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Directorate B – Growth and Innovation
UNIT B06 - Digital Economy

INSPIRE Community Forum on Land Cover & Use Final report (Deliverable – D4)

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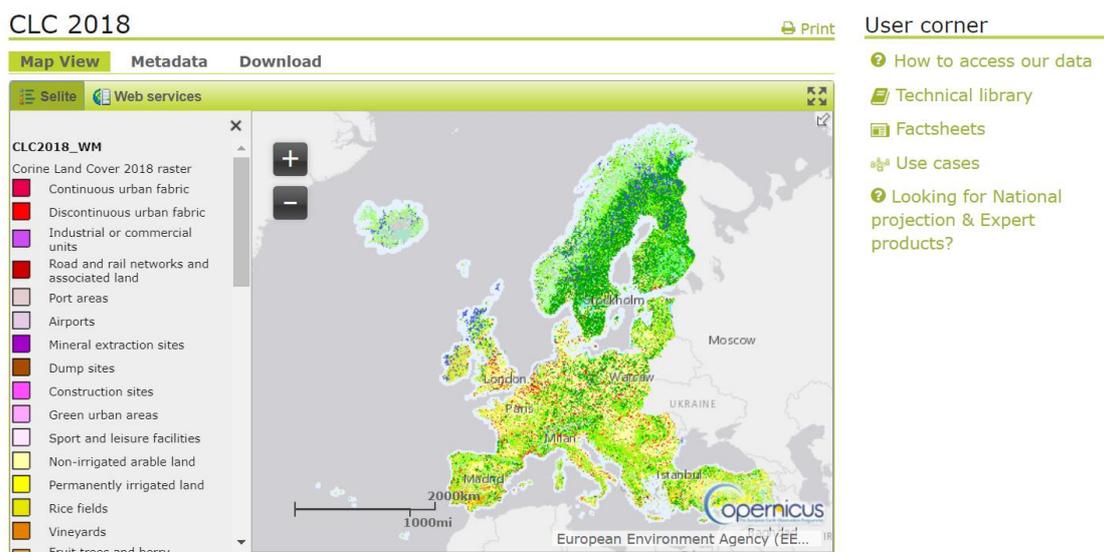
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1. State of play in the thematic domain

1.1. Overview / list of relevant EU Projects/technology/SW activities (title, short description, URL link)

1.1.1. Corine Land Cover 2018 datasets

The Corine Land Cover 2018 projects have been finalised across Europe. To my knowledge the data providers have been obliged to map their data to the INSPIRE Land Cover Vector application schema in a mapping table in Excel, which also has hopefully led to an increased understanding of the data model.



The link to a WMS service, metadata and a map viewer can be found here: <https://land.copernicus.eu/pan-european/corine-land-cover/clc2018>

CLC 2018 Pan-European dataset can be downloaded here, create an EIONET account first: <https://land.copernicus.eu/pan-european/corine-land-cover/clc2018?tab=download>

The description of the nomenclature of the CLC 2018 product can be found here: https://land.copernicus.eu/user-corner/technical-library/corine-land-cover-nomenclature-guidelines/docs/pdf/CLC2018_Nomenclature_illustrated_guide_20190510.pdf

Further product documentation can be found in the [product technical library](#) of the Copernicus Land Monitoring Service page.

More products are to come in 2021-2022. These are called High Resolution Phenology and Productivity, CLC+ and European Ground Motion Service.

1.1.2. Upcoming product CLC+

In February 2020 EEA awarded a European consortium of 14 companies and research institutions from 11 EEA member countries a 10 million € framework contract for implementing the CLC+ Backbone within the next two years.

The CLC+ Backbone products will allow serving many current and future needs in European land cover/land use monitoring and policy reporting, as well as paving the way for all follow-up CLC+ components. Together with land use information from the EEA-38 countries plus UK, the CLC+ Backbone land cover products are foreseen to be ingested into the upcoming CLC+ Core Database, which will enable deriving various so-called CLC+ Instances, for example for LULUCF reporting, and a 'traditional' CLC Legacy product to ensure backwards compatibility with the CLC products of the years 2000, 2006, 2012 and 2018. For more information read this [news item](#).

