EuroRegionalMap

Pan-European Database at Medium Scale

Specification and Data Catalogue for Data Production

- User version for ERM release v10.1 -

Security (distribution level):	Restricted to EuroGeographics Association
Production Manager:	Federal Agency for Cartography and Geodesy (BKG)
Regional Coordinators:	KadasterNL (The Netherlands), IGN-F (France), AGI (Lithuania), BEV (Austria)
Number of pages:	142 pages
File name:	ERM_v10_DataSpecification.doc

Keywords: Accuracy requirements, data model and structure, metadata, feature and attributes coding scheme, data dictionary

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

Status and version:	Date:	Author:
Note: *All changes that apply for ERM v10.1 with respect to previous release ERM v9.0 are highlighted in Pink.*	28/04/17	BKG

Copyright © EuroGeographics

Table of Contents

1 Introduction 6
Scope 6
Purpose 6
Reference Documents 6
Standards and Specifications 6
Other Publications 6
2 General information 7
EuroRegionalMap Concept 7
EuroRegionalMap Concept for Mandatory and Optional Data Content 8
Database Sources and Extent 8
3 Requirements 9
Coordinate Reference Systems 9
Geodetic Datum 9
Vertical Datum 9
Coordinate System 9
Absolute Horizontal Accuracy 9
Data Density Level and Selection Criteria 9
Dimension 9
Units of Measure 9
Geometric resolution 9
4 Data Model and Structure 11
Terminology 11
Theoretical Data Model 12
Database Topology 13
Layer Organization 14
Continuity 14
Feature and Attribute Coding Scheme 14
Core feature attribution 15
Handling Names in Attribute 15
Handling Character set 15
Handling languages 16
Text Features 16
Missing Attribute Values 17
Null/No value 17
Unknown 17
Unpopulated 17
Not Applicable 17
5 Data Dictionary 19
Metadata Files 19
Data Layers 19
Specific tables 20
Annex A: List of Features Classes and Features Codes in the Data Layers 21
Annex B: List of Features and Attributes in the Data Coverages 23
Annex C: Definition of Features and Attributes 34
Boundaries .... BND 34
Administrative Boundary FA000 34
Administrative Area FA001 35
Hydrography .... HYDRO 37
Well AA050 37
Coastline / Shoreline BA010 37
Foreshore BA020 38
Island BA030 39
Water (except inland) BA040 39
Shoreline Construction BB081 40
Aqueduct BH010 40
Lake / Pond BH080 41
Reservoir BH130 43
Spring / Water Hole BH170 45
Spring / Water Hole BH170 45
Waterfall BH180 46
Waterfall BH180 47

Copyright © EuroGeographics

Inland Shoreline BH210 47
Watercourse BH502 48
Watercourse BH502 50
Hydrographic Network Node BH503 53
Dam / Weir BI020 54
Dam / Weir BI020 55
Lock BI030 56
Lock BI030 57
Glacier BJ030 58
Snow Field / Ice Field BJ100 59
Wetland ED010 60
Sea Limit XX500 61
Landmask Area XX501 61
Named Location ..... NAME 62
Named Location ZD040 62
Miscellaneous ..... MISC 64
Mine AA010 64
Disposal Site / Waste Pile AB000 66
Processing Plant / Treatment Plant AC000 66
Power Station AD010 67
Fortification AH050 68
Amusement Park AK030 69
Race Track AK130 70
Stadium / Amphitheatre AK160 71
Monument AL130 72
Ruins AL200 73
Building AL015 74
Tower (non-communication) AL240 75
Pipeline / Pipe AQ113 76
Pumping Station AQ116 76
Power Transmission Line AT030 77
Communication Tower AT080 77
Bluff / Cliff / Escarpment DB010 78
Cave DB030 79
Embankment / Fill DB090 80
National Park FA080 81
Nature Reserve FA081 82
Settlement ..... POP 83
Built-up Area AL020 83
Built-up Area AL020 84
Populated Place AL022 86
Named Location ZD040 88
Transport ..... TRANS 89
Railway AN010 89
Railway Network Link AN500 91
Interchange AP020 92
Road AP030 93
Road Network Link AP500 95
Control Tower AQ060 96
Level Crossing AQ062 96
Road Intersection AQ063 96
Ferry Crossing AQ070 97
Ferry Station AQ080 98
Entrance / Exit AQ090 99
Railway Station AQ125 100
Vehicle Stopping Area / Rest Area AQ135 101
Port BB009 102
Port BB009 103
Port BB009 104
Pier / Wharf / Quay BB190 105
Airport / Airfield GB005 106
Airport / Airfield GB005 106
Airport / Airfield GB005 108

Copyright © EuroGeographics

Heliport GB035 110
Runway GB055 111
Vegetation and Soils ..... VEG 112
Ground Surface Element DA010 112
Agricultural area EA015 113
Plantation EA045 114
Woods/Forest EC050 115
ANNEX D: Topological associations 116
Boundaries ..... BND 116
Hydrography ..... HYDRO 117
Settlements ..... POP 120
Micellaneous ..... MISC 121
Transport ..... TRANS 122
Vegetation and Soils ..... VEG 125
Topological associations required between themes 126
Topological associations needed for quality control and good consistency between features 127
ANNEX E: Metadata files 134
ANNEX F: Relate tables 135
EBM_NAM 135
EBM_ISN 137
SYMBOL_RAT 138
ERM_CHR 139
Ferry_Link 140
FERRY_LINES 140
WATRCRS_MDC 141
LAKERES_WBSC 142
CountryCodes 142

Copyright © EuroGeographics

1 Introduction

Scope

This document defines the content and format of European topographic and administrative reference data at regional level of detail based on requirements set at the European level. It facilitates the production of a seamless and harmonised data set that is produced in cooperation by the National Mapping and Cadastral Agencies (NMCAs), using the official national databases.

The product defined is referred to as EUROREGIONALMAP.

Purpose

The purpose of these specifications is to provide a description of the content, accuracy, data format and design philosophy of EUROREGIONALMAP. Conformance to this specification will insure uniformity among all NMCAs 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 served as a reference for concepts applicable in the specifications.

EUROGEOGRAPHICS	EuroBoundaryMap, Product Specification for v9.0, 2014
IUCN publication	Guidelines for Protected Area Management Categories, 2008 http://www.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf
EUROGEOGRAPHICS	EuroGlobalMap Specifications version 7.0, Sept 2013 http://www.eurogeographics.org/sites/default/files/EGM_Specifications_v7.0.pdf
DFDD	DGIWG Feature and Attribute Data Registry, https://www.dgiwg.org/FAD/registers.jsp
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

Copyright © EuroGeographics

2 General information

EuroRegionalMap Concept

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

A first set of specifications has been elaborated during the PETIT Project. Starting from the specifications of the military product VMap Level 1 (Vector Smart Map), they were adapted to civilian needs according the market study. PETIT specifications have then been revised taking into account of production constraints of mapping agencies. Nomenclatures used for attributes and features come from the DIGEST FACC (Feature Attribute Coding Catalogue). The theoretical model is also DIGEST compliant.

A consortium of 6 NMCAs has settled the first version of the specification.

These NMCAs are:

BKG: Bundesamt für Kartographie und Geodäsie
Federal Agency for Cartography and Geodesy

IGN-B Institut Géographique National – Belgique
National Geographic Institute - Belgium

IGN-F: Institut Géographique National – France
National Geographic Institute - France

KMS: Kort & Matrikelstyrelsen
National Survey and Cadastre - Denmark

OSI: Oifig na Suirbheireachta Ordnais
Ordnance Survey - Ireland

OSNI: Ordnance Survey of Northern Ireland

Since its start EuroRegionalMap has evolved in terms of content and coverage as shown in the table below.

EuroRegionalMap Project phases	**Demonstration phase "EuroRegioMap project"**	**Extension phase**	**Consolidation phase**	**Migration phase**	**Mature phase**
Main objectives	To demonstrate the feasibility of European harmonisation of medium scale topographic databases owned by the NMCAS	To extend the coverage of ERM to European level	To provide regular update. To enhance data quality and improve level of harmonisation	To prepare the migration into the INSPIRE framework To provide regular updates and enhance data quality according to the requirements stated in the EuroStat contract	ERM is now a recognised product used as geo-referencing system at Euopean level
Timeframe	2001-2004	2004-2007	2008-2010	2011-2014	2015 …
Coverage	6 country datasets	31 country datasets	32 country datasets	34 country datasets	37 country datasets …
Release	ERM v1.0	ERM v2.x	ERM v3.x	ERMv4.0-v8.0	ERM v9.0 …

Copyright © EuroGeographics

EuroRegionalMap Concept for Mandatory and Optional Data Content

The quality contract is to reach as most as possible a seamless dataset where information indicated in the specifications are available for whole Europe, harmonized and produced according to the portrayal criteria and quality criteria mentioned in the specifications. However we know that it would be difficult to reach such a level for the complete dataset. We have to weight the data content 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 done according to their rate of importance for users and the rate to be commonly supported by NMAs.

The basic or CORE content of the EuroRegionalMap 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 being too specific to be supported by a majority of NMAs. However, when an optional feature is populated, the mandatory attributes be populated too.

Database Sources and Extent

The primary data sources used for EuroRegionalMap are the national data collections of the mapping agencies possibly at similar spatial resolution or the VMap Level 1 data. Secondary data sources internal or external to the mapping agencies may also be used to fulfil the information.

The extent of the data set is limited to Europe.

Copyright © EuroGeographics

3 Requirements

Coordinate Reference Systems

Geodetic Datum

The horizontal datum for EuroRegionalMap shall be the European ETRS89

Vertical Datum

The vertical datum for EuroRegionalMap shall be the European Vertical Reference System EVRS

Coordinate System

EuroRegionalMap data are stored in decimal degrees as geodetic co-ordinates with northern and eastern hemispheres having positive sign for latitude and longitude, respectively.

Absolute Horizontal Accuracy

This represents the difference between the recorded horizontal coordinates of features and their true positions. Absolute horizontal accuracy is expressed as a circular error at 90 percent probability.

Accuracy specifications for traditional paper maps are expressed in terms of map distances; for digital products, such as EuroRegionalMap, accuracy is expressed in ground distances. Features in EuroRegionalMap should have 125m of accuracy or better. However, a less accurate level is accepted depending on the data sources accuracy. The absolute horizontal accuracy and data sources have to be indicated in the metadata.

Data Density Level and Selection Criteria

EuroRegionalMap data are collected at a density of detail that approximates the medium scale product range (from 1:200 000 to 1:300 000). Portrayal criteria mentioned in the data dictionary are general guidelines. It is up to producers to settle in detail its own portrayal criteria.

The appropriate scale for hard-copy output should be at 1:250,000. 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 meters or 0.2 in arc-seconds or 0.00005 in decimal degrees.

Dimension

Units of Measure

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

Geometric resolution

The appropriate scale for hard-copy output should be at 1:250,000. 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 meters or 0.2 in arc-seconds or 0.00005 in decimal degrees.

Copyright © EuroGeographics

Geometric data resolution according to generalization 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 **5 m**. (weed and fuzzy tolerance)
- The minimum length of an edge between two connected points should be **50 m**.
  If connected points distances are less than 50m, they have to be combined into one.

  Exceptions are:
  The connected points are assigned to a feature.
  The edges associated to the connected point compose features having different attributes

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. 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 shares 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 EuroRegionalMap 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 faces

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 pre-defined 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.

