

# Delivery guide for Environmental Noise Data:



## DF0: Definition of reporting structure

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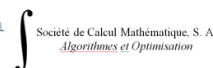


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# 1 OUTLINE OF THE DELIVERY

This reporting obligation consists on the definition of the reporting structure of each country to provide noise information per agglomerations, major roads, major railways and major airports following the END requirements. It is intended to use this dataflow as the general structure for the deliveries to be expected in order to compile all the information at EU level in a single database.

It is a completely voluntary dataflow, not detailed in the END and therefore, not subject to any delivery dates.

This delivery would consist on the following types of information:

- Tabular data consisting on:
  - o Excel worksheets providing the definition of the reporting structure, indicating the country code, the name and the unique code of the reporting entity, and some contact information related to the reporting entity.
- Spatial data consisting on:
  - o Country areas corresponding to the reporting entities (a reporting entity could be a whole country and also, regions of that country)  
(Details concerning the spatial information to be provided can be found in chapter 5 of the current Annex)
- Supplementary information (if needed), detailed in chapter 6 of this Annex.
- Metadata (how the data provided has been created and constraints of this data: a detailed list of information that should be provided is specified in chapter 7).

So, it is expected that each subfolder created to deliver data concerning this reporting obligation will contain the corresponding Excel file. How data should be delivered through Reportnet is explained in a separate chapter in the main document.

It is highly recommended that the data provided follow the templates that have been specially created for this purpose, with specific quality check rules designed for helping the country to report the data following the specifications and ensuring the data coherence and at the same time, to facilitate the manual quality check developed by several EU institutions.

The analysis of the quality of the data as well as of its completeness will be only done for the information requested as compulsory, which will be basis to evaluate the compliance of a specific country.

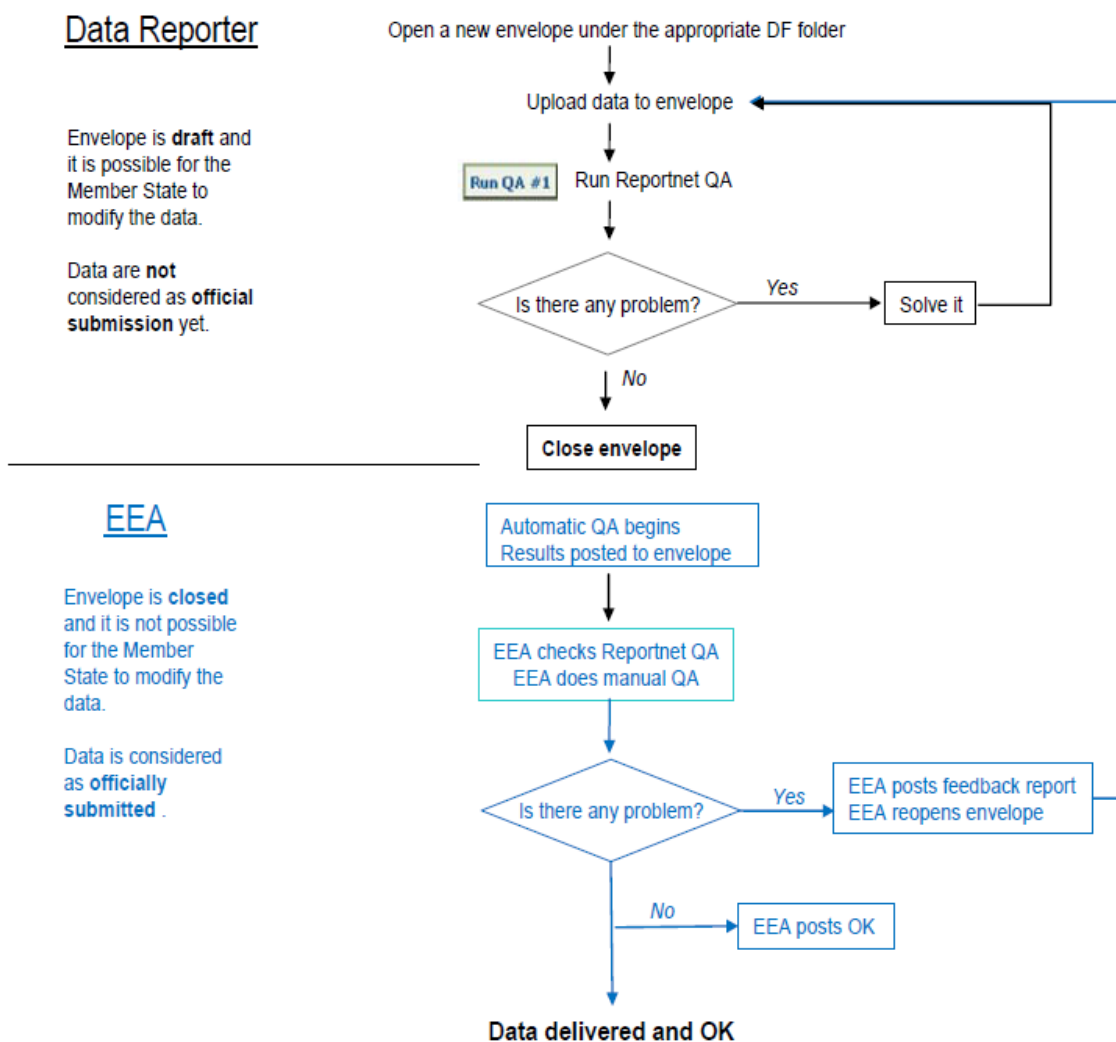
To be highlighted that unique codes are not compulsory but highly relevant in order to ensure traceability as well as the linkage between different dataflows or different types of information in the same dataflow. This is the reason why unique codes already stored from previous deliveries can be consulted in <http://rod.eionet.europa.eu/obligations/685> through the Reportnet platform.

