

# Environmental Noise Directive Reporting guidelines

DF7\_10 Noise action plan: Quiet area



Version 2, March 2024

Authors:

Núria Blanes (UAB), Eulàlia Peris (EEA), Darja Lihteneger (EEA), Maria José Ramos (UAB), Miquel Sáinz de la Maza (UAB)



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## HISTORY OF CHANGES

<b>Version</b>	<b>List of changes</b>
December 2022	Issue first version
January 2024	Corrected errors in Reportnet 3: updated schema, updated code list NoiseSourceValue. Corrected GeoPackage template (field citationDate has data type Date). Updated guidelines: added section 3.3 Reportnet 3 dataset schema and data types (limitation on number of characters for field type Text and URL); updated section 4.3.1 with information on INSPIRE Good Practice for GePackage; updated code list NoiseSourceValue related to field protectionFrom; added section 7.5 (short information) and details in Annex 2 WorkflowLog table used as feedback from importing geospatial file; updated section 7.6 Validations.
March 2024	Technical acceptance is excluded in this reporting data flow. Added information on INSPIRE Good Practice on GeoPackage in section 1.3.

## Contents

Contents .....	3
Acknowledgements .....	5
Summary .....	6
1 Introduction .....	7
1.1 Purpose of this document.....	7
1.2 The legal basis .....	7
1.3 Alignment with the INSPIRE Directive .....	8
2 Understanding the new END data model.....	10
3 Understanding the basic principles of Reportnet 3 from a reporter point of view .....	11
3.1 Validation .....	13
3.2 Reportnet 3 dataset schema and data types .....	16
4 Key concepts in relation to <i>Noise action plan (DF7_10): Quiet area</i> .....	17
4.1 Reporting data schema structure for DF7_10: Quiet area .....	17
4.2 Identifiers .....	17
4.2.1 Thematic identifiers .....	17
4.2.2 Providing thematic identifiers in the END reported data .....	18
4.2.3 Re-using object identifiers defined in data flows DF1_5 and in other DF7_10 dataflows (agglomeration, major road, major railway, major airport) for data flow DF7_10: Quiet areas.....	18
4.2.4 INSPIRE identifiers.....	18
4.3 From conceptual data model (UML) to GeoPackage template .....	19
4.3.1 General recommendations for spatial datasets.....	19
4.3.2 From conceptual data model (UML) to templates in GeoPackage .....	19
5 Data schema: Quiet area (DF7_10).....	23
5.1 Description.....	23
5.2 Table QuietArea .....	23
5.2.1 Field id.....	24
5.2.2 Field quietAreald_identifier .....	25
5.2.3 Quiet area name .....	25
5.2.4 Field QuietAreaType.....	26
5.2.5 Field agglomerationIdIdentifier .....	26
5.2.6 Field protectionFrom .....	27
5.2.7 Field protectionFromOtherSource.....	27
5.2.8 Field protectionMeasure.....	28
5.2.9 Field actionPlanIdIdentifier .....	28
5.2.10 Spatial object identifier inspireId.....	28
5.2.11 Field specializedZoneType .....	30
5.2.12 Field geometry .....	31
5.2.13 Field sourceIdentifier .....	32
5.3 Table QuietAreaDocumentation.....	32
5.3.1 Field id.....	33
5.3.2 Field quietAreald_identifier .....	33
5.3.3 Field citationDate .....	33
5.3.4 Field citationLink .....	34
5.3.5 Field citationName .....	34

5.3.6	Field citationLevel .....	34
5.3.7	Field citationType.....	35
5.3.8	Field sourceIdentifier .....	35
5.4	Table QuietAreaVoidables .....	35
5.5	Table DatasetDefaultProperties.....	37
5.6	Table CodelistProperties.....	38
5.7	Tables supporting data harvesting through INSPIRE download services .....	39
5.8	GeoPackage format.....	39
5.8.1	Support to data transformation into GeoPackage.....	39
5.8.2	Use of GeoPackage file format in the Reportnet 3 .....	40
6	Data schema: Submission Declaration .....	40
6.1	Description.....	40
6.2	Table SubmissionDeclaration.....	40
6.2.1	Field processStatus .....	42
6.2.2	Field difference .....	42
6.2.3	Field reason.....	42
6.2.4	Field explanatoryFile .....	43
6.2.5	Field dateOfChange.....	43
7	Reporting process.....	44
7.1	Reporting data in Reportnet 3: overall workflow .....	44
7.2	User accounts and permissions .....	45
7.3	Importing data from a file.....	47
7.4	Importing data from a service .....	48
7.5	Feedback from importing a geospatial file .....	50
7.6	Validations .....	50
7.7	Official submission of the report .....	52
7.8	Resubmission .....	53
Annex 1.	Tables supporting data harvesting through INSPIRE download services.....	55
Table HarvestSource.....		55
Field serviceType.....		55
Field serviceURL.....		56
Field operation.....		56
Table WorkflowLog.....		56
Field logTime.....		56
Field logType .....		57
Field logMessage.....		57
Field harvestSource.....		57
Annex 2.	WorkflowLog table used as feedback from importing a geospatial file.....	58

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## Summary

The reporting guidelines are intended to support reporters that will be conducting the submission of data required under the Environmental Noise Directive. The document provides an overview to the data reporting and validation process in Reportnet 3. A key goal of this document is to ensure a common understanding among data providers working on the implementation of the Environmental Noise Directive. This document should further be of assistance to both thematic and IT experts.

# 1 Introduction

## 1.1 Purpose of this document

This document aims to provide detailed guidance on the practicalities and processes for reporting environmental noise data to Reportnet 3, the central hub from which all e-Reporting activities handled by the EEA with Eionet and other partners will be performed.

In this context, a user is assumed to be a representative of an EU Member State or other reporting country who is submitting relevant country-level noise data to Reportnet 3.

These reporting guidelines are intended to support reporting countries in providing high quality noise reports in an efficient manner following the new Implementing Decision on *Setting up a mandatory data repository and a mandatory digital information exchange mechanism according to Directive 2002/49/EC*.

Specifically, this document is focused on the reporting of DF7\_10 Noise action plan in relation to quiet areas:

- The legal basis of the END requirements addressed in the Implementing Decision on Setting up a mandatory data repository and a mandatory digital information exchange mechanism according to Directive 2002/49/EC
- The technical requirements for the data submission
- The structure of Reportnet 3 in relation to this dataflow
- The practicalities involved in reporting and submitting data using Reportnet 3.

These reporting guidelines are intended to be a stand-alone document that contains all necessary information for reporting. However, other documents and video recordings may offer additional detail on certain aspects and are available in the webpage : <https://www.eionet.europa.eu/reportnet/docs/noise>.

## 1.2 The legal basis

Reporting noise data under the Environmental Noise Directive (END) will occur in Reportnet 3 from 2022. The END reporting is defined in the Directive 2002/49/EC and the reporting requirements are further defined in the *Commission Implementing Decision (EU) 2021/1967 of 11 November 2021 on Setting up a mandatory data repository and a mandatory digital information exchange mechanism according to Directive 2002/49/EC*<sup>1</sup>. The current reporting obligations of the Environmental Noise Directive have been adapted to also fulfil the new INSPIRE Directive which is based on the harmonisation and sharing of spatial data and infrastructures based on the 2019 regulation<sup>2</sup> which amends different articles of the END. Firstly, the regulation obliges countries to produce *noise maps and action plans according to the Inspire Directive* and secondly, it obliges the EC and the EEA to develop a *mandatory digital information exchange mechanism* that countries have to use to report and share the data under the END directive. Therefore, the use of the Reportnet 3 platform and the

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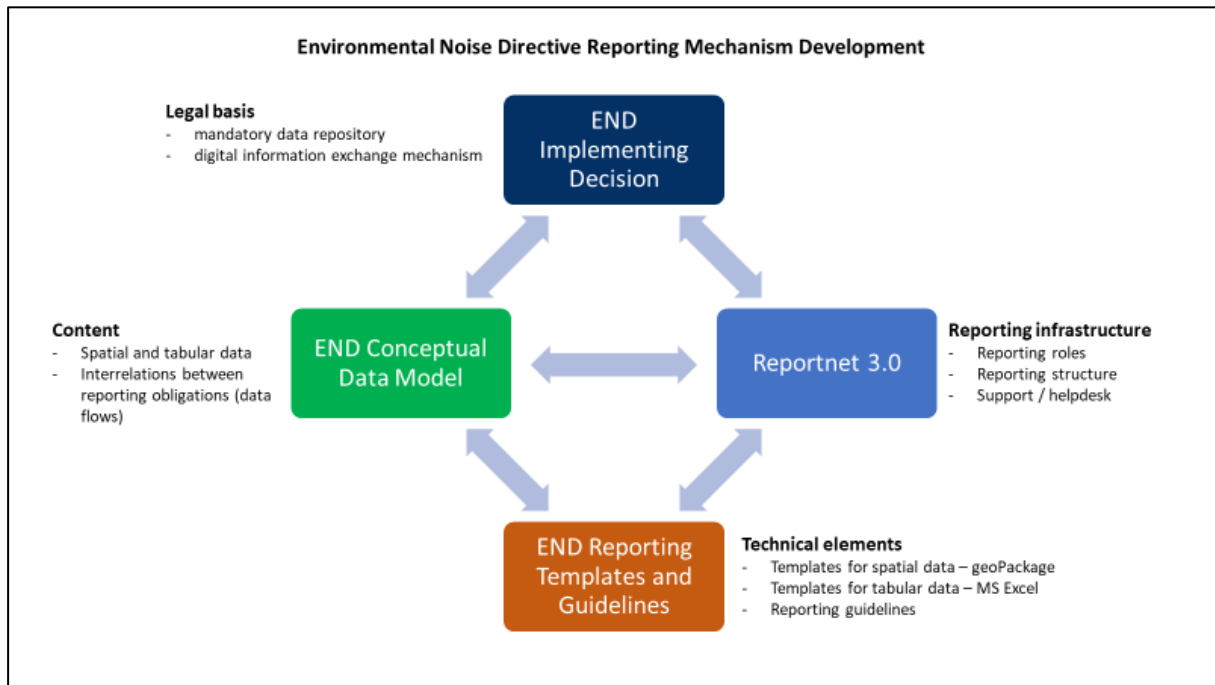
<sup>(1)</sup> Commission Implementing Decision (EU) 2021/1967 of 11 November 2021 setting up a mandatory data repository and a mandatory digital information exchange mechanism in accordance with Directive 2002/49/EC of the European Parliament and of the Council (Text with EEA relevance) C/2021/7948 ELI: [http://data.europa.eu/eli/dec\\_impl/2021/1967/oj](http://data.europa.eu/eli/dec_impl/2021/1967/oj)

<sup>(2)</sup> Regulation (EU) 2019/1010 of the European Parliament and of the Council of 5 June 2019 on the alignment of reporting obligations in the field of legislation related to the environment, and amending Regulations (EC) No 166/2006 and (EU) No 995/2010 of the European Parliament and of the Council, Directives 2002/49/EC, 2004/35/EC, 2007/2/EC, 2009/147/EC and 2010/63/EU of the European Parliament and of the Council, Council Regulations (EC) No 338/97 and (EC) No 2173/2005, and Council Directive 86/278/EEC (Text with EEA relevance). ELI: <http://data.europa.eu/eli/reg/2019/1010/oj>



use of data that is INSPIRE compliant will be mandatory for the reporting of data under the END. In order to support countries in their reporting obligations, we developed new templates and a new Reporting system that fulfils both the END and the INSPIRE requirements.

**Figure 1.1. Overview on new noise reporting mechanism**



### 1.3 Alignment with the INSPIRE Directive

The alignment between the Environmental Noise Directive and the INSPIRE Directive has been included throughout the development process of establishing the mandatory digital information exchange mechanism.

Based on the legal basis, explained in the section above (1.2), the END conceptual data model has been developed on the basis of the INSPIRE conceptual data models for spatial data themes by combining specific END reporting requirements and INSPIRE requirements.

Further on, the END conceptual data model has been used to develop the encoding guidelines for the END spatial data in the GeoPackage file format. The encoding guidelines are based on the INSPIRE work on simplification and alternative encodings following the OGC standard on GeoPackage<sup>3</sup>. Development of the INSPIRE Good Practice for GeoPackage is supported by the INSPIRE ad-hoc Working Group on GeoPackage<sup>4</sup> which joins interests of geospatial communities for GeoPackage implementation, and considers the END reported data in GeoPackage as one of the implementation examples.

The INSPIRE Maintenance and Implementation Expert Group (MIG) endorsed the INSPIRE Good Practice on GeoPackage in November 2022. Documentation is available in the INSPIRE Good Practice Library<sup>5</sup>.

Further on, the EEA developed a validation proof demonstrating compliance of END GeoPackage templates<sup>6</sup> and datasets provided in those templates with the INSPIRE requirements, validated with

<sup>(3)</sup> <https://www.geopackage.org/>

<sup>(4)</sup> <https://github.com/INSPIRE-MIF/gp-geopackage-encodings>

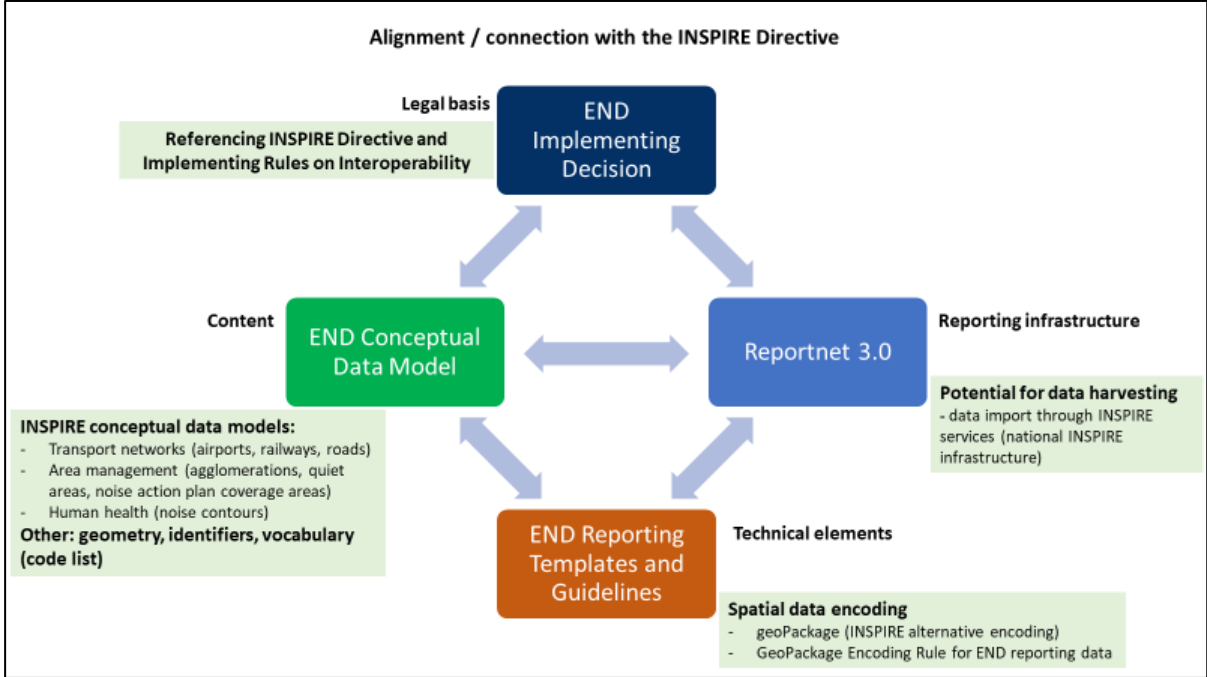
<sup>(5)</sup> [https://knowledge-base.inspire.ec.europa.eu/evolution/good-practice-library\\_en](https://knowledge-base.inspire.ec.europa.eu/evolution/good-practice-library_en)

<sup>(6)</sup> <https://www.eionet.europa.eu/reportnet/docs/noise/templates>

the INSPIRE Reference Validator<sup>7</sup>. The validation documentation is published on the Eionet Noise portal – INSPIRE Validation<sup>8</sup>.

The flexibility of the reporting infrastructure Reportnet 3 allows providing reported data into infrastructure in different ways, from importing files, programmatically by configuring the Reportnet 3 API, or in the future by harvesting INSPIRE services for spatial data.