Copyright © EuroGeographics

Theoretical Data Model

The EuroRegionalMap vector data model is based on the DIGEST vector data model, which adheres to the georelational data model. Feature entities are real items that can be identified on the earth, such as a river or a tower, or they are abstract items such as political boundaries. Attributes may be ascribed to the features. Features may be either of Point, Line, Area or Text type. 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 EuroRegionalMap 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 feature area) is fully covered by swamp (another feature area) and has identical area. Therefore island and swamp share the same face.

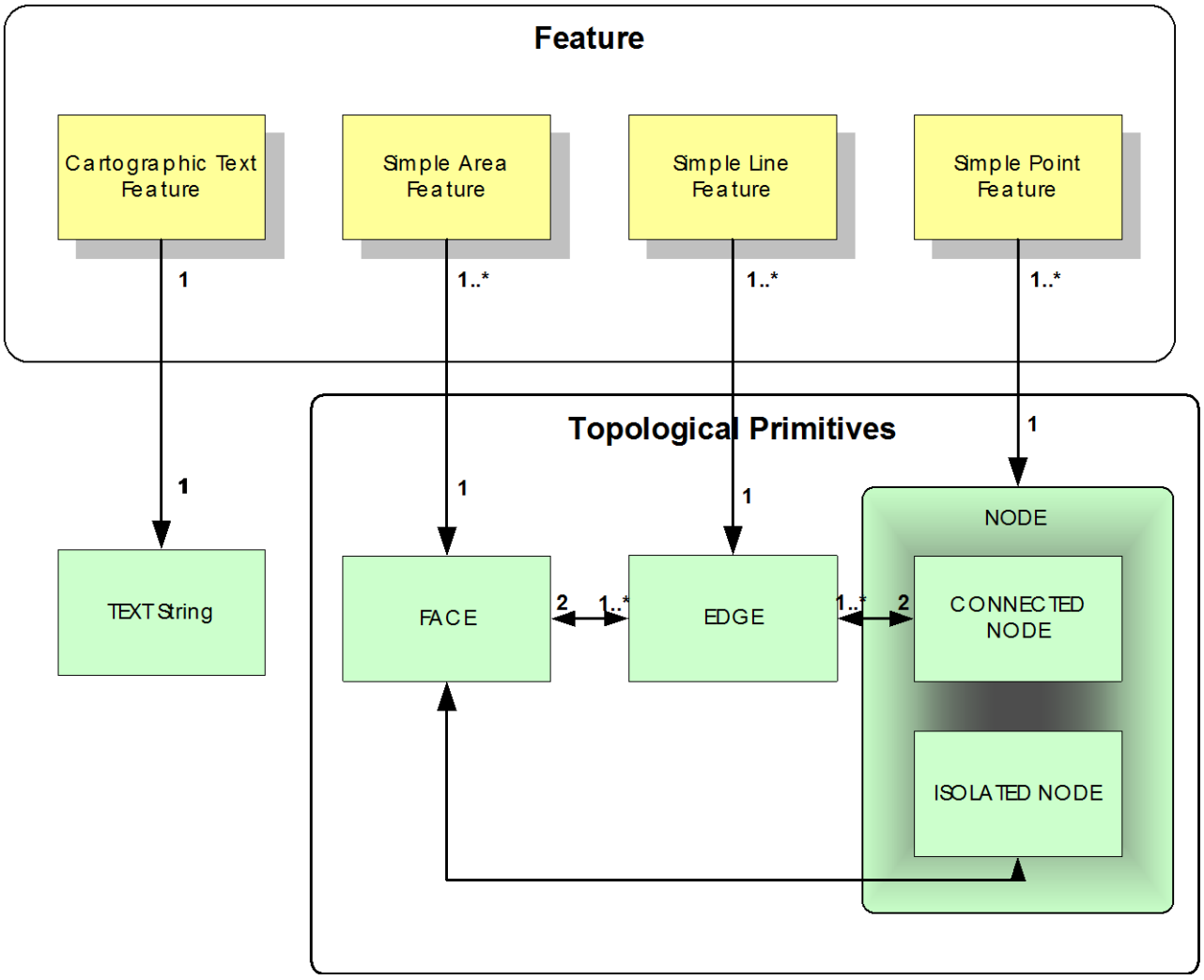

Figure 1: EuroRegionalMap Theoretical Data Model

Database Topology

The basic topological relationships for EuroRegionalMap are following 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 EuroRegionalMap, the acceptable levels of topology are the planar graph (level 2) or the full topology (level 3) within layer.

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 feature does not take part in topology.

Topological Rules

These topological rules are set up within a layer or a theme

- No two nodes may occupy the same (x, y or long, lat) coordinate point. Exceptions apply for the layer POI as well as for Hydrographic Network Nodes.
- No two edges may 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.
- No two faces 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 association are examples of relationships that can be represented and analyzed in a GIS database and need to be considered and specified for the EuroRegionalMap data.

These additional topological associations can be described at a higher level, which is the 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 EuroRegionalMap dataset for advanced spatial analysis, we need to have a transport network and water network reaching full topological and geometrical connectivity in order to have a continuous network. Full connectivity means that we have to respect the database topology and that there is no geometric interruption in the network.

Copyright © EuroGeographics

Layer Organization

The EuroRegionalMap data are organized in thematic layers and are partitioned into tiles. There are 7 thematic layers in the dataset.

- The administrative boundaries
- The water network
- The transport network
- The miscellaneous objects
- The settlements
- The soil and vegetation
- The named locations

The tiling is designed for the purpose of data management. The tile unit will be the country. These tiles can be different in size or shape according to the density of data and data format. The country boundaries will usually define the geographical extent of the tiles except in sea area where specific delimitation will be determined. Naming convention for a tile is EuroRegionalMap_<ICC> (ICC is the ISO 3166-1 2-char Country Code). Each feature of the dataset will have as attribute, an ICC code identifying the country.

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

EuroRegionalMap FAC uses the Digital Geographic Information Exchange Standard (DIGEST) Feature 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 EuroRegionalMap data catalogue.

Copyright © EuroGeographics

Core feature attribution

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

Attribut	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, i.e. “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. This ICC attribute is added for the handling of the data in a seamless coverage.
▪ SN	Symbol Number, a numeric identifier that will be used for easy viewing purpose.

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

Handling Names in Attribute

The naming convention of a name in 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 mean of several name attributes .

Handling Character set

The name is put in two types of attribute 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. For settlements an additional attribute type (NAML series) has been introduced to store transliteration to a latin character set of names in a character set other than latin (Greek, Cyrillic). A documented transliteration should be applied.

- 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 read properly the names in attribute without using the Unicode character set.

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

Copyright © EuroGeographics

Language Code Table (ERM_CHR)

This table provide a description of languages used in ERM. 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	N_A
	…		2	ISO 8859-2	N_A
			3	ISO 8859-3	N_A
			4	ISO 8859-4	
			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)	

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 character to ASCII ones, some languages use transliteration rules according to national standard or recommendation by 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 doesn't really exist, we populate all the name attributes describing the feature with the value 'N_A' (not applicable).

Text Features

EuroRegionalMap will carry cartographic text for named location that is not portrayed geometrically like a mountain range or a maritime bay and it can be useful for general viewing and localization. The cartographic text feature type will carry information; font, colour and height .It will be associated with a related attribute table called SYMBOL.RAT. This table contains a classified symbolization used to replicate font, style, and point size of text strings for representation on hardcopy output at scale 1:250,000.

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

Copyright © EuroGeographics

Missing Attribute Values

Missing values or null values can be populated in a way that can indicate to the user of the data, the reason why the information is missing, i.e. the information doesn't exist or the information exists but has not been collected by the producer.

Null/No value

The "Null/No value" attribution means that the attribute is not normalized to a feature and doesn't define it even if this attribute is listed among the set of attributes determining the feature. This can be met because features are gathered into feature classes. A feature class defines the common set of attributes shared by the features of the feature class. Exceptionally, some features could have officially an attribute that doesn't define it but well another feature of the same class. Null/No value is entered for attribute in that case, when it is logically impossible for a feature to have this certain attribute.

For example in the hydrographical layer, the feature BA010 "Coastline Shoreline" and the feature BB081 "Shoreline Construction" are classified in the same feature class "COASTL" and must share the same attribute HOC but HOC is assigned only to the shoreline construction, HOC for the coastline is set to null value.

The use of this attribute value is clearly specified in the annex C and is considered as a constant value for the feature.

The following missing values clarify the non availability of the information for an attribute. The unavailability of the information for a feature has to be considered in the REAL WORLD context and not because the data producer doesn't own the information or has not simply collected it.

Unknown

This value is used when it is not possible to determine the information for a feature. By impossibility we mean that the data producer doesn't know if the information exists or doesn't exist in the real world because information is simply missing.

For example, a name of a segment of a river, or a name of a very small island, or a number of a road segment.

Used in such case, the value "Unknown" should be restricted to a minority of features belonging to one feature class.

Unpopulated

This value is used when the attribute information exists for a feature in the real world context but the data producer has not collected the attribute information. For example when the information "National hydrological identification code" for rivers and lakes exists but data-producer has not collected it, then "Unpopulated" should be used for the entire feature class. Another example is when the names of the rivers have been partially collected by the data producer, then the "Unpopulated" value can be used for the non named rivers because the information actually exists in the real world context.

'Unpopulated' is normally used for all the features in one feature class when the information is simply not collected for this feature class or for a subset of features in one feature class when the information has been partially collected by the data producer. This subset of features has to be described in the metadata.

Notice:

Data producers should avoid as much as possible to partially collect a mandatory information. Mandatory attributes should have no "Unpopulated" value

Not Applicable

The "Not applicable" value is used in the case when the information simply doesn't exist in the real world context 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 doesn't have "European route number". Typically, "Not applicable" cases often occur when secondary attribute values are concerned.

Copyright © EuroGeographics

Missing information (= data, values) for attributes will be populated consistently with DIGEST data model and according 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*

Copyright © EuroGeographics

5 Data Dictionary

Metadata Files

The metadata file is in accordance with the ISO/DIS 19115 standard. All core metadata elements defined in the standard and additional ones are included (see Annex E).

Several metadata files have to be created; one for the entire dataset EuroRegionalMap giving general information and one by country (tile).

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 (see Annex E).

Data Layers

The data layers hold geographic dataset information.

Thematic Layer	Layer name
Boundaries	BND
Hydrography	HYDRO
Named Location	NAME
Miscellaneous	MISC
Settlement	POP
Transport	TRANS
Vegetation and Soils	VEG

Copyright © EuroGeographics

Specific tables

Complementary information is stored in tables that can be related to the ERM 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 EBM release of the same reference date.

- SYMBOL_RAT storing classified symbolization used to replicate font, style, and point size of text strings for representation on hardcopy output at scale 1:250,000
- ERM_CHR storing the ISO character sets used to be able to read the national characters of the names attributes
- FERRY_LINK linking the ferry station to the ferry line
- FERRY_LINES storing thematic identifier of the ferry crossing and the destinations names and thematic identifier of the destination ports
- LAKERES_WBSC providing classification of lakes/reservoirs by area size
- WATRCRS_MDC providing classification of rivers by size of drainage basin
- CountryCodes holding the relation between the country codes of ISO, EU and EuroGeographics

The tables are described in ANNEX F.