## 2 DATA SUBMISSION PROCESS

The process to submit the requested information is very simple:

1. Download the template provided for tabular data
2. Fill in the template in your personal computer
3. Upload the filled in template into the Reportnet system
4. Run the quality check rules and correct the data if necessary (if this is the case, go back to step 2)
5. Download the template provided for spatial data
6. Upload the requested spatial data as separate files or in a ZIP file using the "Add zip file" button.
7. Complete the task (=equivalent to submit the information)

**Figure 1. Overview of the Reporting process**



The reporter would be able to find the instructions and the explanation of the detailed data to be delivered for each concept specified in the END in chapter 4 (concerning the statistical

information to be reported) and in chapter 5 (concerning the spatial information to be delivered).

Moreover, chapter 3 contains a check list of what needs to be done in order to fulfil the requests of the END for this specific deliverable, to ensure that the data provided is compliant with the minimum requirements specified in this Annex.

Chapter 6 deals with the supplementary information that can be provided, and chapter 7 details the content of the metadata files to be provided for each document delivered.

Finally, in chapter 8, details concerning the naming conventions for the files that should be uploaded in Reportnet are proposed and chapter 9 contain the general quality check process followed concerning this dataflow.

### 3 CHECK LIST FOR THE DATA REPORTERS

This section contains a list to be checked by the (experienced) noise information reporters through Reportnet, to be sure that the data reported accomplish the minimum requirements specified in this annex.

#### **Data preparation:**

- Have you downloaded the most recent template for DF0 from the Reportnet data dictionary (4 tables)? <http://dd.eionet.europa.eu/datasets/2920>
- All the cells are fulfilled and where no data should be provided (due to data not available of data not applicable), have they been fulfilled using the explanatory values "-1" and "-2"?
- Have you inserted your country data into the template (xls or xml)?
- Do you provide a metadata file / supplementary report and do they contain all necessary information (e.g. description of data actuality)?
- Does the supplementary report include a short summary in English?
- Do the shapefiles include a projection-file?
- Do the shapefiles fulfill the requirements (names and values of the attributes, etc.)?
- Have you completed all the metadata files for all the information you need to provide for this deliverable?

