

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 2020](#) acquired in December 2020 and Member States update.

State Of Play

A high-level view on the governance, use and impact of the INSPIRE Directive in Latvia. More detailed information is available on the [INSPIRE knowledge base](#).

Coordination

National Contact Point

Name of Public Authority: Deputy State Secretary of the MoEPD of Latvia

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National INSPIRE Website: https://geolatvija.lv/geo/Cms/CmsArticle_InspirePrincipleView?articleId=3

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Coordination Structure & Progress:

• National Contact point

| | |
|--------------------------|--|
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- The Ministry of Environmental Protection and Regional Development (MEPRD) is responsible for the State policy development, organization and coordination in the field of environment protection (17 from 34 INSPIRE data sets refers to environment), regional development, information and communication technologies` development and digital transformation, State information systems` development, as well as coordination of INSPIRE directive implementation (MEPRD) and development and maintenance of State Uniform Geospatial Information Portal (Latvian national geoportals - https://geolatvija.lv/geo/Cms/CmsArticle_InspirePrincipleView?articleId=3) (State Regional Development Agency - SRDA - authority operating under the supervision of MEPRD).
- In addition to the MEPRD and Ministry of Defence nine other ministries and their 20 subordinated institutions are involved into INSPIRE implementation, namely the Ministry of Justice, the Ministry of Agriculture, the Ministry of Transport, the Ministry of the Interior, the Ministry of Education and Science, the Ministry of Economics, the Ministry of Health and the Ministry of Culture. Each ministry is the designated ministry responsible or jointly responsible for creating and updating the geospatial data sets and their metadata in respect of the data themes referred to in the Annexes I, II and III of INSPIRE Directive.
- The Latvian Geospatial Information Agency (LGIA) is the leading authority for State policy implementation in the area of geodetic, mapping and geospatial information. The LGIA is subordinate to the Ministry of Defence and its activities are monitored by the Ministry of Defence.
- The Law on Geospatial Information provides that associations and foundations (such as the Latvian Association of

Surveyors and the Latvian Association of Cartographers and Geodesists), which bring together natural and legal persons working in the field of geospatial information, may participate in the implementation of state policy in the field of geospatial information, by undertaking discussions concerning regulatory documents and standards, providing opinions, and fostering public involvement in the circulation of geospatial information and improving professional qualifications.

