



INSPIRE

Infrastructure for Spatial Information in Europe

MIWP Action progress and review

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Description	Status reports from the following MIWP actions, <ul style="list-style-type: none">• 2016.4 Theme specific issues• 2017.1 Master Guidance• 2017.3 Improved Client Support for INSPIRE data• 2017.4 Validation and conformity testing
actions:	MIG to: <ul style="list-style-type: none">• Take note and provide feedback on the document

1 MIWP actions

MIWP actions 2016.5, 2018.1, 2019.2 and 2017.2 are discussed in background documents DOC5, DOC6, DOC7 and DOC8, respectively.

1.1 2016.4 Theme specific issues

The main objective of this action is to support MS with implementation of INSPIRE by providing an on-line platform to share, find, propose and discuss issues encountered during the implementation and use of INSPIRE as well as in adaptation/re-use of INSPIRE infrastructure for other domains / purposes. Since the thematic clusters on-line collaborative platform <https://themes.jrc.ec.europa.eu> has been in operation over 4 years, during the last year several evaluation / stock taking activities took place in order to find out whether the Action/Support activity was still needed and what to improve to better reflect new policy / users requirements. The evaluation activity ended up with the Commission proposal (***DOC 10 - Discussion Paper on Action 2016.4 Theme specific issues - supporting the INSPIRE implementation community in 2019-2020***) presented during the last MIG meeting in November 2018.

The proposal was endorsed by MIG and therefore the Commission (JRC) started to work on the implementation of the proposal. The following text covers two main activity parts:

- 1) Monitoring of the use of the platform - Statistics of use
- 2) The status of the implementation of the new collaborative platform

Monitoring of the use of the platform

TC Activity – statistics of use (3.6. 2019)*

- Registered users: **999**
- Discussion topics: **719**
- Discussion replies: **2009**
- Uploaded Files: **299**
- Dedicated topic summarizing pages: **44***
- Groups: **11***
- News: **167**
- Events: **26**
- Nr. of Visits from 1-1-2018 until 30-5-2018: **7992**
- Nr. Pageviews from 1-1-2018 until 30-5-2018: **17927**
- Nr. Unique Pageviews: 13526

NOTE:* The Statistics of use is influenced by the fact that the Thematic Clusters platform was without the facilitators (till 15-5)

1) Thematic Domains

- **Most viewed discussion topic:**
[Workshop about Transformation of Coverage-Based Data Themes and WCS - Barcelona, 29-30 September 2015](#) - (4144 views)

- **Most popular discussions topic** (by number of replies):
[It seems that there is only one fully compliant solution to serve multiple harmonised datasets trough WFS 2.0](#) – (52 replies)

2) Software & Tools

- **Most viewed discussion topic:**
[Download Service WFS: StoredQuery and ResponsePaging for large datasets?](#) (3723 views)
- **Most popular discussions topic** (by number of replies):
[domainExtent vs gml:boundedBy \(EL & OI coverages encoding\)](#) (43 replies)

3) INSPIRE & Environmental Policy

- **Most viewed discussion topic:**
[Codelist for Corine Land Cover \(CLC\) published](#) (2419 views)
- **Most popular discussions topic** (by number of replies):
[missing a Statistical Unit type in the datamodel](#) (16 replies)

Status of the implementation of the new collaborative platform

The new INSPIRE Community Forum (former INSPIRE Thematic clusters) was launched on 3.6.2019.

Commission and its priorities Policies, information and services

European Commission

European Commission > INSPIRE > INSPIRE Community Forum

INSPIRE Community Forum

Supporting the implementation and use of INSPIRE

Home Content Sections Discussion Groups Tags More Help 0 0 My Account

search the site

Welcome to the INSPIRE Community Forum

This collaborative platform is built upon 11 discussion groups. The three sections below group together content from these groups related to: Software & Tools, Thematic Domains and INSPIRE & Environmental Policy. For more specific queries you can use the "Search by Tag" tool.