**Figure 1.2. Overview on the integration of INSPIRE Directive into noise reporting obligations**



<sup>(7)</sup> <https://inspire.ec.europa.eu/validator/home/index.html>

<sup>(8)</sup> <https://www.eionet.europa.eu/reportnet/docs/noise/inspire-validation>

## 2 Understanding the new END data model

The structure and details of the data model are described in the *Data model documentation* and can be accessed at <https://www.eionet.europa.eu/reportnet/docs/noise/data-model-documentation>.

In order to develop the data model for Noise action plan (DF7\_10): Quiet area we considered the following:

the END requirements; and

the INSPIRE elements fit for use in the END reporting scope.

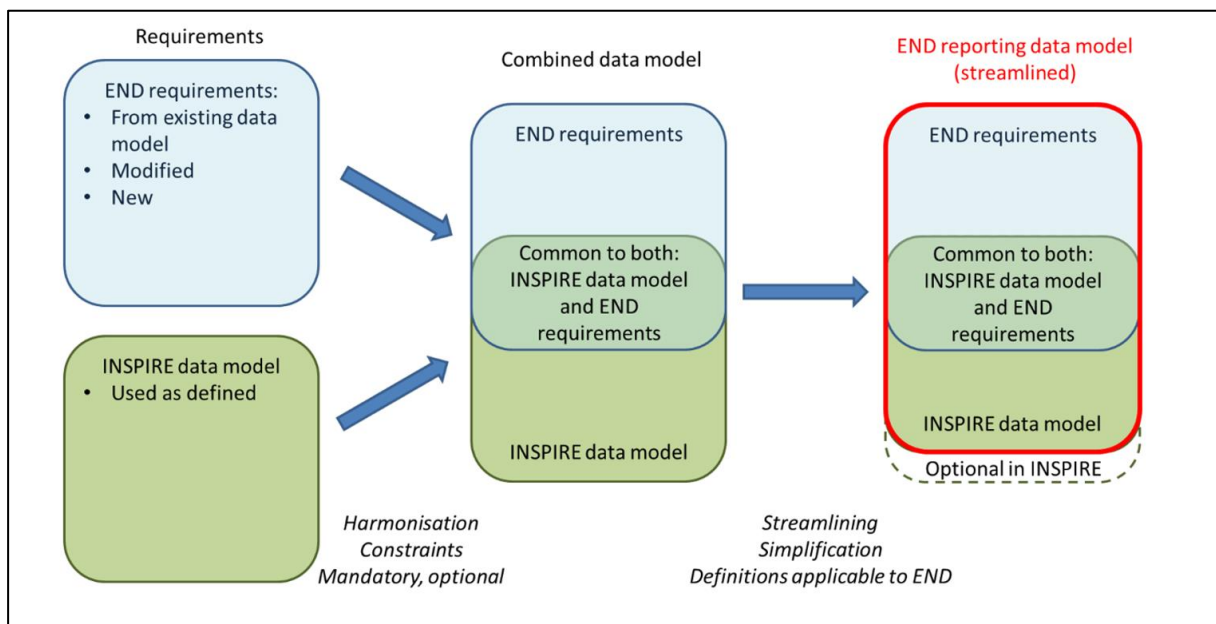
The streamlined data model combines and optimises all the input from the END and INSPIRE into one data model.

The data model described in the data model documentation is used for several interrelated purposes:

- It is used for presenting the content of the noise data that needs to be reported.
- It is used to develop the encoding templates in spatial file format GeoPackage
- It is used to design the schemas in Reportnet 3.0 that will be used for data reporting.

The relevant section of the document for the reporting of dataflow DF7\_10 for quiet areas is section 20.

**Figure 2.1. Streamlined data model of END and the INSPIRE requirements**



### 3 Understanding the basic principles of Reportnet 3 from a reporter point of view

The Regulation (EU) 2019/1010 on the alignment of reporting obligations in the field of legislation related to the environment and the implementing decision on setting up a mandatory data repository and a mandatory digital information exchange mechanism according to Directive 2002/49/EC, specifies that a digital information exchange mechanism should be used for reporting on all dimensions of the Environmental Noise Directive (END) by Member States.

A key element of the new reporting system, Reportnet 3 is being developed by the European Environment Agency. Reportnet 3 (<https://reportnet.europa.eu/>) is the next generation platform for reporting environmental data to the EEA and also hosts several reporting tasks for the European Commission. Reportnet 3 acts as a central hub for e-Reporting activities, aiming at simplifying and streamlining the data flow steps across all environmental domains. The system acts as a one-stop-shop for all involved stakeholders.

#### Important links

- Reportnet 3 reporters' manual : [https://www.eionet.europa.eu/reportnet/docs/prod/reporter\\_howto\\_reportnet3.0](https://www.eionet.europa.eu/reportnet/docs/prod/reporter_howto_reportnet3.0)
- Training videos: <https://www.eionet.europa.eu/reportnet/docs/noise/videos>

Once the reporter is successfully logged-in in Reportnet 3, the dataflows assigned to the reporter will show up as illustrated in Figure 3.1. In Reportnet 3, the reporter is able to see the list of dataflows along with information related to the role, the delivery date, the dataflow name, the dataflow description, the associated obligation and instrument, the status of the reporting obligation.

Figure 3.1. Dataflows overview: main page and list of dataflows assigned to the reporter

The screenshot displays the Reportnet 3 interface. At the top, there's a navigation bar with the European Union logo and the user's name 'Nuria Blanes'. Below this, the 'Dataflows' section is active, showing a list of dataflows categorized by type: Reporting dataflows (17), Business dataflows (0), Citizen science dataflows (0), and Reference dataflows (2). The main table lists dataflows with columns for Name, Description, Legal instrument, Obligation, and Obligation id. A detailed view of a dataflow is shown below the list, including the role (CUSTODIAN), name (Noise action plan (DF7\_10): Quiet area), description, legal instrument (Environmental noise directive), obligation (Action plan summaries (DF 7 and DF 10)), creation date (2022-12-15), delivery date (2024-01-18), and dataflow status (OPEN).

The Noise Directive reporting data flows will typically include several types of dataset schemas:

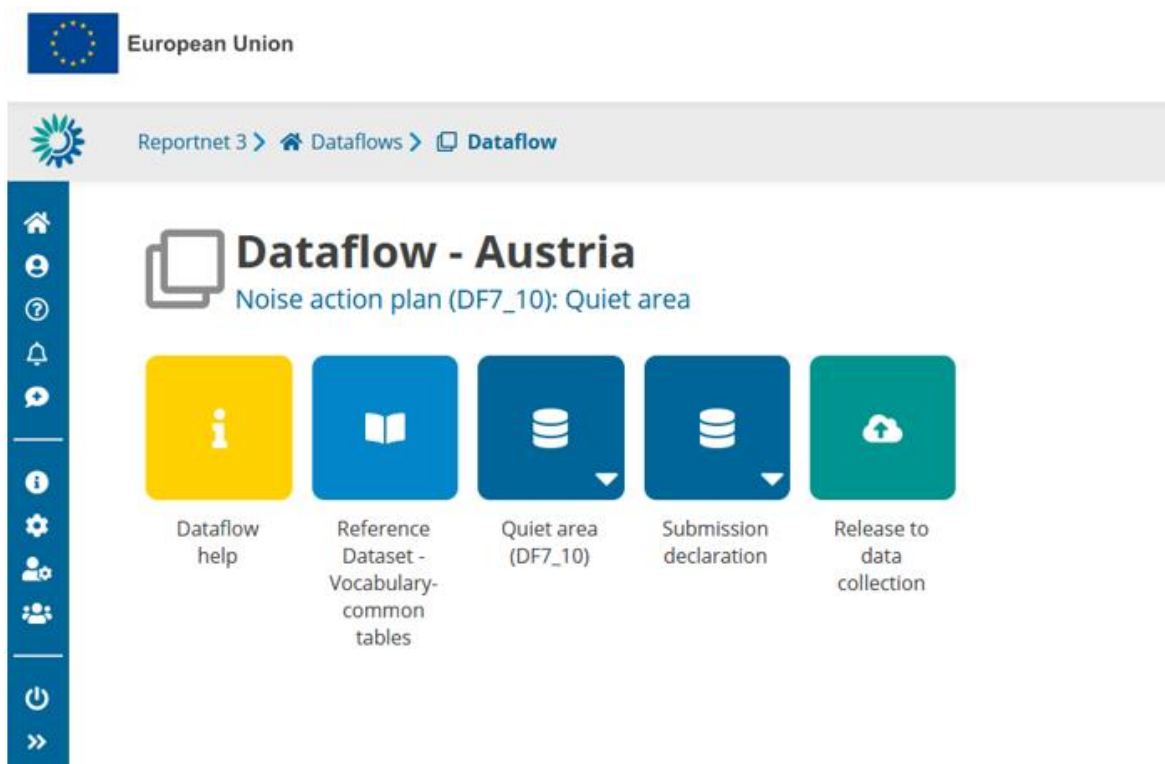
- Dataflow help includes additional support information, such as templates, UML diagrams, reporting guidelines and reporting videos, as well as the definition of the complete data schema, attributes and quality controls implemented in the dataflow.
- Reference Dataset Vocabulary – common tables include a set of applicable code lists used in the reporting data flow. The code lists can be seen in the Eionet Data Dictionary Vocabulary (<https://dd.eionet.europa.eu/vocabularies>) in the following folders: noise, inspire and common.
- A set of reporting dataset schemas.

More information will be encountered in Reportnet guidelines ([https://www.eionet.europa.eu/reportnet/docs/prod/reporter\\_howto\\_reportnet3](https://www.eionet.europa.eu/reportnet/docs/prod/reporter_howto_reportnet3)).

In order to exemplify how to submit data, Austria has been taken as an example throughout this reporting guidelines.

Figure 3.2 shows more specifically the reporting window of the dataflow *Noise action plan (DF7\_10): Quiet area*.

**Figure 3.2. Reportnet – Reporter view: general dataflow structure for the END Noise action plan (DF7\_10): Quiet area reporting**

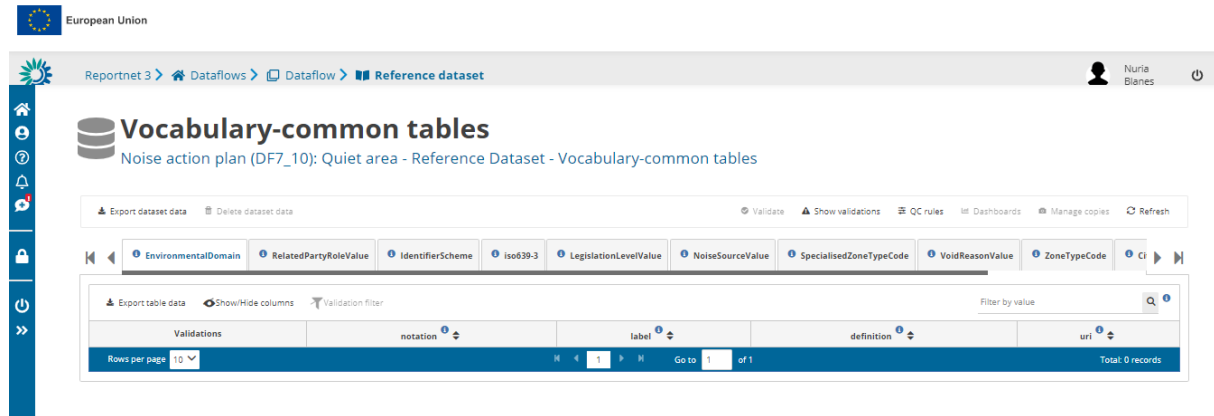


The dataflow is organised by dataset schemas. The reporting data flow *Noise action plan (DF7\_10): Quiet area* includes the following dataset schemas:

- The dataset schema “Quiet area (DF7\_10)”, used to provide information about designation and preservation of quiet areas in agglomerations and in the open country.
- The dataset schema “Submission declaration”, used to provide information on quiet areas submitted or information on the changes from previous submissions and the reasons for submitting updated data after the deadline; and

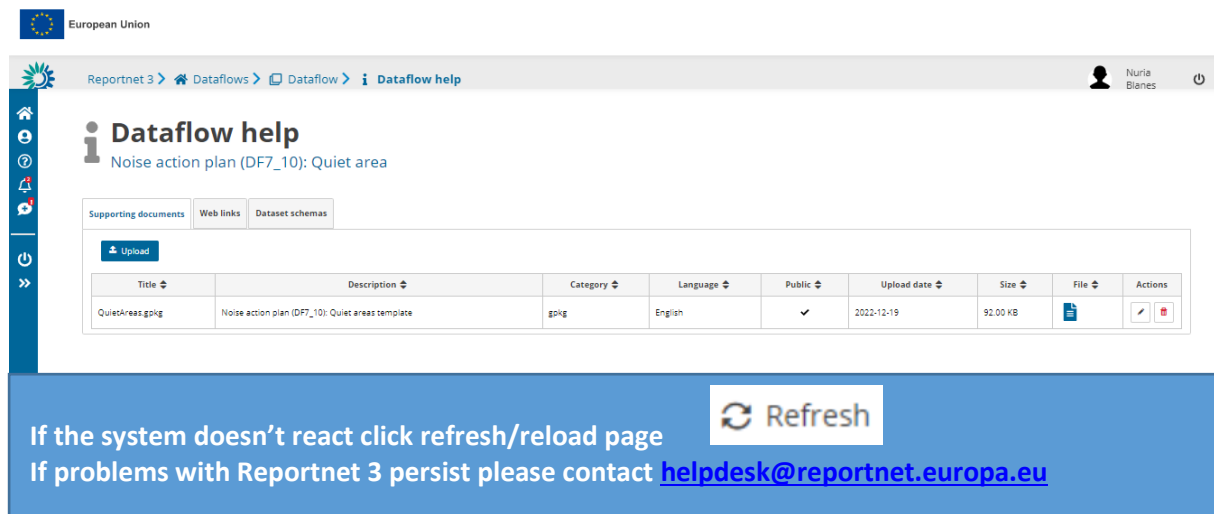
- There is another data schema “Reference dataset - Vocabulary – Common tables”. This is a read-only schema and contains the different code lists that are applicable to this dataflow as well as tables that are used for data validation (see Figure 3.3).

**Figure 3.3. Reference dataset - Vocabulary – Common tables for Noise action plan (DF7\_10): Quiet area**



Finally, the *Dataflow Help* contains relevant help documents, including the Geopackage template for preparation of reported data, the links to all supporting materials, all the information on quality controls and validation rules, as well as the description of the different tables and attributes applicable to this dataflow (see Figure 3.4).

**Figure 3.4. Dataflow help page: supporting documents tab, web links tab and dataset schemas tab**



### 3.1 Validation

The following level error types have been implemented in Reportnet 3:

- BLOCKER: Blocker messages indicate that the detected error will prevent data submission (data release is not possible).
- ERROR: Error messages indicate issues that clearly need corrective action by the data reporter.
- WARNING: Warning messages indicate issues that may be an error. Data reporters are expected to double-check relevant records.
- INFO: Informative message. Neutral or statistical feedback about the delivery, e.g. number of species reported.

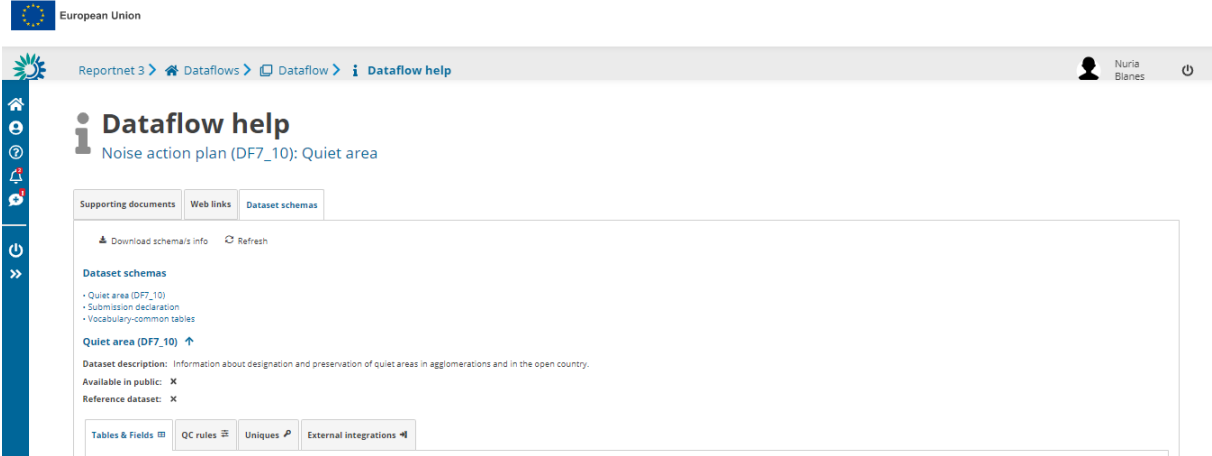
The applicable validations and error types into the dataset schema of *Noise action plan (DF7\_10): Quiet area* dataflow are outlined in Table 3.1.