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According to the tender specifications, the contractor shall provide the following INSPIRE related documentation to each of its datasets:

“1. Metadata for each dataset following the “INSPIRE Metadata Implementing Rules: Technical Guidelines based on EN ISO 19115 and EN ISO 19119”. The most up to date version of technical guidelines shall be used and can be found on: <https://inspire.ec.europa.eu/Technical-Guidelines2/Metadata/6541>.

2. Evidence that the data model delivered by the contractors is compatible with the INSPIRE Data Specification on Land Cover. The evidence shall be provided as table document showing the associations between the source (contractors deliverable) and the target data model (INSPIRE Data Specification on Land Cover). The data specifications and templates for mapping tables are available on the INSPIRE website, <https://inspire.ec.europa.eu/Data-Models/Data-Specifications/2892>. These templates shall be used but can be extended if needed. Best practices for metadata and mapping table development are available under <https://land.copernicus.eu/eagle/EAGLE-related-topics/inspire-related-work>.” Information on this so called best practice work has been provided at the Community Forum platform [here](#).

In the production process the so called CLC Hard bones will be produced based on EU-wide reference data, using Open Street Map (OSM), EU-hydro and the EU Water Framework Directive (WFD) data to derive roads, railways and hydrography.

For more information, please check the [tender specification](#) and <https://land.copernicus.eu/user-corner/technical-library/upcoming-product-clc>

1.1.3. The ICAS-INSPIRE interoperability survey

The Commission has prepared a discussion paper (called draft Part 2 of the Technical Guidelines), dealing with IACS-INSPIRE interoperability and data harmonisation. The Commission invited national IACS experts and the INSPIRE community to reply to an online survey related to get feedback on the discussion paper document. The document and the link to the survey were shared on the Community Forum. The document introduces to the topic, provides preliminary mapping of IACS spatial data concepts to INSPIRE and proposes other interoperability solutions. For more information, check [this](#) discussion topic on the Forum. More information on DG AGRI’s process for IACS data sharing under INSPIRE can be found on the MIG meetings repository on webgate, the latest presentation from the MIG meeting in November can be found [here](#).

1.1.4. Work related to the ISO 19144 standard

A description of the work related to the update of the ISO TC211 LCML 19144-2, and the development of a new Land Use Meta Language LUML 1944-3 and related schemas 19944-4 is described in a separate report.

1.2. Overview / list of selected good / highly visited / highly replied Forum contributions

There has only been a handful new discussion topics opened this year. However, several quite old discussion topics are still relevant and active, of which I’d like to highlight a few below.

There is still a clear interest from the community in code lists. With 3382 views in December 2020, the discussion topic ‘Codelist for Corine Land Cover (CLC) published, is the top scorer in terms of views. I’m not an expert on code lists, but to me it seems that everything is not yet in place in order to use the CLC code list in a way that was originally intended in INSPIRE. That is, it seems like the extension of the LandCoverClassValue code list is not fully in place:

Cluster	User	Date	Topic	Views	Replies	Status
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		16.11.2015	Codelist for Corine Land Cover (CLC) published	2932	7	
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	------------	------------------------------------------------	------	---	-------------------------------------------------------------------------------------

<https://inspire.ec.europa.eu/forum/discussion/view/27211/codelist-for-corine-land-cover-clc-published>

With 1861 views in December 2020, there is also a clear interest in finding examples of view and download services providing Land Cover & Use datasets, especially the ones providing harmonized data sets.