Copyright © EuroGeographics

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
HYDRO	AQUEDCTL	Line	BH010
	COASTA	Area	BA020
	COASTL	Line	BA010, XX500
	DAML	Line	BI020, BI030
	DAMC	Point	BI020, BI030
	LAKERESA	Area	BH080, BH130
	LANDICEA	Area	BJ030,BJ100
	ISLANDA	Area	BA030
	SEAA	Area	BA040
	SPRINGP	Point	BH170
	SPRINGC	Point	BH170
	SWAMPA	Area	ED010
	RAPIDSL	Line	BH180
	RAPIDSC	Point	BH180
	SEASTRTL	Line	BB081
	WATRCRSA	Area	BH502
	WATRCRSL	Line	BH502
	WELLP	Point	AA050
	LANDMASKA	Area	XX501
	SHOREL	Line	BH210
	HYNODEC	Point	BH503
NAME	GNAMET	Text	ZD040
	GNAMEL	Line	ZD040
MISC	BUILDP	Point	AL015
	CTOWERP	Point	AT080
	EXTRACTP	Point	AA010
	INDPRODL	Line	AQ113
	INDPRODP	Point	AB000, AC000, AQ116
	LANDMRKP	Point	AH050, AK030, AK130, AK160, AL130, AL200
	PARKA	Area	FA080, FA081
	PHYSL	Line	DB010, DB090
	PHYSP	Point	DB030
	POWERL	Line	AT030
	POWERP	Point	AD010
	TOWERP	Point	AL240
POP	BUILTUPA	Area	AL020
	BUILTUPP	Point	AL020, AL022
	URBANP	Point	ZD040
TRANS	AIRFLDA	Area	GB005
	AIRFLDC	Point	GB005
	AIRFLDP	Point	GB005
	EXITC	Point	AQ090
	FERRYL	Line	AQ070
	FERRYC	Point	AQ080
	HARBORA	Area	BB009
	HARBORC	Point	BB009
	HARBORP	Point	BB009
	HARBORL	Line	BB190
	HELIP	Point	GB035
	INTERCC	Point	AP020
	LEVELCC	Point	AQ062, AQ063
	MISAEROP	Point	AQ060

Copyright © EuroGeographics

	RAILRDL	Line	AN010, AN500
	RAILRDC	Point	AQ125
	RESTC	Point	AQ135
	ROADL	Line	AP030, AP500
	RUNWAYL	Line	GB055
VEG	SOILA	Area	DA010
	VEGA	Area	EC050, EA015, EA045

Copyright © EuroGeographics

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

This list holds all the features and attributes of the EuroRegionalMap data set.

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 ERM Production Management Team during the final data assembly (A) of the EuroRegionalMap production. All other elements have to be collected and provided by the data producers according to the given obligation.

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
BND	**POLBNDL**	**FA000**	**Administrative boundary**	**M**	
		BST	Boundary Status Type	M	
		USE	Usage	M	
		ABID	*Unique identifier for all administrative boundaries*	*M*	*A*
		LEN	Length	M	A
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*	
		SHN5	*EBM Hierarchical Number*	*M*	
		TAA	*Type of administrative area*	*M*	
		NUTS3	*Unique code of NUTS 3 region*	*M*	*A*
		ARA	Area	M	A
HYDRO	**WELLP**	**AA050**	**Well**	**O**	
HYDRO	**COASTL**	**BA010**	**Coastline / Shoreline**	**M**	
HYDRO	**COASTL**	**XX500**	**Sea Limit**	**M**	
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**	
		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*	
		ARA	Area	M	A
HYDRO	**SEAA**	**BA040**	**Water (Except Inland)**	**M**	
HYDRO	**SEASTRTL**	**BB081**	**Shoreline Construction**	**O**	
		PWC	Shoreline Construction Type	O	
HYDRO	**AQUEDCTL**	**BH010**	**Aqueduct**	**O**	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
HYDRO	**LAKERESA**	**BH080**	**Lake/Pond**	**M**	
		HYP	Hydrological Persistence	M	
		HydroID	*Hydrologic Identifier*	*M*	
		NHI	*National Hydrological Identification Code*	*M*	
		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	
		ARA	Area	M	A
HYDRO	**LAKERESA**	**BH130**	**Reservoir**	**M**	
		HYP	Hydrological Persistence	M	
		HydroID	*Hydrologic Identifier*	*M*	
		NHI	*National Hydrological Identification Code*	*M*	
		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	
		ARA	Area	M	A
HYDRO	**SPRINGP, SPRINGC**	**BH170**	**Spring / Water Hole**	**O**	
		SWT	Well/Spring Feature Type	M	
HYDRO	**RAPIDSC, RAPIDSL**	**BH180**	**Waterfall**	**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	**WATRCRSL**	**BH502**	**Watercourse**	**M**	
		NVS	Navigability Information Code	M	
		HOC	Hydrographical Origin Category	M	
		HYP	Hydrological Persistence	M	
		LDV	*Link Direction Value*	*O*	*(A)*
		LOC	Location Category	M	
		HydroID	Hydrologic Identifier	M	
		NHI	*National Hydrological Identification Code*	*M*	
		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*	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		NLN2	*3-Char Language Code*	*M*	
		TEN	*TransEuropean Transport Network*	*M*	*DGMove*
		TID	Tidal/Non-Tidal Category	M	
		WCH	*National Watercourse Hierarchy*	*O*	
		WD7	*Width Lower Range*	*M*	
		WD8	*Width Upper Range*	*M*	
		LEN	Length	M	A
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*	*M*	
		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	
		ARA	Area	M	A
HYDRO	**DAMC, DAML**	**BI020**	**Dam / Weir**	**M**	
		HydroID	Hydrologic Identifier	M	
		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	**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*	
		ARA	Area	M	A
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*	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		NAMA2	*Name in second national language (ASCII-7bit)*	*O*	
		NLN1	*3-Char Language Code*	*O*	
		NLN2	*3-Char Language Code*	*O*	
		ARA	Area	M	A
HYDRO	**SWAMPA**	**ED010**	**Wetland**	**M**	
		TID	Tidal/Non-Tidal Category	O	
HYDRO	**LANDMASKA**	**XX501**	**Landmask Area**	**M**	**A**
HYDRO	**SHOREL**	**BH210**	**Inland Shoreline**	**M**	**A**
HYDRO	**HYNODEC**	**BH503**	**Hydrographic Network Node**	**M**	
		HydroID	*Hydrologic Identifier*	*M*	
		HNC	*Hydro node category*	*M*	
NAME	**GNAMET, GNAMEL**	**ZD040**	**Named Location**	**M**	
		CNL	*Category Code for the named location*	*M*	
		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*	
		SID	*Symbol Identification*	*M*	
MISC	**EXTRACTP**	**AA010**	**Mine**	**O**	
		EXS	Existence Category	O	
		MIN	Mining Category	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*	
		PRO	Product Category	O	
MISC	**INDPRODP**	**AB000**	**Disposal Site/Waste Pile**	**O**	
		PRO	Product Category	O	
MISC	**INDPRODP**	**AC000**	**Processing Plant/Treatment Plant**	**O**	
		PRO	Product Category	O	
MISC	**POWERP**	**AD010**	**Power Station**	**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*	
		PPC	Power Plant Category	O	
MISC	**LANDMRKP**	**AH050**	**Fortification**	**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*	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		NLN2	*3-Char Language Code*	*O*	
MISC	**LANDMRKP**	**AK030**	**Amusement Park**	**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*	
MISC	**LANDMRKP**	**AK130**	**Race Track**	**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*	
MISC	**LANDMRKP**	**AK160**	**Stadium / Amphitheatre**	**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*	
MISC	**LANDMRKP**	**AL130**	**Monument**	**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*	
MISC	**LANDMRKP**	**AL200**	**Ruins**	**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*	
MISC	**BUILDP**	**AL015**	**Building**	**M**	
		BFC	Building Function 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*	
MISC	**TOWERP**	**AL240**	**Tower (non-communication)**	**O**	
		TTC	Tower Type Category	M	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
MISC	**INDPRODL**	**AQ113**	**Pipeline / Pipe**	**O**	
		LOC	Location Category	O	
		PRO	Product Category	O	
MISC	**INDPRODP**	**AQ116**	**Pumping Station**	**O**	
		PRO	Product Category	O	
MISC	**POWERL**	**AT030**	**Power Transmission Line**	**O**	
		FCO	Feature Configuration	O	
MISC	**CTOWERP**	**AT080**	**Communication Tower**	**O**	
		NST	Navigation System Type	O	
MISC	**PHYSL**	**DB010**	**Bluff / Cliff / Escarpment**	**O**	
MISC	**PHYSP**	**DB030**	**Cave**	**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*	
MISC	**PHYSL**	**DB090**	**Embankment / Fill**	**O**	
		PFH	Predominant Feature Height (decimetres)	O	
		USE	Usage	O	
		VRR	Vertical Reference Category	O	
MISC	**PARKA**	**FA080**	**National Park**	**M**	
		NA3	Classification Name	M	
		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*	
MISC	**PARKA**	**FA081**	**Nature Reserve**	**M**	
		NA3	Classification Name	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*	
POP	**BUILTUPA**	**AL020**	**Built-up area**	**M**	
		Populated PlaceID	*Populate place identifier*	*M*	
		ARA	Area	M	A
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 (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NAML1	*Name in first national language (Latin characters)*	*M*	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		NAML2	*Name in second national language (Latin characters)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		PPL	Population Place Category	C (M/if PP1&PP2 not populated)	
		PP1	*Population Lower Range*	*C (M/if PPL not populated)*	
		PP2	*Population Upper Range*	*C (M/if PPL not populated)*	
		USE	Usage	M/for country capitals, optional for other	
		Populated PlaceID	*Populate 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 (ASCII-7bit)*	*M*	
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NAML1	*Name in first national language (Latin characters)*	*M*	
		NAML2	*Name in second national language (Latin characters)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
		PPL	Population Place Category	C (M/if PP1&PP2 not populated)	
		PP1	*Population Lower Range*	*C (M/if PPL not populated)*	
		PP2	*Population Upper Range*	*C (M/if PPL not populated)*	
		USE	Usage	M/for country capitals, optional for other	
		Populated PlaceID	*Populate place identifier*	*M*	
POP	**URBANP**	**ZD040**	**Named Location**	**O**	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		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	**RAILRDL**	**AN010**	**Railway**	**M**	
		EXS	Existence Category	M	
		FCO	Feature Configuration	M	
		GAW	Gauge Width	M	
		LLE	*Location Level*	*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*	
		RCO	Railroad Code	O	
		RGC	Railroad Gauge Category	M	
		RRA	Railroad Power Source	M	
		RRC	Railroad Categories	M	
		RSD	*Railway Speed Class*	*M*	
		RSU	*Seasonal availability*	*O*	
		TEN	*TransEuropean Transport Network*	*M*	*DGMove*
		TUC	Transportation Use Category	M	
		LEN	Length	M	A
TRANS	**RAILRDL**	**AN500**	**Railway Network Link**	**M**	
		TEN	*TransEuropean Transport Network*	*M*	*DGMove*
TRANS	**INTERCC**	**AP020**	**Interchange**	**M**	
		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*	
		RJC	*Road Junction Type*	*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*	*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*	
		RST	Road Surface Type	M	
		RSU	*Seasonal availability*	*O*	
		RTE	*Route Number (Int.)*	*M*	
		RTN	Route Number (Nat.)	M	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		RTT	Route Intended Use	M	
		TEN	*TransEuropean Transport Network*	*M*	
		TOL	*Toll Category*	*M*	
		TUC	Transportation Use Category	M	*DGMove*
		LEN	Length	M	A
TRANS	**ROADL**	**AP500**	**Road Network Link**	**M**	
		TEN	*TransEuropean Transport Network*	*M*	*DGMove*
TRANS	**MISAEROP**	**AQ060**	**Control Tower**	**O**	
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 (ASCII-7bit)*	*M*	
		DNLN	*3-Char Language Code*	*M*	
		USE	Usage	M	
		RSU	*Seasonal availability*	*O*	
		TEN	*TransEuropean Transport Network*	*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*	*O*	
		NAMN2	*Second 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*	
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*	
		RStationID	*Railway Station Identifier*	*M*	
		TUC	Transportation Use Category	M	
TRANS	**RESTC**	**AQ135**	**Vehicle stopping Area/ Rest Area**	**M**	
		AFA	Available Facilities	M	
		NAMN1	*Name in first national language*	*M*	
		NAMN2	*Name in second national language*	*M*	
		NAMA1	*Name in first national language (ASCII-7bit)*	*M*	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		NAMA2	*Name in second national language (ASCII-7bit)*	*M*	
		NLN1	*3-Char Language Code*	*M*	
		NLN2	*3-Char Language Code*	*M*	
TRANS	**HARBORL**	**BB190**	**Pier/Wharf/Quay**	**O**	
TRANS	**HARBORA**	**BB009**	**Port**	**M**	
		HID	Harbor Identification Code	M	
		ARA	Area	M	A
TRANS	**HARBORP, HARBORC**	**BB009**	**Port**	**M**	
		HID	Harbor Identification Code	M	
		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*	
		TUC	Transportation Use Category	M	
TRANS	**AIRFLDA**	**GB005**	**Airport / Airfield**	**M**	
		IKO	ICAO designator	M	
		ARA	Area	M	A
TRANS	**AIRFLDC, 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 (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	M	
		USE	Usage	M	
		ZV3	Airfield elevation	M	
TRANS	**HELIP**	**GB035**	**Heliport**	**M**	
		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 (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	**RUNWAYL**	**GB055**	**Runway**	**M**	
		LEN	Length	M	A
VEG	**SOILA**	**DA010**	**Ground Surface Element**	**O**	
		MCC	Material Composition Category	M	
VEG	**VEGA**	**EA015**	**Agricultural Area**	**O**	
VEG	**VEGA**	**EA045**	**Plantation**	**O**	

