INSPIRE Protected Sites -teemaan liittyvä yhteistyö ja kehittämistyö

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SYKE

Käynnissä oleva yhteistyö

- Kansallinen yhteistyö liittyen PS-teemaan
- **Pohjoismainen yhteistyö** liittyen PS-teemaan
- **EEA:n kehittämistyö** liittyen PS-teemaan

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Nordic INSPIRE network

	Ministry/Department	Agency	”Special Guest Star”
	Regeringskansliet	LANTMÄTERIET	NATURVÅRDSVERKET
	Kommunal- og moderniseringsdep 24 Followers • 23 Following	Kartverket	MILJØ-DIREKTORATET
	Ministry for the Environment and Natural Resources	LANDMÆLINGAR ÍSLANDS	
	mmm.fi MINISTRY OF AGRICULTURE AND FORESTRY	NLS NATIONAL LAND SURVEY OF FINLAND	SYKE
	DANISH MINISTRY OF ENERGY, UTILITIES AND CLIMATE	Danish Geodata Agency	Miljø- og Fødevareministeriet Naturstyrelsen

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INSPIRE Tools and Services workshop

- Exchange of experiences
  - Tools to support the transformation
    - National data -> INSPIRE data
  - Tools for setting up INSPIRE services
    - INSPIRE WMS and WFS
  - Tools for Validation
    - Datasets
    - Services
- Focus on INSPIRE Protected Sites theme
  - PS simple data products
  - Other national PS data products
- Arranged at SYKE 9-10 December 2015
- Participants from Finland, Norway, Denmark and Iceland

MILJØ-DIREKTORATET

SYKE

Miljø- og Fødevareministeriet
Naturstyrelsen

LANDMÆLINGAR ÍSLANDS

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On the PS workshop agenda

DAY 1: Mapping to INSPIRE

12:00 Welcome to SYKE and current issues

12:15 Datasets reported the Protected Sites theme in each Nordic country

13:30 Data model pilot at SYKE– experiences from mapping and setting up WFS services in the PS theme

- Presenter: Ilkka Rinne, Finland

14:45 Mapping to the PS data model – other experiences

- Mapping to INSPIRE PS schema in FME to produce GML Presenter: Lars Christensen, Norway
- Experiences with HALE Presenter: Saulius Prizginas, Iceland
- Mapping to ESRI's database template (LifeData) Presenter: Lena Hallin-Pihlatie

16:30 Wrap up of day 1

DAY 2: Setting up and validation of INSPIRE services and datasets

9:00 Overall INSPIRE data and service production process: the Danish model

- Presenter: Sofia Jaeger

10:30 SOSI - The Norwegian data product standardisation method

- Presenter: Lars Christiansen

9:45 Setting up INSPIRE services

- Using ArcGIS and ArcGIS for INSPIRE to set up services (the process) Moderator: Mikko Hynninen

12:30 Validation tools

- Spatineo monitoring validator – Presenter: Jaana Mäkelä
- Validation: eEnvplus Validator: PS theme Schematron Test Presenter: Saulius Prizginas, Iceland

14:00 Wrap up of day 2

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Summary of tools

- Transformation tools (schema mapping)
  - Tested: FME & HALE
  - Tools provided by JRC
    - Mapping tables
    - Find your scope tool
- Tools for setting up INSPIRE services
  - Tested: ArcGIS for INSPIRE, GeoServer
  - Others: Deegree, ArcGISServer, FMEServer, Go Publisher
- Validation tools
  - Spatineo Monitor: demo by Spatineo,
  - eEnvplus Validator: demo by Iceland
  - Others: Overview by MIWP-5

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Transformation - HALE

- Pros
  - Nice graphical interface, which supports ”hierarchical” mapping
  - Open Source
  - Developed in Europe for European needs
  - Direct usage of INSPIRE code lists
  - A pretty active development and user community
- Cons
  - Not as many transformers as in FME
- Experiences in Finland, Iceland, and in Denmark

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Transformation - FME

- Pros
  - Includes a lot of transformers
  - FME has also FMEServer
    - Norway will probably test FMEServer next year
- Cons
  - All attributes as a long non-hierarchical list
  - The ETL process gets easily complicated and complex (long syntaxes, with references from 0..*)

- Experiences in Norway and Finland

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GeoServer – Service provision

