for the transport and water network. The description of the national classification will be specifically required.

A description of the Naming conventions (describes the use of the official languages and its exceptions and the translation rules to the ASCII names)

Specific national features that have been integrated in the EGM dataset but cannot be really identified as such because the EGM data schema doesn't allow it. The way they have been codified and structured can be described here.

Information about unpopulated optional or esp. mandatory features and attributes

5. **Currency/Update remarks**

The actual date of the modification of the data differentiated by theme (and/or feature class: if needed). Among them, the statement about date and data sources used for the population figure of the built-up area is required. The currency date for the EBM tables is also useful.

6. **Improvement of the data quality**

A brief description of the improvement in the data quality comparing with the previous release can be provided as well as the expected improvement that will be done for the next release.

The improvement can be described for the data content, the selection criteria, the topology, the transport and water network, the new added features.

The improvement of the data quality will be briefly summarised in the paragraph 6 of the EGM_lineage.doc.

The improvement of the data quality can also be described at feature code and attribute level using the table EGM_lineage.xls

7. Availability of the data

The availability of the data is described by two main indicators:

the existence (ID1)of the feature and attribute

the completeness (ID2) of the feature and attribute

The indicators will be defined by feature class/feature code meaning that i.e. the feature code watercourse BH502 will have two indicator values; one when portrayed as area feature WATRCRSA and one when portrayed as line feature WATRCRSL.

The indicator Existence (ID1) means the presence/absence of a feature or an attribute in the EGM dataset.

The presence of a feature means that the feature exists in the real world context and has been selected in the EGM dataset.

The presence of an attribute means that the data exists in the real world context and has been populated in the EGM dataset

The absence of a feature means that the feature exists in the real world context but has NOT been selected in the EGM dataset.

The absence of an attribute means that the data exists in the real world context but has NOT been populated in the EGM dataset

The indicator “existence” shall be calculated as follow:

Presence: indicator ID1 = 1

Absence: indicator ID1 = 0

The indicator “existence” cannot be applied to a feature and an attribute that doesn’t exist in the real world context. In that case the indicator is not applicable and shall be populated with -1

Not applicable: indicator ID1 = -1

The Completeness (ID2) is defined by a group of two indicators: the selection compliancy of a feature class/feature code (ID2.1) and the data completeness of an attribute (ID2.2).

The indicator “completeness” shall be applied only when the features have been selected or the attribute populated meaning that the indicator “existence” ID1 = 1.

Selection Compliancy for a feature class/feature code (ID2.1) estimates if the selected features are fully compliant or not fully to the specifications. The feature shall be captured for the entire territory and in accordance to the portrayal and selection criteria of the specifications. In that case, we have full selection compliancy of the selected features.

This selection compliancy (ID2.1) for a feature class/feature code shall be roughly estimated by the provider. Two estimations can be provided; the selection of the features is “not fully compliant” to the specifications or it is “fully compliant”’ to the specifications.

The “not fully compliant “can be estimated in different ways:

Case 1: The selected features have been captured just for a part of the territory

Case 2: The selected features have been captured not or partly according to the selection criteria and portrayal criteria

The indicator will be measured as followed:

ID2.1 = 0 = not fully (compliant)

ID2.1 = 1 = fully (compliant)

When ID2.1 is not fully compliant, then remarks are welcome.

Data Completeness of an attribute (ID2.2) for a specific feature class/feature code means the % of the populated attributes holding real values. Real values exclude the null values like unknown and unpopulated. The not applicable value is part of the %.

The data completeness of an attribute (ID2.2) shall be calculated as following:

By feature class/feature code, the number of features whose attribute is not equal to unknown and unpopulated value divided by the total number of features of the feature class/feature code.

If not 100%, remarks or comments are welcome.

The indicators will be listed in an .xls table named EGM_lineage.xls.

ANNEX F: Related tables

EBM_NAM

Definition: Names of administrative units.
Table name: EBM_NAM
Relationship The EBM_NAM table is related to the POLBNDA feature class using the SHNx/SHN attribute as primary key item.
Portrayal Criteria: All administrative areas from feature class POLBNDA as well as all units on the upper administrative levels must have a corresponding record in EBM_NAM.

