Analysing feedback by EU JRC – INSPIRE team on INSPIRE change requests as submitted by SeaDataCloud (WP8.3)

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Change request: TrajectoryObservation issues

- Constraint issue:
  - The FeatureOfInterest of a TrajectoryObservation should be a curve, however, the current constraint in the data model is inconsistently formulated (as a point). This should be adjusted in the data model (correct in the IR).

- TimeLocationValueTriple:
  - this class has been wrongly defined in the available schemata; the current version only provides the time and location, no value. This must be rectified in the schema made available for specialized observations.

Change request: TrajectoryObservation issues

- Expected impact/benefits of change
  - Would allow correct implementation and provision of the TrajectoryObservation type

Reply by JRC: TrajectoryObservation issues

- The issue with the O&M SpecialisedObservations schema will be dealt with as part of the INSPIRE maintenance and implementation process.

# Change request: Provision of external result data for O&M Observations

- Formalised guidance needed:
    - In the O&M Guidelines (D2.9), there is an Annex providing examples for the provision of external result data for O&M Observations. This was foreseen for communities with established standardized data models for the exchange of observational data, to allow them to maintain their existing infrastructure and tools when using external formats such as NetCDF. Unfortunately, no resources were allocated to this issue, and thus no formalized guidance available.

- Expected impact/benefits of change
    - Alignment among datasets being provided, utilizing external result formats

Reply by JRC: Provision of external result data for O&M Observations

- The marine community is an excellent candidate for expanding the 'external result data' discussion. Within this context, a formal proposal for an INSPIRE 'good practice', showcasing the approach, bundled with a real example (e.g. result as NetCDF), would be a good starting point that can then evolve into a new version of the currently existing SOS guidance.

- Overview of the procedure and requirements for formal submission of an INSPIRE 'good practice' is available, together with a submission template.

Ongoing discussion

- Out-of-band data provision using the NOAA ERDDAP open source software
- Linkage of output from SOS and WCS
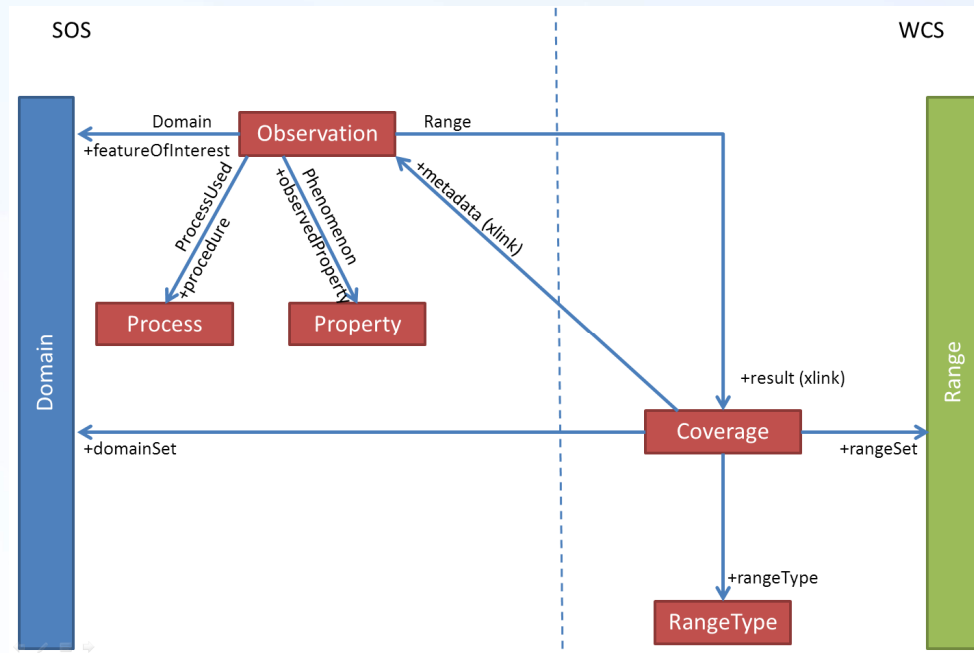
Change request: Accept the use of WGS84 as CRS in the provision of INSPIRE (marine) data

- Proposed change:
  - The proposal is to allow the usage of WGS84 (EPSG:4326), at least for marine data provision. The minimum proposal would be to add OF and EF-specific requirements into

    COMMISSION REGULATION (EU) No 1253/2013 of 21 October 2013 (Annex VI, sections 7, 14) of the INSPIRE Implementation Rules

    to allow it.

    For cross-thematic interoperability, the ideal solution would be to allow the use of it in all themes.

Change request: Accept the use of WGS84 as CRS in the provision of INSPIRE (marine) data

- Rational of change
  - It is considered inconvenient, costly, and unnecessary, by the Marine community to transform these datasets from WGS84 (EPSG:4326) to the INSPIRE compliant ETRS89-GRS80 (EPSG 4258) as the difference between the two is so small. This change proposal is in line with the fact that provision in, for example GeoJSON, currently only supports the use of WGS84.

- Expected inputs/benefits of change:
  - This change would support wider usage and interoperability of INSPIRE datasets with the datasets of marine and other domains and standards/formats. It would speed up the INSPIRE implementation process, at least in the marine domain, and the cost-benefit of the implementation would improve.

Reply by JRC: Accept the use of WGS84 as CRS in the provision of INSPIRE (marine) data

- A similar issue has been raised by several MS with regards to national CRS and the Spherical Mercator CRS (EPSG:3857). The different options for the inclusion of new CRS are provided and evaluated in [1] and [2]. The decision taken during the 8th meeting of the MIG [3] to

- (i) allow additional CRS through a CRS control body under the governance of the MIG,

- (ii) endorsement procedure, and

- (iii) CRS registry that also includes transformation parameters that would allow the establishment of a transformation service to other well-known CRSes.

Reply by JRC: Accept the use of WGS84 as CRS in the provision of INSPIRE (marine) data

A minor amendment to the Implementation Rules would allow additional CRS to be endorsed, e.g. by changing point 1.3.4 in Annex II along the following lines (proposed changes in red):

1.3.4 Other Coordinate Reference Systems. Exceptions, where other coordinate reference systems than those listed in 1.3.1, 1.3.2 or 1.3.3 may be used, are:

- *1. Other coordinate reference systems may be specified for specific spatial data themes in this Annex or by endorsement of the EC expert group on INSPIRE maintenance and implementation.*
- *2. For regions outside of continental Europe, Member States may define suitable coordinate reference systems.*

- *The geodetic codes and parameters needed to describe these other coordinate reference systems, and to allow conversion and transformation operations, shall be documented and an identifier shall be created in the INSPIRE registry, according to EN ISO 19111 and ISO 19127.*

- *The use of WGS84 as the native data sharing CRS would be possible and the transformation parameters to ETRS89 should be disclosed.*

Next steps

- – Planned implementation of the Transformation Service
  - • create harmonised INSPIRE data even though EF and OF data cannot yet be validated by the INSPIRE Validator

  - • Validation service for EF and OF should be in place by end of 2020 latest

- – Ongoing work looking at the out-of-band data provision – outside of the SDC project.

- – Follow up the JRC suggestion to make a proposal for INSPIRE Best Practice?

Other issues

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  convention = "SeaDataNet_1.0, CF-1.6"

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  • Affected data files – potentially all SDN NetCDF files which used the examples described within the Format

Other issues

– CF checker software

CJDY1101 – Chronological Julian Date

Days since -4713

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  - Best outcome – no further impact for SDC