- Pros
  - GeoServer + HALE integration under development
  - Open Source
  - Developed to meet the requirements of INSPIRE
    - INSPIRE Extension
  - Delivery of other formats than GMLs via WFS possible
    - Eg. Shapefiles
- Cons
  - The AppSchema extenstion sets restrictions on the mapping
    - Eg. mapping to multigeometry types is not presently possilbe
  - One Geoserver instance per INSPIRE application schema
    - Mapping to an object data type possible only once
- Experiences in Finland

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ArcGIS for INSPIRE – Service provision

- Pros
  - Service production made easy
  - Program maintenance easy
- Cons
  - You need to transform your data to ESRI's own database template
  - The database template does not yet include all INSPIRE themes
    - No support for delivery of rasters yet
  - Unflexible with schema updates
  - Mismatch in attribute names versus PS TG
  - Mismatch in database structure versus PS TG
  - Not all multiplicities preserved
  - Are the GMLs Inspire compliant?
- Experiences in Finland and Norway

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Common challenges and concerns identified

- The creating of INSPIRE compliant network services (eg. WMS, WFS) is a big and time-consuming effort
  - The INSPIRE-specific service requirements (extended capabilities: link to metadata, language support, coordinate system support, etc.) put a heavy burden for data providers
    - Concern: Will the WFS services work? It may depend on INSPIRE data model and theme.

- The complex data types of INSPIRE causes challenges in the schema mapping and INSPIRE service provision
    - Concern: will/can the GMLs be used as they are not well supported in most GIS software
  - A possible solution could be to the develop alternative simple feature “implementation” data models

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EEAn kehittämistyö Eionet verkoston kanssa

- Eionet is a partnership network of the European Environment Agency (EEA) and its member and cooperating countries involving approximately 1000 experts and more than 350 national institutions. The network supports for example the collection and organisation of data.
- NFP = National Focal Point
  - SYKEn Elise Järvenpää
- NRCs = National Reference Centres are nominated by member and cooperating countries. They are nationally funded experts or groups of experts in organisations which are regular collectors or suppliers of environmental data at the national level
  - **Reporting of data sets** due to Directives and agreements
  - NRC Enviromental Information Systems (EIS)
    - Since 2014 focus on INSPIRE implementation
    - Annual two-day meeting for knowledge exchange

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CDDA raportoidaan EEAlle joka vuosi

- Common Database on Designated Areas (CDDA) eli kansallisilla päätöksillä perustetut suojelualueet
- Raportoitu EEA vuodesta 1995 lähtien
  - Osana ns. Eionet priority data flow
- CDDA on Euroopan maiden virallinen suojelualuetietojen lähde, josta tiedot välitetään globaaliin tietokantaan World Database of Protected Areas (WDPA)