Attributes:

SHN	*Unique identifier for all European administrative units.*	*Data type:*	Character
		Domain:	Coded value
		FI6000000 *(Example)*	The national code is preceded by the 2-letter ISO-3166 Country Code
USE	*Administrative hierarchy level*	*Data type:*	Short integer
		Domain:	Coded value
		1	1st order
		2	2nd order
		3	3rd order
		4	4th order
		5	5th order
		6	6th order
ISN	*Unique structure identifier for all European administrative hierarchical levels.*	*Data type:*	Short integer
		Domain:	Coded value
		4904 (Example)	
NAMN	*Geographical (official national) name of the administrative unit given in national characters (Unicode-UTF8). In case of more than one official language the names are delimited by # starting with the primary official name.*	*Data type:*	Character
		Domain:	Actual value
		Ahvenanmaa *(Example)*	Name of the unit
		<UNK>	Unknown
		<N_A>	Not applicable
NAMA	*Geographical name of the administrative unit (NAMN) converted to ASCII characters without diacritical characters.*	*Data type:*	Character
		Domain:	Actual value
		Åland *(Example)*	
		<N_A>	Not applicable
NLN	*ISO 639-2/B 3-Char Language Code of the geographical name (NAMN).*	*Data type:*	Character
		Domain:	Actual value
		SWE (Example)	
		<N_A>	Not applicable

SHNupper	SHN code of the upper level unit which administers the administrative unit	*Data type:* *Domain:* FI619000 (Example)	Character Actual value
		<N_A>	Not applicable (for administrative units on country level)
ROA	Identifier of the residence of authority	*Data type:* *Domain:* N.FI.BUILTUP.000028 <UNK> <N_P> <N_A>	Character Actual value PopulatedPlaceID of the Finnish built-up area Helsinki. Unknown Not populated Not applicable
PPL	*Population*	*Data type:* *Domain:* -29999 -29997 -29998	Character Actual value Unknown Unpopulated Not applicable
ARA	*Area*	*Data type:* *Measurement units:* *Domain:*	Double 0.01 km² Actual value
effectiveDate	*Official entry into force date of the administrative unit*	*Data type:* *Domain:*	Date Actual value

EBM_ISN

Definition: Designation of administrative hierarchical levels.
Table name: EBM_ISN
Relationship The EBM_ISN table is related to the EBM_NAM table using ISN attribute as primary key item.
Portrayal Criteria: All administrative units of all national hierarchical levels have a corresponding record in this table.
The relation to the referring feature classes and tables is established based on the ISN codes.

Attributes:

ISN	*Structure ID of administrative unit (from the SABE Catalogue of Internal Structures and Designators).*	*Data type:* *Domain:* 4904 (Example)	Short Integer Coded value
USE	*Administrative hierarchy level*	*Data type:* *Domain:* 1 2 3 4 5 6	Short integer Coded value 1st order 2nd order 3rd order 4th order 5th order 6th order
DESN	*Designation of the national administrative hierarchy level given in national characters (Unicode-UTF8). In case of more than one official language the designations are delimited by #.*	*Data type:* *Domain:* Lääni *(Example)*	Character Actual value
DESA	*Designation of the national administrative hierarchy level (DESN) converted to ASCII characters without diacritical characters.*	*Data type:* *Domain:* Laani *(Example)*	Character Actual value
NLN	*ISO 639-2/B 3-char Language Code for DESN*	*Data type:* *Domain:* FIN *(Example)*	Character Actual value
SHNdigit	Number of digits of the SHN code which are significant for the hierarchical level	Data type: Domain: 5 (Example)	Integer Actual value First five digits of the SHN code are significant for Finnish hierarchical level Maakunta/Landskap (total length of Finnish SHN is 8 digits)

EGM_CHR

Definition: This table stores the character ISO code that can be used to be able to read properly the names in attribute without using the Unicode character set.

Table name: EGM_CHR

Relationship

Portrayal Criteria: Each data producer must provide the ISO code of all the official languages used for the NAMNx attributes when Unicode is not available.

Attributes:

ICC	Two-character country code according to ISO 3166	*Data type:* *Domain:*	Character Coded value
NLN	*ISO 639-2/B 3-Char Language Code used for NAMNx*	*Data type:* *Domain:*	Character Actual value
LNM	*Language Name (in English)*	*Data type:* *Domain:*	Character Actual value
ISC	*ISO Character Code Set*	*Data type:* *Domain:* 1 2 3 4 5 6 7 8 9 10 13 14 15 16 99	Short Integer Coded value ISO 8859-1 (Latin 1) ISO 8859-2 (Latin 2) ISO 8859-3 (Latin 3) ISO 8859-4 (Latin 4) ISO 8859-5 (Cyrillic) ISO 8859-6 (Arabic) ISO 8859-7 (Greek) ISO 8859-8 (Hebrew) ISO 8859-9 (Latin 5) ISO 8859-10 (Latin 6) ISO 8859-13 (Latin 7) ISO 8859-14 (Latin 8) ISO 8859-15 (Latin 9) Unicode UTF-8 Not applicable
TLS	*Transliteration Scheme*	*Data type:* *Domain:*	*Character* *Actual value*

Ferry_Link

Definition: This table is a link table relating the ferry lines (FERRYL) to their ferry station destinations (FERRYC).
Table name: Ferry_Link
Relationship The Unique identifier (FerryID and FStationID) of each feature of FERRYL and FERRYC are used as primary key item.
Portrayal Criteria: Each data provider must provide and fill the table for their production area. One ferry line must be related to two or more ferry stations. One ferry station must be related to one or more ferry lines.