Progress

- Taking into consideration the reproach and warning received from the European Commission (EC) in 2015 regarding potential legal proceedings related to faulty implementation of the INSPIRE Directive in Latvia, as well as results of the joint meeting in January 2016 between the EC and Latvian responsible institutions representatives, the Ministry of Defence, in cooperation with responsible ministries, prepared an informative report about “Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) implementation in Latvia”. The report was supplemented by an action plan for disposal of implementation shortcomings of the INSPIRE Directive. The report was reviewed and accepted for information in the Cabinet of Ministers on 26 April 2016 (Cabinet of Ministers meeting minutes No. 20, 31§). The action plan – the task performance schedule for the INSPIRE Directive implementation and the action plan for disposal of implementation shortcomings of the INSPIRE Directive (priority data sets) was sent to the EC on the 3rd of May 2016.
- One of the activities under the action plan was organization of training in order to improve knowledge and skills of responsible institutions’ specialists responsible for INSPIRE data preparation for processing geospatial information and to solve the stated problems in geospatial data sets and metadata publication. Thus, the Latvian Geospatial Information Agency, in cooperation with the State Regional Development Agency, organized seven practical training sessions (“Master classes”) in 2016 where representatives from the responsible institutions regarding the INSPIRE data sets preparation took part. In total, 65 participants from 24 different data holders’ organizations took part in the classes (on average 21 participant per class). The following themes were discussed in the “Master classes”: metadata, their preparation and publication, work with the INSPIRE interactive specification and data specifications; the INSPIRE code lists and the INSPIRE register; preparation of the ready INSPIRE data sets for publication in the INSPIRE viewing services, visualizing the ready data according to the requirements of the specification; the INSPIRE viewing and downloading services; the INSPIRE data publication on the Latvian geoportal infrastructure and the INSPIRE data exploitation in environment reports (example of the Directive concerning urban waste-water treatment).
- Geospatial data were prepared during the INSPIRE practical classes for several INSPIRE Directive’s themes, for instance, Utility and governmental services (Annex III, theme 6), Population distribution – demography (Annex III, theme 10), Sea regions (Annex III, theme 16), Area management/restriction/regulation zones and reporting units (Annex III, theme 11).
- Thanks to these classes, understanding of the INSPIRE Directive, its essence and implementation process as well as knowledge and practical work sequence with the INSPIRE documentation and geospatial data preparation methodology was improved among Latvian specialists. Compared to 2015, in 2016 and in 2017 the number of registered metadata entries was considerably increased in the Latvian geoportal as well as the number of prepared and published INSPIRE data sets and services.
- In April 2017, the Ministry of Defence as the responsible institution for the INSPIRE Directive implementation coordination in Latvia, reviewed the execution of the 2016 action plan. It was found that the best progress in execution of the action plan was made in the institutions under the Ministry of Defence, Ministry of Health, Ministry of the Interior and Ministry of Justice. Delays in execution of the plan were stated in the institutions under the Ministry of Agriculture, Ministry of Transport, Ministry of Culture, in the Ministry of Education and Science. However, the greatest delays were discovered in the institutions under the Ministry of Environmental Protection and Regional Development. The most important reasons for the delays were the lack of competence among geospatial data sets holders and preparers, incompliance of the existing services to the INSPIRE specification, insufficient financing for the INSPIRE data sets and services preparation.
- Taking into account the stated facts, the Ministry of Defence drew up a new informative report in April 2017 “Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) implementation in Latvia” (Action plan for 2017”).
- The report concluded that further work of the INSPIRE Directive implementation was mostly related to the geospatial data sets which fell under the competence of the Ministry of Environmental Protection and Regional Development and that involvement of the Ministry of Defence in coordination of the geospatial data provision under the responsibility of the Ministry of Environmental Protection and Regional Development exceeded the authorities and competence of the Ministry of Defence. For successful further implementation of the INSPIRE Directive, direct involvement of the Ministry of Environmental Protection and Regional Development was necessary. Therefore, it was suggested to appoint the Ministry of Environmental Protection and Regional Development as the responsible institution for further implementation coordination of the INSPIRE Directive in Latvia.
- The report was reviewed in the Cabinet of Ministers on 7 November 2017 (Cabinet of Ministers meeting minutes No. 55, 40§). It was decided that the Ministry of Defence would work out amendments to the Cabinet of Ministers Instruction No. 686 of 28 December 2013 “On the Latvian Geospatial Information Development Concept” by appointing the Ministry of Environmental Protection and Regional Development as the responsible institution for coordination of implementation of the INSPIRE Directive. Besides, the Ministry of Environmental Protection and Regional Development was tasked to find solutions for financing redistribution till 15 November 2017 in order to provide compliance with the INSPIRE Directive

requirements. Since comparatively great delays in the INSPIRE Directive implementation were also found in the responsibility fields of the Ministry of Transport, this Ministry had to find a solution, too. If till 15 November 2017 redistribution of financing was not made, the Ministry of Environmental Protection and Regional Development and the Ministry of Transport would have to assess the possible measures related to the INSPIRE Directive's requirements implementation in their respective fields of responsibility, to fully or partly finance the project using the European Union financing available for the respective ministry and in case of necessity to suggest redistribution of the financing.