Software & Tools	Thematic Domains	INSPIRE & Environmental Policy
Facing technical issues? Doubts on which software to use?	Questions about INSPIRE Data Specifications? Using INSPIRE Data in your domain?	Interested in the INSPIRE Working Plan 2016-2020? Looking for synergies with INSPIRE?

Selected Highlights.

Discussion conclusions, interesting posts and other content provided by our Forum facilitators.

Search by Tag

Search and retrieve content using our curated tag list.

INSPIRE
INSPIRE Geoportail

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<http://inspire.ec.europa.eu/forum>

Major new features/changes of the INSPIRE Community Forum:

1. Terminology / Content / Organisation changes

- The INSPIRE Community Forum has a new URL: <http://inspire.ec.europa.eu/forum>
- The Forum is organized around 11 Discussion Groups:
 - 9 Thematic Domain Groups(former Thematic clusters)
 - 2 new Cross-domain Groups
- The whole Forum content (discussion topics, shared files, news items, dedicated pages etc.) has been reclassified by facilitators using the set of agreed Controlled Tags.
- The use of the controlled tags allow filtering the content in endless ways. Based on the evaluation activities the three entry points to the forum content have been prepared and are accessible from the landing page. These are:
 - Software & Tools
 - Thematic Domains
 - INSPIRE & Environmental policy
- Selected Highlights provide direct access to the e.g. interesting discussion conclusions, summary of dedicated workshops, compilation of SW bugs and other content provided by forum facilitators

2. Searching for a content

- The use of Tags for searching is recommended as the most effective and therefore is highlighted on the landing page. Tags could be logically (AND / OR) combined or the Tag Index map could be used to directly access the content related to a selected Tag.

The screenshot displays the 'INSPIRE Community Forum' website interface. At the top, there is a navigation bar with the breadcrumb 'European Commission > INSPIRE > INSPIRE Community Forum > Controlled tags'. Below this, the main header reads 'INSPIRE Community Forum' and 'Controlled tags - Thematic-related'. A secondary navigation bar includes links for 'Home', 'Content Sections', 'Discussion Groups', 'Tags', 'More', and 'Help', along with a user account icon labeled 'My Account'.

The main content area is titled 'Tag Search' and features a search form. The form includes a 'Select Tag(s)' dropdown menu with the placeholder 'Choose at least a Tag...', a 'Tag Operator' dropdown menu set to 'AND', and a 'Choose at least a Cluster...' dropdown menu. A 'Search' button is positioned below the form. Below the search form, there is a note: 'Select the tags you wish to search for. You can select more than one tag. You can combine tags with the AND and the OR operators.'

Below the search form is the 'Tag Index' section. It has four tabs: 'Thematic-related', 'Software-related', 'Policy-related', and 'Management-related'. The 'Thematic-related' tab is active, showing a grid of 'INSPIRE Data Themes' with various tag codes and counts, such as TC-EL 165, TC-OI 148, TC-EF 87, etc. Below the grid are four sub-sections: 'Issues/questions/data management' (with tags like TC-Closed 58), 'Typology of use' (with tags like TC-EU-project 24), 'Other EU relevant activities/communities' (with tags like TC-EuroGeographics 48), and 'Clusters' (with tags like TC-Biodiversity_Area_Management 61).

3. User notification / subscription to newly published content

- The Notification could be managed by users at several levels:
 - i. Discussion Group
 - ii. Selected User/Registered Member of the Forum
 - iii. Individual Tags

Updated roles for facilitators

The Forum content will still be supported/organised by facilitators. Each of the 11 Discussion Groups has a facilitator. The major new activity for facilitators represents more intensive controlling of the contribution of users to the Forum especially, correcting the use of Tags. Also, the Facilitators are encouraged to more actively administer the Forum discussions, e.g. by closing/re-opening them, or summarizing their outcomes in e.g. Change proposals.