#### **File names:**

- Do the file names follow the naming convention proposed? And if the naming convention is not available, does the name indicate the content of the file?

#### **Uploading process:**

- Have you delivered the data through Reportnet? If this is the case, have you log in, created a new envelope, entered the envelope and activated the task?
- Have you uploaded the filled template with the corresponding metadata file, and the supplementary reports (in case it is needed)?
- Have you run the automatic QA for all the tables?
- If necessary (because the automatic QA is not passed successfully for all tables) have you corrected the data and uploaded the correct tables again?
- Have you checked that your data is delivered? Have you press the option "Complete task"?
- Have you logout from Reportnet?

## 4 STATISTICAL INFORMATION EXPECTED TO BE REPORTED

In order to harmonise the statistical information to be reported to the European Commission, an Excel Workbook has been designed containing 5 different worksheets, 4 of them expected to be fulfilled with information concerning the noise sources specified by the END, and the last worksheet is solely for internal use (for the conversion of the files to enable the automatic quality check of the data being reported).

The expected information to be reported is indicated in the first row of the four worksheets. Empty fields are not allowed in those worksheets; therefore, one of the following values should be provided in case there is no information available for a specific cell:

Field value	Meaning	Description
-1	Data not applicable	This may apply to the following cases: <ul style="list-style-type: none"><li>- Table / field not to be reported because no agglomeration, or no major roads, or no major railways or no major airports fall in the scope of the Directive (meeting the minimum threshold specified by END).</li><li>- For the agglomerations case if a specific noise source is not present.</li><li>- A field value does not exist (e.g. EURoadID)</li></ul>
-2	Data not available	This may apply to the following cases: <ul style="list-style-type: none"><li>- Data not mandatory for reporting</li><li>- Data not yet available (mandatory data)</li><li>- Data not available (mandatory data)</li></ul>

The "-2" value should not appear in the mandatory cells corresponding to the final data delivery (in case more than one delivery is done by one MS).

For consultation purposes, all the information expected to be provided in the template excel sheets is detailed in the following subsections (it is not the purpose to reproduce the format of all the spreadsheets, it is just a summary of the details of the data requested in each excel sheet,). This information can also be consulted in the following Reportnet page <http://dd.eionet.europa.eu/datasets/latest/NoiseDirectiveDF0>. Naming conventions to upload the requested files in the corresponding folder of Reportnet are detailed in chapter 8.1 of the current annex.

EC and EEA will decline responsibilities for not quality checking and therefore, not including into NOISE (Noise Observation and Information Service for Europe) those deliveries not following the specifications and guidelines provided in this annex.

The specifications detailed in this document will be adapted to the INSPIRE guidelines specifications as soon as they become available and official.

## 4.1 DATA TO BE REPORTED CORRESPONDING TO AGGLOMERATIONS > 100.000 INHABITANTS

Information should be provided in the spreadsheet named as DF0\_Aggl, which contain the following data requests:

Field Identifier	Field Name	Field Definition	Compulsory (c) / not compulsory (nc)	Methodology	Data type	Units
CountryCode	Country Code	Unique code used as an identifier for each country, as defined in the code list.	nc	ISO 3166-1 alpha-2 country code.	String	
FullNameReportingEntity	Full name of the Reporting Entity	The name, in full, of the organisation responsible for reporting the area defined in this geodataset (not an abbreviation or acronym).	nc		String	Minimum size: 1 Maximum size: 255
ReportingEntityUniqueCode	Reporting Entity Unique Code	A single character Unique code assigned by the Member State to each Reporting Entity.	nc	A single character Unique alpha ID from a to z assigned sequentially by the Member State.	String	Minimum size: 1 Maximum size: 1 Minimum value: a Maximum value: z
ContactName	Contact Name	The name of the person who will act as the primary point of contact within the nominated organisation.	nc		String	Minimum size: 1 Maximum size: 255
Address	Address	The postal address for the organisation, including building name or number where appropriate.	nc		String	Minimum size: 1 Maximum size: 255
Telephone	Telephone	Contact Telephone number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Fax	Fax	Contact Fax number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Email	E- mail	The electronic mail address of the responsible organisation or individual	nc		String	Minimum size: 1 Maximum size: 255