Cluster	User	Date	Topic	Views	Replies	Status
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		14.10.2016	Examples of INSPIRE view and download services for LC/LU	1721	7	
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<https://inspire.ec.europa.eu/forum/discussion/view/108800/examples-of-inspire-view-and-download-services-for-lclu>

I have collected examples on this page, which in December 2020 has 2416 views:

		19.12.2016	Examples of INSPIRE view and download services for the INSPIRE Land Cover and Land Use themes	2024	0	
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	------------	-----------------------------------------------------------------------------------------------	------	---	--

<https://inspire.ec.europa.eu/forum/pages/view/117401/examples-of-inspire-view-and-download-services-for-the-inspire-land-cover-and-land-use-themes>

One of the discussion topics that has gained the most attention (1624 views) recently is the one related to the production of an Open Land Use map, which has full European coverage. Work is presently ongoing to get full coverage of Africa:

<https://inspire.ec.europa.eu/forum/discussion/view/70563/open-land-use-map>

Other discussion that I'd like to draw your attention to is the following discussion topics, which discuss suggestions to make amendments to the Land Cover and Land Use (vector) data models – issues that have not yet been resolved.

<https://inspire.ec.europa.eu/forum/discussion/view/245981/discussion-about-amendments-for-tg-land-cover-and-land-use>

<https://inspire.ec.europa.eu/forum/discussion/view/239445/extent-for-existinglandusedataset>

There is still a need for support in understanding the data specifications

<https://inspire.ec.europa.eu/forum/discussion/view/269688/differ-zoning-element-from-supplementary-regulation>

I have recently promoted the newly developed test suits for LU at the Validator staging instance:

<https://inspire.ec.europa.eu/forum/discussion/view/269445/tests-for-lu-available-in-the-validator>

Unresolved, open topics, which I'd also like to mention:

<https://inspire.ec.europa.eu/forum/discussion/view/112345/missing-xsd-file-for-landcoverextension>

<https://inspire.ec.europa.eu/forum/discussion/view/75120/relation-landcoverdataset-landcoverunit>

<https://inspire.ec.europa.eu/forum/discussion/view/43246/missing-namespace-declaration-in-embedded-description>

The last one will be solved once ongoing ISO TC211 standardisation work related to the LCML standard will be finalised in 2-3 years.

1.3. Overview / list of relevant existing applications, services (Title, description, URL link)

Basemaps <https://basemaps.helcom.fi/> is a map application to serve transnational Maritime Spatial Planning (MSP) activities in the region of the Baltic Sea . INSPIRE network services and other spatial data services are provided as input data for MSP. The application has been developed by the Baltic Marine Environment Protection Commission (HELCOM) in close cooperation with actors around the Baltic sea.

1.4. Overview and assessment of the availability of thematic domain data sets in the EU Geoportal

1.4.1. Status of Land Cover in the INSPIRE Geoportal

When checking the status of the INSPIRE Geoportal in December 2020, data providers of all countries but Bulgaria and Greece have provided metadata of their datasets in the Land Cover theme.

December 2019:

Austria	14 11 12	Finland	20 4 4	Latvia	12 0 0	Portugal	31 6 19
Belgium	8 4 8	France	1155 238 234	Liechtenstein	4 1 1	Romania	5 0 0
Bulgaria	0 0 0	Germany	135 14 29	Lithuania	21 20 1	Slovakia	18 0 0
Croatia	16 2 3	Greece	0 0 0	Luxembourg	3 3 3	Slovenia	3 1 1
Cyprus	1 0 0	Hungary	1 0 0	Malta	1 1 1	Spain	6 4 4
Czech Republic	2 1 1	Iceland	16 1 0	Netherlands	2 2 2	Sweden	2 0 1
Denmark	1 0 1	Ireland	1 0 0	Norway	11 3 2	Switzerland	9 0 0
Estonia	2 1 1	Italy	518 0 2	Poland	51 0 0	United Kingdom	135 2 1

December 2020

Austria	13 9 11	Finland	14 4 5	Latvia	5 3 3	Portugal	37 29 30
Belgium	12 12 11	France	1285 129 23	Liechtenstein	4 1 1	Romania	5 0 0
Bulgaria	0 0 0	Germany	94 17 32	Lithuania	21 21 1	Slovakia	12 9 9
Croatia	15 2 3	Greece	0 0 0	Luxembourg	15 10 14	Slovenia	6 1 5
Cyprus	1 1 1	Hungary	1 0 0	Malta	1 1 1	Spain	6 4 4
Czech Republic	3 1 1	Iceland	16 1 0	Netherlands	2 2 2	Sweden	2 1 2
Denmark	1 0 1	Ireland	1 0 0	Norway	11 8 6	Switzerland	10 0 0
Estonia	4 3 3	Italy	626 46 35	Poland	17 16 16		