Issues and risks

- Late signature of the contracts with facilitators created an activity gap (cc. 6 months) that need to be overcome quickly by intensified activity.
- Two facilitators work for us without a request for financial support. Their activity is covered by existing Collaboration agreements (JRC X EuroGeoSurveys, JRC X ECMWF).
- The new INSPIRE Community Forum has change the look and feel and therefore there might be some time for users to get used to it. To overcome the issue the User Guide (Help) was written to facilitate the use of the Forum.
- The two new cross cutting domains will need to be followed more closely to fine-tune the use / content. The additional effort e.g. dedicated Telco with the respective facilitators will need to be carried out by Commission.

2016.4 Meetings (2019)

Due to the fact that the contacts were not signed the official 2016.4 activity restarted on 16.5. 2019.

Last 2016.4 Teleconference took place on 16.5. 2019

Next 2016.4. Teleconference will take place on 27.6. 2019 (TBC).

1.2 2017.1 Master Guidance

Work on the Master Guidance was put on hold. The 2017.1 drafting team had a first meeting on 21 March 2018 and brainstormed about the scope, form and content of the guidance. No tangible deliverables have been produced yet. The ambition is to pick-up work on the Master Guidance in summer 2019 and draft the guidance starting from tangible use cases on different administrative levels to demonstrate the added-value of a European infrastructure for spatial data in different application domains.

1.3 2017.3 Improved client support for INSPIRE data

The action complements action 2017.2 in the overall goal of facilitating the consumption of INSPIRE data. While action 2017.2 aims to create alternative simplified schemas and a proposal for a

GeoJSON encoding of INSPIRE data for basic data exchange and direct visualisation in standard GIS tools, the purpose of action 2017.3 is to encourage better support by GIS software vendors for the current GML-based encoding as well as for the GeoJSON encoding developed within the remit of action 2017.2.

The work is carried out with the support of a contractor.

A GitHub repository named “CanIUse” has been created to document the action’s activities and results. A number of popular GIS client applications (both desktop and web, proprietary and open source) were selected for testing. These include: QGIS (in both versions 2.18 and 3.4), ESRI ArcMap 10.5, FME, hale studio, ESRI ArcGIS Online, OpenLayers 3, Leaflet 1.4, and GDAL/OGR (the popular library that is underlying most open source and proprietary client solutions). New versions of these software tools, as well as other software solutions (e.g. GRASS GIS), can easily be added.

A set of GML INSPIRE data sets were collected or created on an ad-hoc basis in order to gather a sample of test data sets representative of most of the possible complexity of existing INSPIRE schemas. Using these data sets, each selected client application was tested according to the following usability features : load and display GML data, load and display WFS 2.0 data, edit/create GML features, handle big data files, display geometries, display GML data with mixed-type geometry, display multiple geometries in the same feature type, correctly interpret the CRS, read and display 3D coordinates, read/display complex properties/properties with multiplicity > 1, and use them for styling and processing, load and display nillable properties and nilReason attributes, load and display @xlink:href and @xlink:title attributes, and use them for styling and processing, resolve links.

The results of the tests are provided in a tabular form, showing which feature is/is not supported by which software client. Results, available in a web page (an extract of which is shown in the figure below), are still provisional, since ESRI – which expressed interest in being involved in the study – is expected to provide the findings for Arcmap 10.5.

gml_file_load

QGIS	ArcGIS Online	hale studio	OpenLayers	FME Desktop	Leaflet
2.18.24-Las Palmas	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
3.4.4-Madeira	December 2018 update	3.4.1	5.3.0	2018.1	1.4.0

gml_file_display

QGIS	ArcGIS Online	hale studio	OpenLayers	FME Desktop	Leaflet
2.18.24-Las Palmas	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
3.4.4-Madeira	December 2018 update	3.4.1	5.3.0	2018.1	1.4.0

gml_WFS2_load

QGIS	ArcGIS Online	hale studio	OpenLayers	FME Desktop	Leaflet
2.18.24-Las Palmas	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
3.4.4-Madeira	December 2018 update	3.4.1	5.3.0	2018.1	1.4.0

gml_WFS2_display

QGIS	ArcGIS Online	hale studio	OpenLayers	FME Desktop	Leaflet
2.18.24-Las Palmas	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
3.4.4-Madeira	December 2018 update	3.4.1	5.3.0	2018.1	1.4.0

Regarding GeoJSON, data sets will be collected starting in the following weeks as soon as the work of Action 2017.2 will be finalized. Similarly to the case of GML, GeoJSON data sets will be tested according to a set of usability features listed on GitHub .