## 4.2 DATA TO BE REPORTED CORRESPONDING TO MAJOR ROADS WITH MORE THAN 3.000.000 VEHICLES / YEAR

Information should be provided in the spreadsheet named as DF0\_MRoad, which contain the following data requests:

Field Identifier	Field Name	Field Definition	Compulsory (c) / not compulsory (nc)	Methodology	Data type	Units
CountryCode	Country Code	Unique code used as an identifier for each country, as defined in the code list.	nc	ISO 3166-1 alpha-2 country code.	String	
FullNameReportingEntity	Full name of the Reporting Entity	The name, in full, of the organisation responsible for reporting the area defined in this geodataset (not an abbreviation or acronym).	nc		String	Minimum size: 1 Maximum size: 255
ReportingEntityUniqueCode	Reporting Entity Unique Code	A single character Unique code assigned by the Member State to each Reporting Entity.	nc	A single character Unique alpha ID from a to z assigned sequentially by the Member State.	String	Minimum size: 1 Maximum size: 1 Minimum value: a Maximum value: z
ContactName	Contact Name	The name of the person who will act as the primary point of contact within the nominated organisation.	nc		String	Minimum size: 1 Maximum size: 255
Address	Address	The postal address for the organisation, including building name or number where appropriate.	nc		String	Minimum size: 1 Maximum size: 255
Telephone	Telephone	Contact Telephone number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Fax	Fax	Contact Fax number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Email	E- mail	The electronic mail address of the responsible organisation or individual	nc		String	Minimum size: 1 Maximum size: 255

### 4.3 DATA TO BE REPORTED CORRESPONDING TO MAJOR RAILWAYS WITH MORE THAN 30.000 TRAIN PASSAGES / YEAR

Information should be provided in the spreadsheet named as DF0\_MRail, which contain the following data requests:

Field Identifier	Field Name	Field Definition	Compulsory (c) / not compulsory (nc)	Methodology	Data type	Units
CountryCode	Country Code	Unique code used as an identifier for each country, as defined in the code list.	nc	ISO 3166-1 alpha-2 country code.	String	
FullNameReportingEntity	Full name of the Reporting Entity	The name, in full, of the organisation responsible for reporting the area defined in this geodataset (not an abbreviation or acronym).	nc		String	Minimum size: 1 Maximum size: 255
ReportingEntityUniqueCode	Reporting Entity Unique Code	A single character Unique code assigned by the Member State to each Reporting Entity.	nc	A single character Unique alpha ID from a to z assigned sequentially by the Member State.	String	Minimum size: 1 Maximum size: 1 Minimum value: a Maximum value: z
ContactName	Contact Name	The name of the person who will act as the primary point of contact within the nominated organisation.	nc		String	Minimum size: 1 Maximum size: 255
Address	Address	The postal address for the organisation, including building name or number where appropriate.	nc		String	Minimum size: 1 Maximum size: 255
Telephone	Telephone	Contact Telephone number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Fax	Fax	Contact Fax number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Email	E- mail	The electronic mail address of the responsible organisation or individual	nc		String	Minimum size: 1 Maximum size: 255

#### 4.4 DATA TO BE REPORTED CORRESPONDING TO MAJOR AIRPORTS WITH MORE THAN 50.000 MOVEMENTS / YEAR

Information should be provided in the spreadsheet named as DF0\_MAir, which contain the following data requests:

Field Identifier	Field Name	Field Definition	Compulsory (c) / not compulsory (nc)	Methodology	Data type	Units
CountryCode	Country Code	Unique code used as an identifier for each country, as defined in the code list.	nc	ISO 3166-1 alpha-2 country code.	String	
FullNameReportingEntity	Full name of the Reporting Entity	The name, in full, of the organisation responsible for reporting the area defined in this geodataset (not an abbreviation or acronym).	nc		String	Minimum size: 1 Maximum size: 255
ReportingEntityUniqueCode	Reporting Entity Unique Code	A single character Unique code assigned by the Member State to each Reporting Entity.	nc	A single character Unique alpha ID from a to z assigned sequentially by the Member State.	String	Minimum size: 1 Maximum size: 1 Minimum value: a Maximum value: z
ContactName	Contact Name	The name of the person who will act as the primary point of contact within the nominated organisation.	nc		String	Minimum size: 1 Maximum size: 255
Address	Address	The postal address for the organisation, including building name or number where appropriate.	nc		String	Minimum size: 1 Maximum size: 255
Telephone	Telephone	Contact Telephone number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Fax	Fax	Contact Fax number, including International Calling Code.	nc	International telephone number starting with "+".	String	Minimum size: 1 Maximum size: 16
Email	E- mail	The electronic mail address of the responsible organisation or individual	nc		String	Minimum size: 1 Maximum size: 255

## 5 SPATIAL INFORMATION

Country areas corresponding to the reporting entities could be delivered in spatial format through polygons (a reporting entity could be a whole country and also, regions of that country).

This reporting obligation is completely voluntary; therefore, it is not specifically indicated in the END that should be provided through spatial files, although it is highly recommended by the EC and by the EEA; in order to facilitate the quality check of the data reported and the inclusion of the information into the European noise database.

In order to harmonise the spatial information to be reported to the European Commission, a template can be downloaded from Reportnet.

EC and EEA will decline responsibilities for not quality checking and therefore, not including into NOISE (Noise Observation and Information Service for Europe) those deliveries not following the specifications and guidelines provided in this annex.

### 5.1 REPORTING ENTITIES AREAS

If the information regarding the areas corresponding to the reporting entities is provided in spatial format, the basic demands to be fulfilled are the following ones:

- 1) Preferred GIS format: **SHAPEFILES**<sup>1</sup>
- 2) Expected entities that will represent the reporting areas: **POLYGONS**
- 3) Coordinate system and projection: **ETRS89 - LAEA52** (if another coordinate system is used, it should be specified in the metadata file in order to process the data provided).

Most maps in EEA reports are presented in this Coordinate Reference System (CRS):

Coordinate reference system	EPSG code	Name and definition	Types of coordinates	Datum
ETRS-LAEA	3035	Lambert Azimuthal Equal Area 5210 Latitude of origin: 52 N Longitude of origin (central meridian): 10 E	Map projection in meters	ETRS89

For the purpose of streamline the information of the used Coordinate Reference System (CRS) the EEA QC team recommends to state the EPSG-code instead of writing the full name and definition of the used CRS where it is possible. Lookup EPSG-codes: <http://www.epsg-registry.org/>.

- 4) Attribute table: in fact, all the information requested to fulfil DF0 requirements could be provided as the attribute table of the shapefiles corresponding to the reporting entities.

### 5.2 SPATIAL DATA EXPECTED TO BE RECEIVED

It is expected to be received, in total, 4 shapefiles (one per each noise source) containing the polygons of the reporting entities.

Naming conventions to upload those files in the corresponding folder of Reportnet are detailed in chapter 8.2 of the current annex.

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<sup>1</sup> Preferred format is shapefile because (1) major GIS software packages and all the open source desktop GIS support this format and (2) it can be considered an open format and a de facto standard.

What is referred to as a "shapefile" is actually a set of several files. Four individual files are mandatory to store the core data that comprises a shapefile ("

(These 4 shapefiles can also be delivered in a structured geodatabase, but this is up to each country and the contents should be clearly explained in the metadata file, in this case).

However, the attribute table of the different spatial files can be increased with the attributes requested for this dataflow as tabular information.