Copyright © EuroGeographics

Coverage name	Feature Class(es)	Feature Codes	Feature Name	Obligation	Responsibility
		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*	
		PRO	Product Category	O	
VEG	**VEGA**	**EC050**	**Woods/Forest**	**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*	

Copyright © EuroGeographics

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 and national subdivisions up to the lowest level (municipality level).
In sea area boundaries are only portrayed if they are official (legal) boundaries. (Some countries do not portray legal boundaries on sea, which does not mean that they do not exist).
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/ 1st order national level
		30	Secondary/ 2nd order national level
		31	Tertiary/ 3rd order national level
		111	Fourth/ 4th order national level
		112	Fifth/ 5th order national level
		984	*For all lines closing the polygons of administrative units in those cases, where the international boundary is not portrayed in the dataset*
ABID	Unique identifier for all administrative boundaries in ERM	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
LEN	Length	*Data type:*	Short integer
		Measurement units	0.001 km
		Domain:	Actual value

Copyright © EuroGeographics

Administrative Area FA001

Definition: An area controlled by an administrative authority.
Feature class: POLBNDA
Feature type: Area
Primitive type: Face
Portrayal criteria: National territory and all national subdivisions up to fifth order.

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
SHN5	*EBM Hierarchical Number (5th 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	*Unique code of NUTS 3 region as defined and published by Eurostat*	*Data type:*	Character
		Domain:	Coded Value 5 characters
		<UNK>	Unknown
		<N_A>	Not applicable
ARA	Area	*Data type:*	Short Integer
		Measurement units	0.01 km²
		Domain:	Actual Value

Copyright © EuroGeographics

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

Copyright © EuroGeographics

Hydrography HYDRO

Well AA050

Definition: A hole drilled or dug into the earth or seabed for the extraction of liquids or gases.
Feature class: WELLP
Feature type: Point
Primitive type: Isolated Node
Portrayal criteria: Water, permanent hole considered as vital for the environment and/or considered as landmark by its location or its size.

Attributes: None

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.

Attributes: None

Copyright © EuroGeographics

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 250 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

Copyright © EuroGeographics

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 ≥ 0.4 km² for islands in seawater.
Smaller islands in inland water area can be portrayed if considered as landmark.
Quality criteria: At least all islands ≥ 0.4 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
ARA	Area	*Data type:*	Short Integer
		Measurement units	0,01 km²
		Domain:	Actual Value

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

Copyright © EuroGeographics

Shoreline Construction BB081

Definition: An artificial structure attached to land bordering a body of water and fixed in position. It is usually fixed to the waterbody bottom (for example: a mole) but may occasionally be fixed in position (for example: attached to the shore at one end and held between pilings at the other), but floating. Shoreline constructions are normally used for berthing and/or protection.
Feature class: SEASTRTL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Length ≥ 125 meters.
Important or prominent shoreline construction considered as landmark.
Shoreline can be coincident with foreshore flat boundaries or coastline. In that case, consistent geometry has to be applied.
Quality criteria: All the Shoreline Construction Types (PWC) don't have to be necessarily portrayed.

Attributes:

PWC	Shoreline Construction Type	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		4	Breakwater
		5	Groin
		7	Recreational Pier
		8	Training Wall
		11	Seawall
		997	Unpopulated

Aqueduct BH010

Definition: A pipe or artificial channel designed for water supply from a remote source, usually by gravity.
Feature class: AQUEDCTL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Length ≥ 1600 meters only suspended and elevated above ground or water surface. If connected to the water network, shorter aqueducts can be collected.

Attributes:

EXS	Existence Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		5	Under construction
		6	Abandoned / disused
		28	Operational
		997	Unpopulated

Copyright © EuroGeographics

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 ≥ 0.4 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 ≥ 0.4 km² have to be named when existing. ZV2 attribute has not to be necessarily 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_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

Copyright © EuroGeographics

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
ARA	Area	*Data type:*	Short Integer
		Measurement units	0.01 km²
		Domain:	Actual Value

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

Copyright © EuroGeographics

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 ≥ 0.4 km²
Reservoirs being part of the water network have to be topologically connected to watercourses.
Quality criteria: All reservoirs should be named.

Attributes:[2]

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_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

[2] As BH130 shares the same list of attributes than BH080, all non assigned attributes get the Null/No value

Copyright © EuroGeographics

ZV2	Highest Z-Value	*Data type:*	Short integer
		Measurement units:	1 meter
		Domain:	Actual value
		-29999	Unknown
		-29997	Unpopulated
ARA	Area	*Data type:*	Short Integer
		Measurement units	0.01 km²
		Domain:	Actual Value

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

Copyright © EuroGeographics

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

Attributes:

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

Copyright © EuroGeographics

Waterfall BH180

Definition: A vertical or nearly vertical descent of water.
Feature class: RAPIDSC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: Major waterfalls of national or tourist interest or being obstruction to navigation, located on watercourse portrayed as line feature.

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

Copyright © EuroGeographics

Waterfall BH180

Feature class: RAPIDSL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Major waterfalls of national or tourist interest or being obstruction to navigation located on watercourses portrayed as area feature.

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

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 ERM touches land (including islands).

Attributes: None

Copyright © EuroGeographics

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 ≥ 125 m.
Quality criteria: All watercourses should be named..
The HydroID should be populated at least for watercourses with drainage basin ≥ 500 km^2

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_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

Copyright © EuroGeographics

NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
TID	Tidal/ Non-Tidal Category	*Data type:* *Domain:* 0 1 2	Short integer Coded value Unknown Non-tidal Tidal / tidal fluctuating
ARA	Area	*Data type:* *Measurement units* *Domain:*	Short Integer 0.01 km² Actual Value

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

Copyright © EuroGeographics

Watercourse BH502

Feature class: WATRCRSL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Watercourses that form up a logical water network with width < 125 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 ≥ 500 km^2.

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_A>	Not applicable

Copyright © EuroGeographics

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
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
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

Copyright © EuroGeographics

LEN	Length	*Data type:*	Short Integer
		Measurement units	0.001 km
		Domain:	Actual Value

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*

Copyright © EuroGeographics

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: All dams bordering a reservoir or on watercourse portrayed as area feature (having more than 125m 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_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

Copyright © EuroGeographics

Dam / Weir BI020

Feature class: DAMC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: All dams on watercourse portrayed as a single line (< 125m)

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_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

Copyright © EuroGeographics

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 (having more than 125m wide)

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_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

Copyright © EuroGeographics

Lock BI030

Feature class: DAMC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: All locks on watercourse portrayed as a single line (< 125m)

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_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

Copyright © EuroGeographics

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 ≥ 0.4 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
ARA	Area	*Data type:*	Short Integer
		Measurement units	0.01 km²
		Domain:	Actual Value

Copyright © EuroGeographics

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 ≥ 0.4 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
ARA	Area	*Data type:*	Short Integer
		Measurement units	0.01 km²
		Domain:	Actual Value

Copyright © EuroGeographics

Wetland ED010

Definition: A poorly drained or periodically flooded area where the soil is saturated with water and vegetation is supported, e.g. marsh/swamp, bog/moor.
Feature class: SWAMPA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 0.4 km². Smaller wetland areas can be portrayed when significant to determine land occupation..
Quality criteria: Wetland being part of the water network have to be topologically connected to watercourses. Bogs are usually open bogs.

Attributes:

TID	Tidal/ Non-Tidal Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Non-tidal
		2	Tidal / tidal fluctuating
		997	Unpopulated

Copyright © EuroGeographics

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

Copyright © EuroGeographics

Named Location NAME

Named Location ZD040

Definition: A geographic place on earth having a name that requires to be placed on a map
Feature class: GNAMET / GNAMEL
Feature type: Text / Line
Primitive type: Text string / edge
Portrayal criteria: Cartographic text needed for named place at scale 1:250.000 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. GNAMEL 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

Copyright © EuroGeographics

NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
SID	*Symbol Identification*	*Data type:*	Short integer (Refers to SYMBOL.RAT for selection of values)

Related Table: SYMBOL_RAT must be provided with the Named Location theme (see description in ANNEX F)

Copyright © EuroGeographics

Miscellaneous MISC

Mine AA010

Definition: An excavation, made in the earth for the purpose of extracting natural deposits.
Feature class: EXTRACTP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Mine and quarry larger than 0.4 km² or being considered as landmark.
Quality criteria: Not all mining and/or product categories have to be portrayed.

Attributes:

EXS	Existence Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		6	Abandoned / disused
		28	Operational
		997	Unpopulated
MIN	Mining Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		2	Horizontal shaft
		3	Open pit
		4	Placer
		5	Prospect
		6	Strip
		7	Vertical shaft
		8	Peat cuttings
		997	Unpopulated
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

Copyright © EuroGeographics

NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:*	Character
		Domain:	Actual value
		<N_A>	Not applicable
PRO	Product Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		16	Clay
		17	Coal
		23	Copper
		42	Gold
		46	Gravel
		51	Iron
		54	Lead
		84	Rock / rocky
		87	Salt
		88	Sand
		100	Silver
		112	Uranium
		118	Zinc
		119	Bauxite
		997	Unpopulated
		999	Other

Copyright © EuroGeographics

Disposal Site / Waste Pile AB000

Definition: An area for the collecting /disposing of refuse or discarded material.
Feature class: INDPRODP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature or larger than 0.4 km².
Quality criteria: All product categories have not to be necessarily portrayed.

Attributes:

PRO	Product Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		101	Slag
		127	Tailings
		128	Refuse
		997	Unpopulated

Processing Plant / Treatment Plant AC000

Definition: A site used for changing or refining a particular material.
Feature class: INDPRODP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature or larger than 0.4 km².
Quality criteria: All product categories have not to be necessarily portrayed.