- On 9 January 2018 the Cabinet of Ministers Instruction No. 12 "Amendments to the Cabinet of Ministers Instruction No. 686 of 28 December 2013 "On the Latvian Geospatial Information Development Concept"" became valid. The Instruction specified that in the future the implementation coordination of the INSPIRE Directive would be done by the Ministry of Environmental Protection and Regional Development.
- Latvian data providers keep working on the development of their information systems in order to ensure the availability of electronic geospatial data sets to end users. Public availability of data creates a feedback loop between the data provider and the society, which continuously improves data quality **[Coherence]**.
- In order to provide for availability of the INSPIRE priority data and metadata and development and implementation of functionality needed for publication, two EU structural funds projects have been started and are executed by the largest holder of the INSPIRE priority environment data in Latvia – the state Ltd. "Latvian Environment Geology and Meteorology Centre".

The main achievements of this reporting period (2016-2018) **[Effectiveness]**:

- The national geoportal (became operational in 2014) has improved the availability and accessibility of geospatial information - https://geolativija.lv/geo/Cms/CmsArticle_InspirePrincipleView?articleId=3
- In 2017 (and continuing now in 2019) the metadata of data sets and services was significantly improved.
- In 2018, the number of records published in the metadata catalogue has increased in the following profiles: in the INSPIRE data profile - 109 records (compared to 106 in 2017), in the INSPIRE services profile 120 records (in 2017 - 110 respectively), in the Latvian data profile – 41 records (in 2017 - 35 respectively).
- According to the specification of the INSPIRE directive, State Regional Development Agency (SRDA) has established a single centralized point for entering and distributing metadata - a metadata catalogue for centralized infrastructure (GDS). Any authority in it can request user rights and publish their metadata for data or services.
- GDS provides both data storage, distribution and service development and maintenance. As in accordance with the Cabinet of Ministers' Decree No.686 "On the Conception of Geospatial Information Development in Latvia" on the preparation and updating of a specific data set and its metadata is the responsibility of the relevant ministry have the opportunity to make relevant to distribute the data to the service, which means that the data set holder prepares the data according to the INSPIRE specification and guidelines, establishes the relevant service (if there is no own infrastructure, then can use the SRDA centralized solutions GDS) and register the service metadata in the GDS metadata catalogue.
- Since the providing of access to a specific service and service validation is the responsibility of each responsible ministry (data set owners), SRDA with its systems provides all the necessary functionality to do so: 1) the service management module provides the service required for the institution, 2) shared access management systems provide access control, 3) the Metadata catalogue provides the publishing, availability and transfer of metadata to the INSPIRE portal. As the new version of the validator is publicly available, data set holders can validate their services in it.
- The Metadata catalogue is being updated with the ability to specify keywords for priority data sets; changes introduced in April 2019.
- Many data providers developed their spatial data infrastructure, supporting INSPIRE data and services.
- More active cooperation between the bodies responsible for the implementation of the INSPIRE Directive was initiated, workshops and meetings, consultation process takes place continuously.

The main achievements of this reporting period (2019-2021):

- In the response to the official notice from European Commission (COM) on possible infringements regards the implementation of the INSPIRE, Ministry of Environmental Protection and Regional Development of the Republic of Latvia has implemented several direct and tangible improvements to address identified shortcomings and delays.
- In 2019, in a comprehensive reply on official notice from COM (letter 09.04.2019. No.1-132/3169) Latvia informed COM on the progress on publication of INSPIRE initial data sets and provisionally set the complete publication of priority data sets by the end of October 2020.
- Since the last report, Latvia has gained significant progress on publication of data sets and there are 84 downloadable data sets available on INSPIRE Geoportal at the moment, including 32 downloadable priority data sets. In comparison, as we informed in Brussels in a bilateral meeting with COM, on September 20, 2019 there were only 11 downloadable data sets, including 2 downloadable priority data sets.
- It has to be noted that national implementation efforts of INSPIRE directive have also included significant managerial and administrative changes and improvements. The coordination and monitoring process has been addressed in order to ensure timely achievement of results to secure that data sets are available and downloadable. To meet our commitments, significant improvements have been made to secure better coordination of activities resulting in publishing as many data

sets as possible, such as:

- On October 15, 2019, the Cabinet of Ministers approved the report "On the action of the Republic of Latvia to ensure that all violations referred to in the formal notification violation procedure of the European Commission of 7 March 2019 in case No.2019 / 2027". The report included renewed action plan for the implementation of priority spatial data sets under directive 2007/02/EC in Latvia.
 - The new team of INSPIRE data publication coordination has been established. The coordination work is actively continuing including updating and reporting on INSPIRE issues in State secretary meeting (September 17, 2020) and providing necessary support to the data publishers.
 - The framework of reporting and communication with the data publishers on practical and governance (state secretary) level has been renewed.
 - In accordance with INSPIRE specifications a new metadata catalogue has been created that includes the functionality of describing priority data sets.
 - The harvesting services to INSPIRE geoportal have been set up.
 - The owner of majority of the priority data sets, Latvian Environment, Geology and Meteorology Centre (LEGMC), has developed a central LEGMC geospatial data information system that provides a possibility to collect all geospatial information at the disposal of the LEGMC, ensuring that this information is used in the context of INSPIRE directive.
- There are still several challenges that are addressed in order to publish initial list of INSPIRE priority data sets. The publication of some data sets has been delayed due to a lack of experts in the field of INSPIRE specifications. The preparation and converting of data according to the INSPIRE specifications is financed exclusively by EU funds, therefore the extending deadlines of projects in certain cases influence the initial plans and delay publishing of data sets. Regarding the data sets that are not published fully, it has to be emphasized that most data publishers have already prepared the data and the publication of download services is at a technical process of describing correct metadata and configuring publication tools.
 - Overall Latvia has made **significant progress in publishing priority data sets — all the data sets have been published except** few that will be provided in the first half of 2021 (9 themes compiled in 6 data sets by LEGMC). Several data themes have been compiled in single data sets. The up to date list of corresponding themes and data sets is available through national contact point.

Functioning and coordination of the infrastructure

- Because the Latvian geospatial information development concept, which was approved under Cabinet Order No 718 of 20 November 2007, and provides for the creation of an infrastructure for geospatial information (IGI) in Latvia, is currently outdated, LGIA has begun developing its updated version.
- The Latvian national geoportal became operational in December 2014. The geoportal has improved the availability and accessibility of geospatial information. Technical problems due to the low level of interoperability remain (e.g. mismatches between topographic maps and cadastral data) and some data providers have not documented all necessary metadata. Further investments are needed. The geoportal allows data providers that do not have their own data dissemination system to publish their data and gives Latvian citizens the opportunity to participate electronically to spatial planning and public consultations.
- The State Administration Structure Law provides that state and local authority bodies may cooperate both on a one-off or permanent basis by concluding an interdepartmental agreement or a cooperation agreement. This model of cooperation is also used to provide permanent cooperation for sharing geospatial information in compliance with the Law on Geospatial Information, which provides that users of geospatial data sets should conclude a cooperation agreement with the holder of the relevant geospatial data set in order to share data sets **[Coherence]**.
- Currently metadata on major Latvian geospatial data sets and services are stored and maintained in metadata catalogue, maintaining by SRDA — Latvia's geoportal (<https://geometadati.viss.gov.lv/geoportal/catalog/wrapper/ivisgds.page#/>).

Usage of the infrastructure for spatial information

- Geospatial data sets are used for a wide range of purposes by national and local institutions to fulfil their role and responsibilities. Many geospatial data providers have published their data and derived services on the national geoportal (<https://geolatvija.lv/geo/search>) to facilitate the accessibility of data **[Effectiveness]**.
- National and local geospatial data services have been developed, some of them are under development or development stage. In order to ensure the availability of information in an electronic environment, various geo-information browsers and applications are made available by different administrations and used by local authorities, emergency services, insurance companies etc. e.g. State Land Service e-services (mapping, real estate information based on the cadastre data) available on the website (<https://www.kadastrs.lv>), LGIA topographic maps and orthophoto maps (<http://map.lgia.gov.lv/>, <https://kartes.lgia.gov.lv/>), the rural register on agricultural land (<https://karte.lad.gov.lv/>) for the application and the payment of subsidies for farmers (<https://eps.lad.gov.lv/login>), e-Health integrated information systems (<https://www.eveselibas.gov.lv/>) providing geospatial data, the national register of protected cultural monuments (<http://mantojums.lv/lv/piemineklu-saraksts/>), Latvian Institute of Aquatic Ecology used data for the preparation of

