INSPIRE
Data Specification for Meteorology

Bruce Wright, Expert Strategic Advisor (Data Management)

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INSPIRE

Overview & Timescales

INSPIRE

INfrastructure for SPatial InfoRmation in Europe

- Establish an infrastructure for spatial information in Europe
- Based on the infrastructures established and operated by the 27 EU Member States
- To support community environmental policies, and policies or activities which may have an impact on the environment.

The INSPIRE Directive (2007/2/EC) came into force in Europe on 15 May 2007

INSPIRE

Key components specified through common technical implementing rules (IR)

And many guideline documents!

- Ensure the SDIs of the Member States are compatible and usable in a Community and transboundary context
- Adopted in a number of specific areas:
  - Metadata
  - Data Specifications
  - Network Services
  - Data and Service Sharing
  - Monitoring and Reporting

INSPIRE

Directive addresses 34 spatial data themes in 3 Annexes

"Basic" geographic

Annex 1

- Coordinate reference systems (RS)
- Geographical grid systems (GG)
- Protected sites (PS)
- Hydrography (HY)
- Addresses (AD)
- Cadastral parcels (CP)
- Transport networks (TN)
- Administrative units (AU)
- Geographical names (GN)

Annex II

- Elevation (EL)
- Land cover (LC)
- Orthoimagery (OI)
- Geology (GE)

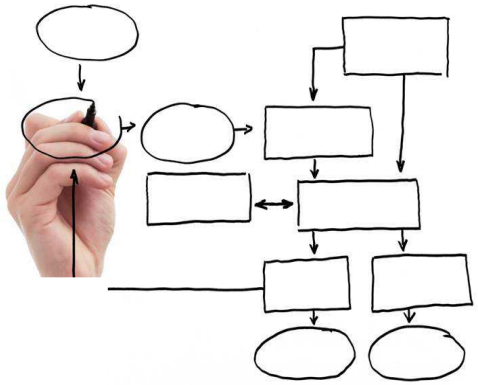
Specialist domains

Annex III

- Statistical units (SU)
- Buildings (BU)
- Soil (SO)
- Land use (LU)
- Human health and safety (HH)
- Utility and governmental services (US)
- Environmental monitoring facilities (EF)
- Production and industrial facilities (PF)
- Agricultural and aquaculture facilities (AF)
- Population distribution and demography (PD)
- Area management/restriction/regulation zones & reporting units (AM)
- Natural risk zones (NZ)
- Atmospheric conditions (AC)
- Meteorological geographical features (MF)
- Oceanographic geographical features (OF)
- Sea regions (SR)
- Bio-geographical regions (BR)
- Habitats and biotopes (HB)
- Species distribution (SD)
- Energy Resources (ER)
- Mineral Resources (MR)

INSPIRE

Timescales



INSPIRE
For Meteorology

Themes

Focussed on Meteorology & Related

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Thematic Working Groups

Met Office

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Thematic Working Group on Atmospheric Conditions & Meteorological geographical Features

(or TWG AC- MF)

TWG AC-MF

Membership

Met Office

Bernard Strauss (Facilitator) - Meteo-France

Spiros Ventouras (Editor) - STFC Rutherford Appleton Laboratory

Sheila Cryan - European Environmental Agency

Esa Falkenroth - Swedish Meteorological and Hydrological Institute

Frédéric Guillaud - Meteo-France

Stefano Nativi - Italian National Research Council (CNR - IMAA)

Erwin Petz - Zentralanstalt f. Meteorologie und Geodynamik

Ilkka Rinne - Finnish Meteorological Institute (FMI)

Raymond Sluiter - Royal Netherlands Meteorological Institute (KNMI)

Bruce Wright - Met Office

INSPIRE
Scope

TWG AC-MF

Scope

INSPIRE Directive [2007/2/EC] defines:

- Theme III-13, Atmospheric conditions:
  - Physical conditions in the atmosphere. Includes spatial data based on measurements, on models or on a combination thereof and includes measurements locations
- Theme III-14, Meteorological geographical features:
  - Weather conditions and their measurements: precipitation, temperature, evapotranspiration, wind speed and direction

Distinction is not so clear & scope potentially very large!

TWG AC-MF

Scope

Approach:

- Treat AC & MF as single theme for initial development of a data specification
- Use the Use Cases to focus on which data are really needed
- Be aware of :
  - User requirements
  - Cost/Benefits ratio
  - Testability
  - Implementation
- Keep consistency with other modelling activities

This work will result in implementing rules and then, laws!

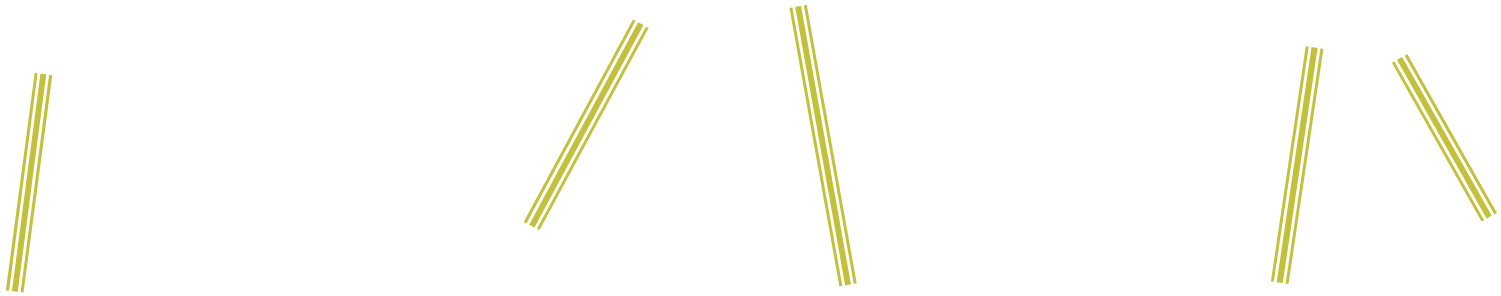
INSPIRE
Data Modelling

Data Modelling

Methodology

Data Modelling

Use Cases



Flash flood forecasting

Finding best locations for new wind farms

Climate Impacts

Data Modelling

Based on O&M

OGC Observations and Measurements (O&M)

now ISO/DIS 19156 Geographic Information – Observations and measurements

Data Modelling

TWG AC-MF First Draft – very preliminary

INSPIRE
Further information

INSPIRE

Reference Information

INSPIRE Web Site: http://inspire.jrc.ec.europa.eu

OGC Met-Ocean Domain Working Group Wiki:

http://external.opengis.org/twiki_public/bin/view/MetOceanDWG/

Most INSPIRE use case documents can be found linked from the Conceptual Modelling Use Case pages:

http://external.opengis.org/twiki_public/bin/view/MetOceanDWG/MetOceanUseCases

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Cross-Domain Use Case

Met Office

Any questions?