The total number of datasets harvested to the INSPIRE Geoportal is 2375 (12/2019 2204, this figure includes datasets of UK, which are no longer included). According to the INSPIRE Geoportal 221 (in 12/2019 331) of these are viewable and 333 (in 12/2019 319) downloadable. Of these 163 are national datasets in comparison with 101 in April 2020, of which more than half 97 are viewable (51 in April 2020) and 105 downloadable (45 in April 2020). In several countries, there has been an increase either in the number of services in comparison with 12/2019 (eg. Belgium, Estonia, Italy, Latvia, Luxemburg, Norway, Poland, Portugal, Slovakia). Out of these figures one can draw the conclusion that the Spatial Scope key word is now more widely in use and that the linkages between metadata and services have been improved.

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Find below information on the availability of datasets within the theme Land Cover. These are the countries for which harmonized datasets are available or seem to be available. I have marked the countries, that did not have harmonized datasets in April 2020, but that have now with the word **(new)**. The analysis has been done based on visual analysis based on the datasets downloaded from the links provided in the INSPIRE Geoportal and may contain errors:

Austria offers predefined harmonized CORINE data (for example CORINE Land Cover 2018 Österreich), using embeddedDescription in a creative way by providing an own schema repository for the classification. Comment: provides both unit and a dataset feature types.

Belgium (new) offers predefined harmonized LSPIS data (for example INSPIRE - Surfaces agricoles basées sur le LPIS de 2015 en Wallonie (BE)). Comment: provides both unit and dataset feature types.

Bulgaria: no data sets provided

Croatia offers harmonized CORINE data (at least Pokrov i namjena korištenja zemljišta CORINE Land Cover). Comment: provides both unit and dataset feature types.

Cyprus (new) offers a Land Cover data product that includes both Corine and other LC data, that ANNEX 2 | Land cover - Department of Environment (Metadata of Data). Comment: provides only units probably with ESRI technology

Czech Republic provides Corine data in 'as is' form

Denmark (new) provides harmonised LC data, which seems to be derived from topographic map data. The GML file could not be retrieved for analysis.

Estonia (new) provides harmonised LC data, which seems to be derived from topographic map data. Comment: provides only units probably with ESRI technology

Finland provides harmonised data, for example [INSPIRE-tietotuote: Corine maanpeite 2018](#). You can download the GML containing the whole country (including both units and dataset information) or use this WFS to download a few units or the dataset separately: <http://geoserver.ymparisto.fi/geoserver/wcs?request=GetCapabilities&service=WFS&AcceptVersions=2.0.0>. Comment: <http://uls.eionet.europa.eu/CLC2000/classes> does not provide the document describing the CLC nomenclature. The documentation has been put to another web address.

France provides a wide range of INSPIRE land cover data of which some may be provided as harmonized, but it is hard to know as you would have to investigate so many datasets in order to find out.

Germany (new) provides at least Corine datasets in a harmonized form, such as [INSPIRE Land Cover CLC5 2018](#)

Greece no data sets provided

Hungary one data set has been described, but it cannot be accessed for analysis

Iceland have described land cover data sets, but they cannot be accessed for further analysis

Ireland one LPIS data set has been described, but it cannot be accessed for analysis

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Italy provides a wide range of INSPIRE land cover data of which some may be provided as harmonized, but it is hard to know as you would have to investigate so many datasets in order to find out.

