

STFC – Science & Technology Facilities Council, UK Subcontractor to BODC

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Science & Technology Facilities Council, <http://www.stfc.ac.uk>

*SeaDataNet II Kick Off Meeting,
Athens, 19-20 October 2011*

STFC: Science & Technology Facilities Council, UK

UK Astronomy Technology Centre
Edinburgh, Scotland



Polaris House
Swindon, Wiltshire



Chilbolton Observatory
Stockbridge, Hampshire



Isaac Newton
Group of
Telescopes
La Palma

Daresbury Laboratory
Daresbury Science and Innovation Campus
Warrington, Cheshire



Rutherford Appleton Laboratory
Harwell Science and Innovation Campus
Didcot, Oxfordshire



One of the 7 Research Councils in the UK

Supports UK Science base with:

- * High tech expertise
- * Experimental facilities

Partners with Academia & Industry

Broad Science portfolio:

- * Materials
- * Lasers
- * Astronomy
- * Particle Physics
- * Alternative Energy
- * ... + more

CEDA

Centre for Environmental Data Archival

NERC Designated Data Centres
 For Atmospheric and Earth
 Observation data.
**BADC = British Atmospheric Data
 Centre**

~ 1.5 Petabytes
 ~ 100,000,000 files

Model & Observational data.

IPCC Data Distribution Centre

UK Climate Impacts Program

CMIP5 Gateway Centre.



Main data holdings

- UK Met Office weather observations – near real time and historical
- ECMWF forecast runs - twice daily
- Long term observational climate records - e.g. CRU
- Climate model runs replicated from many major modelling centres, CMIP5 archive
- Satellite data e.g. AATSR Sea Surface Temperature

STFC's role in SeaDataNet 2

- Catch up on SeaDataNet 1...
- Standardisation and standards.
- Aims to achieve INSPIRE compliance and to contribute to the INSPIRE process for developing implementing rules for oceanography.
- Expertise with INSPIRE and ISO/OGC standards – relevant for WP8.1 and WP8.2.

Open Geospatial Consortium (OGC)

- The Open Geospatial Consortium (OGC) is an **international industry consortium** of 436 companies, government agencies and universities participating in a **consensus** process to develop **publicly available interface standards**. OGC® Standards support interoperable solutions that "**geo-enable**" the Web, wireless and location-based services and mainstream IT. The standards empower technology developers to make complex **spatial information and services** accessible and **useful with all kinds of applications**.

<http://www.opengeospatial.org>

BADC/STFC in OGC

- Active member of OGC (~6 years), contributions to:
 - Observations & Measurements
 - GML
 - WMS, WCS, WFS, WPS..
 - Earth Observation Profile of O&M (ESA HMA)
 - NetCDF
 - MetOcean Domain Working Group
- Implemented various tools: WxS clients and servers.
- Familiar with OGC standards, members, 'mechanics' of specification development and current activities.

INSPIRE

General **rules** for establishment

Distributed infrastructure



27 countries
21 languages



Environment

34 Spatial Data Themes
Entry into force 15/5/2007

European legislation

Slide adapted from Paul Smits, Alessandro Sarretta, JRC

INSPIRE Directive 2007/2/EC

- INSPIRE lays down general rules to establish an infrastructure for spatial information in Europe
 - for the purposes of **Community environmental policies** and
 - policies or activities which may have an **impact on the environment**.
- INSPIRE to be based on the infrastructures for spatial information established and operated by the **Member States**
 - INSPIRE is a **distributed infrastructure**.
- INSPIRE does **not** require collection of **new spatial data**
- INSPIRE does not affect existing Intellectual Property Rights
- Directive entry into force 15 May 2007
- Implementing rules followed (or to follow)

Slide adapted from Paul Smits, Alessandro Sarretta, JRC



INSPIRE Thematic Scope

Annex I

- Coordinate reference systems
- Geographical grid systems
- Geographical names
- Administrative units
- Addresses

Annex II

- Elevation
- Land cover
- Ortho-imagery
- Geology

Annex III

- Statistical units
- Buildings
- Soil
- Land use
- Human health and safety
- Utility and governmental services
- Environmental monitoring facilities
- Production and industrial facilities
- Agricultural and aquaculture facilities
- Population distribution – demography
- Area management/restriction /regulation zones & reporting units
- Natural risk zones

Annex III

- Atmospheric conditions
- Meteorological geographical features
- Oceanographic geographical features
- Sea regions
- Bio-geographical regions
- Habitats and biotopes
- Species distribution
- Energy Resources
- Mineral resources



**British Atmospheric
Data Centre**

NATIONAL CENTRE FOR ATMOSPHERIC SCIENCE
NATURAL ENVIRONMENT RESEARCH COUNCIL

Slide adapted from Paul Smits, Alessandro
Sarretta, JRC



**Science & Technology
Facilities Council**

Standards: BADC/STFC in INSPIRE

- Member of Data Specifications Drafting team (Andrew Woolf, now with BoM Australia).
- Editor Annex 1 theme: Hydrography (Woolf).
- *Editor Annex 2 themes: Atmospheric Conditions /7 Meteorological Features (Spiros Ventouras)*
- *Editor Annex 2 themes: Oceanographic Geographical Features & Sea Regions (Dominic Lowe)*
- *Editor Download Services Technical Guidance (Lowe)*

Note on INSPIRE Specification Timelines

- Version 2.0 of Data Specifications:
 - Public Consultation now!
 - Ends Friday 21st October...
 - **All** comments received will be considered.
- SeaDataNet member participation ..?.
- “SeaDataNet II will participate in the relevant INSPIRE working groups to contribute to the INSPIRE process, by tuning the standards adopted for usage in oceanographic domain and by establishing guidelines and training to facilitate their usage”
- Comment resolution till end Jan 2012 – discussions with external parties if necessary...



- Version 3.0 (final) April 2012

Thank you

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