Possible attributes to be provided per all noise sources (in the case of agglomerations, major roads, major railways or major airports):

<b>Attribute name<sup>2</sup></b>
CountryCode
FullNameReportingEntity
ReportingEntityUniqueCode
ContactName
Address
Telephone
Fax
Email

Each of those shapefiles should be accompanied with the corresponding metadata. More information on metadata for spatial files is detailed in section 7.2.

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<sup>2</sup> Specifications for those attributes are the same than the ones provided for the tabular data to be reported.

## 6 SUPPLEMENTARY INFORMATION

You can provide any other types of information that you think are relevant for consultation purposes (letters, clarification documents, etc). This information will be solely stored, and will not be analysed, so be sure that all the relevant information is provided in the fulfilled templates, in the shapefiles or in the metadata sections accompanying all the files.

It is requested that a short text file (supplying it using any text file format (e.g. Microsoft WORD, .txt files, etc.), to be used as metadata of the supplementary information provided, would be stored in the same folder detailing, in English:

- The title of the supplementary information
- Language used in the report
- Short description of the information contained in this report (recommended length: from half a page to one page).

(The name of this file can follow the same specifications than the proposed in section 7.1).

# 7 METADATA

In order to be able to deal with the data provided, it is very important to provide some information about the data itself.

Therefore, several metadata files are asked to be provided accompanying the information reported. These files should be written down in English.

## 7.1 METADATA FOR THE TABULAR DATA TO COMPILE NOISE SOURCES

The metadata file should contain the following information:

- Title of the excel file that the metadata is referring to
- Reference year: in which year this information has been created and delivered / published
- Responsible organisation: Name of the organisation creating the data
- Contact person: Name of the contact person in the responsible organisation and contact details
- Census year when the population has been calculated
- Year when the traffic flow has been determined
- Constraints of the data being provided.

It is sufficient to supply the metadata files using any text file format (e.g. Microsoft WORD, .txt files, etc.) and they could follow the naming convention specified below:

[Name]\_metadata.[extension]

Where:

- [Name] is the name of the file the metadata is referring to.

## 7.2 METADATA FOR THE SHAPEFILES CONTAINING NOISE SOURCES LOCATION

Metadata information that should be associated to each shapefile containing location of noise sources:

- Name of data: title of the data
- Description of data: Which is the content of the data and purpose of its creation
- Coordinate reference system
- Source and methodology – including version of specification on which the compilation is based
- Reference year: in which year this information has been created and delivered / published
- Responsible organisation: Name of the organisation creating the data
- Contact person: Name of the contact person in the responsible organisation and contact details
- Ownership: to whom the data belongs
- Use rights: if the data can be distributed worldwide, restrictions, possibility to use depending on the purpose,...

The EEA has developed a metadata standard for geodata. The standard – termed the European Environment Agency Metadata Standard for Geographic Information (EEA-MSGI) – is a profile of

the ISO19115 standard for geographic metadata. EEA-MSGI is defined as a set of metadata for discovery and quick understanding of geographic data.<sup>3</sup>

EEA Metadata Editor (designed specifically for EEA-MSGI) has been developed using the ArcCatalog data explorer in the ArcGIS desktop v9.x software packages. The editor provides an easy way to edit and visualise metadata, but other software and programmes could be used in order to provide the metadata information.

EEA developed as well, a metadata information form in Microsoft – Word format; the latest version can be found at <http://www.eionet.europa.eu/gis>. In this case, the reporter needs to fill in the metadata form and validate the entries manually.

### **7.3 METADATA FOR THE SUPPLEMENTARY INFORMATION**

Detailed information provided in section 6.