Latvia have been described datasets, but one resource providing a GML file from a FTP server cannot be accessed for further analysis

Liechtenstein (new) provides harmonised land cover, which includes both dataset and units

Lithuania provide a land cover data set in national form

Luxemburg provides several harmonized data sets, eg. INSPIRE - Annex II Theme Land Cover - LandCoverSurfaces - Corine 2012 (Comment: only units implemented, not dataset)

Malta (new) provides CLC 2012 as harmonized data set, with only units implemented

Netherlands provides land cover datasets, but I was not able to download them for further analysis

Norway (new) provides at least on harmonised land cover data

Poland provides land cover data sets in national form

Portugal provides land cover data sets in national form

Romania has land cover data sets, but they cannot be accessed for further analysis

Slovakia provides land cover data sets in national form

Slovenia provides harmonized data 'Pokrovnost tal v Sloveniji po CORINE 2012'. Comment: lcn:embeddedDescription seems to be used in a wrong way.

Spain provides harmonized land cover data sets, which includes both the units and the dataset features. The unit and dataset feature types are available from the INSPIRE Geoportal through separate requests, for example:

[https://servicios.idee.es/wfs-inspire/ocupacion-suelo?typenames=lcv:LandCoverDataset&request=GetFeature&service=WFS&count=10&version=2.0.0&namespaces=xmlns\(lcv,\)](https://servicios.idee.es/wfs-inspire/ocupacion-suelo?typenames=lcv:LandCoverDataset&request=GetFeature&service=WFS&count=10&version=2.0.0&namespaces=xmlns(lcv,))

[https://servicios.idee.es/wfs-inspire/ocupacion-suelo?typenames=lcv:LandCoverUnit&request=GetFeature&service=WFS&count=10&version=2.0.0&namespaces=xmlns\(lcv,\)](https://servicios.idee.es/wfs-inspire/ocupacion-suelo?typenames=lcv:LandCoverUnit&request=GetFeature&service=WFS&count=10&version=2.0.0&namespaces=xmlns(lcv,))

Sweden provides land cover data sets of which one is in raster form, but they cannot be accessed for further analysis

General remarks related to Land Cover based on the analysis of the INSPIRE Geoportal:

A general comment is that GM_MultiSurface has been used in several implementations, even though the Land Cover Vector application only allow the use of GM_Surface. The use of GM_MultiSurface is allowed for Land Use and could be allowed for Land Cover Vector as well as in many land cover datasets, to my knowledge both LPIS and CLC contains multipolygons and splitting them up has consequences on id management.

The situation regarding the provision of harmonised LC data sets have improved substantially since April 2020, with 7 new MS providing harmonised LC data. One technical explanation of this may be that the linkage between the metadata and the corresponding download services is better than in spring.

The major part of the harmonised LC data sets provided are Corine Land Cover (CLC), topographic maps and LPIS data. Top-down steering would be needed to obtain a full and consistent coverage (LPIS, CLC and/or LC elements from topographic maps) of INSPIRE LC products.

1.4.2. Status of Land Use in the INSPIRE Geoportal

Data providers of all Member States but Bulgaria, Greece and Hungary have provided metadata of their datasets in the Land Use theme.

December 2019:

Austria	48 40 44	Finland	94 1 3	Latvia	6 0 0	Portugal	54 1 26
Belgium	36 22 24	France	13477 3812 4768	Liechtenstein	14 1 1	Romania	6 0 0
Bulgaria	0 0 0	Germany	26687 9624 9057	Lithuania	0 0 0	Slovakia	17 0 0
Croatia	17 0 2	Greece	0 0 0	Luxembourg	25 18 14	Slovenia	4 3 0
Cyprus	1 0 0	Hungary	0 0 0	Malta	2 2 2	Spain	16 2 3
Czech Republic	57 0 2	Iceland	13 0 0	Netherlands	3 2 3	Sweden	1 0 1
Denmark	52 1 2	Ireland	1 0 0	Norway	6 3 0	Switzerland	9 0 0
Estonia	1 0 0	Italy	3749 1 3	Poland	29407 0 4829	United Kingdom	5358 2 42

December 2020:

Austria	62 62 62	Finland	109 38 20	Latvia	3 2 1	Portugal	55 48 48
Belgium	27 22 24	France	12296 588 489	Liechtenstein	14 1 1	Romania	6 0 0
Bulgaria	0 0 0	Germany	51013 32697 32895	Lithuania	0 0 0	Slovakia	18 5 3
Croatia	16 1 2	Greece	0 0 0	Luxembourg	10 8 9	Slovenia	4 2 0
Cyprus	1 1 1	Hungary	0 0 0	Malta	2 1 2	Spain	16 3 2
Czech Republic	61 3 16	Iceland	13 0 0	Netherlands	3 2 3	Sweden	2 1 2
Denmark	16 2 2	Ireland	1 0 0	Norway	6 3 0	Switzerland	9 0 0
Estonia	3 2 2	Italy	4024 49 87	Poland	1 1 1		

The total number of datasets harvested to the INSPIRE Geoportal is 73 146 (12/2019 the number was 79 161, but that figure included also the dataset of UK (5358)). According to the INSPIRE Geoportal 33714 (in 12/2019 18826) of these are viewable and 33544 (in 12/2019 13535) downloadable. Of these 143 are national datasets in comparison with 123 in April 2020, of which 85 (43 in 4/2020) are viewable and 87 (53 in 4/2020) downloadable. In several countries however, there has been an increase either in the number of services (eg. Austria, Czech Republic, Estonia, Finland, Germany, Italy, Portugal, Slovakia). Out of these figures one can draw the conclusion that the Spatial Scope key word is now more widely in use and that the linkages between metadata and services have been improved.

Find below information on the availability of datasets within the theme Land Use. I have marked the countries, that did not have harmonized datasets in April 2020, but that have now with the word **(new)**. The analysis was based on visual analysis based on the INSPIRE Geoportal and may contain errors:

Austria provides a wide range of harmonized land use data from the agricultural sector (e.g. LPIS & IACS information)

Belgium provides several harmonized LU data sets, for example related to LPIS & ICAS and planning data

Bulgaria does not provide any LU data sets

Croatia has described several data sets, out of which one is downloadable in non-harmonised form

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Czech Republic has described several datasets, of which none of the downloadable ones are in harmonized form

Denmark (new) has described several datasets, of which one downloadable one (national parks data set) is available in harmonized form.

Estonia has made available LPIS& ICAS information in national form

Finland has made available a wide range of spatial plans in national form. One harmonized dataset, which is harmonized according to the AM schema appears in the Geoportal for the LU theme.

France has made available a wide range of regional data sets, but because of the large amounts of data downloadable it is impossible go them all through to evaluate if they are harmonized or not

Germany has made available a wide range of regional data sets, but because of the large amounts of data downloadable it is impossible go them all through to evaluate if they are harmonized or not

Greece has not described LU data sets

Hungary has not described LU data sets

Iceland has described data sets, but none of them are downloadable through the Geoportal

Ireland has described one data set, but it is not downloadable through the Geoportal

Italy has made available a wide range of regional data sets, but because of the large amounts of data downloadable it is impossible go them all through to evaluate if they are harmonized or not

Latvia has described several data sets. The data set that can be downloaded is CLC, which is not provided by the ELU schema, nor by the LCV schema.

Liechtenstein (new) provides harmonized planned land use data

Lithuania has not described LU data sets

Luxembourg provides several harmonized datasets according to the ELU and PLU application schemas

Malta (new) provides urban and rural coastal zones according to the ELU schema

The Netherlands provides Existing Land Use based on the contents of the Dutch topographic map

Norway provides LU data sets in national form

Poland (new) provides a spatial plan data set in harmonized form

Portugal provides a wide range of LU data sets, however the ones I tried to access returned a server error

Romania has described data sets, but none of them are downloadable through the Geoportal

Slovakia (new) provides LPIS & IACS data according to the ELU application schema

Slovenia provides forest data in another schema than LU

Spain provides existing land use data (SIOSE)

Sweden provides LPIS & IACS information in national form

Romania has described data sets, but none of them are downloadable through the Geoportal

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General remarks related to Land Use based on the analysis of the INSPIRE Geoportal:

The situation regarding the provision of harmonised LU data sets have improved a bit since April 2020 – 5 new MS provides harmonised LU data. This can be explained by the 10/2020 deadline for harmonising Annex III data and better linkages of download services and metadata than half a year ago.