management plans for marine protected areas, maritime spatial planning (http://www.varam.gov.lv/lat/darbibas_veidi/tap/lv/?doc=23102). SLLC "**Latvian Environment, Geology and Meteorology Centre**" (LEGMC), RPMA (Real Properties of Ministry of Agriculture - <https://www.melioracija.lv/>) and LGIA data are used for updating of the River Basin Management Plans, Initial Flood Risk Assessment Report for 2019-2024 and Flood Risks management Plans and (<https://www.meteo.lv/lapas/vides/udens/udens-apsaimniekosana-upju-baseinu-apgabalu-apsaimniekosanas-plani-upju-baseinu-apgabalu-apsaimniekosanas-plani-un-pludu-riska-parvaldiba?id=1107&nid=424>).

- Still low access level to the services of INSPIRE datasets can be explained by the fact, that many institutions are providing these data sets and services as paid (secured) OGC services. Discussions proposed by the Latvian Government on the opening of the reference spatial data have been started. Geospatial data sets are also available through the Open data portal: <https://data.gov.lv/>, connected with geospatial data service metadata catalogue; currently 68 geospatial data sets are available: <https://data.gov.lv/dati/lv/dataset?organization=mdk>.

Data sharing arrangements

- In accordance with the Law on Geospatial Information holders of geospatial data sets must provide public access to information based on the regulations concerning the sharing and re-use of the geospatial data sets. The mandatory requirements for using geospatial data sets are laid down in Cabinet Regulation No 673 of 30 August 2011 "Mandatory content of the rules for using geospatial data sets, and procedures for receiving a permit for use", which specifies uniform model rules of use and model permit forms, in order to simplify and expedite the receipt and utilisation of permits for use of geospatial data sets. These rules are applied on equal terms for both sharing and re-using geospatial data sets. Users of geospatial data sets and services are obliged to submit an application for a permit for use of geospatial data sets and services in a timely manner.
- The Law on Geospatial Information provides that an infrastructure for geospatial information is created for sharing geospatial information between authorities and re-using geospatial information in electronic format.
- A national geoportal has been developed in Latvia to provide users with access to the geospatial data sets and metadata included in the aforesaid infrastructure for geospatial information. Community institutions and bodies can use the geoportal (<https://geolatiija.lv/geo/>), the free public LGIA Map browser <https://kartes.lgia.gov.lv/karte/>, the Flood risk map information system (<http://syke.maps.arcgis.com/apps/webappviewer/index.html?id=f60441869a654c298a2d3b150ea7dc1c>), the RSS field block map (<https://karte.lad.gov.lv/>), Land reclamation cadastre data (<https://www.melioracija.lv/>), Meteorological observation information (https://www.meteo.lv/lapas/noverojumi/noverojumi_ievads?id=1136&nid=422) etc. Part of these e-services geospatial data interfaces are developed in English, e.g. the geoportal, LGIA Map browser.
- One of the main problems which hamper improvement of geospatial data sets sharing is a lack of funding for the maintenance of the basic data and geospatial information. Another problem is a lack of qualified GIS and IT professionals in the institutions, responsible for the preparation, validation etc. of geospatial data sets.

