



News from JRC Helpdesk, Good Practices

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Overview

- INSPIRE Evolution
- Helpdesk
- GeoPackage Good Practice



INSPIRE Evolution

- The Registry is the definitive source in place of the IRs
 - New or extended codelists
 - New CRS
 - <https://github.com/INSPIRE-MIF/helpdesk/blob/main/crs.md>
- Technical Guidance documents being migrated to asciidoc, available via GitHub
- Corrections and Extensions of data models and schemas also being managed via GitHub



INSPIRE Helpdesk etc.

- Replacement of INSPIRE Forum (closed Jan 2021) on GitHub & MORE!
- Sections:
 - **Issues:** Errors
 - **Discussions:** New ideas, extensions but also questions not related to bugs!!
 - **Code:** Resources such as documents, schemas, etc. (Only on repositories)

INSPIRE-MIF / helpdesk Public

Code Issues 8 Pull requests Discussions Actions Projects Security Insights

main 2 branches 0 tags Go to file Add file Code

MarcoMinghini Merge pull request #97 from INSPIRE-MIF/sMorr... 634a9f2 on May 12 21 commits

.github/ISSUE_TEMPLATE	Update issue templates	2 years ago
README.md	Update README.md	7 months ago
code-of-conduct.md	Update code-of-conduct.md	2 years ago
crs.md	Correct id of EVRF2019 height and mean-tide height	8 months ago

README.md

INSPIRE helpdesk

This space is used for discussions and announcements on general INSPIRE topics. Before reporting a problem or asking a question here, please make sure that the problem or question is not relevant to (only) a specific INSPIRE component. If this is the case, please use the dedicated helpdesks for the

Community discussion for generic INSPIRE related topics

helpdesk inspire

Readme Code of conduct 5 stars 24 watching 5 forks

Releases No releases published

Packages



INSPIRE Helpdesks

Base URI for INSPIRE Helpdesks: <https://github.com/INSPIRE-MIF>

- **Generic Helpdesk:** discussions and announcements on general INSPIRE topics
<https://github.com/INSPIRE-MIF/helpdesk>
- **GeoPortal Helpdesk:** issues and discussions on existing and proposed GeoPortal functionality
<https://github.com/INSPIRE-MIF/helpdesk-geoportal>
- **Registry Helpdesk:** discuss and propose changes to the content and the service of the INSPIRE registry
<https://github.com/INSPIRE-MIF/helpdesk-registry>
- **Validator Helpdesk:** discussions and announcements around INSPIRE validation & conformity testing
<https://github.com/INSPIRE-MIF/helpdesk-validator>



INSPIRE Repositories

- **Application Schemas:** draft and final version of all INSPIRE Schemas (including OWS extensions)
<https://github.com/INSPIRE-MIF/application-schemas>
- **Technical Guidelines:** management of changes being shifted to GitHub, updated TG to be published as AsciiDoc
<https://github.com/INSPIRE-MIF/technical-guidelines>
- **UML Models:** management of changes to the INSPIRE UML models
<https://github.com/INSPIRE-MIF/uml-models>
- **Model Transformation Rules:** collection of simplification rules
<https://github.com/INSPIRE-MIF/model-transformation-rules>

Good Practice on GeoPackage: aim

Aim:

- To describe a mechanism to create **INSPIRE datasets encoded using the OGC GeoPackage encoding standard**.
- Ensure compliance: These datasets will be **compliant with the INSPIRE Implementing Rules (IR), and technical compliance can be shown through transformation to the default encoding (GML)**.
- **Alternative encoding:** In this perspective, the GeoPackage can be used both as an additional and an alternative encoding for INSPIRE datasets.

Main benefits of the Good Practice

to Data Providers:

- the relatively simple data models focus on key values, which simplify data harmonisation as compared to creating full INSPIRE GML
- more robust encoding based on the use of templates reduces number of schema and encoding errors
- usability and re-usability of provided data is considerably improved
- GeoPackage files can handle large number of features in a smaller file size, hence the sharing of entire data sets, sized medium to large is facilitated.

to Data Users:

- the simplified data model aligns directly with use cases
- GeoPackage encoded data can be directly used in GIS tools without any ETL process, with good performance. The data consumption experience is considerably improved with possibility to directly edit/update data, create views and store styles
- loading data on GIS or making queries on the file database is faster, since the vector layers in geopackage are inherently rtree indexed (spatial indexing).