Attributes:

PRO	Product Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		13	Chemical
		67	Oil
		95	Sewage
		116	Water
		997	Unpopulated

Copyright © EuroGeographics

Power Station AD010

Definition: The building(s) and equipment necessary for the generation of electric power.
Feature class: POWERP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature, major power stations.
Quality criteria: All Power Plant Categories have not to be necessarily portrayed.

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
PPC	Power Plant Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Hydro-electric
		2	Nuclear
		3	Solar
		4	Thermal
		5	Wind
		6	Tidal
		7	Internal combustion
		997	Unpopulated

Copyright © EuroGeographics

Fortification AH050

Definition: A facility constructed for the military defence of a site.
Feature class: LANDMRKP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: A site or fortress usually composed of walls, ditches, or defensive works or citadel. Prominent ones of national or tourist interest or larger than 0.4 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

Copyright © EuroGeographics

Amusement Park AK030

Definition: A predominately man-made facility equipped with recreational devices.
Feature class: LANDMRKP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Area ≥ 0.4 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

Copyright © EuroGeographics

Race Track AK130

Definition: A course of racing.
Feature class: LANDMRKP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Race tracks (cars, cycles, horses ...) considered as a landmark or important by its location, size or tourist interest.

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

Copyright © EuroGeographics

Stadium / Amphitheatre AK160

Definition: An arena for holding and viewing events.
Feature class: LANDMRKP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Permanent landmark structure or have national interest.

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

Copyright © EuroGeographics

Monument AL130

Definition: A structure erected or maintained as a memorial to a person or event.
Feature class: LANDMRKP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature or have national or tourist interests.

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

Copyright © EuroGeographics

Ruins AL200

Definition: The deteriorated remains of an unspecified structure.
Feature class: LANDMRKP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature or have national or tourist interest.

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

Copyright © EuroGeographics

Building AL015

Definition: A relatively permanent structure roofed and usually walled and designed for some particular use.
Feature class: BUILDP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature or be of national or tourist interest.
Quality criteria: All building function categories have not to be necessarily portrayed

Attributes:

BFC	Building Function Category	*Data type:*	Short integer
		Domain:	Coded value
		2	Government building
		4	Castle
		6	Hospital
		9	Museum
		10	Observatory
		11	Palace
		12	Police Station
		15	School
		18	Cemetery building
		19	Farm building
		50	Church
		82	Lighthouse
		83	Power generation
		114	Non-Christian place of worship
		152	Mountain hut / refuge
		153	Historic windmill
		999	Other
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

Copyright © EuroGeographics

Tower (non-communication) AL240

Definition: A relatively tall structure which may be used for observation, support, storage, etc.
Feature class: TOWERP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature

Attributes:

TTC	Tower Type Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		6	Water tower
		8	Cooling tower
		18	Chimney / smokestack
		19	Grain bin / silo
		20	Tank
		999	Other

Copyright © EuroGeographics

Pipeline / Pipe AQ113

Definition: A tube for the conveyance of solids, liquids or gases.
Feature class: INDPRODL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Length ≥ 1600 meters and considered as landmark. Pipe for water conveyance is portrayed as BH010 "Aqueduct"

Attributes:

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
		997	Unpopulated
PRO	Product Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		13	Chemical
		38	Gas
		39	Gasoline
		50	Heat
		67	Oil
		997	Unpopulated

Pumping Station AQ116

Definition: A facility to move solids, liquids or gases by means of pressure or suction.
Feature class: INDPRODP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Major pumping station that can be considered as landmark.

Attributes:

PRO	Product Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		13	Chemical
		38	Gas
		39	Gasoline
		50	Heat
		67	Oil
		116	Water
		997	Unpopulated

Copyright © EuroGeographics

Power Transmission Line AT030

Definition: A system of above ground wires, including their supports, which transmits electricity over distance.
Feature class: POWERL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Length ≥ 1600 meters, high voltage transmission line, which can be considered as aerial obstruction.
When several transmission lines are close to each other, they may be portrayed into one single line. In that case, they will be mentioned as multiple.

Attributes:

FCO	Feature Configuration	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		2	Multiple
		3	Single
		997	Unpopulated

Communication Tower AT080

Definition: A relatively tall structure used for transmitting and/or receiving electronic communication signals.
Feature class: CTOWERP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Major ones that can be considered as a landmark feature.

Attributes:

NST	Navigation System Type (Primary system)	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		12	Radio
		15	TV
		16	Microwave
		997	Unpopulated
		999	Other

Copyright © EuroGeographics

Bluff / Cliff / Escarpment DB010

Definition: A steep, vertical or overhanging face of rock or earth.
Feature class: PHYSL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Length ≥ 1600 meters and Height ≥ 50 m

Attributes:[3] *None*

[3] As DB010 shares the same list of attributes than DB090, all non assigned attributes get the Null/No value

Copyright © EuroGeographics

Cave DB030

Definition: A natural subterranean chamber or series of chambers open to the Earth's surface.
Feature class: PHYSP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Prominent ones of national or tourist interest

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

Copyright © EuroGeographics

Embankment / Fill DB090

Definition: A raised long mound of earth or other material.
Feature class: PHYSL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Length ≥ 1600 meters and Height ≥ 3 meters

Attributes:

PFH	Predominant Feature Height	*Data type:*	Short integer
		Measurement unit:	decimetre
		Domain:	Actual value
		-29999	Unknown
		-29997	Unpopulated
USE	Usage	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		69	Levee / dike
		127	As a causeway
		136	As a fill
		997	Unpopulated
VRR	Vertical Reference Category	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Above surface / does not cover (at high water)
		8	Covers and uncovers
		997	Unpopulated

Copyright © EuroGeographics

National Park FA080

Definition: Extensive area of a particular nature that has been defined by law and that is to be protected as a whole. It meets the prerequisites of a nature reserve for the largest part and has been influenced by man at most only to a small extent.

Feature class: PARKA

Feature type: Area

Primitive type: Face

Portrayal criteria: Area ≥ 0.4km^2

The area should contain a representative sample of major natural regions, features or scenery, where plant and animal species, habitats and geomorphologic sites are of special spiritual, scientific, educational, recreational and tourist significance.

Classification Name stores Categories settled in the IUNC publication “Guidelines for Protected Area Management Categories

Quality criteria: All the national parks have to be named.

Attributes:

NA3	Classification Name	*Data type:*	Character
		Domain:	Coded value
		<UNK>	Unknown
		CAT II	National Park
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

Copyright © EuroGeographics

Nature Reserve FA081

Definition: An area that has been legally defined and whose nature and landscape requires special protection, be it in part or as a whole in order to preserve symbioses or biotypes of specific wildlife animals or plants, for scientific reasons or reasons of natural or geographic history, or because of their rareness, uniqueness or outstanding beauty

Feature class: PARKA

Feature type: Area

Primitive type: Face

Portrayal criteria: Area ≥ 0.4km^2
The classification name stores categories settled in the IUNC publication “Guidelines for Protected Area Management Categories

Quality criteria: All the national reserves have to be named.

Attributes:

NA3	Classification Name	*Data type:*	Character
		Domain:	Coded value
		<UNK>	Unknown
		CAT I	Strict nature reserve / wilderness area
		CAT III	Natural monument / natural landmark
		CAT IV	Habitat / species, management area
		CAT V	Protected landscape / seascape
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

Copyright © EuroGeographics

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: Area ≥ 0.4km^2 and population ≥ 5000 inhabitants.
When a seamless built-up area forms a conurbation of several important cities, it can be split into separate polygons with common borderlines, each polygon referring to a distinct city.
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
ARA	Area	*Data type:*	Short Integer
		Measurement units	0.01 km^2
		Domain:	Actual Value

Copyright © EuroGeographics

Built-up Area AL020

Feature class: BUILTUPP
Feature type: Point
Primitive type: Isolated Node
Portrayal criteria: Area < 0.4 km2 or population >100 but < 5000 inhabitants. All municipalities and other built-up areas estimated to be important by their number of inhabitants and/or their outstanding localisation. Those built-up areas, which have less than 100 inhabitants but are main villages or cities of the regional/local administrative units, are included.
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: All the built-up area has to be named.
In the case that PPL is considered to be populated (including 'unknown' value for some exceptions) , it is not necessary to populate the PP1 and the PP2 attributes, which get the value Unpopulated (-29997). Using PP1 and PP2 class limits in general could be chosen individually, if possible use a fixed class limit at 1000 to ensure interoperability with EGM.
Each populated place should have a unique population place identifier.
The capital of a country has to be identified (USE).

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
NAML1	*Name in first national Language (Latin character)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAML2	*Name in second national language (Latin character)*	*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

Copyright © EuroGeographics

NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
PPL	Population Place Category	*Data type:* *Measurement units:* *Domain* -29999 -29997	Long integer 1 inhabitant Actual value Unknown Unpopulated
PP1	*Population Lower Range*	*Data type:* *Measurement units:* *Domain* -29999 -29997	Long integer 1 inhabitant Range value, ≥ 1 Unknown Unpopulated
PP2	*Population Upper Range*	*Data type:* *Measurement units:* *Domain* -29999 -29997	Long integer 1 inhabitant Range value, < 5000 Unknown Unpopulated
USE	Usage	*Data type:* *Domain:* 0 23 26 30 31 111 112 997 998	Short integer Coded value Unknown International Primary/ 1st order national level Secondary/ 2nd order national level Tertiary/ 3rd order national level Fourth/ 4th order national level Fifth/ 5th order national level Unpopulated Not applicable
Populated PlaceID	*Populated Place Identifier*	Data type: Domain:	Character Actual value

Copyright © EuroGeographics

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 area 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 the populated places have to be named.
In the case that PPL is considered populated (including 'unknown' value for some exception), it is not necessary to populate the PP1 and the PP2 attributes, which get the value unpopulated (-29997).
Using PP1 and PP2 class limits in general could be chosen individually, if possible use a fixed class limit at 50000 to ensure interoperability with EGM.
Each populated place should have a unique population place identifier.
The capital of a country has to be identified (USE).

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
NAML1	*Name in first national Language (Latin character)*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
NAML2	*Name in second national language (Latin character)*	*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

Copyright © EuroGeographics

		<N_A>	Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
PPL	Population Place Category	*Data type:* *Measurement units:* *Domain* -29999 -29997	Long integer 1 inhabitant Actual value Unknown Unpopulated
PP1	*Population Lower Range*	*Data type:* *Measurement units:* *Domain* -29999 -29997	Long integer 1 inhabitant Range value, ≥ 5000 Unknown Unpopulated
PP2	*Population Upper Range*	*Data type:* *Measurement units:* *Domain* -29999 -29997	Long integer 1 inhabitant Range value, < 20.000.000 Unknown Unpopulated
USE	Usage	*Data type:* *Domain:* 0 23 26 30 31 111 112 997 998	Short integer Coded value Unknown International Primary/ 1st order national level Secondary/ 2nd order national level Tertiary/ 3rd order national level Fourth/ 4th order national level Fifth/ 5th order national level Unpopulated Not applicable
Populated PlaceID	*Populated Place Identifier*	Data type: Domain:	Character Actual value

Copyright © EuroGeographics

Named Location ZD040

Definition: A geographic place on the 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: URBANP
Feature type: Point
Primitive type: Isolated Node
Portrayal criteria: A named place that cannot be represented by a built-up area.
This can be a minor city, which is included into the built-up area of a major city.
This can also be a municipality resulting from the merging of several populated places identified by their own names

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

Copyright © EuroGeographics

Transport 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. Railway yards, siding railways are allowed if they are landmarks and are classified as branch lines. They are usually generalized (not all the tracks have to be portrayed).
Specific lines reaching harbour or industrial zone can be portrayed and are also classified as branch lines.
The length selection is min. 1600 meters.
Metro lines (= underground urban railways), tramlines or streetcar lines inside city areas are excluded. Railways are portrayed by one line regardless the number of tracks.
Quality criteria: All main lines must have the mandatory attributes populated. Branch lines can allow attribution populated as Unknown because they are considered as landmark information only.