Costs and benefits

- Data providers carry the costs for implementation of the INSPIRE Directive. These costs are included in the total expenditure of these institutions. However, individual projects have been carried out to prepare data, metadata and geospatial services and develop a country wide's geo-portal, also supported by EU funds:
- State limited liability company "Latvian Environment, Geology and Meteorology Centre" (LEGMC), generated and maintained the largest part of environmental data of Latvia, is implementing under the European Regional Development Fund 2.2.1.1.action "Creation of centralized public administration ICT platforms, optimization and development of public administration processes" project "Development and improvement of information systems for geospatial data and flood data of the Daugava basin" (ERDF project) and under Cohesion Fund 5.4.2.2.action "Development of the environmental monitoring and control system and the promotion of public participation in environmental management" second round project "Development of the national environmental monitoring and other environmental data processing and storage infrastructure" (CF project).
- The main activity of the projects of ERDF and CF for LEGMC is to transform data in accordance with Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (hereinafter - INSPIRE). In a result of both projects the information system of LEGMC will be developed, improved and implemented so that delivery of services to the INSPIRE geoportal as well as data processing will be significantly facilitated.
- The total budget of the ERDF project for LEGMC is 1.1 million EUR (implementing period – April 27, 2018 – December 26, 2020), CF project – 3.35 million EUR (implementing period – December 14, 2018 – December 13, 2022).
- The e-Health integrated information system has been developed within the framework of the Ministry of Health and ensures compliance with the requirements of the INSPIRE Directive and integration with the Latvian geoportal. The cost of the project amounted to EUR 164 628, 72 for the development of this functionality.
- In 2019 Agricultural Data Center is planned to supplement the administration of the animal housing register with satellite

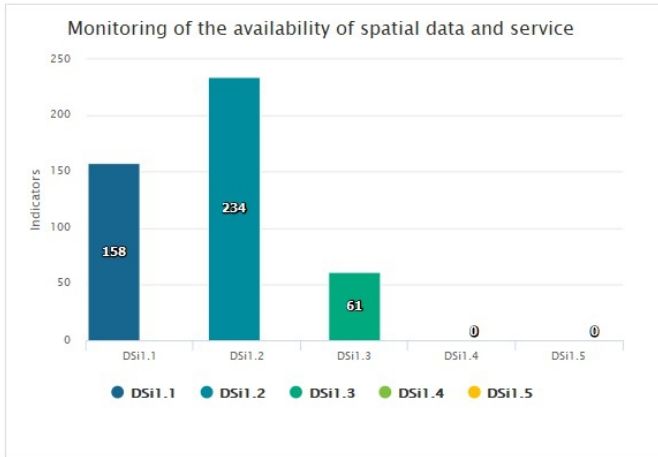
maps. Outsourcing developer was used, when implementing these projects. Total cost of these measures was EUR 29347.87 from 2016 to 2019.