A workshop with software vendors will be held at the JRC in Ispra on July 8-9, 2019. It will be attended by representatives of the software products tested by the action, as well as by

representatives of the open source GIS community. In the workshop, the results of the tests on GML data sets will be presented and the main issues observed will be highlighted. This will form the basis for a discussion on how to improve support for INSPIRE data, in particular on which tools and specific functionalities have the highest priority to be developed or improved.

1.4 2017.4 Validation and conformity testing

The action focuses on two strands of activities:

- the maintenance and further development of the Abstract and Executable Test Suites (ATS and ETS) and the ETF software, which supports the INSPIRE Reference Validator (through a contractor); and
- the discussion (in the 2017.4 sub-group) of future improvements of the INSPIRE Reference Validator as well as of issues raised in the validator helpdesk, which require interpretation of TG (and in some cases IR) requirements.

The contractor's work is progressing. In early 2019 the ATS and corresponding ETS on Metadata TG v2.0, View Services (WMS TG v.3.11, WMTS TG v.3.11) and Download Services (WCS TG v.1.0, SOS TG v.1.0) were produced, validated, and further tested by the JRC staff before release. The ATS and ETS on Discovery Services (CSW TG v.3.1) were also developed and are currently being tested by the JRC staff before release.

Cloud deployment of the INSPIRE Reference Validator using Amazon Web Services (AWS) was successfully performed in early 2019. Two cloud instances were setup:

- a cloud staging instance¹, including the latest developments of the validator (in terms of both new ETS and new ETF functionality) and solutions implemented to fix reported bugs; the main purpose of the staging instance is to allow the community to test new developments before they are deployed in production;
- a cloud production instance², which will include the latest developments (new ETS, new ETF functionality and solutions for bug fixing) once these have been tested and validated by the community; vertical scaling and horizontal scaling were performed to setup this instance, which in June 2019 substituted the production instance hosted by the JRC³ (dismissed).

After about two months of testing by the community on the cloud staging instance, it was decided to include the new ETS on Metadata TG v.2.0, WMS and WMTS in the cloud production instance in June 2019; conversely, since only little testing of the new ETS on WCS and SOS has been performed so far, the plan is to include them in the cloud production instance in late June 2019. For this purpose, some WCS and SOS experts were contacted by the JRC and invited to provide additional testing.

Documentation of the ATS/ETS development roadmap for both the staging and production instances is included in the release planning document⁴.

¹ <http://staging-inspire-validator.eu-west-1.elasticbeanstalk.com/etf-webapp>

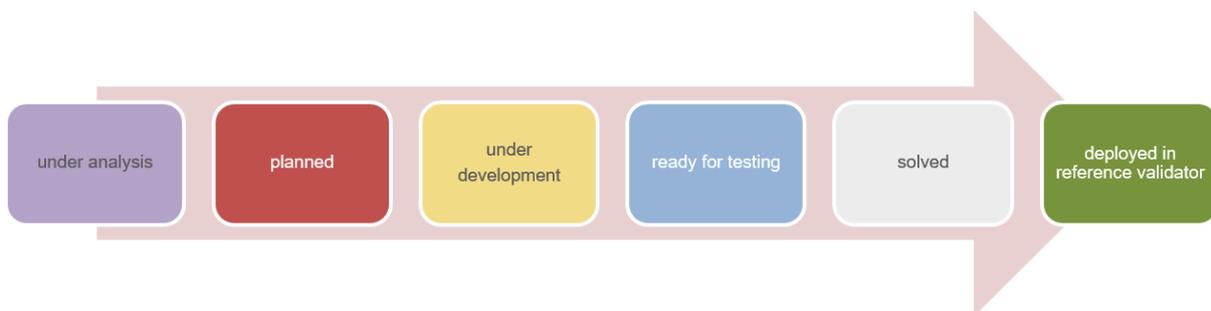
² <http://inspire-validator.eu-west-1.elasticbeanstalk.com/etf-webapp>