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
		11	Double
		12	Juxtaposition
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)*

Copyright © EuroGeographics

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	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Broad
		2	Narrow
		3	Normal
RRA	Railroad Power Source	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Electrified track
		3	Overhead electrified
		4	Non-electrified
RRC	Railroad Categories	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		16	Main line
		17	Branch line
		999	Other

Copyright © EuroGeographics

RSD	*Railway Speed Class*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*Conventional Railway Line*
		2	*Upgraded high-speed railway line (order of 250km/h)*
		3	*Dedicated high-speed railway line (>250km/h)*
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
LEN	Length	*Data type:*	Short Integer
		Measurement units:	0.001 km
		Domain:	Actual value

Railway Network Link AN500

Definition: A railway network link represents a logical connection between the railway and another transport mode; to allow people and/or cargo/freight to change from railway transport mode to another.
Feature class: RAILRDL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Railway network link is part of the railway network and is used to connect the railway network with other transportation modes usually a transport terminal like the ferry station, an airport or a port

Attributes:[4] None, but TEN

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*

[4] As AN500 shares the same list of attributes than AN010, all non assigned attributes get the Null/No value

Copyright © EuroGeographics

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_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
RJC	*Road Junction Category*	Data type:	Short integer
		Domain:	Coded value
		0	Unknown
		1	*Interchange (between motorways)*
		2	*Access/exit (from motorway road)*
		3	*Mixed*

Copyright © EuroGeographics

Road AP030

Definition: An open way maintained for vehicular use.
Feature class: ROADL
Feature type: Line
Primitive type: Edge
Portrayal criteria: All European roads (E-roads) and all roads connecting built-up areas, additionally, other roads can be included when it is needed to reach full connectivity of the transportation network (e.g. direct link between two built-up areas) or only way to reach a built-up area or isolated places (harbours, airports).
Inside built-up areas only main roads (e.g. through roads) are portrayed. Roads are represented by one line regardless of the number of lanes or carriageways

Attributes:

COR	*Category of Road*	*Data type:*	Short integer
		Domain:	Coded value
		0	*Unknown*
		1	*Motorway*
		2	*Road inside built-up area*
		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
NAMN1	*Name in first national language*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_A>	Not applicable
		<N_P>	Unpopulated

Copyright © EuroGeographics

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
RST	Road Surface Type	*Data type:*	Short integer
		Domain:	Coded value
		0	Unknown
		1	Paved
		2	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*

Copyright © EuroGeographics

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
LEN	Length	*Data type:*	Short Integer
		Measurement units	0.001 km
		Domain:	Actual value

Road Network Link AP500

Definition: A road network link represents a logical connection between a road and another transport mode; to allow people, goods to change from road transport mode to another.
Feature class: ROADL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Road network link is part of the road network and is used to connect the road network with other transportation modes usually a transport terminal like the ferry station, a railway station, an airport or a port.

Attributes[5]*:* None, but TEN

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*

[5] As AP500 shares the same list of attributes than AP030, all non assigned attributes get the Null/No value

Copyright © EuroGeographics

Control Tower AQ060

Definition: A tower-like structure that houses the persons and equipment used to control the flow of air, rail or marine traffic.
Feature class: MISAEROP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Landmark feature

Attributes: None

Level Crossing AQ062

Definition: The location where a railway and a 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 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

Copyright © EuroGeographics

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: Length ≥ 125 meters. 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
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
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*

Copyright © EuroGeographics

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 will possibly connect 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)

Copyright © EuroGeographics

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

Copyright © EuroGeographics

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 the stations and stopping places used for passenger traffic and/or freight traffic.

Quality criteria: All stations and stopping places have to be named. Each railway station should have a unique railway station identifier.

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
RStationID	*Railway station Identifier*	Data type:	Character
		Domain:	Actual value
TUC	Transportation Use Category	Data type:	Short integer
		Domain:	Coded value
		0	Unknown
		25	Cargo/Freight
		26	Passenger
		45	General

Copyright © EuroGeographics

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:*	Short integer
		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

Copyright © EuroGeographics

Port BB009

Definition: A place provided with terminal and transfer facilities for loading and discharging cargo or passengers.
Feature class: HARBORA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 0.4 km²
All TEN ports and all statistical ports according to Commission Decision 2005/366/EC of 4 March 2005. (Reference: GISCO Port database)

Attributes:

HID	Harbour Identification Code (UN Locode)	*Data type:* *Domain:*	Character Coded value (5 char.)
ARA	*Area*	*Data type:* *Measurement units* *Domain:*	Short Integer 0.01 km^2 Actual Value

Copyright © EuroGeographics

Port **BB009**

Feature class: HARBORC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: Area ≥ 0.4 km²
The point representation of a port collected as an area feature that provides the intermodal connection to the road or railway network.

Attributes:

HID	Harbour Identification Code (UN Locode)	Data type: Domain:	Character Coded value (5 char.)
NAMN1	*Name in first national language*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NAMN2	*Name in second national language*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
TUC	Transportation Use Category	*Data type:* *Domain:* 0 12 34	Short Integer Coded value Unknown Maritime (Inland) waterway

Copyright © EuroGeographics

Port BB009

Feature class: HARBORP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Area < 0.4 km²
All TEN ports and all statistical ports according to Commission Decision 2005/366/EC of 4 March 2005. (Reference: GISCO Port database)

Attributes:

HID	Harbour Identification Code (UN Locode)	Data type: Domain:	Character Coded value (5 char.)
NAMN1	*Name in first national language*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NAMN2	*Name in second national language*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NAMA1	*Name in first national Language (ASCII-7bit)*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NAMA2	*Name in second national language (ASCII-7bit)*	*Data type:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NLN1	*ISO 639-2/B 3-Char Language Code for NAMN1*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
NLN2	*ISO 639-2/B 3-Char Language Code for NAMN2*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
TUC	Transportation Use Category	*Data type:* *Domain:* 0 12 34	Short Integer Coded value Unknown Maritime (Inland) waterway

Copyright © EuroGeographics

Pier / Wharf / Quay **BB190**

Definition: A structure primarily used as berthing places for vessels.
Feature class: HARBORL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Prominent pier in harbour

Attributes: None

Copyright © EuroGeographics

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: AIRFLDA
Feature type: Area
Primitive type: Face
Portrayal criteria: Military, commercial and leisure airports and airfields with area ≥ 0.4 km² (Reference: GISCO Airport database)
Quality criteria: All existing TEN-T airports should be included.

Attributes:

IKO	ICAO Code	*Data type:*	Character
		Domain:	Coded value (4 char.)
ARA	Area	*Data type:*	Short Integer
		Measurement units:	0.01 km²
		Domain:	Actual value

Airport / Airfield GB005

Feature class: AIRFLDC
Feature type: Point
Primitive type: Connected node
Portrayal criteria: The point representation of an airport/airfield collected as an area feature that provides the intermodal connection to the road or railway network.

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

Copyright © EuroGeographics

		Domain:	Coded value (4 char.)
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
ZV3	Airfield Elevation	Data type:	Short Integer
		Measurement units:	1 meter
		Domain:	Actual value
		-29999	Unknown

Copyright © EuroGeographics

Airport / Airfield GB005

Feature class: AIRFLDP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: Area < 0.4 km²
Military, commercial and leisure airfields (Reference: GISCO Airport database)
Quality criteria: All existing TEN-T airports should be included.

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.)
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

Copyright © EuroGeographics

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
ZV3	Airfield Elevation	*Data type:*	Short Integer
		Measurement units:	1 meter
		Domain:	Actual value
		-29999	Unknown

Copyright © EuroGeographics

Heliport GB035

Definition: A place designated for the landing and take-off of helicopters, including its buildings and facilities
Feature class: HELIP
Feature type: Point
Primitive type: Isolated node
Portrayal criteria: All the heliports listed in official data sources such as the civilian and military national AIP (Aeronautical Information Publication) documents provided for each country.

Attributes:

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

Copyright © EuroGeographics

Runway GB055

Definition: A defined area, usually rectangular, used for the conventional landing and take-off of aircraft.
Feature class: RUNWAYL
Feature type: Line
Primitive type: Edge
Portrayal criteria: Only operational hard paved runways of airports (portrayed as an area feature) are portrayed. Runways cannot be portrayed stand-alone without the airport they belong to. Runway is portrayed only with line feature. The length of the line feature should correspond to the real length of the runway. Length may include overrun / stop way.

Attributes:

LEN	Length	*Data type:*	Short Integer
		Measurement units:	0.001 km
		Domain:	Actual value

Copyright © EuroGeographics

Vegetation and Soils VEG

Ground Surface Element DA010

Definition: The surface soil characteristics of the earth.
Feature class: SOILA
Feature type: Area
Primitive type: Face
Portrayal criteria: Open rocks, sand area, sand banks, sand dunes with area ≥ 0.4 km².Smaller areas can be portrayed when significant to determine land occupation.

Attributes:

MCC	Material Composition	Data type:	Short Integer
		Domain:	Coded value
		0	Unknown
		84	Rocky
		88	Sand

Copyright © EuroGeographics

Agricultural area EA015

Definition: Land used for growing agricultural crops and land used as pasture.
Feature class: VEGA
Feature type: Area
Primitive type: Face
Portrayal criteria: If the agriculture area covers a minor part of the land coverage and can be considered as remarkable in the landscape. Area ≥ 0.4 km².

Attributes:[6] None

[6] As EA015 shares the same list of attributes than EA045 and EC050, all non-assigned attributes get the Null/ No value.

Copyright © EuroGeographics

Plantation EA045

Definition: An area covered by systematic plantings of fruit trees, nuts, vine or other products.
Feature class: VEGA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 0.4 km².
Normally fruit and/or nut orchards or vine or other products which are remarkable in the landscape. Smaller areas can be portrayed when significant to determine land occupation.

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
PRO	Product Category	Data type:	Short integer
		Domain:	Coded value
		0	Unknown
		124	Common fruits and/or nuts
		152	Vine
		153	Hops
		997	Unpopulated

Copyright © EuroGeographics

Woods/Forest EC050

Definition: An area covered by trees including temporarily open forest areas.
Feature class: VEGA
Feature type: Area
Primitive type: Face
Portrayal criteria: Area ≥ 0.4 km².
Smaller areas can be portrayed when significant to determine land occupation.

Attributes:[7]

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

[7] As EC050 shares the same list of attributes than EA015 and EA045, all non-assigned attributes get the Null/ No value.