- INSPIRE project implementation will give to State Joint Stock Company "Latvijas gaisa satiksme" the possibility to provide aeronautical data not only in AIXM 5.1 format, which is approved by EUROCONTROL for ATM needs, but also to be interoperable within INSPIRE community.
- The Latvian Geospatial Information Agency (LGIA) concluded an agreement on participation in the project "European Location Framework" (ELF) on 17 July 2015. The project was headed by the Norwegian mapping agency "Kartverket" in cooperation with mapping and cadastre agencies in many other European countries. Practical activity within the project started in 2016 when LGIA, using its previously prepared information, made available data that was related to three INSPIRE data themes: "Hydrography", "Toponyms" and "Land use" as well as their four related online applications "Hydrography", "Hydrographic network", "Toponyms" and "Land use". For implementation of the project, LGIA, with the mediation of the ELF consortium, actually received and used the European Union funds 6,340 euros, and co-financing of LGIA of 7,612 euros was also used for the project implementation.
- Officially the ELF project ended on 31 October 2016 when the activities under the ELF project were overtaken by the Europe's national mapping, cadastral and land registration authorities' association "Eurogeographics" by creating a new project "European Location Services" (ELS), and LGIA continues its participation in the ELS project as well.
- The main benefit of the ELF / ELS projects for the LGIA was that standardized geospatial data were prepared based on INSPIRE principles and INSPIRE technical specifications which in its turn will provide availability of the data; besides, distribution of the data has been promoted among different users, including in various countries.
- The LGIA keeps accounts of expenses that are directly related to updating and maintaining all of the INSPIRE data sets, their metadata and the relevant online applications under the responsibility of LGIA. The annual expenses make up 14,000 euros. The expenses are comparatively small because they do not include preparation of the necessary input data (orthophoto, toponym information, topographic maps, etc.).
- In 2018 LGIA began offering several new geospatial data sets to any interested persons as open data. The data are available on the Latvian national geportal and on the LGIA Open data homepage (<https://opendata.lgia.gov.lv>). The LGIA data prepared for INSPIRE are also made available here which promotes their wider accessibility.
- The Latvian State Land Service (SLS) has also been involved in the ELF project by preparing data and services regarding the INSPIRE data themes "Land units", "Administrative territories", "Addresses".
- A number of measures were taken to introduce the INSPIRE directive into the Agricultural Data Centre: (i) An address correction project for animal housing has been implemented, specifying their coordinates, (ii) Improved animal housing registry administration software where it is possible to choose an animal housing location, (iii) Ltd. "Jāņa Sēta Map Publishers" map system has been integrated in to the animal housing register. The mobile application has been developed to specify the coordinates.
- One of the main benefits for users is the availability and accessibility of geospatial data sets in electronic form, which is a fundamental condition for increasing the use of geospatial data in the various sectors of the economy and public administration [**Efficiency**]. These electronic services: (i) allow for a more efficient management of the production of geospatial data sets and leads to higher reliability of the data by improving the data quality and reducing data duplication in the various national administrations, (ii) ensures the development of IT infrastructure and the provision of various services to the general public as well as public administrations.
- The monetary benefits of the Geospatial Information Infrastructure are indirect and sometimes hard to assess. Latvian Data providers have identified concrete benefits of INSPIRE data production, for example [**Efficiency**]:
 - The Ministry of Agriculture as the institution responsible for the "Soil" data theme, points out that digital soil data will be useful for the greenhouse gas emissions in the country, thus apply for climate policy planning and implementation. The data will be used for soil protection policy planning and implementation.
 - Within the context of the Land Cover data theme, records of forests are kept. The data are useful for forest policy, ensuring sustainable forest management in Latvia. The INSPIRE data theme "Natural risk zones" will be useful for forest fire detection and possible preventive measures to prevent forest fires. (VMD).
 - The Land Use data theme can be used for invasive species and the spread of quarantine pests, for monitoring, analysis and planning of work sites. (State Plant Protection Service).
 - Agricultural and aquaculture facilities data themes will be used to record data about the farm animals (individual and group) location and are useful and effective for the administration of animal diseases such as African swine fever control and eradication. (Agricultural data centre).
 - Several institutes collect data on the quality of the water and assess the quality of bathing waters to inform citizens based on the "Environmental Monitoring Facilities" data theme. The MA points out that, thanks to the INSPIRE implementation the data will be available for everyone through the Geoportal. Users will be given access to the output measured data and be given the potential for using them for their specific needs e.g. by carrying out analysis of different data layers available through other the Geoportal. (Maritime Administration of Latvia).

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

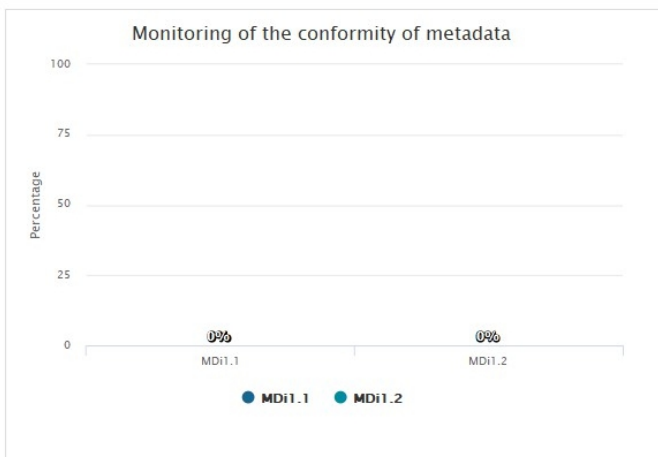
Graphs generated with data taken from: https://inspire-geoportal.ec.europa.eu/mr2020_details.html?country=lv