**Table 3.1. Applicable validation levels in the schema of Noise action plan (DF7\_10): Quiet area dataflow**

Noise action plan (DF7_10): Quiet area	
<b>Applicable validation level</b>	Blocker Error Warning

The validations (quality control - QC) are documented in the Reportnet 3 Data Flow Help schema.

**Figure 3.5. Dataflow help – Details of the data schemas and applied validations**



Additionally, a copy of validations applicable to the *Noise action plan (DF7\_10): Quiet area* dataflow is published in the Noise Eionet Portal for public consideration. Please note that the original information is always in the Reportnet 3 platform.

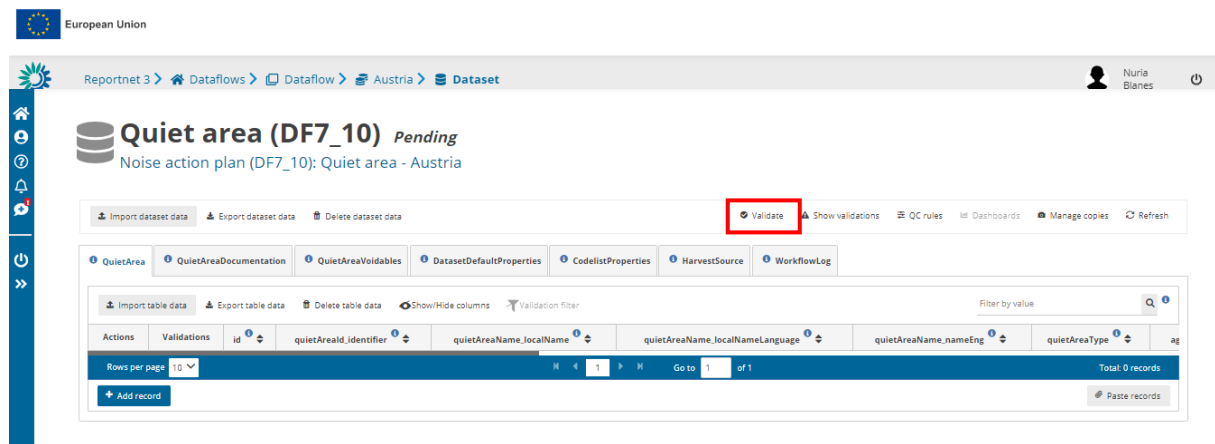
The detailed validations applicable to the *Noise action plan (DF7\_10): Quiet area* dataflow can be consulted in: <https://www.eionet.europa.eu/reportnet/docs/noise/validation-rules/>

They consist primarily in two different sets of validations: the first one relates solely to DF7\_10 data submitted and coherence with data being reported and the second set refers to the validation of entities reported against the noise sources (DF1\_5) and the competent authorities (DF2) being submitted, checking the following:

- Existence and coherence of the unique codes provided per agglomeration.
- Existence and coherence of the unique codes of quiet area re-used in DF2.
- Existence and coherence of the unique codes of action plans provided in the different dataflows corresponding to DF7\_10 deliveries: agglomerations, major roads, major railways and major airports.

Validations need to be run for each data schema. In each schema, data can be validated by clicking on “Validate” (Figure 3.6).

Figure 3.6. Validation of the data being loaded



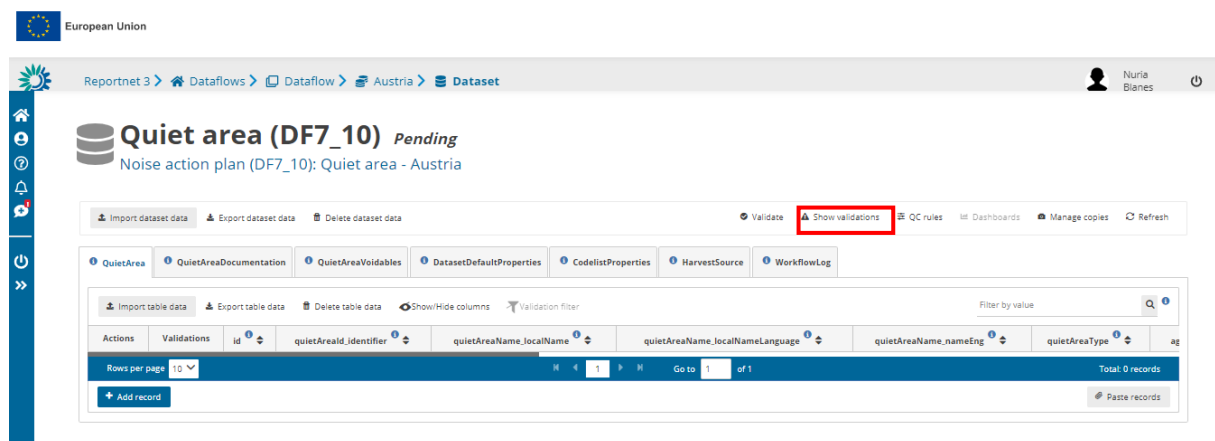
Once the validation has been performed, a notification will pop up on the top-right hand of the screen. After clicking “Refresh”, errors, if any, will be displayed at four types:

- Field error
- Record error
- Table error
- Dataset error

The column “Validations” shows for each record which level of errors at field and record level can be found.

Finally, the button “Show validations” in the dataset menu (Figure 3.7) shows the list of all errors in the dataset, displayed in a summary table grouped by a particular error type (more information can be found in [https://www.eionet.europa.eu/reportnet/docs/prod/reporter\\_howto\\_reportnet3.0](https://www.eionet.europa.eu/reportnet/docs/prod/reporter_howto_reportnet3.0)).

Figure 3.7. Show validations function in the dataset menu



A BLOCKER in the dataflow will prevent the reporter to officially submit any data in Reportnet 3.



### 3.2 Reportnet 3 dataset schema and data types





















The Reportnet 3 design of dataset schemas includes several Text data types, such as Text, Multiline text (allows paragraph and line feed characters) and URL (correct URL format is expected). The maximum number of characters is set to 10000 characters in the Reportnet 3 as a default value. However, the maximum number of characters is further on limited to ensure correct data transfer to other IT systems, as follows:

- 4000 characters for data types Text and Multiline text;
- 2100 characters for data type URL.

Text data types (Text, Multiline text) can have maximum of 4000 characters.

Data type URL can have maximum of 2100 characters.

**Figure 3.8. Reportnet 3 dataset schema – data types**

-  Number - Integer
-  Number - Decimal
-  Date
-  Datetime
-  Text
-  Multiline text
-  Email
-  URL
-  Phone
-  Point
-  Multiple points
-  Line
-  Multiple lines
-  Polygon
-  Multiple polygons
-  Single select
-  Multiple select
-  Link
-  External link
-  Attachment

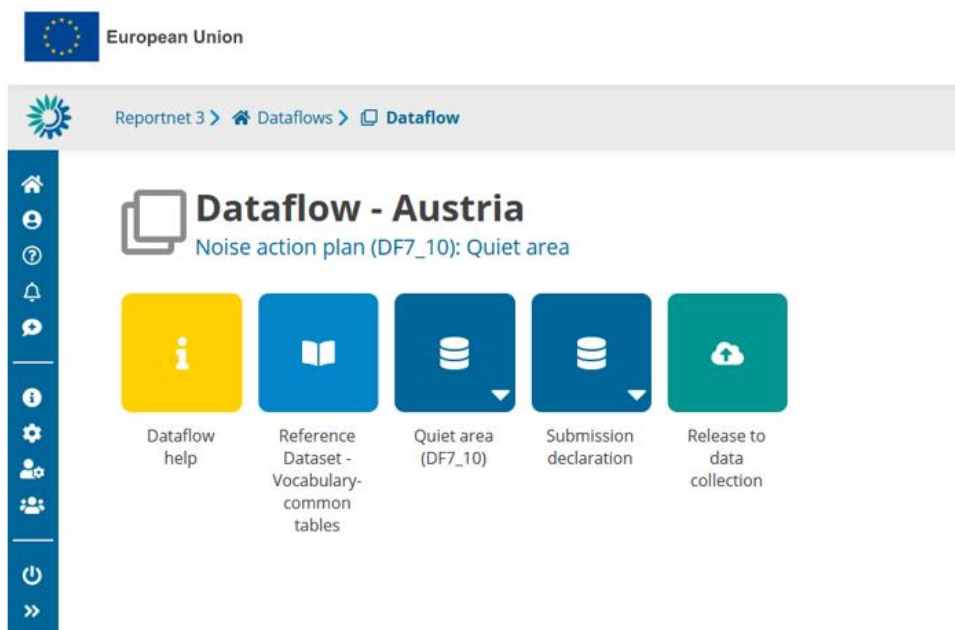
Note : Reportnet 3 data types are evolving with user and data requirements

## 4 Key concepts in relation to Noise action plan (DF7\_10): Quiet area

### 4.1 Reporting data schema structure for DF7\_10: Quiet area

The data schemas developed in Reportnet 3 are based on the specific UML diagrams illustrated in the *END Data model documentation* (<https://www.eionet.europa.eu/reportnet/docs/noise/data-model-documentation>). The GeoPackage template follow the same schemas and principles as the UML diagrams.

Figure 4.1. Dataset schemas for Noise action plan (DF7\_10): Quiet area delivery in Reportnet 3



### 4.2 Identifiers

#### 4.2.1 Thematic identifiers

The concept of thematic identifiers is re-used in the END reporting scope from the INSPIRE data specifications. Thematic identifiers may have been established to meet data exchange requirements within thematic domains, e.g. different reporting obligations at International, European or national levels, and/or internal data maintenance requirements. A property that is considered a thematic identifier will use data type **ThematicIdentifier** which is composed of two mandatory parts:

- **identifier**: Unique identifier used to identify the spatial object within the specified identification scheme;
- **identifierScheme**: Identifier defining the scheme used to assign the identifier.

This concept of thematic identifiers and data type **ThematicIdentifier** are re-used across the complete END data model to uniquely identify spatial objects and all other objects – entities, e.g.: major road segments, major railway segments, agglomerations, competent authorities, quiet areas, reports of limit values, noise control programmes and noise action plans. The internationally defined ICAO code for airports is also used as a thematic identifier.

The guidelines "Proposal on how to build the unique thematic identifiers for the new END data model" provides detailed information and coding system to create thematic identifiers. (See more information in: [https://www.eionet.europa.eu/reportnet/docs/noise/guidelines/codes\\_formation\\_doc.pdf/view](https://www.eionet.europa.eu/reportnet/docs/noise/guidelines/codes_formation_doc.pdf/view)).

#### 4.2.2 Providing thematic identifiers in the END reported data

##### Identifier scheme EUENDCode

The unique identifier scheme with the name **EUENDCode** is defined for the END reporting scope. It is published in the Eionet Data Dictionary as <http://dd.eionet.europa.eu/vocabulary/inspire/IdentifierScheme/EUENDCode>.

It is used across the END reporting data flows and reporting data as the default value and it is stored (pre-filled) in the table DatasetDefaultProperties. This table is included in the pre-defined data templates in GeoPackage (spatial data) and in the Reportnet 3 data schemas.

To make data preparation easier, the table DatasetDefaultProperties is pre-filled with all applicable default values in the reporting data flow, therefore it doesn't require any changes.

#### 4.2.3 Re-using object identifiers defined in data flows DF1\_5 and in other DF7\_10 dataflows (agglomeration, major road, major railway, major airport) for data flow DF7\_10: Quiet areas

Data flow DF7\_10 for quiet areas re-uses object identifiers of agglomerations that have been defined in the data flow DF1\_5, and identifiers of action plans that have been defined in the data flow DF7\_10: Agglomeration, DF7\_10: Major airport, DF7\_10: Major railway, DF7\_10: Major road.

The only value required to be provided for each object is "identifier".

Identifier will be provided in a specific field defined in each data flow and Reportnet 3 data schema. For example, in the END data flow DF7\_10 corresponding to quiet areas, the reporting of quiet area information will include object identifiers in the following way:

- The field `agglomerationIdentifier` in the data schema Quiet area (DF7\_10) will be used as identifier of an agglomeration (defined in DF1\_5);
- The field `actionPlanIdentifier` in the data schema Quiet area (DF7\_10) will be used as identifier of an action plan defined in DF7\_10: Agglomeration, DF7\_10: Major airport, DF7\_10: Major railway, DF7\_10: Major road respectively.

#### 4.2.4 INSPIRE identifiers

Spatial objects in the END reporting scope that are designed on the basis of the INSPIRE data specifications include the external unique object identifiers defined as the INSPIRE data type Identifier, which is composed of the three attributes:

- **localId**: A local identifier, assigned by the data provider, unique within the namespace;
- **namespace**: Namespace uniquely identifying the data source of the spatial object;
- **versionId**: The identifier of the particular version of the spatial object, voidable - optional.

For the END reporting scope, the INSPIRE identifiers are provided in the Reportnet 3 data schema and in the recommended data templates with three separate fields (attributes) corresponding to the type Identifier: `localId`, `namespace` and `versionId`.

Data providers who will prepare the END reporting geospatial data can apply own rules for creating external unique object identifiers according to the INSPIRE specifications. Additional information and

recommendations are provided in “Creating INSPIRE external unique object identifiers in the scope of the END reporting data”.

## 4.3 From conceptual data model (UML) to GeoPackage template

### 4.3.1 General recommendations for spatial datasets

For the END reporting scope, the following recommendations are provided for spatial data sets of noise action plan (DF7\_10): quiet area:

- Use of coordinate reference system ETRS89-extended / Lambert azimuthal equal-area LAEA (EPSG:3035) (one of the coordinate reference systems defined in the INSPIRE specifications that facilitates creation of the pan-European spatial data sets);

Use of coordinate reference system World Geodetic System 1984 (EPSG: 4326) for territories outside of the continental Europe geographical scope. The WGS84 is linked to the ITRS that is in line with the INSPIRE specifications on the datum of the International Terrestrial Reference System (ITRS) or other geodetic coordinate reference systems compliant with ITRS in areas that are outside the geographical scope of ETRS89;

Spatial data sets should be provided accordingly to the pre-defined templates in the file format GeoPackage. INSPIRE Good Practice for GeoPackage was endorsed by the INSPIRE MIG and MIG-T expert groups in November 2022, <https://github.com/INSPIRE-MIF/gp-geopackage-encodings>, accepting GeoPackage as INSPIRE alternative encoding to GML;

The predefined templates in GeoPackage include geometry (i.e. (multi)polygon) and coordinate reference system information;

The predefined templates in GeoPackage ensure the highest compatibility with the Reportnet 3 data schemas, therefore those templates shall not be modified.

### 4.3.2 From conceptual data model (UML) to templates in GeoPackage

The templates for spatial data in file format GeoPackage have been developed from the conceptual data models in UML ([from UML streamlined view](#)) by using a set of model transformation rules created for the END reporting scope on the basis of outcomes of the development of INSPIRE alternative encodings. More information is available in the document “[GeoPackage Encoding Rule for Environmental Noise Directive Reporting Data](#)”.

The GeoPackage templates are aligned with the Reportnet 3 data schemas (names, types, cardinality, use of code lists) to facilitate reporting in the Reportnet 3 infrastructure. This section provides generic information of the GeoPackage template structure and the next chapters provide details of the Reportnet 3 data schemas.

The GeoPackage templates contain the information about designation and preservation of quiet areas in agglomerations and in the open country.

The conceptual data models (presented in the UML diagrams) for dataflow DF7\_10 are transformed into the following typical tables in the GeoPackage templates:

- Primary (or core) tables
- Voidables
- DatasetDefaultProperties
- CodelistProperties

- **QuietAreaDocumentation**: a specific table for information about documentation describing quiet areas.