³ <http://inspire-sandbox.jrc.ec.europa.eu/etf-webapp>

⁴ https://github.com/inspire-eu-validation/community/blob/master/release_planning.md

The "Community" space on GitHub⁵, setup in late 2018, has become the reference place for reporting bugs/issues with the current ATS/ETS implementation, proposing improvements (new functionality) of the ETF software, or asking other questions related to validation and conformity testing.

Bug reports are addressed by labelling the corresponding GitHub issues according to the current workflow in their resolution (see the figure below). When a new bug is reported, the issue is initially labelled as *under analysis*, substituted by *planned* when the problem is identified and a solution is designed. As soon as the development of the solution begins, the issue is labelled as *under development*, and then *ready for testing* when the solution is deployed in the staging instance. At this point, the user who initially reported the bug is invited to test the solution and confirm that the problem has been solved (or, if not, report that additional work is needed); when the solution is also deployed in the production instance, the GitHub issue is labelled as *deployed in reference validator* and is finally closed.



A special label *for-2017.4-discussion* is used for those issues requiring a separate discussion within the 2017.4 sub-group. These discussions, which took place both through GitHub comments and dedicated sub-group meetings and mostly concerned the new ETS (particularly those on Metadata TG v.2.0 and WMS), have led to some possible proposals to update TG documents which will be formalized in the next weeks.

A separate discussion with the 2017.4 sub-group members⁶ took place to evaluate the needs and the goals of a workshop on the ETF validator targeting national implementers. It was agreed to hold the workshop in September 2019 and to organize it around the needs of both users and developers: the former are interested in demos, presentations and discussions on improvement proposals; the latter on using the ETF API and extending the ETS according to national needs.

The work on the governance (maintenance and further development) of the open source ETF software is assessed during monthly meetings of the ETF Steering Group, attended by the two current main sponsors (*interactive instruments* and *JRC*) as well as the ETF active developers. ETF Improvement proposals (EIPs) are collected, discussed and prioritised on GitHub⁷. The latest features added to the ETF (or currently under development) include a number of performance improvements and improvements to the UI, some of which were suggested and discussed by the 2017.4 sub-group.

⁵ <https://github.com/inspire-eu-validation/community/wiki>

⁶ <https://github.com/inspire-eu-validation/community/issues/20>

⁷ <https://github.com/orgs/etf-validator/projects/2>

Since the contractor has not yet consumed all the days established in the contract (currently expiring in June 2019), an extension until November 2019 was agreed and is currently under finalization.

1.5 Operation, maintenance and evolution of the INSPIRE registry & the INSPIRE register federation

The work on the Re3gistry software continued and the editing interface component has been completed following the suggestions gathered during the workshop on the Re3gistry software and INSPIRE register federation which took place on 5-6 September 2018. A period of internal testing has been completed and a testbed instance to check the editing interface will be set up and shared with a list of interested stakeholders.

In parallel, a collaboration agreement has been established with the National Land Survey of Finland to implement the data caching and the data API modules. These modules will be used to provide the services component of the platform such as the frontend web app and the API to get the data in different formats.

The INSPIRE registry service has been updated with the addition of the following items:

- Code list values for *EU Economic Activity Classification*;
- Code list values for *Environmental Stratification Classification*;
- Code list values for *Habitats Directive Code*;
- Code list values for *International Classification Of Diseases*;
- Code list values for *Cause Of Death*;
- Metadata code list *Spatial Scope*.

Furthermore, the following translations have been added:

- Croatian translation for the metadata code list *INSPIRE priority data set*
- Slovenian translation for the *Inspire Glossary*
- Dutch translation for metadata code list *Limitations on public access*
- Dutch translation for metadata code list *Conditions Applying To Access and Use*
- Translations in 23 languages for metadata code list *Spatial scope*