A Quick Clarification

What options are there for encoding INSPIRE compliant data?

Default (Encoding)

The default encoding is part of all data specifications

Data that complies to default encoding is INSPIRE compliant

Central Tooling is available, e.g. INSPIRE ETF Validator

Additional (Encoding)

Does not have to satisfy all legal (IR) requirements

Data owner does **not** need to prove compliance

Central tooling is not **required**

OR

Alternative (Encoding)

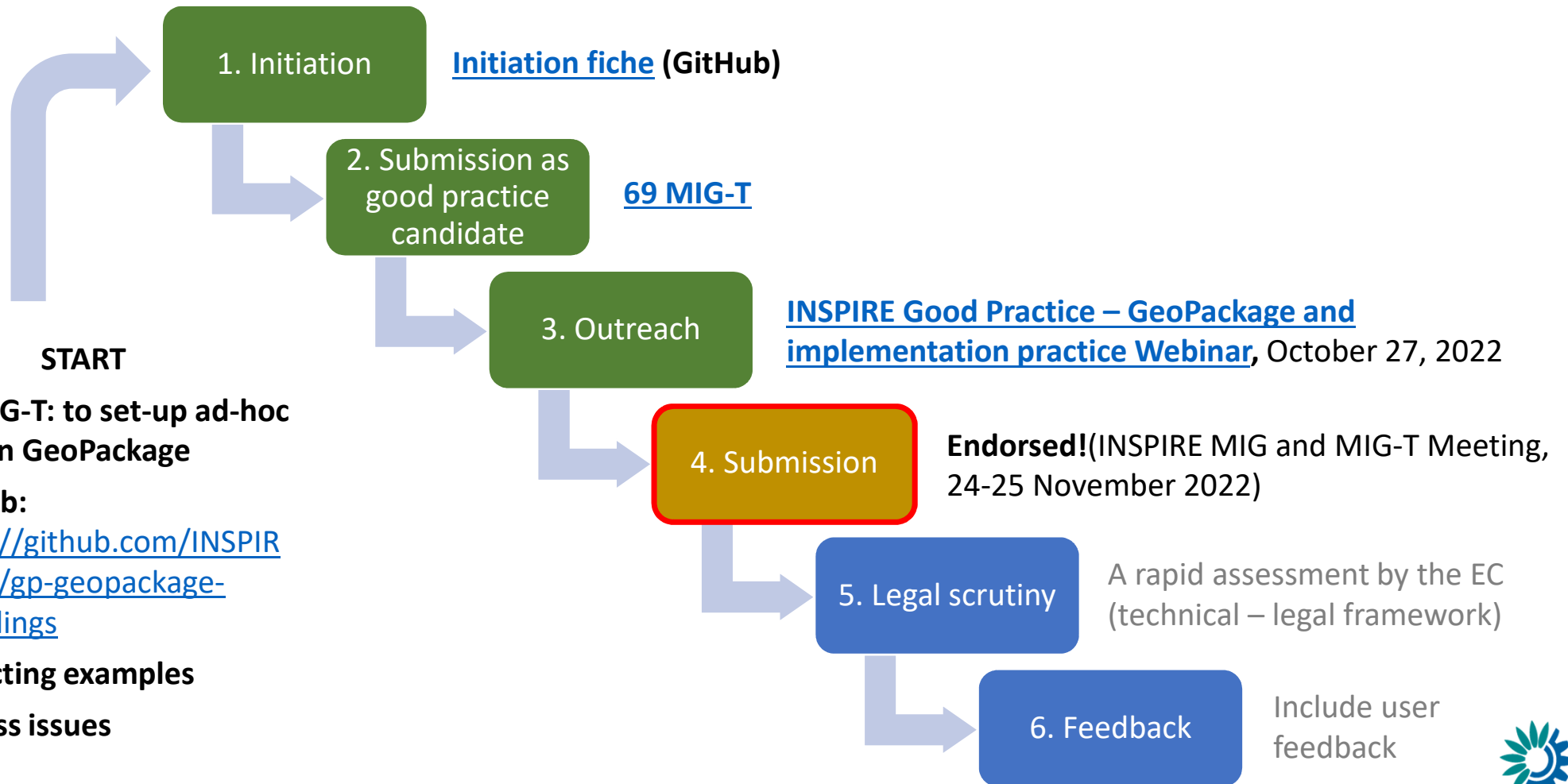
Shall satisfy all (legal) IR requirements