The **Primary (or core) tables containing spatial data** includes the essential properties of spatial data (slim primary table).

The table **Voidables** is a companion table to the primary tables in relation to spatial data of quiet areas. It includes voidable properties which values can be assigned for individual spatial objects instead of default values. The values in the Voidables table prevail over the pre-defined default values. If default values are applicable to all spatial objects in the data set, the Voidables table can remain empty.

Properties that can have default values – same values in the complete data set are provided in the table **DatasetDefaultProperties**. This table can include a default void reason or another default value for voidable properties, or other properties with default values. The origin of voidable properties is the underlying INSPIRE conceptual data models for spatial data. All expected properties and default values are already pre-defined and pre-filled in each GeoPackage template.

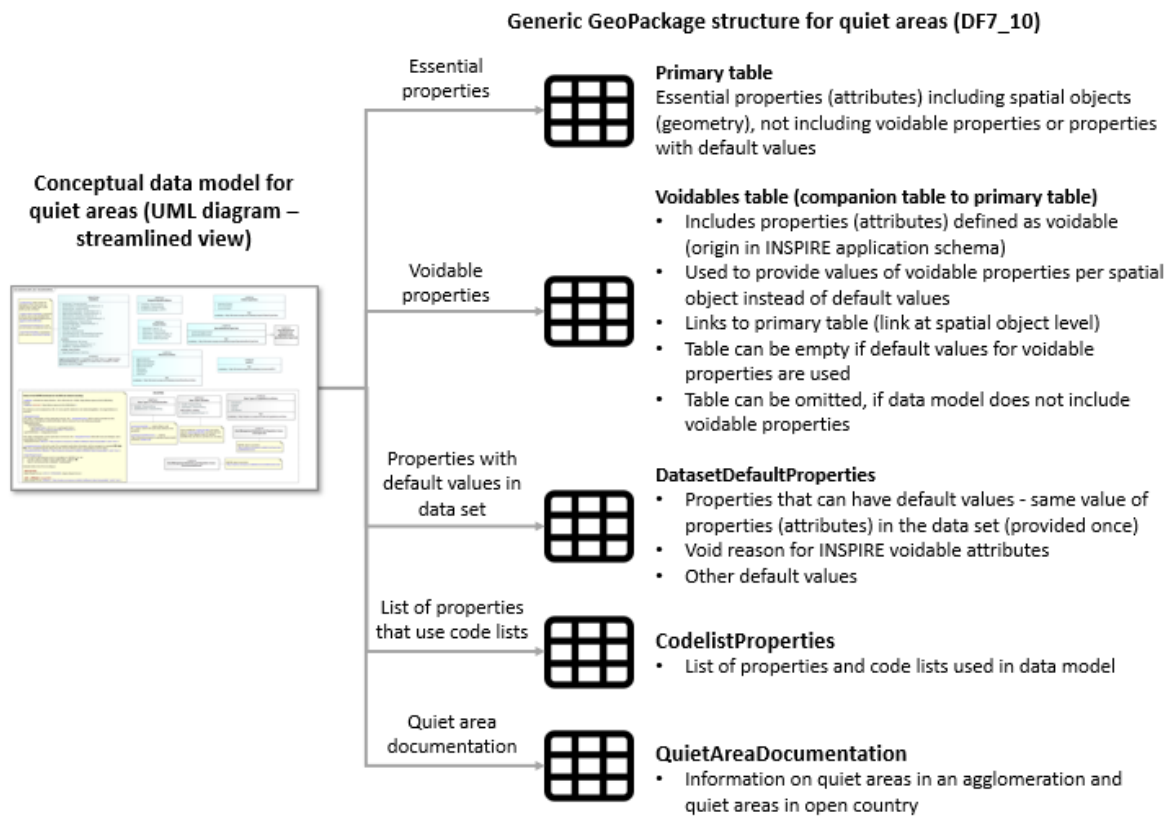
**CodelistProperties** table includes the list of properties that use values from agreed vocabularies – code lists. This table is already pre-filled in each GeoPackage template and helps finding the correct values for the properties from the related code lists. The code lists defined for the END reporting scope are published in two registers:

- [INSPIRE code list registry](#) for INSPIRE code lists (re-using INSPIRE code lists), and
- [Eionet Data Dictionary – Vocabularies](#) for other code lists used in the END reporting scope.

The **QuietAreaDocumentation** is a specific table for information about documentation describing quiet areas.

The following diagram in Figure 4.2 summarizes the GeoPackage template structure.

Figure 4.2. Transformation from conceptual data model (UML) to GeoPackage structure

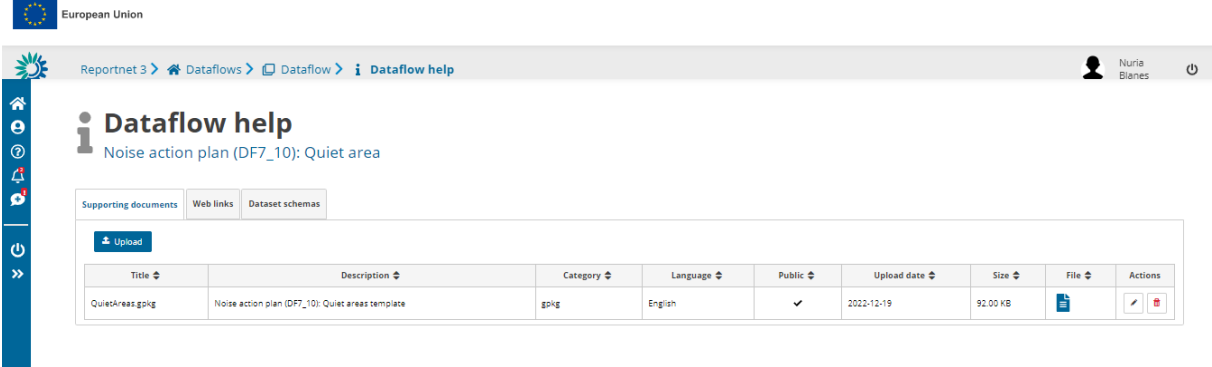


The GeoPackage templates have been already designed to facilitate data preparation in the following way:

- The pre-filled tables DatasetDefaultProperties and CodelistProperties don't need modifications;
- For quiet areas:
  - If the recommended and pre-filled void reasons or other values for voidable properties are applicable, the voidable properties in the QuietAreaVoidables table can remain empty;
  - The main table for reporting data is therefore the primary table QuietArea, and the specific table QuietAreaDocumentation.

The GeoPackage templates that have been created to support data reporting can be found in the Dataflow Help page in Reportnet 3.

**Figure 4.3. Screenshot of the Dataflow help page where the GeoPackage template is available for download**



Geopackage templates can be downloaded from: <https://www.eionet.europa.eu/reportnet/docs/noise>

## 5 Data schema: Quiet area (DF7\_10)

### 5.1 Description

Information about designation and preservation of quiet areas in agglomerations and in the open country.

The Quiet area (DF7\_10) data schema includes five thematic tables and two additional tables supporting the alternative data harvesting process :

- QuietArea: primary content including spatial data
- QuietAreaDocumentation: table that contain information on quiet areas in agglomeration and quiet areas in open country.
- QuietAreaVoidables: table includes attributes defined as « voidable in the INSPIRE context »
- DatasetDefaultProperties: Information about the default values of objects in a data set or a table (read only schema, and already filled in in Reportnet 3)
- CodelistProperties: list of applicable code lists in that data schema (read only schema, and already filled in in Reportnet 3).
- HarvestSource: URLs from which to harvest the geospatial features needed for the reporting.
- WorkflowLog: log messages from the harvesting process (i.e. harvested resources, errors occurring during harvesting).

### 5.2 Table QuietArea

The table *QuietArea* provides information on quiet areas in an agglomeration and quiet areas in open country as defined by the END.

**Table 5.1. QuietArea table overview**

Mandatory /optional/ conditional	Name	Reportnet 3 Type	Code list
M	id	Number - Integer	
M	quietAreald_identifier	Text	
O	quietAreaName_localName	Text	
O	quietAreaName_localNameLanguage	Link	<a href="https://dd.eionet.europa.eu/vocabulary/noise/iso639-3/">https://dd.eionet.europa.eu/vocabulary/noise/iso639-3/</a>
O	quietAreaName_nameEng	Text	
M	quietAreaType	Text	
C	agglomerationIdIdentifier	Text	
O	protectionFrom	Link	<a href="http://dd.eionet.europa.eu/vocabulary/noise/NoiseSourceValue">http://dd.eionet.europa.eu/vocabulary/noise/NoiseSourceValue</a>



Mandatory /optional/ conditional	Name	Reportnet 3 Type	Code list
O	protectionFromOtherSource	Text	
M	protectionMeasure	Multiline text	
C	actionPlanIdIdentifier	Text	
M	inspireId_localId	Text	
M	inspireId_namespace	Text	
O	inspireId_versionId	Text	
M	specialisedZoneType	Link	<a href="http://dd.eionet.europa.eu/vocabulary/inspire/SpecialisedZoneTypeCode">http://dd.eionet.europa.eu/vocabulary/inspire/SpecialisedZoneTypeCode</a>
M	geometry	Multipolygon	
M	sourceIdentifier	Text	

The following section includes detailed information of each field, i.e. description, type, format, use of code lists (where applicable), additional information of expected data or guidelines to prepare data, and data samples.

### 5.2.1 Field id

Requirement	Mandatory
Description	Unique identifier automatically created in GeoPackage file (primary key in the SQLite database). It is mandatory.
Reportnet 3 type	Number - Integer
Format	Maximum of 20 characters
Information	This attribute is primarily required by the OGC GeoPackage standard. It must be unique within a GeoPackage file.
Example	1

### 5.2.2 Field *quietAreald\_identifier*

Requirement	Mandatory
Description	Unique identifier assigned to each quiet area.
Reportnet 3 type	Link
Format	Only one value is allowed
Information	The value of this field follows the coding system to create thematic identifiers provided in the guidelines “Proposal on how to build the unique thematic identifiers for the new END data model”. It belongs to the common END identifier scheme named EUENDCode. The identifier scheme is provided as default value in the table DatasetDefaultProperties. It is expected to be reused in dataflow Competent authority (DF2), when submitting information about competent authorities responsible for quiet areas.
Example	QA_AT_00_1

### 5.2.3 Quiet area name

quietAreaName name is based on the complex data type (SimpleGeographicalName) which is represented in the table by three interrelated fields: QuietAreaName\_localName, QuietAreaName\_localNameLanguage and QuietAreaName\_nameEng.

If the name of the quiet area is available, the information should be provided in all three fields as quiet area name. If the name of the quiet area is not available, these three fields can remain empty.

#### Field *agglomerationName\_localName*

Requirement	Optional
Description	Name of the quiet area in the national or local language
Reportnet 3 type	Text
Format	Maximum of 10000 characters.
Example	Türkenschanzpark
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

#### Field *agglomerationName\_localNameLanguage*

Requirement	Optional
Description	Specification about the national or local language by providing a three-letter language code from ISO 639-3.
Reportnet 3 type	Link
Code list	Code list URL: <a href="https://dd.eionet.europa.eu/vocabulary/noise/iso639-3/">https://dd.eionet.europa.eu/vocabulary/noise/iso639-3/</a> Applicable code list values: bul, ces, dan, deu, ell, eng, est, fin, fra, gle, hrv, hun, ita, lav, lit, mlt, nld, nor, pol, por, ron, slk, slv, spa, swe
Example	deu

### **Field *agglomerationName\_nameEng***

Requirement	Optional
Description	Name of the quiet area in English language.
Reportnet 3 type	Text
Format	Maximum of 10000 characters.
Information	An established name of the quiet area in English language can be used, or a simple transliteration of name into English / Latin alphabet (without specific language characters).
Example	Turkenschanzpark
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### **5.2.4 Field *QuietAreaType***

Requirement	Mandatory
Description	Characteristics of the quiet area.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	A quiet area type could be a natural reserve, green space, quiet built-up area, cemetery, etc.
Example	Green space
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### **5.2.5 Field *agglomerationIdIdentifier***

Requirement	Conditional
Description	Unique agglomeration identifier where the quiet area described is designated.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	It is expected to be the same as the identifier from the feature type AgglomerationSource ( <i>agglomerationId_identifier</i> ). This attribute is conditional, and should be provided if the quiet area is in agglomeration.
Example	AG_AT_00_1
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 5.2.6 Field protectionFrom

Requirement	Optional
Description	Defines the type of noise source from which the quiet area is protected. This attribute uses a value from the code list NoiseSourceValue. It is optional.
Reportnet 3 type	Link
Format	Multiple values are allowed Value separated list with the separation character “;” (semicolon)
Code list	Code list URL: <a href="http://dd.eionet.europa.eu/vocabulary/noise/NoiseSourceValue">http://dd.eionet.europa.eu/vocabulary/noise/NoiseSourceValue</a> Applicable code list values: <ul style="list-style-type: none"> <li>- agglomerationAir</li> <li>- agglomerationMajorAirport</li> <li>- agglomerationIndustry</li> <li>- agglomerationRoad</li> <li>- agglomerationMajorRoad</li> <li>- agglomerationRailway</li> <li>- agglomerationMajorRailway</li> <li>- agglomerationAllSources</li> <li>- majorAirport</li> <li>- majorRoad</li> <li>- majorRailway</li> <li>- majorAllSources</li> </ul>
Example	agglomerationRoad; agglomerationRailway

### 5.2.7 Field protectionFromOtherSource

Requirement	Optional
Description	Additional type of noise sources from which the quiet area is protected.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	This attribute describes potential other types of noise sources, e.g. wind turbines, recreational noise, a quiet area is protected from.
Example	Wind turbines
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 5.2.8 Field protectionMeasure

Requirement	Mandatory
Description	Measures for protecting the designated quiet area from noise.
Reportnet 3 type	Multiline text
Format	Maximum of 10000 characters
Information	This attribute describes measures for protecting a quiet area from noise sources and exposure.
Example	A buffer zone with no traffic from road of 100 meters will be established around the quiet area. An awareness campaign for the citizens and users of the quiet area will be implemented.
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 5.2.9 Field actionPlanIdIdentifier

Requirement	Conditional
Description	Unique identifier of noise action plan that includes protection or preservation of a quiet area.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	It is expected to be the same as the identifier from the data types NoiseActionPlanAgglomeration, NoiseActionPlanMajorAirport, NoiseActionPlanMajorRailway, NoiseActionPlanMajorRoad (actionPlanId_identifier). This attribute is conditional, and should be provided if a quiet area is addressed by the noise action plan.
Example	AP_AG_AT_00_1
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 5.2.10 Spatial object identifier inspireId

Following the underlying INSPIRE conceptual data model, each quiet area includes also the external unique object identifier published by the responsible body. The field inspireId is based on the complex data type (Identifier) which is represented in the table by three interrelated fields: inspireId\_localId, inspireId\_namespace and inspireId\_versionId. The external unique object identifier is provided by the mandatory values in the fields inspireId\_localId and inspireId\_namespace. The field inspireId\_versionId is optionally used when different versions of the same spatial object are provided in the data set.

Additional information and recommendations on creating INSPIRE external unique object identifiers are provided in “Creating INSPIRE external unique object identifiers in the scope of the END reporting data”.