Lähde: Liisa Tuominen-Roto, SYKE

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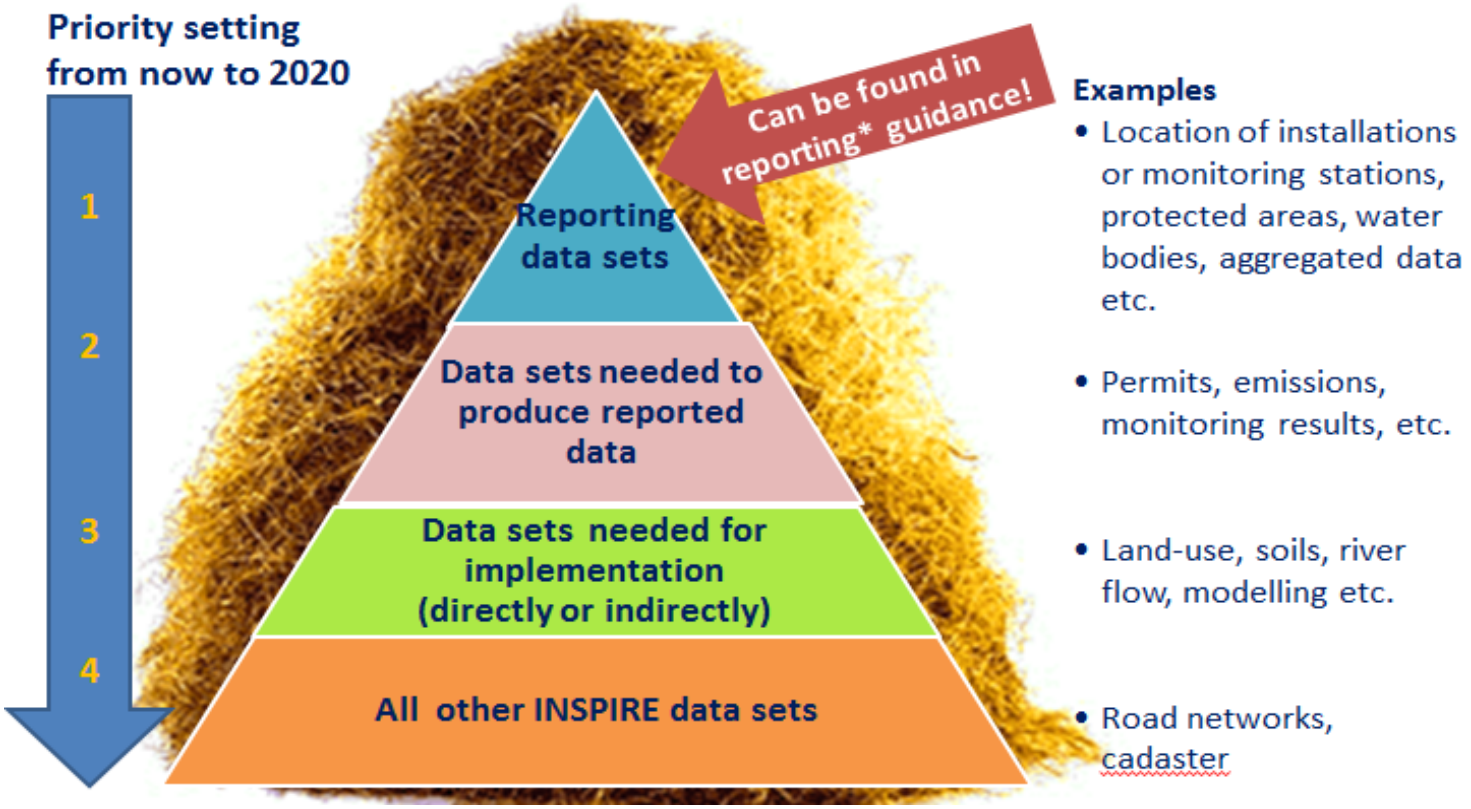
New priorities in the INSPIRE implementation



- The European Commission would like the e-reporting communities to take a bigger role in the evolvement of INSPIRE
  - To benefit from INSPIRE
  - Resource-efficient reporting
  - Streamlining reporting obligations

Source: EEA

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EEA's CDDA-INSPIRE Pilot

Part 1: 2015 - 2016

- Developing CDDA data model according to INSPIRE Protected sites Simple application schema
  - Planned outcomes:
    - Conceptual data model in UML
    - GML application schema
    - Test GML data

Part 2: 2016

- Development and demonstration of INSPIRE web services
- Testing the inclusion of services into the reporting process

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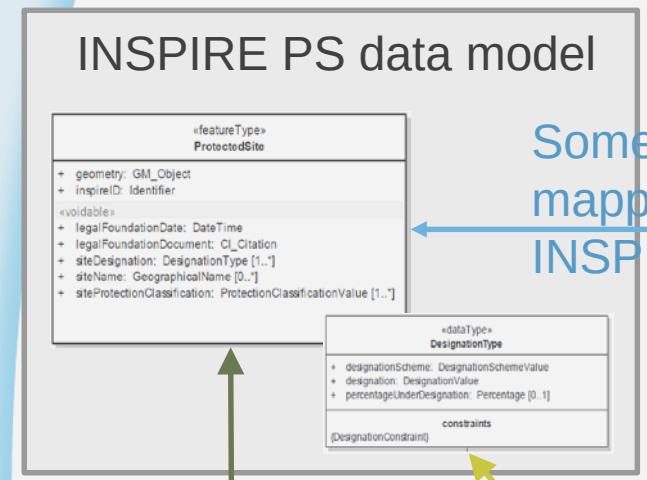
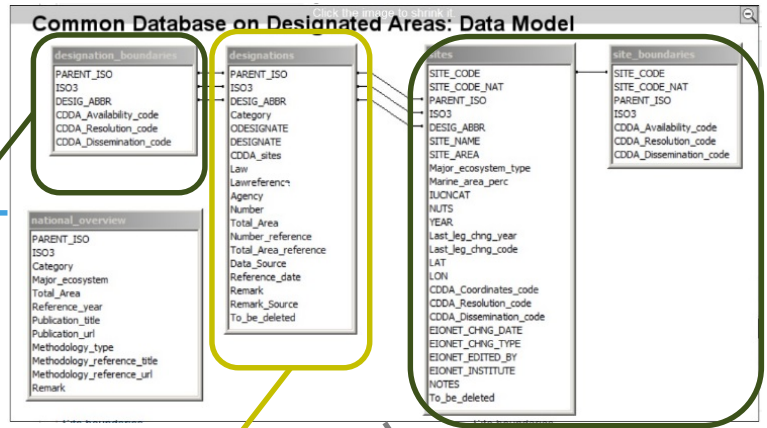
Source: EEA
11/2015, NRC EIS meeting