A broad variety of data sets fall into the Land Use themes. However, most harmonised LU data sets provided are planning, LPIS & IACS and a variety of existing land use data sets.

1.4.3. General concerns and recommendations regarding the LCLU themes based on the analysis of the INSPIRE Geoportal

One concern I have is that I could not find examples of harmonized LCLU datasets in raster form on the INSPIRE Geoportal. This may indicate that it's unclear how to provide raster LCLU data in an INSPIRE compliant way.

Sometimes the same data set can be found in both themes, harmonized according to different schemas. For example, information from the Land Parcel Identification System (LPIS) can sometimes be found in the Land Cover and sometimes in the Land Use theme. To obtain a consistent coverage DG AGRI should give guidelines on, in possible on what LPIS&ICAS content to provide using which schema (LC, LU or AM). Also, forest and Corine Land Cover information seems to fall into both themes. The consistency and usability of the harmonised data products suffer if the same data sets are available in different INSPIRE schemas.

The fact that this analysis was made for datasets mainly with national coverage may explain why not many harmonized datasets using the Planned Land Use data model were encountered.

In order to make a better, more reliable analysis it would be useful to be able to filter harmonized data sets from the INSPIRE Geoportal.

2. Overview of the facilitator's activity

Since the last reporting period, I have opened very few new discussion topics, but instead been focusing on answered to existing ones and going through topics, closing topics and trying to find out whether its ok to close topics, where there has been little activity. I have also been involved in ISO TC211 standardisation on which I have provided a separate report. I have promoted the usage of the INSPIRE Community Forum at meetings with my networks, such as the INSPIRE Nordic network and the Finnish network of the INSPIRE data providers. I have also used the Forum myself to ask theme-specific questions on behalf of data providers in Finland.

Together with a few other facilitators we have made a list of bug and other issues related to for example INSPIRE schemas and code lists that need to be taken care of, once it is possible to allocate resources for it:

<https://docs.google.com/spreadsheets/d/1hKsQzXlr2BrP6joJSCDgth9jnOaAuyLrv40m-RZkZl/edit?usp=sharing>

The contract of the facilitators ends in December 2020. There is a need to continue, but in a more resource-efficient way. To ensure a continuity and migration to other channels of support, Stefania and Jordi outlined a proposal (Fig. 1), which was discussed at an online meeting in autumn 2020. The proposal includes the establishment of a new INSPIRE Helpdesk on GitHub to continue providing general INSPIRE support. Questions will be redirected or linked to other discussion fora, such as software specific technical ones GitHub and a new repository for MIG-T on GitHub. This seems to be a good solution, provided that enough resources are allocated for answering/resolving INSPIRE-specific questions and fixing bugs for example in INSPIRE schemas.