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<sup>3</sup> More information can be found in the report EEA GIS guide, that can be found in the webpage:  
<http://www.eionet.europa.eu/gis/>



# 8 NAMING CONVENTIONS

## 8.1 TABULAR FILES NAME

The excel files to be uploaded in the corresponding folder in Reportnet should follow the naming convention proposed below:

[CountryCode]_[ReportingEntityUniqueCode]_DF0_ <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <math>\left. \begin{array}{l} \text{del} \\ \text{upd}(\text{date}) \end{array} \right\}</math> </div>
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Where:

- "del" refers to "deliverable" and corresponds to the first time that a country provide information for this dataflow;
- "upd" refers to "update" and corresponds to the updates of the information corresponding to the dataflow (solely applicable if a country change the reporting structure of the noise information);
- and (date) is the date when the update of information is done. Date format is month (two digits), followed by year (two digits).

Examples:

UK\_e\_DF0\_del.xls

UK\_e\_DF0\_upd0613.xls

## 8.2 SPATIAL FILES NAME

The spatial files (SHP)<sup>4</sup> to be uploaded in the corresponding folder in Reportnet should follow the naming convention proposed below:

- Agglomerations' case: [CountryCode]\_[ReportingEntityUniqueCode]\_Agg.[extension]

	SHAPEFILE	FILES
Example:	HU_a_Agg	HU_a_Agg.shp HU_a_Agg.dbf HU_a_Agg.prj HU_a_Agg.shx HU_a_Agg.shp.xml

- Major roads' case: [CountryCode]\_[ReportingEntityUniqueCode]\_Mroad.[extension]

	SHAPEFILE	FILES
Example:		

<sup>4</sup> Mandatory files :

- .shp — shape format; the feature geometry itself
- .shx — shape index format; a positional index of the feature geometry to allow seeking forwards and backwards quickly
- .dbf — attribute format; columnar attributes for each shape, in dBase IV format
- .prj — projection format; the coordinate system and projection information, a plain text file describing the projection using well-known text format.

Optional files :

- .shp.xml — geospatial metadata in XML format, such as ISO 19115 or other schemas

	HU_a_Mroad	HU_a_Mroad.shp HU_a_Mroad.dbf HU_a_Mroad.prj HU_a_Mroad.shx HU_a_Mroad.shp.xml
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- Major railways' case: [CountryCode]\_[ReportingEntityUniqueCode]\_Mrail.[extension]

	SHAPEFILE	FILES
Example:	HU_a_Mrail	HU_a_Mrail.shp HU_a_Mrail.dbf HU_a_Mrail.prj HU_a_Mrail.shx HU_a_Mrail.shp.xml

- Major airports' case: [CountryCode]\_[ReportingEntityUniqueCode]\_Mair.[extension]

	SHAPEFILE	FILES
Example:	HU_a_Mair	HU_a_Mair.shp HU_a_Mair.dbf HU_a_Mair.prj HU_a_Mair.shx HU_a_Mair.shp.xml

## 9 QUALITY CHECK PROCESS

The items checked in the data reported are the following ones:

- Items checked in the Reportnet's QA process:
  - data specifications – data types, to ensure that data is within the range defined in the guidelines documents,
  - all the mandatory elements have been reported,
  - code conventions
  - the existence of duplicates in unique codes fields.
- It is checked which mandatory elements has been filled in with "-2" value, to keep track of the information that still needs to be provided.
- Correspondence of unique codes between different dataflow and/or updates of the same dataflow.
- Correspondence of unique codes between tabular information and spatial information being reported.
- Reporting coverage, to be sure that the information has been provided for all the expected reporting units.
- Coordinate Reference System (CRS) is ETRS89 - LAEA52
- Coordinates of the spatial information are inside the European territory.
- Geometry of the data being provided, either points, lines or polygons, have an acceptable structure and topology (e.g. are polygons closed and lines forming networks linked properly to nodes?)
- Geometric accuracy, coordinate reference system and file format follow specifications.
- Metadata compliant with Inspire specifications (<http://inspire-geoportal.ec.europa.eu/>) has been provided, including aspects of accuracy, coordinate system, methodology and source.

More information concerning spatial information can be found in the EEA GIS guide in <http://www.eionet.europa.eu/gis/>.