Extending INSPIRE PS for CDDA purpose



Some properties are mapped / moved to INSPIRE PS



Extension to the INSPIRE Protected sites – CDDA Sites, boundaries

Designations
New standalone register with its own data flow

Some questions to Eionet on usefulness and future needs, making reporting more effective and targeted..

Source: EEA
11/2015, NRC EIS meeting

EEA's two data modelling apporoaches

A. Integrated approach

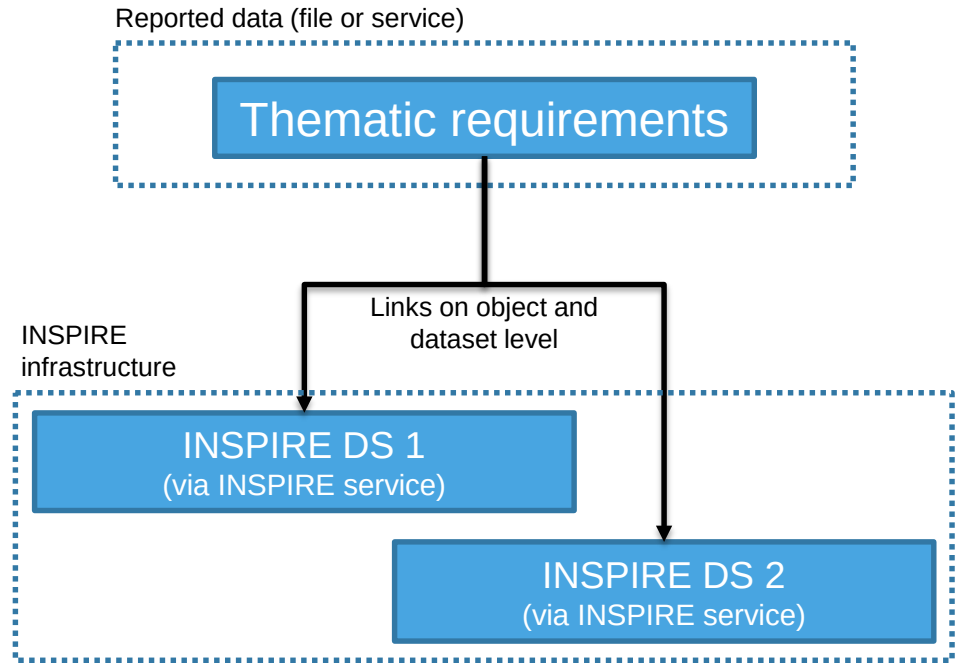
One schema containing …

- Thematic requirements
- INSPIRE DS 1
- INSPIRE DS 2
- …
- …
- etc.

Adding new application schemas and importing INSPIRE or other schemas

Used for CDDA & INSPIRE alignment – making one INSPIRE based data model

B. Linked approach



Keeping INSPIRE schemas as they are, transform data accordingly, develop other schemas and include pointers – references to INSPIRE spatial objects

Source: EEA
11/2015, NRC EIS meeting

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Yhteenveto

- SYKE ja MML osallistuu Pohjoismaiseen yhteistyöhön
- SYKE seuraa EEAn INSPIRE työtä, kuten CDDA-INSPIRE pilottia
- Kansainvälisiä esimerkkejä tietotuoteteemaan?
- Lisätietoja CDDA-INSPIRE tietomallinnuksesta @ INSPIRE Thematic Clusters:
  - https://themes.jrc.ec.europa.eu/discussion/view/69048/cdda-data-model-webinar-presentations-and-webinar-recording-link

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