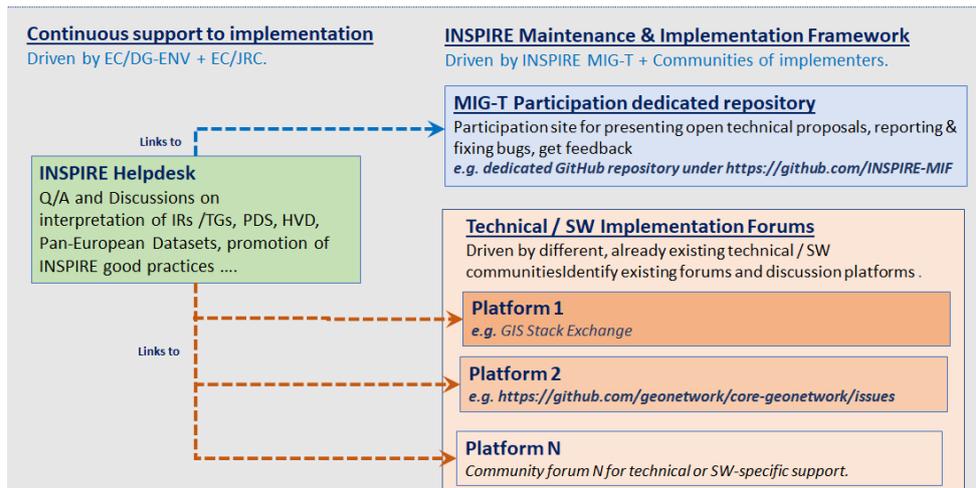


Figure 1. Migration scenario

I participated in the preparation of the INSPIRE Community Forum webinar on 11 December. I gave a presentation on the goals, functionalities and achievements of the Community Forum on behalf of all facilitators. I prepared Sli.do questions to find out how big a share of the audience that had used the Forum, for what purpose, what overall score they gave to the activity and which expectations they have regarding the future.

According to the results of the Sli.do poll, 65% of the webinar participants has used the INSPIRE Community Forum. They had used the Forum mainly for searching information (N= 30) and for getting help with INSPIRE implementation (N=30). Some had used it also for discussing and raising issues (N=20), for sharing information (N=12), and for using INSPIRE (N=13). Most participants that had used the platform gave the grade 7 or 8 to the activity on a range from 0-10. From that you could draw the conclusion that the users of the platform are quite content with the information found on the platform and the help that it has provided for the INSPIRE implementation.

The future expectations were the following:

- to give the community a more active role
- to continue giving support for INSPIRE implementation in the future, with special focus on the INSPIRE digital update
- need for faster concrete answers to issues and identified errors
- need for a collection of examples, e.g. an example repository to facilitate implementation
- allow possibility to reference the discussions in the Forum using e.g. GitHub pages, issues... A possible suggestion is to have an open place where the discussion can keep going, e.g. something like Discourse (<https://www.discourse.org/>), with forum, e-mail notification, tags
- In case the activity will be outsourced, please ensure it will be taken over by competent people, like the current facilitators
- organise webinars of priority discussions and topics
- continue to build an deepen the harmonisation
- to share developments and tools to implement INSPIRE
- get more users involved

Video recordings and the presentations from the INSPIRE Community Webinar can be found here: <https://inspire.ec.europa.eu/icfwebinar>

2.1. Planned activity at the following INSPIRE Conference

I made a proposal for a special session focusing on LCLU-specific issues in the INSPIRE Conference 2020 (see proposal below). The proposal was accepted, and the organizing committee added a few more presentations to the agenda. Due to COVID-19, the Conference was held Online Conference during two weeks in June. Unfortunately, the time slot offered by the arrangers did not fit the presenters. When the call for abstract is out for the next INSPIRE Conference one can consider whether to resubmit the session proposal. There is a clear need for a state of play session in the LCLU domain

Land in sight

Room: 6 Chair: Lena Hallin-Pihlatie - National Land Survey, Finland

CROSS - FOREST project: harmonization and modeling of open forest data from Spain and Portugal for forest fire control and forestry growing assessment	Alexandra Fonseca
I Can Haz a Single Spatial Plan? - Data Models for the Finnish National Platform for Built Environment	Ilkka Rinne
Insights into harmonization and standardization of LC/LU nomenclatures – from national to international (ISO) level	Stephan Arnold
Leveraging WCS for Rastered Land Cover and Land Use	Kathi Schleidt
An attempt to make an executive summary on where we stand in the implementation in the INSPIRE themes Land Cover & Use	Lena Hallin-Pihlatie
Towards a new pan - European Copernicus Land Monitoring Service product	Stefan Jensen
Land take measure arrangement, what's going on in France?	Pascal Lory

2.2. Concluding remarks

It's been a pleasure to be involved in this activity for over 6 years. It has been challenging but also very rewarding, not the least due to the good team spirit and fruitful cooperation with the facilitators, MIG-T liaisons and JRC staff on board. A special thanks goes to Vlado, who did a good job in taking over the coordination of the activity after Robert.