Copyright © EuroGeographics

ANNEX D: Topological associations

This annex describes topological relationships at feature level that need to be specified in the data schema of EuroRegionalMap 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

Copyright © EuroGeographics

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
AQUEDCTL	Must not intersect or touch interior		Aqueduct lines must only touch at their ends and must not overlap each other
	Must not overlap with	WATRCRSL, COASTL, DAML, RAPIDSL	Aqueduct lines must not overlap with watercourse line, shoreline, dam, rapids
COASTA	Must not overlap with	COASTA ISLANDA LAKERESA LANDICEA	Foreshore area must not overlap with itself and island area, lake area, ice area
	Must overlap	WATRCRSA SEAA	The foreshore SHALL overlap the water area, watercourse area
	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	AQUEDCTL, WATRCRSL, RAPIDSL	Coastlines/shorelines must not overlap with aqueduct, watercourse lines, rapids
COASTL, BA010	Must not overlap with	SEASTRTL DAML	Coastlines/shorelines must not overlap with shoreline construction, dam/weir
	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 islands polygon or sea polygons
COASTL, XX500	Must be covered by boundary of	SEAA	Sea limit must be covered by the boundaries of sea polygons
	Must be covered by boundary of	WATRCRSA	Coastlines/shorelines 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	AQUEDCTL, WATRCRSL, RAPIDSL SEASTRTL	Dam lines must not overlap with aqueduct, watercourse lines, rapids, shoreline construction
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
DAMC	Must be covered by endpoint of	WATRCRSL	Dam/lock as connected nodes must be covered by the ends of watercourse lines
	Must not overlap with	SPRINGP SPRINGC WELLP RAPIDSC DAMC	Dams as connected nodes must not overlap between them and with spring water, wells, rapids

Copyright © EuroGeographics

Feature class	Topological association	Related feature class	Description
HYNODEC	Must be covered by endpoint of	WATRCRSL	Hydrographic Network Nodes as connected nodes must be covered by the ends of watercourse lines
	Must not overlap with	HYNODEC	Hydrographic Network Node as connected nodes must not overlap between them
LAKERESA	Must not overlap with	COASTA ISLANDA SEAA WATRCRSA LAKERESA LANDICEA	Lake areas must not overlap between them and with foreshore areas, sea areas, watercourse areas, island areas, ice areas
LANDICEA	Must not overlap with	COASTA ISLANDA SEAA WATRCRSA LAKERESA LANDICEA	Ice areas must not overlap between themselves and with foreshore areas, sea areas, watercourse areas, island areas, lake areas
LANDMASKA	Must not overlap with	SEAA LANDMASKA	Landmask areas must not overlap between them and with water area
	Must have no gap		Landmask area must form a continuous coverage and must not have a void area between them
	Boundary must be covered by	COASTL	Boundaries of landmask areas must be covered by the lines of the coastline/shoreline or sea limit
ISLANDA	Must not overlap with	COASTA SEAA ISLANDA WATRCRSA LAKERESA LANDICEA	Island areas must not overlap between them and with water area, foreshore area, watercourse area, lake area and ice area.
	Must not have gap with	SEAA WATRCRSA LAKERESA LANDICEA	Islands area must not have void area with water area, watercourse area, lake area and ice area
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
	Boundary must be covered by	COASTL	Boundaries of sea water (area) must be covered by the lines of the coastline/shoreline or sea limit
SHOREL	Must not intersect or touch interior		Inland shorelines lines must only touch at their ends and must not overlap each other
	Must be covered by boundary of	ISLANDA OR WATRCRSA OR LAKERESA	Inland shorelines must be covered by the boundaries of islands polygon or watercourse polygons or lake/reservoir polygons
	Must not have isolated start node and/or end node		Inland shorelines 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

Copyright © EuroGeographics

Feature class	Topological association	Related feature class	Description
SPRINGP	Must not overlap with	SPRINGP SPRINGC, WELLP RAPIDC DAMC	Spring/water hole as isolated node must not overlap between them and with spring water (as connected), wells, rapids, and dams
SPRINGC	Must not overlap with	SPRINGP SPRINGC WELLP RAPIDSC DAMC	Spring/water hole as connected node must not overlap between them and with spring water (as isolated), wells, rapids, dams
	Must be covered by endpoint of	WATRCRSL	Spring/water hole as connected node must be covered by the ends of watercourse lines
SWAMPA	Must not overlap with	SEAA WATRCRSA LAKERESA SWAMPA LANDICEA	Wetland areas must not overlap between them and with sea area, watercourse area and lake area, land ice area
RAPIDSC	Must not overlap with	SPRINGP SPRINGC WELLP RAPIDSC DAMC	A rapid as connected node must not overlap between them and with spring water, wells, dams
	Nodes must be covered by end node of	WATRCRSL	Waterfall as connected node must be covered ends of watercourse line
RAPIDSL	Must not intersect or touch interior		Waterfall lines must only touch at their ends and must not overlap each other
	Must not overlap with	AQUEDCTL, COASTL, DAML, SEASTRTL WATRCRSL	Rapid lines must not overlap with aqueduct, shoreline, dam, and watercourse lines
	Must be covered by boundary of	WATRCRSA	Waterfall as line feature must be covered by boundary of watercourse area
SEASTRTL	Must not intersect or touch interior		Coastline must only touch at their ends and must not overlap each other
	Must not overlap with	AQUEDCTL, WATRCRSL, DAML, RAPIDSL	Coastline must not overlap with aqueduct, watercourse lines, dam, rapids
WATRCRSA	Must not overlap with	ISLANDA SEA 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	AQUEDCTL, COASTL, DAML, RAPIDSL SEASTRTL	Watercourse lines must not overlap with aqueduct, shoreline, dam, rapids

Copyright © EuroGeographics

Feature class	Topological association	Related feature class	Description
WELLP	Must not overlap with	SPRINGP SPRINGC WELLP RAPIDSC DAMC	Wells as node must not overlap between them and with spring water, wells, springs, and dams

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
URBANP	Must be inside	BUILTUPA	Named location node feature must be inside a built-up area as area feature

Copyright © EuroGeographics

Micellaneous MISC

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
PARKA,	Must not overlap		National parks and natural reserves must not overlap with themselves
POWERL	Must not intersect or touch interior		High power lines can only touch at their ends and must not overlap each other
	Must not overlap with	INDPRODL, PHYSL	High power lines must not overlap with pipelines and cliffs
INDPRODL	Must not intersect or touch interior		Pipelines can only touch at their ends and must not overlap each other
	Must not overlap with	POWERL, PHYSL	High power lines must not overlap with high power lines and cliffs
PHYSL	Must not intersect or touch interior		Cliff/escarpment can only touch at their ends and must not overlap each other
	Must not overlap with	INDPRODL, POWERL	Cliff/escarpment must not overlap with pipelines and power lines
EXTRACTP	Must not overlap with	EXTRACTP LANDMRKP POWERP TOWERP CTOWERP BUILDP	Mine must not overlap between them and with landmarks, power plants, towers and buildings
LANDMRKP	Must not overlap with	EXTRACTP LANDMRKP POWERP TOWERP CTOWERP	Landmarks must not overlap between them and with mines, power plants, and towers
POWERP	Must not overlap with	EXTRACTP LANDMRKP POWERP TOWERP CTOWERP BUILDP	Power plants must not overlap between them and with mines, power plants, towers, landmarks and buildings
TOWERP	Must not overlap with	EXTRACTP LANDMRKP POWERP TOWERP CTOWERP BUILDP	Towers must not overlap between them and with mines, power plants, communication towers, landmarks and buildings
CTOWERP	Must not overlap with	EXTRACTP LANDMRKP POWERP TOWERP CTOWERP BUILDP	Communication towers must not overlap between them and with mines, power plants, landmarks, towers and buildings
BUILDP	Must not overlap with	EXTRACTP POWERP TOWERP CTOWERP BUILDP	Buildings must not overlap between them and with mines, power plants, and towers

Copyright © EuroGeographics

Transport 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
AIRFLDA	Must not overlap		Airfields as polygons must not overlap
	Must not overlap with	HARBORA	Airfields as polygons must not overlap with harbour zone as polygons
AIRFLDC	Must be inside	AIRFLDA	Airport/Airfield as connected node must be inside the correspondent airport/airfield as area feature
	Must be covered by end node of	ROADL OR RAILRDL	Airport/Airfield as connected node must be covered by end node of a road or a railway
AIRFLDP	Must not overlap with	AIRFLDP AIRFLDC EXITC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Airfields as node must not overlap between them and with exits, helifield, interchange, level crossing, railway stations, ports and rest areas
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 AIRFLDC EXITC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC MISAEROP	Entrance/exit as connected node must not overlap between them and with airfield, helifield, interchange, level crossing, railway stations, ports and control towers
FERRYL	Must not overlap with	RAILRDL ROADL RUNWAYL	Ferry lines must not overlap with road lines, runways 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
	Must not overlap with	AIRFLDP AIRFLDC HELIP INTERCC LEVELCC RAILRDC MISAEROP FERRYC RESTC	Ferry station as node must not overlap between them and with airfields, heliport, interchange, level crossing, railway stations, control towers and vehicle stopping areas / rest areas
HARBORA	Must not overlap		Port as polygons must not overlap

Copyright © EuroGeographics

Feature class	Topology rules	Related feature class	Description
HARBORL	Must not intersect or touch interior		Pier/Wharf/Quay as lines can only touch at their ends and must not overlap each other
	Must not overlap with	FERRYL RUNWAYL ROADL RAILRDL	Pier/Wharf/Quay must not overlap with roads, railway, runways and ferry lines
HARBORC	Must be inside	HARBORA	Port as connected node must be inside the correspondent port as area feature
	Must be covered by end node of	ROADL OR RAILRDL	Port as connected node must be covered by end node of a road or a railway
HARBORP	Must not overlap with	AIRFLDP AIRFLDC EXITC HARBORC HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Port as node must not overlap between them and with exits, heliport, interchange, level crossing, railway stations, and rest areas as well as ports as connected node features
HELIP	Must not overlap with	AIRFLDP AIRFLDC EXITC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Heliports as node feature must not overlap between them and with exits, airfield, interchange, level crossing, railway stations, control towers, ports 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 AIRFLDC EXITC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Interchanges, as connected node, must not overlap between them and with exits, heliport, airfield, level crossing, railway stations, control towers, ports and rest areas
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 AIRFLDC EXITC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Level crossings, as connected node, must not overlap between them and with exits, helifield, airfield, interchange, railway stations, control towers, ports and rest areas

Copyright © EuroGeographics

Feature class	Topology rules	Related feature class	Description
MISAEROP	Must not overlap with	AIRFLDP AIRFLDC EXITC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Control towers, as isolated node, must not overlap between them and with exits, heliport, airfield, interchange, level crossing, railway stations, ports and rest areas
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 RUNWAYL HARBORL	Railroad lines must not overlap with road lines, wharfs, runways and ferry lines
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 AIRFLDC EXITC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Railway station, as connected node, must not overlap between them and with exits, helifield, airfield, interchange, level crossings, control towers, ports and rest areas
RESTC	Must be covered by end node of	ROADL	Parking as connected node must be covered by end nodes of roads
	Must not overlap with	AIRFLDP AIRFLDC HARBORC HARBORP HELIP INTERCC LEVELCC RAILRDC RESTC MISAEROP	Rest area, as node, must not overlap between them and with helifield, airfield, interchange, railway stations, control towers, ports and level crossings
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 RUNWAYL HARBORL	Road lines must not overlap with railroad lines, wharfs, runways and ferry lines
RUNWAYL	Must not intersect or touch interior		Runway lines can only touch at their ends and must not overlap each other
	Must not overlap with	RAILRDL FERRYL RUNWAYL HARBORL	Runway lines must not overlap with railroad lines, roads, wharfs, runways and ferry lines
	Must be covered by	AIRFLDA	Runway line must be covered by a single polygon of airfield area

Copyright © EuroGeographics

Vegetation and Soils VEG

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

Feature class	Topology association	Related feature class	Description
SOILA	Must not overlap	SOILA, VEGA	Soil areas as polygons must not overlap with themselves and vegetation areas
VEGA	Must not overlap	VEGA, SOILA	Vegetation areas as polygons must not overlap with themselves and soil areas