Attributes:

FerryID	Ferry line Identifier	*Data type:* *Domain:*	Character Actual value
FStationID	Ferry Station Identifier	*Data type:* *Domain:*	Character Actual value

FERRY_LINES

Definition: This table stores information on ferry crossings and related ferry stations.
Table name: FERRY_LINES
Relationship The Unique identifier (FerryID and FStationID) of each feature of FERRYL and FERRYC are used as primary key item.
Portrayal Criteria: Each data provider must provide and fill the table for their production area. One ferry line must be related to two or more ferry stations. One ferry station must be related to one or more ferry lines.

Attributes:

FerryID	Ferry line Identifier	*Data type:* *Domain:*	Character Actual value
FStationID	Ferry Station Identifier	*Data type:* *Domain:*	Character Actual value
CountryICC	*Code(s) of the destination port country(ies)*	*Data type:* *Domain:*	Character Actual value
PortNAMN	*Name in first national language*	*Data type:* *Domain:* <*UNK*>	Character Actual value Unknown
PortNAMA	*Name in first national language (ASCII-7bit)*	*Data type:* *Domain:* <*UNK*> <*N_A*>	Character Actual value Unknown Not applicable
PortNLN	*ISO 639-2/B 3-Char Language Code used for PortNAMN*	*Data type:* *Domain:* <*N_A*>	Character Actual value Not applicable

WATRCRS_MDC

Definition: This table provides the information regarding the size of the main drain class of a watercourse.
Table name: WATRCRS_MDC
Relationship: WATRCRS_MDC table is related to the WATRCRSL and WATRCRSA feature classes using the HydroID attribute as primary key item.
Portrayal Criteria: For each watercourse with a drainage basin ≥ 500 km^2 the main drain class should be indicated.

Attributes:

HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
MDC	*Main Drain Class*	*Data type:*	Short Integer
		Domain:	Coded value
		5000	River with drainage basin ≥ 5000 km^2
		4000	River with drainage basin ≥ 4000 km^2 and < 5000 km^2
		3000	River with drainage basin ≥ 3000 km^2 and < 4000 km^2
		2000	River with drainage basin ≥ 2000 km^2 and < 3000 km^2
		1000	River with drainage basin ≥ 1000 km^2 and < 2000 km^2
		900	River with drainage basin ≥ 900 km^2 and < 1000 km^2
		800	River with drainage basin ≥ 800 km^2 and < 900 km^2
		700	River with drainage basin ≥ 700 km^2 and < 800 km^2
		600	River with drainage basin ≥ 600 km^2 and < 700 km^2
		500	River with drainage basin ≥ 500 km^2 and < 600 km^2

LAKERES_WBSC

Definition: This table provides a classification of lakes and reservoirs by their size.
Table name: LAKERES_WBSC
Relationship: LAKERES_WBSC table is related to the LAKERESA feature class using the HydroID attribute as primary key item.
Portrayal Criteria: At least for each lake/reservoir with area ≥ 10 km^2 the water body size code should be indicated.

Attributes:

HydroID	*Hydrologic Identifier*	*Data type:*	Character
		Domain:	Actual value
WBSC[12]	*Water Body Size Code*	*Data type:*	Short Integer
		Domain:	Coded value
		1	Lakes/reservoirs with area GT 500 km^2
		2	Lakes /reservoirs with area GE 100 km^2 and LT 500 km^2
		3	Lakes /reservoirs with area GE 10 km^2 and LT 100 km^2
		4	Lakes /reservoirs with area GE 1 km^2 and LT 10 km^2
		5	Lakes /reservoirs with area GE 0,5 km^2 and LT 1 km^2

CountryCodes

Definition: Country code combinations of EuroGeographics, ISO, and EU.
Table name: CountryCodes
Relationship:
Portrayal Criteria: Within the EuroGeographics products, all countries have unique country codes (ICC). In some cases these differs from the view of ISO and EU. There are also differences between ISO and EU. This table holds all combinations and one can join it by using the attributes “ICC” and “EuroGeographics_Country_Code”.

Attributes:

EuroGeographics_Country_Code	*Country code of EuroGeographics*	*Data type:*	Character
Name_national	*Country name in national characters*	*Data type:*	Character
Name_english	*Long term of country name in English*	*Data type:*	Character
Name_english_short	*Short term of country name in English*	*Data type:*	Character
EU_Country_Code	*Country code of European Commission*	*Data type:*	Character
ISO_Country_Code	*Country code of ISO*	*Data type:*	Character

[12] The use of mathematical operators is not recommended in the database implementation, thus the WBSC domain uses GT for Greater Than > , GE for Greater or Equal ≥ and LT for Less Than <.