The date of harvest metadata: 16/12/2020



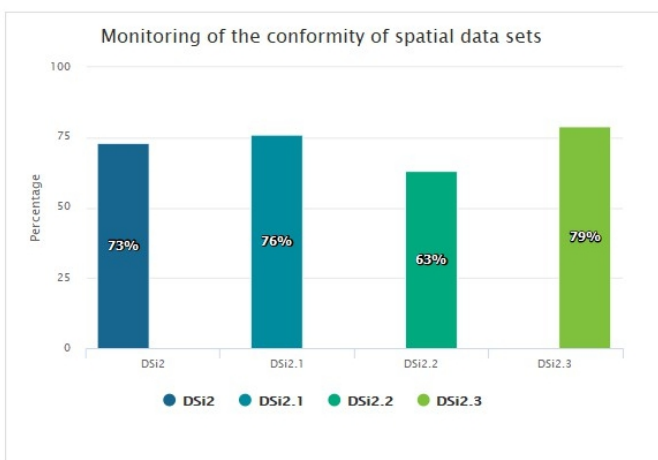
Legend

| Indicator | Definition |
|-----------|--|
| DSi1.1 | The number of spatial data sets for which metadata exist |
| DSi1.2 | The number of spatial data services for which metadata exist |
| DSi1.3 | The number of spatial data sets for which the metadata contains one or more 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 |
| DSi1.5 | 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 |



Legend

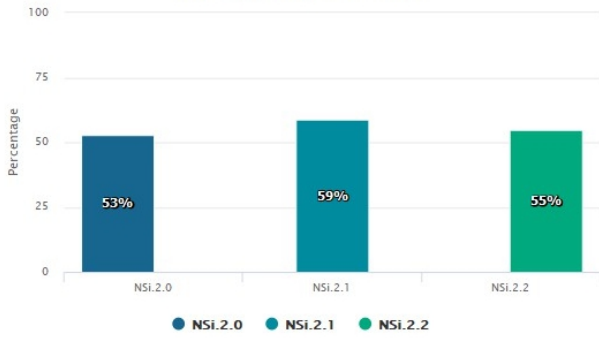
| Indicator | Definition |
|-----------|--|
| MDi1.1 | Percentage of metadata for spatial data sets conformant with Commission Regulation (EC) No 1205/2008 as regards metadata |
| MDi1.2 | Percentage of metadata for spatial data services conformant with Commission Regulation (EC) No 1205/2008 as regards metadata |



Legend

| Indicator | Definition |
|-----------|--|
| DSi2 | 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 1089/2010 as 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 |

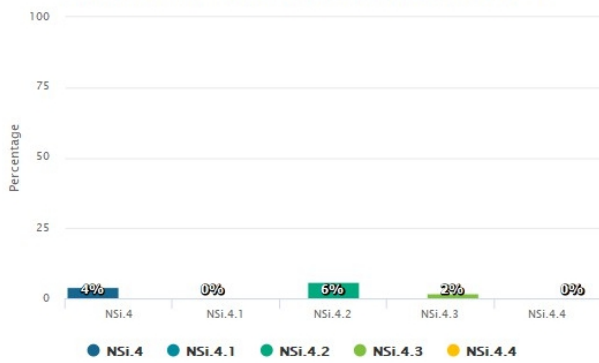
Monitoring of the accessibility of spatial data sets through view and download services



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 |

Monitoring of the conformity of the network 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 |