Copyright © EuroGeographics

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 WATRCRSA LAKERESA	Built-up Area as area must not be covered by sea area, watercourse area and Lake/Reservoir
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
URBANP	Must be properly inside	POLBNDA	Named location as nodes must be inside single polygons of administrative area.
HARBORA	Must be covered by feature class of	POLBNDA	The harbour zone must be covered by the polygons of the administrative areas
AIRFLDA	Must be covered by feature class of	POLBNDA	The airfield area must be covered by the polygons of the administrative areas
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
SOILA VEGA	Must not be covered by	WATRCRSA LAKERESA SEEA	Vegetation and Soil area features must not overlap with sea area, watercourse area and lake/reservoir
		BUILTUPA	Vegetation and Soil area features must not overlap with builtup-area features
		HARBORA AIRFLDA	Vegetation and Soil area features must not overlap with port area and airport area features

Copyright © EuroGeographics

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 [8]

AREA / AREA	COASTA	LAKERESA	LANDICEA	LANDMASKA	ISLANDA	SEAA	SWAMPA	WATRCRSA	PARKA	BUILTUPA	AIRFLDA	HARBORA	SOILA	VEGA
COASTA														
LAKERESA														
LANDICEA														
LANDMASKA														
ISLANDA														
SEAA														
SWAMPA														
WATRCRSA														
PARKA														
BUILTUPA														
AIRFLDA														
HARBORA														
SOILA														
VEGA														

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

Copyright © EuroGeographics

Point must not be covered by area[9]

AREA / POINT	COASTA	LAKERESA	LANDICEA	LANDMASKA	ISLANDA	SEAA	SWAMPA	WATRCRSA	PARKA	BUILTUPA	AIRFLDA	HARBORA	SOILA	VEGA
DAMC														
HYNODEC														
SPRINGP, SPRINGC														
RAPIDSC														
WELLP														
BUILDP														
CTOWERP														
EXTRACTP														
INDPRODP														
LANDMRKP														
PHYSP														
POWERP														
TOWERP														
BUILTUPP														
URBANP														
AIRFLDP														
AIRFLDC														
HELIP														
MISAEROP														
INTERCC														
LEVELCC														

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

Copyright © EuroGeographics

AREA POINT	COASTA	LAKERESA	LANDICEA	LANDMASKA	ISLANDA	SEAA	SWAMPA	WATRCRSA	PARKA	BUILTUPA	AIRFLDA	HARBORA	SOILA	VEGA
RAILRDC														
RESTC														
EXITC														

Line must not overlap with area[10]

AREA LINE	COASTA	LAKERESA	LANDICEA	LANDMASKA	ISLANDA	SEAA	SWAMPA	WATRCRSA	PARKA	BUILTUPA	AIRFLDA	HARBORA	SOILA	VEGA
RAPIDSL														
DAML														
COASTL														
SEASTRTL														
SHOREL														
AQUEDCTL														
WATRCRSL														
INDPRODL														
PHYSL														
POWERL														
FERRYL														
HARBORL														
RAILRDL														
ROADL														
RUNWAYL														

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

Copyright © EuroGeographics

Line must not overlap with line [11]

LINE LINE	RAPIDSL	AQUEDCTL	COASTL	SEASTRTL	SHOREL	DAML	WATRCRSL	INDPRODL	PHYSL	POWERL	FERRYL	HARBORL	RAILRDL	ROADL	RUNWAYL
RAPIDSL															
AQUEDCTL															
COASTL															
SEASTRTL															
SHOREL															
DAML															
WATRCRSL															
INDPRODL															
PHYSL															
POWERL															
FERRYL															
HARBORL															
RAILRDL															
ROADL															
RUNWAYL															

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

Copyright © EuroGeographics

Isolated point must not be covered by line[12]

LINE / POINT	RAPIDSL	AQUEDCTL	COASTL	SEASTRTL	SHOREL	DAML	WATRCRSL	INDPRODL	PHYSL	POWERL	FERRYL	HARBORL	RAILRDL	ROADL	RUNWAYL
SPRINGP															
WELLP															
BUILDP															
CTOWERP															
EXTRACTP															
INDPRODP															
LANDMRKP															
PHYSP															
POWERP															
TOWERP															
BUILTUPP															
URBANP															
AIRFLDP															
HARBORP															
HELIP															
MISAEROP															

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

Copyright © EuroGeographics

Point must not cover by point [13]

POINT / POINT	SPRINGP SPRINGC	HYNODEC	RAPIDSC	WELLP	BUILDP	CTOWERP	EXTRACTP	INDPRODP	LANDMRKP	PHYSP	POWERP	TOWERP	BUILTUPP	URBANP	AIRFLDP	AIRFLDC	HARBORP HABROC	HELIP	MISAEROP	INTERCC	LEVELC	RAILDC	RESTC	EXITC	FERRYC
SPRINGP, SPRINGC																									
HYNODEC																									
RAPIDSC																									
WELLP																									
BUILDP																									
CTOWERP																									
EXTRACTP																									
INDPRODP																									
LANDMRKP																									
PHYSP																									
POWERP																									
TOWERP																									
BUILTUPP																									
URBANP																									
AIRFLDP																									
AIRFLDC																									
HARBORP																									
HARBORC																									
HELIP																									

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

Copyright © EuroGeographics

POINT / POINT	SPRINGP SPRINGC	HYNODEC	RAPIDSC	WELLP	BUILDP	CTOWERP	EXTRACTP	INDPRODP	LANDMRKP	PHYSP	POWERP	TOWERP	BUILTUPP	URBANP	AIRFLDP	AIRFLDC	HARBORP HABROC	HELIP	MISAEROP	INTERCC	LEVELC	RAILDC	RESTC	EXITC	FERRYC
MISAEROP																									
INTERCC																									
LEVELCC																									
RAILRDC																									
RESTC																									
EXITC																									
FERRYC																									

Copyright © EuroGeographics

ANNEX E: Metadata files

Discovery metadata for ERM are provided in Excel and XML format. The metadata is INSPIRE compliant and also adheres to the ISO 19115/19139 profile.

Copyright © EuroGeographics

ANNEX F: Relate tables

EBM_NAM

Definition: Names related to administrative units via SHN codes.
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:

ICC	Two-character country code according to ISO 3166	*Data type:* *Domain:*	Character Actual value
SHN	*Unique identifier for all European administrative units*	*Data type:* *Domain:*	Character Actual value 14 characters
USE	*Administrative hierarchy level*	*Data type:* *Domain:* *1* *2* *3* *4* *5* *6*	Short integer Coded value *1st order (country level)* *2nd order* *3rd order* *4th order* *5th order* *6th order*
ISN	*Unique structure identifier for all European administrative hierarchical levels*	*Data type:* *Domain:*	Short integer Coded value
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:* *Domain:* <UNK> <N_A>	Character Actual value Unknown Not applicable
NAMA	*Geographical name of the administrative unit (NAMN) converted to ASCII characters without diacritical characters.*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
NLN	*ISO 639-2/B 3-Char Language Code of the geographical name (NAMN)*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable
SHNupper	*SHN code of the upper level unit which administers the administrative unit*	*Data type:* *Domain:* <N_A>	Character Actual value Not applicable

Copyright © EuroGeographics

ROA	*Identifier of the residence of authority*	*Data type:*	Character
		Domain:	Actual value
		<UNK>	Unknown
		<N_P>	Unpopulated
		<N_A>	Not applicable
PPL	*Population*	*Data type:*	Integer
		Domain:	Actual value
		-29999	Unknown
		-29997	Unpopulated
		-29998	Not applicable
ARA	*Area*	*Data type:*	Integer
		Measurement units:	0.01 km^2
		Domain:	Actual value
effectiveDate	*Official entry into force date of the administrative unit*	*Data type:*	Date
		Domain:	Actual value

Copyright © EuroGeographics

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:

ICC	Two-character country code according to ISO 3166	*Data type:* *Domain:*	Character Actual value
ISN	*Unique structure identifier for all European administrative hierarchical levels*	*Data type:* *Domain:*	Short Integer Coded value
USE	*Administrative hierarchy level*	*Data type:* *Domain:* *1* *2* *3* *4* *5* *6*	Short integer Coded value *1st order (country level)* *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:*	Character Actual value
DESA	*Designation of the national administrative hierarchy level (DESN) converted to ASCII characters without diacritical characters*	*Data type:* *Domain:*	Character Actual value
NLN	*ISO 639-2/B 3-char language code of the designations (DESN)*	*Data type:* *Domain:*	Character Actual value
SHNdigit	*Number of digits of the SHN code which are significant for the hierarchical level*	*Data type:* *Domain:*	Short Integer Actual value

Copyright © EuroGeographics

SYMBOL_RAT

Definition: This table stores the font type, the text style, and the font size related to the symbol number used to portray the text features for viewing or cartographic purpose

Table name: SYMBOL_RAT

Relationship SYMBOL_RAT table is related to the GNAMET feature class using the SID attribute as primary key item.

Portrayal Criteria: The SYMBOL_RAT table will be provided with a list of predefined symbol numbers (SID) with specific font, colour and text size, which must be used to portray the text features. Each SID attribute value of the GNAMET features must have a corresponding SID value stated in the SYMBOL_RAT table

Attributes:

SID	Symbol Identification	*Data type:*	Character
		Domain:	Coded value
FON	Type of Font	*Data type:*	Short Integer
		Domain:	Coded value
		1	Machine default
STY	Style of Text	*Data type:*	Character
		Domain:	Coded value
		1	Kern
		2	Proportional
		3	Constant
SIZE	Font Size in meters	*Data type:*	Character
		Domain:	Coded value
		350	4 points
		435	5 points
		522	6 points
		610	7 points
		700	8 points
		785	9 points
		870	10 points
		1045	12 points
		1220	14 points
		1400	16 points
COL	Colour of Text	*Data type:*	Character
		Domain:	Coded value
		1	Black
		4	Blue
		9	Red brown
		12	Magenta

Copyright © EuroGeographics

ERM_CHR

Definition: This table stores the ISO code of the character set that can be used to read properly geographical names without using the Unicode character set. For non-Latin languages the transliteration scheme is given.

Table name: ERM_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 Actual 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	Short Integer Coded value ISO 8859-1 ISO 8859-2 ISO 8859-3 ISO 8859-4 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)
TLS	*Transliteration Scheme*	*Data type:* *Domain:*	Character Actual value

Copyright © EuroGeographics

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
Country	*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

Copyright © EuroGeographics

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[14]	*Main Drain Class*	*Data type:*	Short Integer
		Domain:	Coded value
		5000	River with drainage basin GE 5000 km^2
		4000	River with drainage basin GE 4000 km^2 and LT 5000 km^2
		3000	River with drainage basin GE 3000 km^2 and LT 4000 km^2
		2000	River with drainage basin GE 2000 km^2 and LT 3000 km^2
		1000	River with drainage basin GE 1000 km^2 and LT 2000 km^2
		900	River with drainage basin GE 900 km^2 and LT 1000 km^2
		800	River with drainage basin GE 800 km^2 and LT 900 km^2
		700	River with drainage basin GE 700 km^2 and LT 800 km^2
		600	River with drainage basin GE 600 km^2 and LT 700 km^2
		500	River with drainage basin GE 500 km^2 and LT 600 km^2

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

Copyright © EuroGeographics

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[15]	*Water Body Size Code*	*Data type:*	Short Integer
		Domain:	Coded value
		1	Lakes/reservoirs with area GT 500km^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 1km^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

[15] 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 <

Copyright © EuroGeographics