### ***Field inspireId\_localId***

Requirement	Mandatory
Description	Part of inspireId - external object identifier of the spatial object, defined in the INSPIRE Implementing Rules on Interoperability. The inspireId_localId can be the same as quietAreaId_identifier. If a Member State has already in place different rules for INSPIRE identifiers, these rules could be used.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	See more information in “Creating INSPIRE external unique object identifiers in the scope of the END reporting data”
Example	QA_AT_00_1
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### ***Field inspireId\_namespace***

Requirement	Mandatory
Description	Part of inspireId - external object identifier of the spatial object, defined in the INSPIRE Implementing Rules on Interoperability. The attribute namespace uniquely identifies the data source or data set of the spatial object.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	See more information in “Creating INSPIRE external unique object identifiers in the scope of the END reporting data”
Example	end_quietarea
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

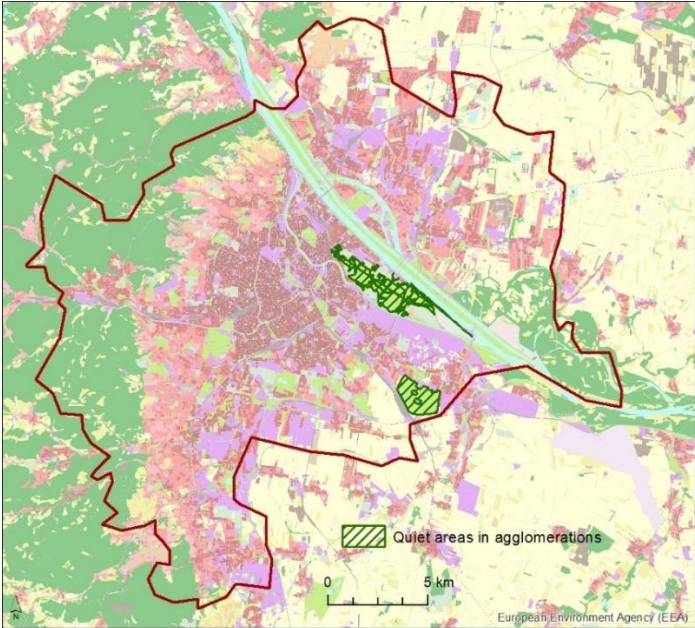
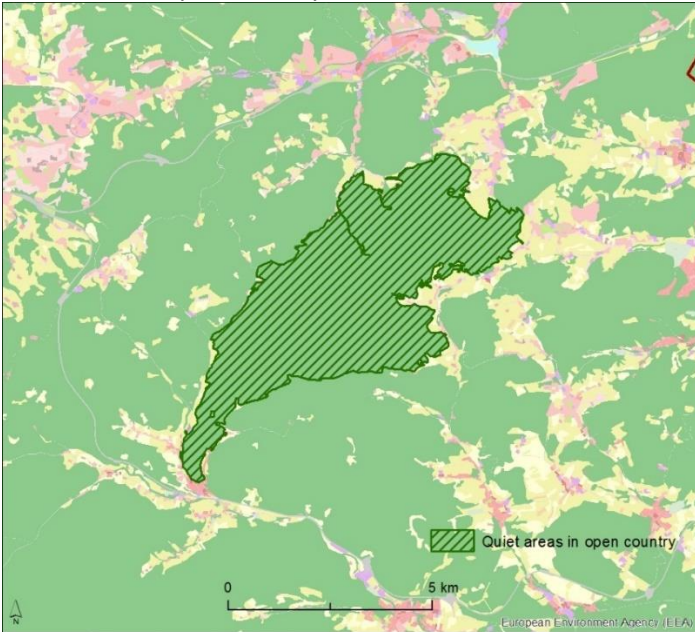
### ***Field inspireId\_versionId***

Requirement	Optional
Description	The attribute versionId identifies a particular version of a spatial object, defined in the INSPIRE Implementing Rules on Interoperability. This attribute can be used together with life-cycle information to distinguish between the different versions of a spatial object.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	See more information in “Creating INSPIRE external unique object identifiers in the scope of the END reporting data”. It is proposed to omit spatial object versions (no value – empty field).
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 5.2.11 Field *specializedZoneType*

Requirement	Mandatory
Description	Defines if the quiet area is located inside or outside agglomerations in the END scope, according to the definition in the INSPIRE Implementing Rules on Interoperability.
Reportnet 3 type	Link
Format	Only one value is allowed
Code list	Code list URL: <a href="http://dd.eionet.europa.eu/vocabulary/inspire/SpecialisedZoneTypeCode">http://dd.eionet.europa.eu/vocabulary/inspire/SpecialisedZoneTypeCode</a> The following code list values apply: <ul style="list-style-type: none"><li>- quietAreaInAgglomeration</li><li>- quietAreaInOpenCountry</li></ul>
Information	This is an INSPIRE attribute. It uses a value from the extended INSPIRE code list SpecialisedZoneTypeCode.
Example	quietAreaInAgglomeration

### 5.2.12 Field geometry

Requirement	Mandatory
Description	Spatial extent of the quiet area, according to the definition in the INSPIRE Implementing Rules on Interoperability. This is an INSPIRE attribute. For the END reporting purpose, geometry of the quiet area shall be presented as area, by using polygon or multipolygon geometry type.
Reportnet 3 type	Multiple polygons
Information	Geometry type of polygon or multipolygon is allowed.
Example (polygon and mutipolygon geometry)	<p>Quiet area in agglomeration:</p>  <p>Quiet area in open country:</p> 



### 5.2.13 Field sourceIdentifier

Requirement	Mandatory
Description	This field is filled automatically. It indicates the source of the reporting data. It is composed of the source name and time stamp. It can be a name of the directly imported file, or the URL of an external source, from which the data was harvested, as recorded in the HarvestSource table. The field also supports the integrity between the primary table with spatial data and the voidables table.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	The data source will be provided in the form of a time stamp (DateTime format) and the source name (imported file or service URL). It is provided by the import or harvest process and must not be modified.
Example	2022-05-10T10:10:46Z QuietArea.gpkg
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 5.3 Table QuietAreaDocumentation

The table *QuietAreaDocumentation* provides any existing documentation related to the delimitation of the quiet area described.

**Table 5.2. QuietAreaDocumentation table overview**

Mandatory /optional/ conditional	Name	Reportnet 3 Type	Code list
M	id	Number - Integer	
M	quietAreald_identifier	Link	
O	citationDate	Date	
M	citationLink	Text	
O	citationName	Text	
M	citationLevel	Link	<a href="http://inspire.ec.europa.eu/codelist/LegislationLevelValue">http://inspire.ec.europa.eu/codelist/LegislationLevelValue</a>
M	citationType	Link	<a href="http://dd.eionet.europa.eu/vocabulary/inspire/CitationTypeValue">http://dd.eionet.europa.eu/vocabulary/inspire/CitationTypeValue</a>
M	sourceIdentifier	Text	

The following section includes detailed information of each field, i.e. description, type, format, use of code lists (where applicable), additional information of expected data or guidelines to prepare data, and data samples.

### 5.3.1 Field id

Requirement	Mandatory
Description	Unique identifier automatically created in GeoPackage file (primary key in the SQLite database). It is mandatory.
Reportnet 3 type	Number - Integer
Format	Maximum of 20 characters
Information	This attribute is primarily required by the OGC GeoPackage standard. It must be unique within a GeoPackage file.
Example	1

### 5.3.2 Field quietAreald\_identifier

Requirement	Mandatory
Description	Unique identifier assigned to each quiet area.
Reportnet 3 type	Link
Format	Only one value is allowed
Information	It is a foreign key related to the table QuietArea by re-using the unique identifier assigned to each quiet area. The value of this field follows the coding system to create thematic identifiers provided in the guidelines "Proposal on how to build the unique thematic identifiers for the new END data model". It belongs to the common END identifier scheme named EUENDCode. The identifier scheme is provided as default value in the table DatasetDefaultProperties.
Example	QA_AT_00_1

### 5.3.3 Field citationDate

Requirement	Optional
Description	Date when the quiet area documentation was issued.
Reportnet 3 type	Date
Format	YYYY-MM-DD
Example	2024-07-18

### 5.3.4 Field citationLink

Requirement	Optional
Description	Link to the website where the quiet area documentation is available.
Reportnet 3 type	URL
Format	Maximum of 10000 characters
Information	Provision of the link to the website where the information on the quiet area is available.
Example	<a href="https://www.laerminfo.at/">https://www.laerminfo.at/</a>
Reporting constraints	Limit of 2100 characters due to database export constraints. Please see section 3.2.

### 5.3.5 Field citationName

Requirement	Optional
Description	Title of the quiet area documentation.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	Title of the quiet area documentation
Example	Quiet areas in Vienna (2025-2030)
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 5.3.6 Field citationLevel

Requirement	Optional
Description	Legislative or administrative level at which the quiet area documentation has been adopted.
Reportnet 3 type	Link
Format	Only one value is allowed
Code list	Code list URL: <a href="http://inspire.ec.europa.eu/codelist/LegislationLevelValue">http://inspire.ec.europa.eu/codelist/LegislationLevelValue</a> The following code list values apply: <ul style="list-style-type: none"><li>- sub-national</li><li>- national</li><li>- international</li><li>- european</li></ul>
Example	sub-national

### 5.3.7 Field citationType

Requirement	Optional
Description	Type of quiet area documentation.
Reportnet 3 type	Link
Format	Only one value is allowed
Code list	Code list URL: <a href="https://dd.eionet.europa.eu/vocabulary/inspire/CitationTypeValue">https://dd.eionet.europa.eu/vocabulary/inspire/CitationTypeValue</a> The following code list values apply: <ul style="list-style-type: none"> <li>- documentCitation</li> <li>- legislationCitation</li> <li>- resourceCitation</li> </ul>
Information	Document citation corresponds to any documentation. Legislation citation can be used for citation of legal acts. Resource citation can be used for any other sources of information.
Example	documentCitation

### 5.3.8 Field sourceIdentifier

Requirement	Mandatory
Description	This field is filled automatically. It indicates the source of the reporting data. It is composed of the source name and time stamp. It can be a name of the directly imported file, or the URL of an external source, from which the data was harvested, as recorded in the HarvestSource table. The field also supports the integrity between the primary table with spatial data and the voidables table.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Information	The data source will be provided in the form of a time stamp (DateTime format) and the source name (imported file or service URL). It is provided by the import or harvest process and must not be modified.
Example	2022-05-10T10:10:46Z QuietArea.gpkg
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

## 5.4 Table QuietAreaVoidables

This table includes attributes that are defined as voidable in the data model. Only the attributes defined in the INSPIRE specifications are voidable. This table is used in case a value is assigned to a voidable attribute for an individual spatial object which is already provided in the primary (core) table QuietArea. Otherwise, the default values of these attributes (defined in the DatasetDefaultProperties table) are used and therefore this table can be left empty.

It is recommended to use DatasetDefaultProperties as default values applicable to the complete dataset. By doing this, QuietAreaVoidables can be left empty.

In case a value for a voidable property for each special object is provided, the following constraints apply to individual voidable property :

- 1) DateTime data type requires ISO DateTime format with UTC information. The required format is YYYY-MM-DDThh:mm:ssZ. It is applicable to the fields designationPeriod\_beginPosition, designationPeriod\_endPosition, beginLifespanVersion;
- 2) If designationPeriod\_beginPosition is provided and designationPeriod\_endPosition is not known it can be left empty (it is assumed it is not known);
- 3) If information about the competent authority is provided it shall be provided with at least the following information:
  - One of the fields competentAuthority\_indivName (individual name), competentAuthority\_orgName (organisation name) or competentAuthority\_posName (position name) must be provided;
  - Field competentAuthority\_role must be provided with the value “authority” from the designated code list;
- 4) If a legal instrument is provided in legalBasis, it must be provided in both fields legalBasis\_link and legalBasis\_level;
- 5) If any value for a voidable property of a spatial object is provided, a correct linking between both tables QuietArea and QuietAreaVoidables must be provided: the field QuietArea\_id in the table QuietAreaVoidables must include the corresponding id of the spatial object from the table QuietArea, see example below.

QuietArea	
id	... other fields ...
10	

QuietAreaVoidables	
QuietArea_id	... other fields ...
10	

Detailed information about requirements of voidable properties in the INSPIRE application schema can be also found in the [INSPIRE Data Specification on Area Management/Restriction/Regulation Zones and Reporting Units – Technical Guidelines](#) and in the [Implementing Rules on Interoperability of spatial data sets and services](#).

**Table 5.3. QuietAreaVoidables table overview**

Mandatory /optional	Name	Reportnet 3 Type	Code list
M	id	Number - Integer	
O	designationPeriod_beginPosition	DateTime	
O	designationPeriod_endPosition	DateTime	
O	competentAuthority_contact	Text	
O	competentAuthority_indivName	Text	
O	competentAuthority_orgName	Text	

Mandatory /optional	Name	Reportnet 3 Type	Code list
O	competentAuthority_posName	Text	
O	competentAuthority_role	Link	<a href="http://inspire.ec.europa.eu/codelist/RelatedPartyRoleValue">http://inspire.ec.europa.eu/codelist/RelatedPartyRoleValue</a>
O	legalBasis_link	URL	
O	legalBasis_level	Link	<a href="http://inspire.ec.europa.eu/codelist/LegislationLevelValue">http://inspire.ec.europa.eu/codelist/LegislationLevelValue</a>
O	beginLifespanVersion	DateTime	
M	QuietArea_id	Number - Integer	
M	sourceIdentifier	Text	

Detailed information about voidable properties in the Inspire application schemas are provided in the data model documentation (<https://www.eionet.europa.eu/reportnet/docs/noise/data-model-documentation>).

## 5.5 Table DatasetDefaultProperties

This table includes all properties that can have a default value in a data set. Typically, it includes: default values or void reason for voidable attributes defined in the INSPIRE specifications, and default values of other attributes. The table is prefilled and read-only.

**Table 5.4. DatasetDefaultProperties table overview**

Mandatory /optional	Name	Reportnet 3 Type
M	tableName	Text
M	propertyName	Text
O	attribute	Text
M	defaultValue	Text

**Table 5.5. Applicable values for the DatasetDefaultProperties**

tableName	propertyName	attribute	defaultValue
QuietArea	zoneType	href	<a href="http://inspire.ec.europa.eu/codelist/ZoneTypeCode/noiseRestrictionZone">http://inspire.ec.europa.eu/codelist/ZoneTypeCode/noiseRestrictionZone</a>
QuietArea	environmentalDomain	href	<a href="http://inspire.ec.europa.eu/codelist/EnvironmentalDomain/noise">http://inspire.ec.europa.eu/codelist/EnvironmentalDomain/noise</a>

QuietArea	competentAuthority	nilReason	<a href="http://inspire.ec.europa.eu/codelist/VoidReasonValue/Unpopulated">http://inspire.ec.europa.eu/codelist/VoidReasonValue/Unpopulated</a>
QuietArea	beginLifespanVersion	nilReason	<a href="http://inspire.ec.europa.eu/codelist/VoidReasonValue/Unpopulated">http://inspire.ec.europa.eu/codelist/VoidReasonValue/Unpopulated</a>
QuietArea	quietAreaId_IdentifierScheme	href	<a href="http://dd.eionet.europa.eu/vocabulary/inspire/IdentifierScheme/EUENDCode">http://dd.eionet.europa.eu/vocabulary/inspire/IdentifierScheme/EUENDCode</a>
QuietArea	designationPeriod	nilReason	<a href="http://inspire.ec.europa.eu/codelist/VoidReasonValue/Unpopulated">http://inspire.ec.europa.eu/codelist/VoidReasonValue/Unpopulated</a>
QuietArea	legalBasis_link	href	<a href="http://data.europa.eu/eli/dir/2002/49/oj">http://data.europa.eu/eli/dir/2002/49/oj</a>
QuietArea	legalBasis_level	href	<a href="http://inspire.ec.europa.eu/codelist/LegislationLevelValue/european">http://inspire.ec.europa.eu/codelist/LegislationLevelValue/european</a>

## 5.6 Table CodelistProperties

This table includes a list of the code lists that have to be used for reporting data on the DF7\_10 Noise Action Plan data model. The complete code lists used in the END data model are also published in the Eionet Data Dictionary (<https://dd.eionet.europa.eu/vocabularies>) and are used in the Reportnet 3 data schemas.

The specific applicable code lists can also be found in the Vocabulary – common tables data schema of this dataflow.

The table is prefilled and read-only.

**Table 5.6. CodelistProperties table overview**

Mandatory /optional	Name	Reportnet 3 Type
M	tableName	Text
M	propertyName	Text
M	codelist	Text

**Table 5.7. Applicable values for the CodelistProperties**

tableName	propertyName	codelist
QuietArea	competentAuthority_role	<a href="http://inspire.ec.europa.eu/codelist/RelatedPartyRoleValue">http://inspire.ec.europa.eu/codelist/RelatedPartyRoleValue</a>
QuietArea	protectionFrom	<a href="http://dd.eionet.europa.eu/vocabulary/noise/NoiseSourceValue">http://dd.eionet.europa.eu/vocabulary/noise/NoiseSourceValue</a>
QuietArea	specialisedZoneType	<a href="http://dd.eionet.europa.eu/vocabulary/inspire/SpecialisedZoneTypeCode">http://dd.eionet.europa.eu/vocabulary/inspire/SpecialisedZoneTypeCode</a>

QuietArea	legalBasis_level	http://inspire.ec.europa.eu/codelist/LegislationLevelValue
QuietArea	environmentalDomain	http://inspire.ec.europa.eu/codelist/EnvironmentalDomain
QuietAreaDocumentation	citationLevel	http://inspire.ec.europa.eu/codelist/LegislationLevelValue
QuietArea	quietAreaName_localNameLanguage	http://dd.eionet.europa.eu/vocabulary/common/iso639-3
QuietAreaDocumentation	citationType	http://dd.eionet.europa.eu/vocabulary/inspire/CitationTypeValue
QuietArea	zoneType	http://inspire.ec.europa.eu/codelist/ZoneTypeCode

## 5.7 Tables supporting data harvesting through INSPIRE download services

The dataset schema includes two additional tables for the alternative reporting method by providing INSPIRE download services and trigger a data harvesting process. The tables HarvestSource and WorkflowLog are described together with the harvesting process in section 7.4 and in Annex 1.

