## **Table of Contents**

- Introduction
- · State of Play
  - Coordination
  - Functioning and coordination of the infrastructure
  - Usage of the infrastructure for spatial information
  - Data Sharing Arrangements
  - · Costs and Benefits
- · Key Facts and Figures.
  - Monitoring Indicators

## Introduction

The INSPIRE Directive sets the minimum conditions for interoperable sharing and exchange of spatial data across Europe as part of a larger European Interoperability Framework and the e-Government Action Plan that contributes to the Digital Single Market Agenda. Article 21 of INSPIRE Directive defines the basic principles for monitoring and reporting. More detailed implementing rules regarding INSPIRE monitoring and reporting have been adopted as Commission Implementing Decision (EU) 2019/1372 on the 19th August 2019.

This country fiche highlights the progress in the various areas of INSPIRE implementation. It includes information on monitoring 2021 acquired in December 2021 and Member States update.

## State Of Play

A high-level view on the governance, use and impact of the INSPIRE Directive in Luxembourg. More detailed information is available on the INSPIRE knowledge base.

Luxembourg has an INSPIRE law since 2010 and has implemented and maintainted the national INSPIRE node since then.

All Annex I data has been harmonised from the beginning and the harmonisazion of Annex II and III data has been planned in 2017 in a 4 year road map which has been transposed until the End of 2020.

Everything went well and almost all INSPIRE relevant data has been made available in a harmonised way. A 4 year roadmap has been set up since 2021 for the operation of the INSPIRE platform and harmonization of new or updated datasets and some more data has been added / harmonized since.

In order to cope with the new requirements from the HVD Implementing Regulation, the roadmap has been adapted. From this year on, an OGC API Features service will be added for every vector dataset and the entire platform might be reused in order to serve non-INSPIRE relevant HVD in the same way we already to it for INSPIRE-relevant HVD

#### Coordination

# National Contact Point

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## **Coordination Structure & Progress:**

## National Contact point

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Contact person - substitute	Jeff Konnen	
Email address	jeff.konnen@act.etat.lu	

## Coordination Structure

- Comité de Coordination de l'Infrastructure Luxembourgeoise de Données Géographiques CC-ILDG, created in 2009, is an organisation that acts as a steering committee of all the activities concerning the creation, updating, management and distribution of geographic data, either in analogue or in digital form. This group is led by the Administration du Cadastre et de la Topographie (ACT), who is responsible for an important part of the geographic data currently available in the Grand-Duchy.
- Groupe Technique de l'Infrastructure de Données Géographiques GT-ILDG: The members are representatives of their respective public organizations, appointed by their ministers or directors in charge meet 2-4 times a year to discuss projects related to geodata, to discuss challenges and the progress of development of the geoportal tools created by the ILDG / Geoportal team at the ACT. In relation to the COVID-19 Crisis, the meetings have been held virtually and they have been recorded. This has allowed a much more important audience for the group.
- Thematic Working Groups: if special interest topics arise during general meetings, working groups are constituted
  and agree a meeting schedule. The actual WGs are: WG for legislation purposes, WG for points of interest, WG for
  water data, WG for geodata policies, WG for the management of metadata. Currently there are two active working
  groups, one for the usage of UAVs and one for creating an online platform about underground data (pipes etc)

# Progress

- The separation of CC-ILDG and GT-ILDG has been decided recently so that the "CC" can focus on the tasks given by law and the GT can focus on technical aspects.
- During the last 4 years, most if not all geographic data produced by the public sector in Luxembourg has been

released under Creative Commons 0 license to the public domain and is available on https://data.public.lu. This is a huge step and it also helps the public actors to collaborate better.

- All the data that is being harmonized for INSPIRE is taken from the open data portal, harmonized and put back there under the same license as INSPIRE GML.
- The whole harmonizing process has been fully automated, so that GMLs, ATOM Feeds and WMS View Services are created by a process that is fed by mapping rules

#### Functioning and coordination of the infrastructure

- In order to be able to deliver a more complete portfolio of Luxembourg's INSPIRE-related datasets, ACT has proceeded to a detailed assessment of Luxembourg's situation in the INSPIRE dossier with the help of external experts. This inventory is now being done once a year and we currently focus on streamlining the process in regard to environmental reporting obligations so that datasets that are officially submitted to the EC through EIONET are also being shown as INSPIRE datasets and services
- All the identified datasets have to be published under an open license (CC0 if possible) on the national data portal. The INSPIRE experts will then contact the data producers to define the mapping rules and they will implement a script that can be automatically executed regularly.
- Domain experts only have to update their data on the open data portal and the INSPIRE scripts will automatically convert the data to the INSPIRE data models.

The "Groupe Technique" of the ILDG meets 2-4 times a year to discuss different aspects of the ILDG and to coordinate the experts work on INSPIRE.

#### Usage of the infrastructure for spatial information

- The backbone of the Luxemburg's SDI is the Luxembourgish geoportal which opens up an access to the different users. The LSDI offers a lot of OGC compliant webservices (WMS,WFS, CSW), open data and a very powerful viewer (http://map.geoportail.lu). . A lot of efforts are being put into the visualization of 3D data (pointclouds, terrains, meshes, 3D buildings).
- Independently of the special geoportal dedicated to INSPIRE, the national geoportal of Luxembourg has great success and is widely used by the general public. It counts more than 50'000 visitors per day, through its different viewers, webservices and APIs.