Data owner needs to prove compliance

Central tooling is not **available**

! Needs to be accepted by MIG-T as "Good Practice" !

INSPIRE Good Practice for GeoPackage – process status



START

- **63 MIG-T: to set-up ad-hoc WG on GeoPackage**
- **GitHub:**
<https://github.com/INSPIRE-MIF/gp-geopackage-encodings>
- **Collecting examples**
- **Discuss issues**



About GeoPackage

- *“GeoPackage is an open, standards-based, platform-independent, portable, self-describing, compact format for transferring geospatial information”*
- Based on database system SQLite, can store:
 - Vector features with attributes (including spatial data and other tabular data)
 - Tile matrix sets of imagery, raster maps
 - Tile gridded coverage data (Extension)
 - Metadata and schema constraints
- Data sharing without information loss between GIS and direct use in different GIS
- Supported by OGC GeoPackage validation tools, <https://github.com/opengeospatial/ets-gpkg12>
- Maximum size ~140TB, good read performance
- Suitable for desktops, network servers, and mobile applications



Source: Thorsten Reitz, Heidi Vanparys ([GeoPackage Webinar](#))



Evidence of GeoPackage implementation (outreach webinar)

Thematic domain	INSPIRE data model covered by GeoPackage implementation
Environmental Noise Directive reporting of noise sources, strategic noise maps and noise action plans	<ul style="list-style-type: none">• Area Management• Transport Networks: roads, railways and airports• Human Health: environmental health determinant measure
Addresses, Denmark Addresses, Finland	<ul style="list-style-type: none">• Addresses
Geological Map of Italy 1:100k Geology – extended model for easy-to-use, interoperable subsurface data, Italy	<ul style="list-style-type: none">• Geology

Examples: <https://github.com/INSPIRE-MIF/gp-geopackage-encodings/blob/main/examples/overview.md>

GeoPackage Webinar: <https://inspire.ec.europa.eu/events/inspire-good-practice-geopackage-and-implementation-practice-webinar>



Example: Environmental Noise Directive reporting

Wide stakeholders' cooperation

- European Environment Agency (EEA)
- ETC and Eionet (Noise experts and reporters)
- European Commission
- EEA consultancy (wetransform, Epsilon Italia, KU Leuven, other EEA consultancy services)
- National implementations of Noise portals and data repositories

Darja Lihteneger
Thorsten Reitz

L 400/160 EN Official Journal of the European Union 12.11.2021

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)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2002/49/EC of the European Parliament and of the Council of 26 June 2002 on the assessment and management of environmental noise ⁽¹⁾, and in particular Article 10(2) and point 1 of Annex I thereof,

Whereas:

(1) After the modifications introduced into Directive 2002/49/EC by the Regulation 2017/1004 of the European Parliament and of the Council ⁽²⁾ a mandatory data repository and a mandatory digital information exchange mechanism needs to be developed by the Commission for Member States to be able to produce strategic noise maps and summaries of noise action plans.

Eionet report – ETC/ATNI 2021 (ETC/HE – Updated 2022)