Regardless of the import process, file import or download service harvesting, the expected file format is GeoPackage provided on the pre-defined template.

## 5.8 GeoPackage format

### 5.8.1 Support to data transformation into GeoPackage

#### GeoPackage template

The GeoPackage template QuietAreas.gpkg that has been created to support data reporting can be found in the:

- Dataflow Help page in Reportnet 3 (see 4.3), and
- <https://www.eionet.europa.eu/reportnet/docs/noise>.

#### Sample data

Sample data containing information as an example of reporting best practices is available at: [https://www.eionet.europa.eu/reportnet/docs/noise/reporting-examples/quiet-areas-df7\\_10](https://www.eionet.europa.eu/reportnet/docs/noise/reporting-examples/quiet-areas-df7_10). It is important to notice that the sample data is simulated data.

#### Demonstration of data transformation with the ETL tool HALE Studio

A demonstration video on how to create the new GeoPackage file has been issued, using HALE Studio tool, which is accessible in: <https://www.eionet.europa.eu/reportnet/docs/noise/videos>.

The data transformation project (HALE Studio) details with test data (note: using simulated data for feasibility of data transformation, not exact data for noise reporting) can also be found in the repository [https://github.com/wetransform-os/geopackage-end/tree/main/DF7\\_10/QuietAreas](https://github.com/wetransform-os/geopackage-end/tree/main/DF7_10/QuietAreas). It shows possibilities to create a mapping between a source schema and target GeoPackage schema and transform source data into the Geopackage file format.



### 5.8.2 Use of GeoPackage file format in the Reportnet 3

The GeoPackage template for Noise action plan (DF7\_10): Quiet area includes the same tables as the ones that are included in Reportnet 3, see example below. The data import process in the Reportnet 3 transfers data from the GeoPackage file into the correlated tables into the Reportnet 3 data schema *Quiet area (DF7\_10)*.

GeoPackage template QuietArea.gpkg – list of tables	Reportnet 3 data schema <i>Quiet area (DF7_10)</i> – list of tables
QuietArea	QuietArea
QuietAreaDocumentation	QuietAreaDocumentation
QuietAreaVoidables	QuietAreaVoidables
DatasetDefaultProperties (pre-filled)	DatasetDefaultProperties (pre-filled, read-only)
CodelistProperties (pre-filled)	CodelistProperties (pre-filled, read-only)

## 6 Data schema: Submission Declaration

### 6.1 Description

Information on quiet areas submitted before the deadline or information on the changes from previous submissions and the reasons for submitting updated data after the deadline.

According to Article 10, if the country wishes to modify the submission after the deadline, the country needs to explain the changes from the previous submission and the reasons for the update. The information of this schema is also used to understand completeness of the data provided.

The SubmissionDeclaration dataset schema only includes one table:

- SubmissionDeclaration

### 6.2 Table SubmissionDeclaration

The table *SubmissionDeclaration* includes a list of fields that describe the submission and resubmission status in relation to the quiet areas, and changes from previous submissions and the reasons for re-submitting data.

**Table 6.1. SubmissionDeclaration table overview**

Mandatory /optional/ conditional	Name	Reportnet 3 Type	Code list
M	processStatus	Single select	
C	difference	Multiline text	
C	reason	Multiline text	

O	explanatoryFile	Attachment	
O	dateOfChange	Date	

The following section includes detailed information of each field, i.e. description, type, format, use of code lists (where applicable), additional information of expected data or guidelines to prepare data, and data samples.

### 6.2.1 Field processStatus

Requirement	Mandatory
Description	Type of submission
Reportnet 3 type	Single select
Format	Applicable values: <ul style="list-style-type: none"> <li>- submissionBeforeDeadline</li> <li>- resubmission</li> </ul>
Information	Value “submissionBeforeDeadline” needs to be selected if the reporting is done before the legal deadline of the dataflow. The value “resubmission” needs to be selected in the following cases: <ul style="list-style-type: none"> <li>- The first submission is done after the deadline of the dataflow.</li> <li>- A resubmission of the data is done after the deadline, replacing the previous submission</li> </ul>
Example	submissionBeforeDeadline

### 6.2.2 Field difference

Requirement	Conditional
Description	Description of the differences from the previous submission.
Reportnet 3 type	Multiline text
Format	Maximum of 10000 characters
Information	Briefly describe all the differences that apply to the resubmission. It is important to indicate the quiet area identifier and to describe the changes made. Any first submissions after the legal deadline need to be indicated here. Please include the identifier of the quiet area that is included or changed in the resubmission.
Example	A new quiet area QA_AT_00_3 has been included in the latest submission.
Reporting constraints	It is mandatory when “resubmission” is selected in processStatus.
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### 6.2.3 Field reason

Requirement	Conditional
Description	Description of the reasons for the data update.
Reportnet 3 type	Multiline text
Format	Maximum of 10000 characters
Information	Briefly describe the reasons for the data update.
Example	Quiet area QA_AT_00_3 was not protected when noise action plans were developed.
Reporting constraints	It is mandatory when “resubmission” is selected in processStatus.
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

#### 6.2.4 *Field explanatoryFile*

Requirement	Optional
Description	Placeholder to include an extra explanatory file with details of the submission or resubmission, if applicable.
Reportnet 3 type	Attachment
Format	Any file extension
Information	Recommended .doc, .pdf, .xls
Reporting constraints	Maximum size of the file is 100 MB

#### 6.2.5 *Field dateOfChange*

Requirement	Optional
Description	Date when the change in the delivery is done
Reportnet 3 type	Date
Format	YYYY-MM-DD
Information	Date of submission or resubmission
Example	2025-10-20

## 7 Reporting process

### 7.1 Reporting data in Reportnet 3: overall workflow

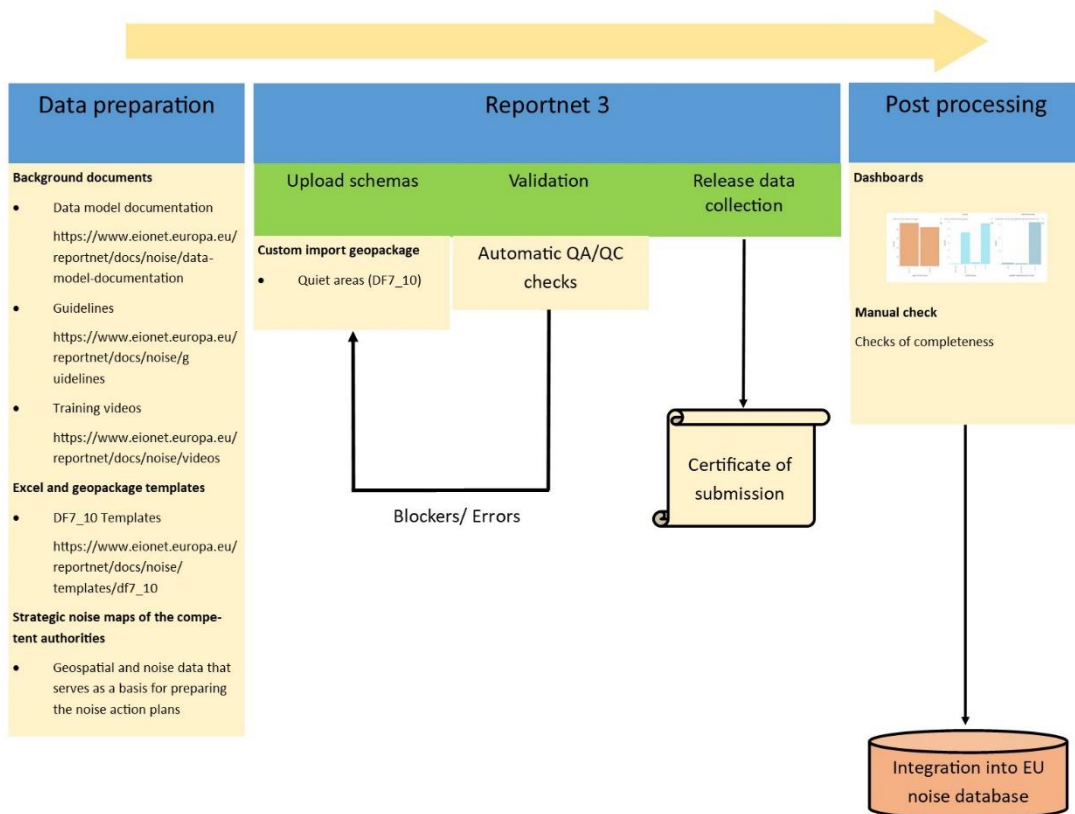
Figure 7.1 illustrates the different processes involved in the reporting of Noise action plans (DF7\_10): Quiet area. The direct link to access to all the available supporting material can be found here: <https://www.eionet.europa.eu/reportnet/docs/noise>.

The preparation of the data involves using predefined templates in GeoPackage with the spatial information about designation and preservation of quiet areas in agglomerations and in the open country.

The dataflow is organised with several data schemas, and a GeoPackage template is available for reporting quiet areas. Data sets for each data schema will need to be uploaded in the corresponding schema. In addition, to comply with Article 10, if the country wishes to modify a submission after the deadline, an explanation stating the changes from the previous submission and the reasons for the update needs to be provided. This information needs to be provided in “Submission declaration”. Once the data files have been uploaded, they can be assessed based on the quality assurance validations that are programmed inside Reportnet 3. The description of these quality checks can be downloaded from: <https://www.eionet.europa.eu/reportnet/docs/noise/validation-rules>.

Once the data is correct, without any blocking errors in the quality checks, the delivery can be completed by releasing the data collection. In case of blocking errors in the validation, the data cannot be released and the reporter will need to correct the content, replace the files and release the data collection again. After the data has been released, a confirmation receipt will be issued and will be available in the dataflow page. The data submitted will be available in Reportnet 3 and if there are other errors, you will receive a standard notification that a correction and a resubmission is needed. All the technically accepted submissions will be integrated in the EU noise database.

**Figure 7.1. Reporting workflow**



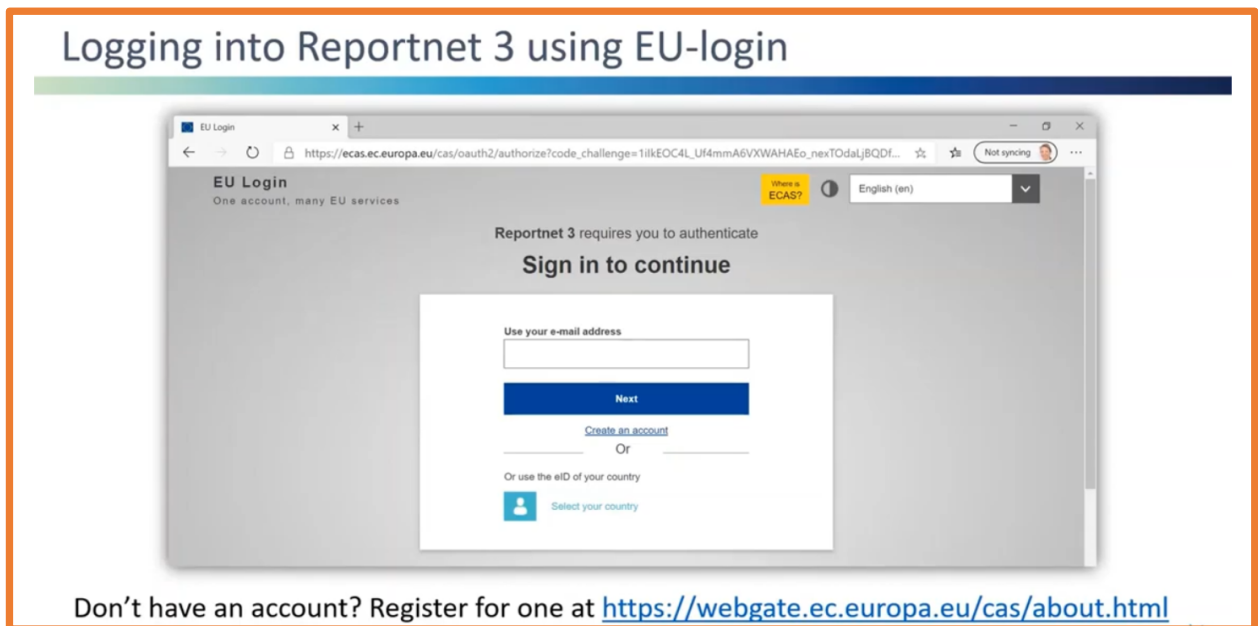
**Further information on the reporting process of DF7\_10**

- Reportnet 3 reporters' manual : [https://www.eionet.europa.eu/reportnet/docs/prod/reporter\\_howto\\_reportnet3.0](https://www.eionet.europa.eu/reportnet/docs/prod/reporter_howto_reportnet3.0)
- Training video: <https://www.eionet.europa.eu/reportnet/docs/noise/videos>

**7.2 User accounts and permissions**

The official reporting will be done through the following URL: <https://reportnet.europa.eu/> . The log in will be done through the EU login portal and the reporter will have to use the EU login details. Therefore, reporters will not be managing an Eionet login account but they will use an EU login account which is separately maintained and that can be more easily updated. Creating an EU account can be done at <https://webgate.ec.europa.eu/cas/about.html> .


Figure 7.2. Log in into Reportnet 3.0 using EU-login



In Reportnet 3 there are two main roles for reporters, one is the lead reporter's role and the other is the supporting reporter's role. Prior, in Reportnet 2, all reporters were registered by the EEA and the lists were maintained by the agency. In the new reporting mechanism, the supporting reporters can prepare the data and can access the reporting platform. The number of supporting reporters is unlimited but those will be managed by the lead reporter. The lead reporter will be in charge to submit the final data and needs to be formally nominated.

Figure 7.3. Roles in Reportnet 3

## Roles in Reportnet 3




**Lead Reporter(s)**

Up to two per country per reporting obligation.

Formally nominated.


Able to submit final data or reports.



**Supporting Reporter(s)**

Unlimited number per country per reporting obligation.

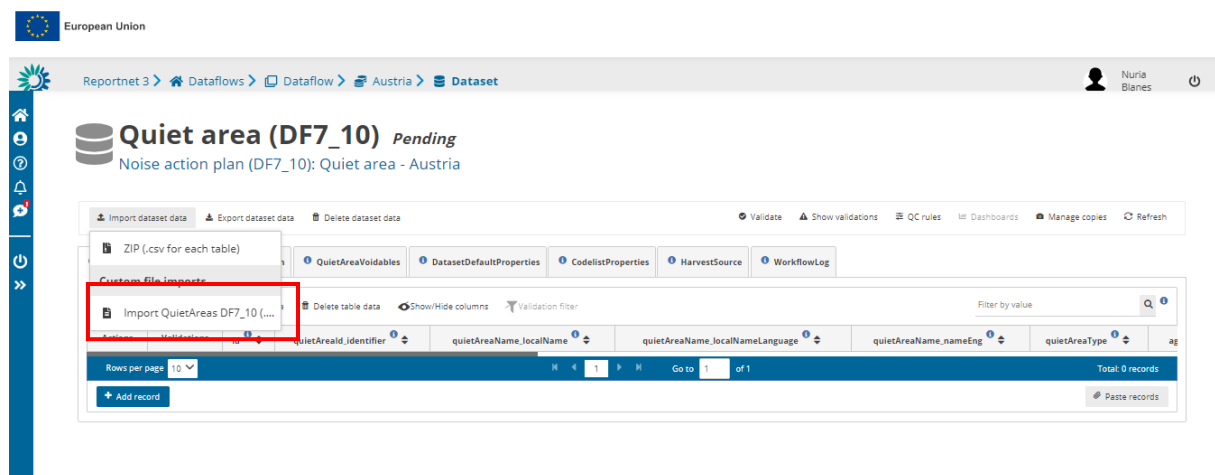
Managed by the Lead Reporter(s).