## Data sharing arrangements

The LSDI and especially the INSPIRE implementation is based on the principle that all geodata should be released under an open license to the open data portal.

This means that there are no further data sharing arrangments needed anymore as all the data is openly available for all, without any restrictions.

# Costs and benefits

- For the years 2013-2022, the costs of geoportal, INSPIRE and related activities, can be approximatively summarised as follows:
  - 。 2013 1.125.000 EUR
  - 。2014 1.105.000 EUR
  - 。 2015 1.135.000 EUR
  - 。 2016 1.160.000 EUR
  - 。2017 1.280.000 EUR
  - 。2018 1.400.000 EUR
  - 。 2019 1.400.000 EUR
  - o 2020 1.440.000 EUR
  - 2021 1.440.000 EUR2022 1.440.000 EUR
  - 。 2023 1.440.000 EUR
- The existence of the national geoportal, seen independently from the INSPIRE initiative, has brought great benefits to Luxemburg's public sector bodies, private firms and the citizen in general.
- INSPIRE and the geoportal have been integrated on the list of important factors in the national administrative simplification program.

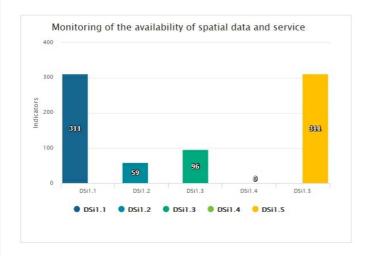


# Indicators in support of Commission Decision (EU) 2019/1372 implementing Directive 2007/2/EC (INSPIRE) as regards to monitoring and reporting

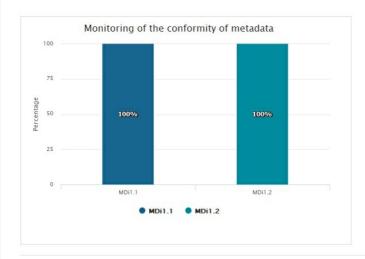
Graphs generated with data taken from: https://inspire-geoportal.ec.europa.eu/mr2022\_details.html?country=lu

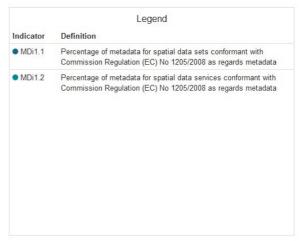
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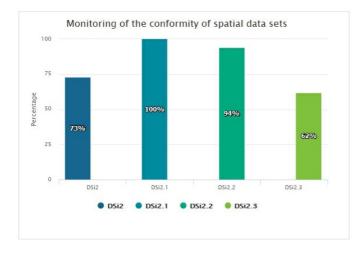
Endpoint: 29f5dbeb-474e-42a3-94bc-1b76952299ad



Indicator	Definition
<ul><li>DSi1.1</li></ul>	The number of spatial data sets for which metadata exist
<ul><li>DSi1.2</li></ul>	The number of spatial data services for which metadata exist
• DSi1.3	The number of spatial data sets for which the metadata contains one ormore keywords from a register provided by the Commission indicating that the spatial data set is used for reporting under the environmental legislation
● DSi1.4	The number of spatial data sets for which the metadata contains a keyword from a register provided by the Commission indicating that the spatial data set covers regional territory
OSi1.5	The number of spatial data sets for which the metadata contains a keyword from a register provided by the Commission indicating that the spatial data set covers national territory

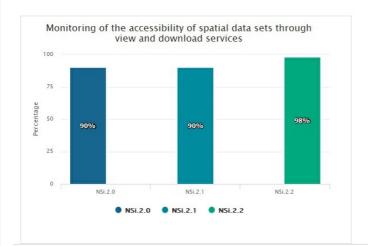




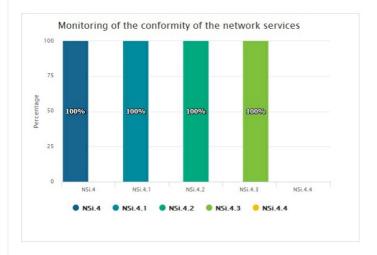


ODSi2	Percentage of spatial data sets that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets
● DSi2.1	Percentage of spatial data sets, corresponding to the themes listed in Annex I,that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets
● DSi2.2	Percentage of spatial data sets, corresponding to the themes listed in Annex II, that are in conformity with Commission Regulation (EU) No 1089/2010as regards interoperability of spatial data sets
• DSi2.3	Percentage of spatial data sets, corresponding to the themes listed in Annex III,that are in conformity with Commission Regulation (EU) No 1089/2010 as regards interoperability of spatial data sets

Legend



Legend		
Indicator	Definition	
● NSi.2.0	The Percentage of spatial data sets that are accessible through view and the download services	
NSi.2.1	The Percentage of spatial data sets that are accessible through view services	
NSi.2.2	The Percentage of spatial data sets that are accessible through download services	



Legend		
Indicator	Definition	
NSi.4	Percentage of the network services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
● NSi.4.1	Percentage of the discovery services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
● NSi.4.2	Percentage of the view services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
● NSi.4.3	Percentage of the download services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	
NSi.4.4	Percentage of the transformation services that are in conformity with Commission Regulation (EC) No 976/2009 as regards the Network Services	