Environmental Noise Directive

Data model documentation version 4.3

October 2022

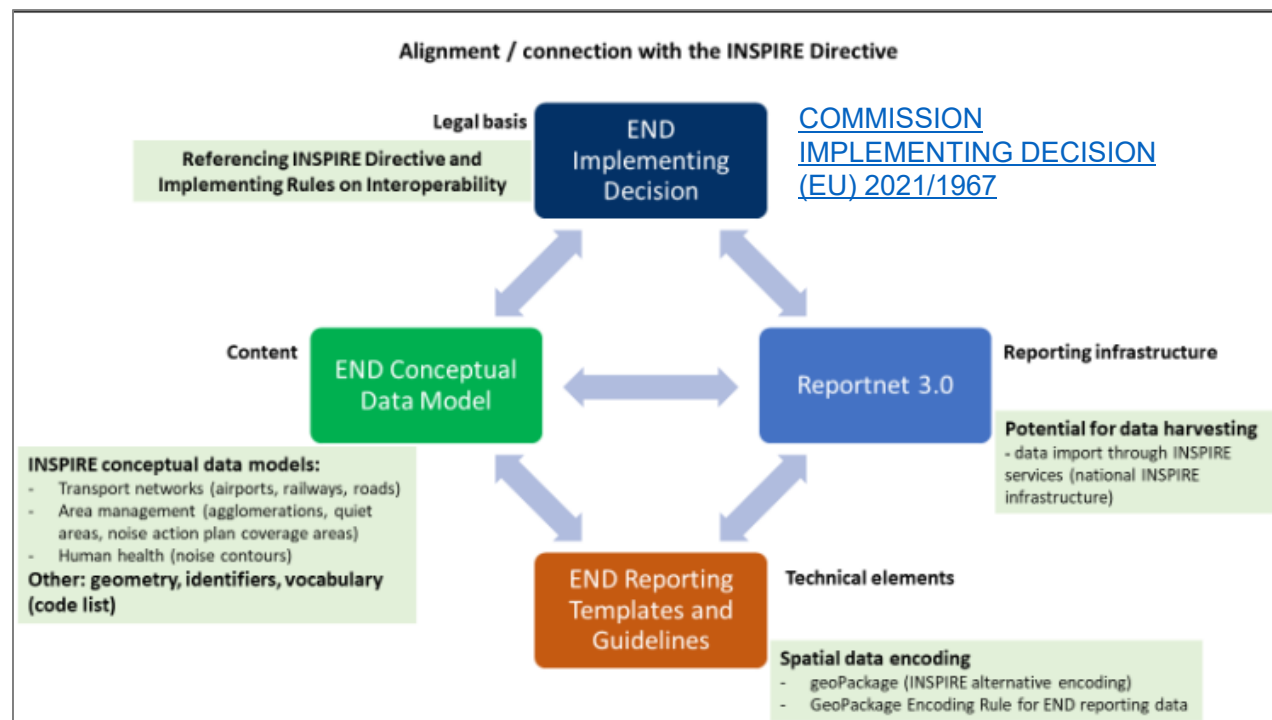
Authors:
 Núria Blanes (UAB), Maria José Ramos (UAB), Miquel Sáinz de la Maza (UAB),
 Darja Lihteneger (EEA), Eulàlia Peris (EEA), Stefania Morrone (Epsilon Italia)

ETC/ATNI consortium partners:
 NILU – Norwegian Institute for Air Research, Aether Limited, Czech Hydrometeorological Institute (CHMI), EMSISA SA, Institut National de l'Environnement Industriel et des Risques (INERIS), Universitat Autònoma de Barcelona (UAB), Umweltbundesamt GmbH (UBA-VI), Astera innova, Transport & Mobility Leuven NV (TML)

European Environment Agency
 European Topic Centre on Air pollution,
 transport, noise and industrial pollution

Example: Environmental Noise Directive reporting

- **Aligning directives: END and Noise**
- **END conceptual data model:** re-using or extending INSPIRE data models
- **GeoPackage encoding**
- **Reporting into Reportnet3**
- **National implementations:** Noise portals and repositories supporting national data collection, validation, reporting and INSPIRE implementation



Noise Eionet Portal: <https://www.eionet.europa.eu/reportnet/docs/noise>



Other GeoPackage Examples

- Implementation of addresses in Denmark: GeoPackage generated by FME
- Addresses and Topographic Map Database, Finland: GeoJSON/Geopackage as an encoding for Download Services (OGC API – Features)
- Geology Data:
 - INSPIRE-extended data model and GPKG encoding for interoperable geological subsurface data
 - For geology core: derived Geological Map of Italy both in GPKG (using the GE gpkg template) and GML format (using geology core xsd) and demonstrated that possible to flip data encoding without information loss