European Environment Agency 

### 7.3 Importing data from a file

To import the GeoPackage file, the custom imports (.gpkg) need to be selected as indicated in Figure 7.4 in the corresponding data schema. The reporter will be asked to select a file and upload it. If the reporter is replacing the existing data, Replace data can be selected (see Figure 7.5). **The option *Replace data* will delete all previously imported data in all tables, which is particularly important if different reporters will import data for the same data schema.**

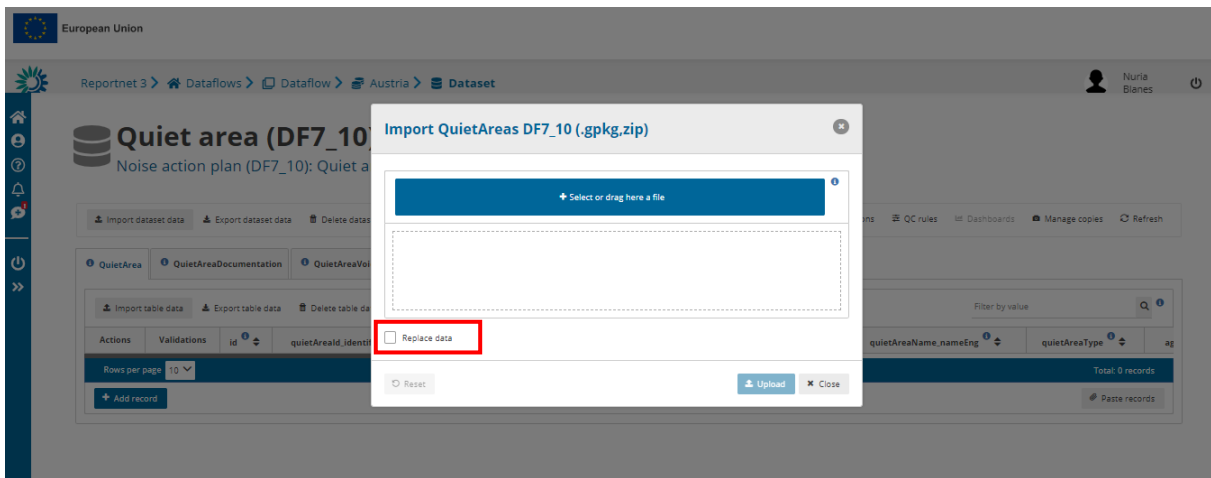
Figure 7.4. Import dataset data: Geopackage file



The screenshot shows the Reportnet 3 interface for a dataset named 'Quiet area (DF7\_10) Pending'. The breadcrumb trail is 'Reportnet 3 > Dataflows > Dataflow > Austria > Dataset'. The user is identified as 'Nuria Blanes'. The main content area shows the 'Import dataset data' section with a red box highlighting the 'Custom File Importer' sub-section. Within this sub-section, the 'Import QuietAreas DF7\_10' option is selected. Below this, there are columns for 'QuietAreaId.Identifier', 'quietAreaName.localName', 'quietAreaName.localNameLanguage', 'quietAreaName.nameEng', and 'quietAreaType'. The table shows 'Total: 0 records' and an 'Add record' button.



Figure 7.5. Replace data



## 7.4 Importing data from a service

Importing data from a service is currently under development. The following information will be applicable when this functionality will be implemented in Reportnet 3.

This functionality provides import from a service for spatial data of quiet areas.

For importing data from a service, the dataset schema in the Reportnet 3 includes two tables: HarvestSource and WorkflowLog which are described in details in Annex 1.

A typical import from a service workflow will look as the following:

1. Manually enter the information about the download services to use in the HarvestSource table.

Figure 7.6. Example of the manual entry of the information in the HarvestSource table

Actions	Validations	serviceType	serviceUri	operation
		Direct file	https://projects.sadl.kuleuven.be/downloadfolder/eea_testdata/df1_5-1/Agglomeration_IR3_MT.gpkg	Append to table data
		Direct file	https://projects.sadl.kuleuven.be/downloadfolder/eea_testdata/df1_5-1/AgglomerationSource_samples.gpkg	Do not import

Another option is to upload a pre-defined file with service information in csv format using function Import table data.

All three fields in the table HarvestSource must be provided as following:

- **serviceType:** can be Direct file only.
- **serviceUri:** contains the link to the service. If Direct file is selected, serviceUri must point to a downloadable GeoPackage file (zipped or unzipped). It is not allowed to point to an atom feed containing the information of a downloadable file.
- **operation:** tells Reportnet what to do with this service. The following options need to be selected:
  - **Append to table data:** This will add the downloaded data to the data already in the thematic tables in the noise source dataset schema, as following:

- In the dataset schema Quiet area (DF7\_10), the tables are: QuietArea, QuietAreaDocumentation and QuietAreaVoidables.
- **Delete all data before import:** This will delete the data in the tables in the schema before starting import. You cannot delete data from one service source only. If “Delete all data before import” is selected for one of the services, ALL data in all thematic tables in the corresponding dataset schema will be deleted before the process starts.
  - For example: in the dataset schema Quiet area (DF7\_10), if “Delete all data before import” is selected for one of the services, ALL data in the tables QuietArea, QuietAreaDocumentation and QuietAreaVoidables will be deleted.
- **Do not import:** This will ignore this record when import is started. For example: if you have three services in the HarvestSource table, and you want to test one of them, you can set operation “Do not import” for the other two services.

**Remark: Import from a file can only process one file for each import. Import from a service will import in one step ALL services in HarvestSource table that do not have operation set to “Do not import”.**

2. If you want to start from empty tables and import all data again, there are several ways to do this. The first option could be to delete data in one table manually by using “Delete table data” (except in HarvestSource table). The second option could be “Delete dataset data” which will delete data from all tables in the dataset schema (except read-only tables). The third option is to ‘Delete all data before import’ as explained in step 1 from the harvesting operation. Please be aware that if you use option 2 and 3, HarvestSource data will also be deleted and you will need to include service information again.

If you use option 1, you should manually delete data in the following tables:

- In the dataset schema Quiet area (DF7\_10), delete the tables QuietArea, QuietAreaDocumentation and QuietAreaVoidables

Be aware that this deletes all data in the table, also those previously imported from a file or from a service. It is not possible to delete records from one import only.

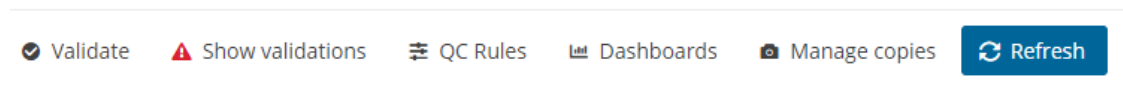
If you don’t need the logged feedback from previous service imports, you can also delete table data for WorkflowLog.

3. Click on the **Import dataset data** button on the top left of the menu, choose “Import from a service”.
4. **Do not check Replace data.** See step 2 if you want to start from empty tables and import all data again. “Replace data” will delete all data in all non-predefined tables, including the tables HarvestSource and WorkflowLog, therefore information about services will be deleted.
5. If the operation field of one of the services in the HarvestSource table is set to “Delete all data before import”, Reportnet 3 will first empty the thematic tables in the dataset schema (e.g. in the dataset schema Quiet area (DF7\_10), the tables QuietArea, QuietAreaDocumentation and QuietAreaVoidables). After that it will connect to each service in HarvestSource and download the data provided by the service. Services with operation set to “Do not import” are not processed.
6. During the process, Reportnet 3 will enter feedback on the process in the WorkflowLog table. This can be information (logType=info, e.g. number of records downloaded from a service), warnings

(logType=warning, e.g. if HarvestSource doesn't contain any services to harvest) or errors (logType=error, e.g. there is something wrong with a service or with the data provided by a service. The logMessage will contain the error received.

7. Notifications in the top right will inform you the import / load has started and when it has finished. Remember to press the "Refresh" button to properly display the data uploaded.

**Figure 7.7. Refresh button to see the results of data load or validation**



8. After import from a service, the validation must be activated by triggering the Validate button.
9. Once the validation is finished the "Refresh" button will be highlighted and after clicking it you will see the results of the validation. The validation can be run manually many times and it is triggered automatically when data flow is released to data collection.

A reporter can consult the WorkflowLog table for feedback information from processing the services, see step 6 in the workflow above. The WorkflowLog information should help a reporter to adjust service information and parameters.

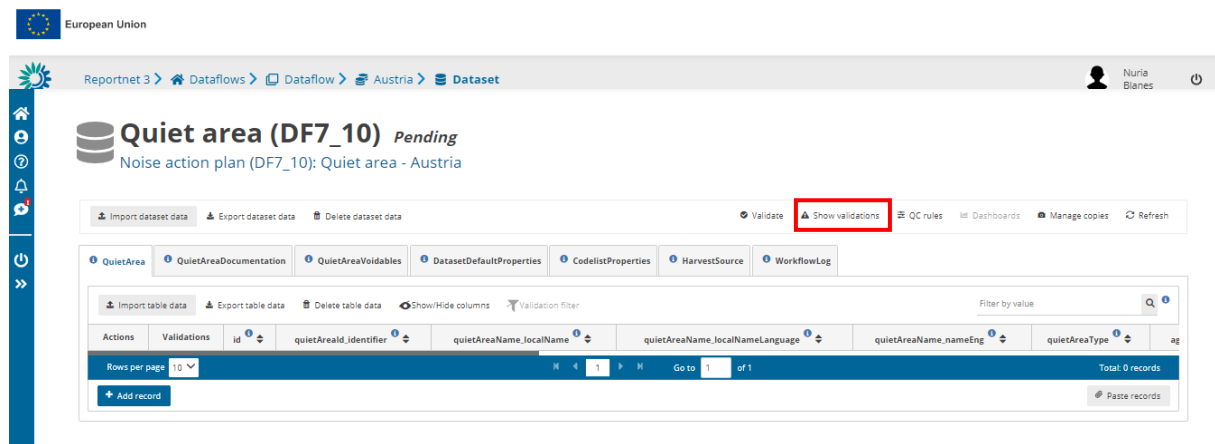
### 7.5 Feedback from importing a geospatial file

The feedback from the process of importing a geospatial file is also provided in the table WorkflowLog. It includes the first information about the import process, compliance with the pre-defined GeoPackage template and a few compliance checks of spatial data with the requirements set in the Reportnet 3 dataset schema. More details on using the WorkflowLog table are described in Annex 2.

### 7.6 Validations

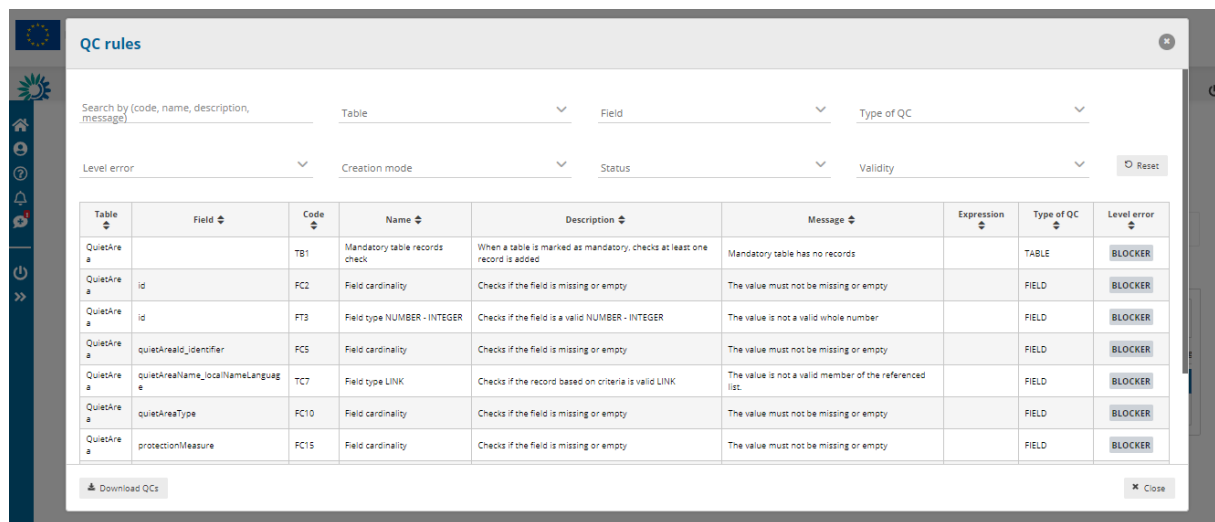
The data to be submitted can be assessed with the validation tools provided in Reportnet 3.0 as shown in Figure 7.8. The validation is triggered manually by pressing the button Validate. Remember to update data view after each validation with Refresh button. The validation report can be consulted under Show validations.

Figure 7.8. Show validations



The list of assigned quality controls in validation is available under QC rules as shown in Figure 7.9.

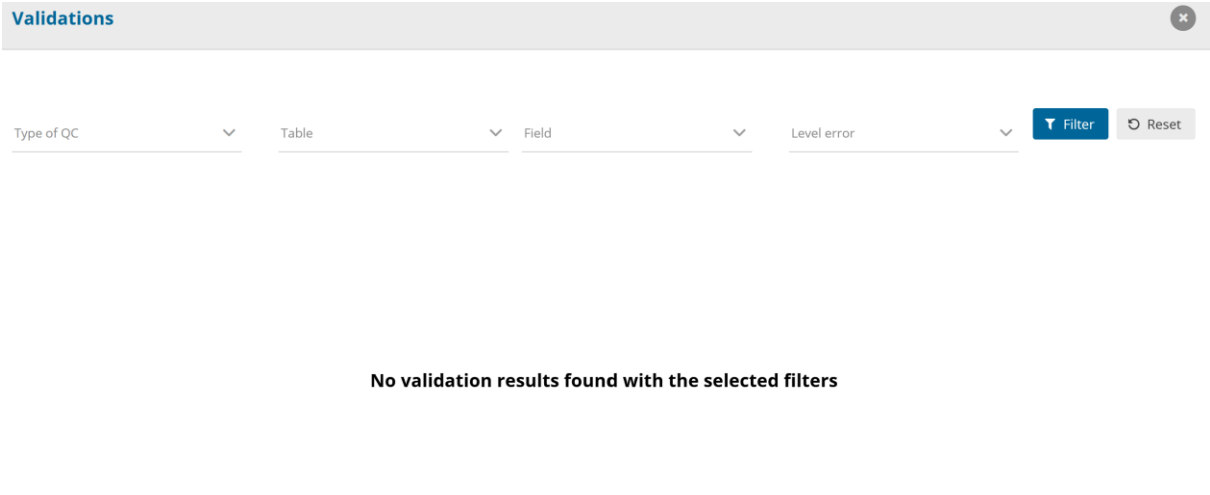
Figure 7.9. QC rules applied for validation



If there are no blockers, errors, warnings, or information messages in the data uploaded, the message shown in Figure 7.10 will be given. Errors identified as “blockers” will not allow the reporter to release the data collection. Obtaining blockers in the validation process means that the data delivered has missing or erroneous elements that may corrupt the integrity of the European noise database or undermine the consistency of the reported data.

All quality control rules are described in Dataflow Help - Dataset schemas / QC rules (see chapter 3.1).

Figure 7.10. Successful validation message



To ensure high quality of the noise data submitted under the END, specific manual quality checks will be performed after the countries submit the data in Reportnet 3. The countries will receive feedback document stating if the delivery is technically accepted or if a correction is requested.

**7.7 Official submission of the report**

The reporter will be able to submit the data by clicking on "Release to data collection" as shown in Figure 7.11. If there are blockers in any dataset schema, the release will be stopped and the reporter will receive a message indicating that releasing the data is not possible due to errors in the dataset. The reporter can make copies of the data submitted. After the submission a new icon will appear with the confirmation receipt as shown in

Figure 7.12. The confirmation receipt is a pdf with a confirmation of the submission which indicates the data schemas that were submitted. If the reporter changes the data and resubmits a new copy to the data collection, then a new confirmation receipt will be available for download.

Figure 7.11. Release to data collection

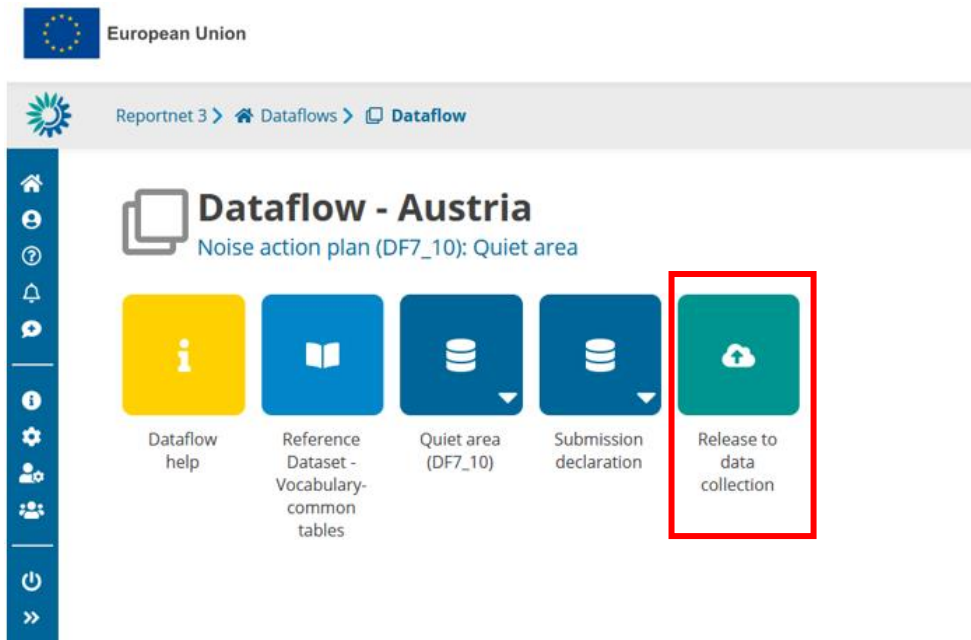
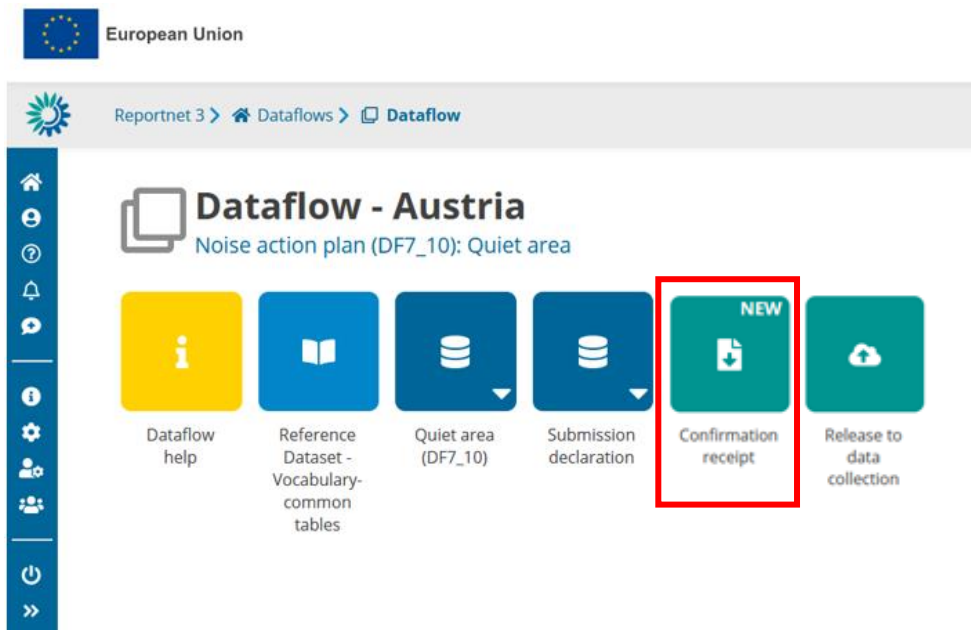


Figure 7.12. Confirmation receipt



## 7.8 Resubmission

The reporter will be able to replace/update the submission until the deadline. According to Article 10 (see below), if the reporter wishes to modify the submission after the deadline, an official communication to the EEA and the EC will have to be provided stating the changes from the previous submission and the reasons for the update.

Article 10 – paragraph 2: ‘Member States shall ensure that the information from strategic noise maps and summaries of the action plans as referred to in Annex VI are sent to the Commission within six months of the dates laid down in Articles 7 and 8 respectively. For that purpose, Member States shall only report the information by electronic means to a mandatory data repository to be established by the Commission by means of implementing acts. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 13(2). **In the event that a Member State wants to update information, it shall describe the differences between the updated and original information and the reasons for the update when making the updated information available to the data repository.**’

## Annex 1. Tables supporting data harvesting through INSPIRE download services

Geospatial data can be also imported from an existing INSPIRE download service. This alternative method includes a harvesting process that is included in the reporting dataset schemas of noise action plans for agglomerations, major airports, major railways, major roads and quiet areas. The harvesting process is supported by the following two tables:

- **HarvestSource:** This table contains the URLs from which to harvest the geospatial features needed for the reporting. In the serviceType field, the reporter indicates if the given URL points directly to a file to download, or to a WFS 2.0 INSPIRE service. For direct file download, the URLs point directly to the dataset file to download (e.g. no Atom feed). For WFS, the URL must provide the full WFS GetFeature request. For END reporting, only 'Direct file' in gpkg format is supported.
- **WorkflowLog:** This table contains log messages from the harvesting process. Messages can contain information about the harvested resources (e.g. number of features) but also information about errors occurred during harvesting.

In the reporting data flow of Noise Action Plans (DF7\_10), the supported file format is GeoPackage with the expected table structure defined in the [pre-defined GeoPackage templates](#). These thematic GeoPackage files could be provided through a download service (e.g. INSPIRE download service) that could be declared and used for harvesting in the reporting process.

### Table HarvestSource

For this purpose, the table HarvestSource must include service(s) information. The table HarvestSource has the following structure:

#### HarvestSource table overview

Mandatory/optional	Name	Reportnet 3 Type	Code list
M	serviceType	Single select	
M	serviceUrl	URL	
M	operation	Single select	

The following tables includes detailed information of each field, i.e. description, type, format, use of code lists (where applicable), additional information of expected data or guidelines to prepare data, and data samples.

#### Field serviceType

Requirement	Mandatory
Description	The service type indicates whether the given service URL points to a direct file download or to a WFS service providing the INSPIRE features. For END reporting only 'Direct file' is supported.
Reportnet 3 type	Single select
Code list	Applicable code list values: - Direct file
Example	Direct file



## Field serviceURL

Requirement	Mandatory
Description	In case of serviceType 'Direct file', serviceURL points directly to the dataset file to download. For END reporting, only GeoPackage (gpkg) is supported. A zip file containing the gpkg file is allowed.
Reportnet 3 type	URL
Code list	Maximum of 10000 characters
Example	<a href="https://projects.sadl.kuleuven.be/downloadfolder/eea_testdata/df4_8/MajorAirports-StrategicNoiseMaps-AT-LOWW-SpatialIndex.gpkg">https://projects.sadl.kuleuven.be/downloadfolder/eea_testdata/df4_8/MajorAirports-StrategicNoiseMaps-AT-LOWW-SpatialIndex.gpkg</a>
Reporting constraints	Limit of 2100 characters due to database export constraints. Please see section 3.2.

## Field operation

Requirement	Mandatory
Description	This field is used to indicate the type of operation – how to use the service: a) service will add data to the table, b) service will replace data in the table or c) service will not import data (Do not import) – service is omitted. Keep in mind that the thematic table(s) will be deleted <b>in its entirety</b> if one of the operations assigned to a service is "Delete all table data before import".
Reportnet 3 type	Single select
Code list	Applicable code list values: <ul style="list-style-type: none"> <li>- Append to table data</li> <li>- Delete all table data before import</li> <li>- Do not import</li> </ul>
Example	Append to table data

## Table WorkflowLog

The table WorkflowLog has the following information:

### WorkflowLog table overview

Mandatory/ optional	Name	Reportnet 3 Type	Code list
O	logTime	DateTime	
O	logType	Text	
O	logMessage	Text	
O	harvestSource	Text	

## Field logTime

Requirement	Optional
Description	The date and time the system added the log message to the table during or after processing services. The logTime is given in local time, therefore it can differ from the time used in the harvestSource field.
Reportnet 3 type	DateTime
Format	ISO DateTime format YYYY-MM-DDThh:mm:ss
Example	2022-06-10T15:11:26

### Field logType

Requirement	Optional
Description	The type of log message. This gives an indication on the importance of the message. LogType can be Info, Warning and Error
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Example	Info

### Field logMessage

Requirement	Optional
Description	The detailed log message. This can contain general information (e.g. number of features) but also details about an error that occurred.
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Example	At the beginning of the process, 2022-06-10T14:12:32Z, there are 4 records inside HarvestSource table
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

### Field harvestSource

Requirement	Optional
Description	The harvest source (web service) where this log message refers to. harvestSource is a composition of the UTC time of the start of the process and the URL of the service. Be aware this is the utc time, which can differ from the local time given in the field logTime
Reportnet 3 type	Text
Format	Maximum of 10000 characters
Example	2022-06-10T14:12:32Z <a href="https://projects.sadl.kuleuven.be/downloadfolder/eea_testdata/df4_8/MajorAirports-StrategicNoiseMaps-AT-LOWW-SpatialIndex.gpkg">https://projects.sadl.kuleuven.be/downloadfolder/eea_testdata/df4_8/MajorAirports-StrategicNoiseMaps-AT-LOWW-SpatialIndex.gpkg</a>
Reporting constraints	Limit of 4000 characters due to database export constraints. Please see section 3.2.

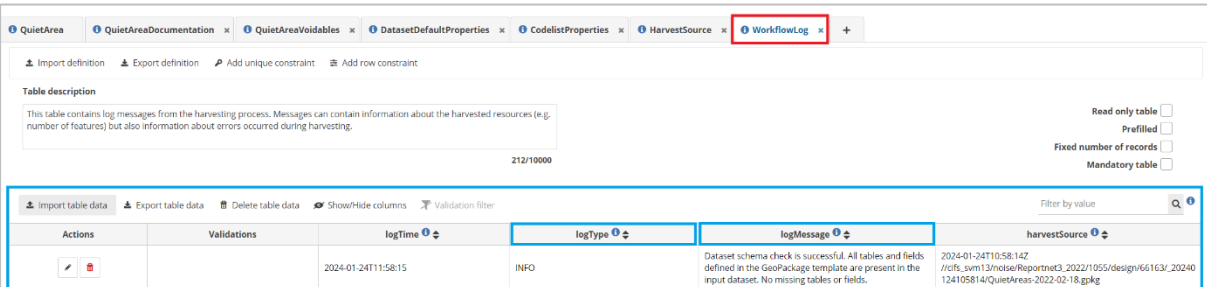
## Annex 2. WorkflowLog table used as feedback from importing a geospatial file



The WorkflowLog table and feedback are useful to detect potential errors in imported GeoPackage file [Figure 1]. The files can be imported using the custom import option of the data schema in “import dataset data”. There are two types of files that can be imported. A GeoPackage file with the .gpk extension or a GeoPackage file that has been zipped. After the import has completed, the information about the import process and basic validation will be provided in the WorkflowLog table, as following:

Information about schema check comparing the input GeoPackage file with the pre-defined GeoPackage template, e.g. passed schema check, missing tables or fields.

Information on spatial data – geometries, i.e. correct geometry type (as defined in the Reportnet 3 dataset schema), geometry field shall not be empty or null, and allowed coordinate reference systems must be used.

Figure 1 Using WorkflowLog table



Actions	Validations	logTime	logType	logMessage	harvestSource
 		2024-01-24T11:58:15	INFO	Dataset schema check is successful. All tables and fields defined in the GeoPackage template are present in the input dataset. No missing tables or fields.	2024-01-24T10:58:14Z //cifs_svm13/noise/Reportnet3_2022/1055/design/66163/20240124105814/QuietAreas-2022-02-18.gpkg

Specific information from this basic validation during the import process will be shown in the fields “logType” and “logMessage”. The field logType includes the error level (i.e. INFO, WARNING, ERROR, ERROR-BLOCK, ERROR-SCHEMA) and the field “logMessage” includes the validation result and explanation. For example: information INFO in the field “logType” indicates that dataset schema check was successful and data (tabular data and geometry) has been imported into the Reportnet3 tables.

The values in the field “logType” are also included in further validation process on complete data in the Reportnet 3 tables. The following types of errors in the field “logType” will cause a validation BLOCKER also preventing the release to data collection in the Reportnet 3 [Figure 2]:

- ERROR
- ERROR-BLOCK
- ERROR-SCHEMA

Figure 2 Validation - blocking errors in logType field in the table WorkflowLog

Table	Field	Shortcode	Name	Description	Expression	Type of QC	Level error	Message
WorkflowLog	logType	END_IT1	Import test	Checks if the import process has detected errors		FIELD	BLOCKER	The import process has failed due to schema errors
WorkflowLog	logType	END_IT2	Import test	Checks if the import process has detected errors		FIELD	BLOCKER	One or more tables have not been found according to the expected template
WorkflowLog	logType	END_IT3	Import test	Checks if the import process has detected errors		FIELD	BLOCKER	The import process has detected error in the geometries

Table 1 presents an overview of the error types recorded in the WorkflowLog table. An INFO message means that there are no errors found in the imported dataset. A dataset name (file name) and path to the internal storage are displayed in the field “harvestSource”.

Table 1 Information about error types. File import errors are blue and geometry errors are yellow.

Information in logType	Information in logMessage	Explanation
INFO	Dataset schema check is successful. All tables and fields defined in the GeoPackage template are present in the input dataset. No missing tables or fields.	This message is given if the schema matches the GeoPackage template (additional tables or fields are allowed).
WARNING	Missing attributes: @Value(missing_attr) The import is blocked because the missing attributes can cause workflow errors.	Warning is always connected to ERROR messages for instance “Some fields are missing in existing tables. See details under WARNING logType.”
WARNING	Missing tables: @Value(missing_tables) The import is not blocked but there are missing tables that are not imported.	The import is not blocked because missing tables are just skipped, but all the other tables can be imported.
ERROR-BLOCK	The uploaded file has a wrong file extension, only .gpkg and .zip are supported.	The import was not successful. This error will appear if a file with the wrong file extension is imported.
ERROR-BLOCK	The uploaded zip file contains file(s) with a wrong file extension, only .gpkg is supported.	The import was not successful. This error will come up if a file with the wrong extension in zip is imported (only gpkg allowed).

ERROR-SCHEMA	Dataset schema check has failed. The input dataset does not comply with the GeoPackage template. Some tables are missing. See details under WARNING logType.	This error will come up if there is a mandatory table that is completely missing.
ERROR	Empty geometry detected in @Value(feature_type_name) at id @Value(id)	This error comes up if there is no geometry (but attribute values are present). If there are also no attribute values, this is just an empty record that is ignored.
ERROR	Wrong CRS detected in @Value(feature_type_name) at id @Value(id)	This error comes up if the coordinate reference system (CRS) is not in the following: EPSG 4326, 4258, 3035. Only the first 10 records are logged this way. After that, the error below is shown.
ERROR	More than 10 features with wrong CRS detected in @Value(feature_type_name)	This error will come up if there are more than 10 records with the wrong CRS. It means that it stopped logging the subsequent errors.
ERROR	Wrong geometry @Value(type) detected in @Value(feature_type_name) at id @Value(id)	Wrong geometry type (only Multi(Polygon) allowed)
ERROR	More than 10 features with wrong geometry detected in @Value(feature_type_name), stopped logging these errors	Only first 10 features with errors are logged this way, after that a general message is provided.

**Remember !**

- ✓ Do not delete empty fields in the tables or empty tables from the GeoPackage templates. Keep all the tables and fields from the templates even if they are empty (otherwise this will cause errors).
- ✓ Consult WorkflowLog table after each imported dataset to verify if dataset has been imported successfully or errors have been detected in the dataset.
- ✓ Geometry errors must be corrected in the GeoPackage file itself.
- ✓ It is recommended correcting errors in tabular data in the GeoPackage file.



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