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

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







# STFC: Science & Technology Facilities Council, UK





Isaac Newton Group of Telescopes La Palma

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 fordeveloping 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



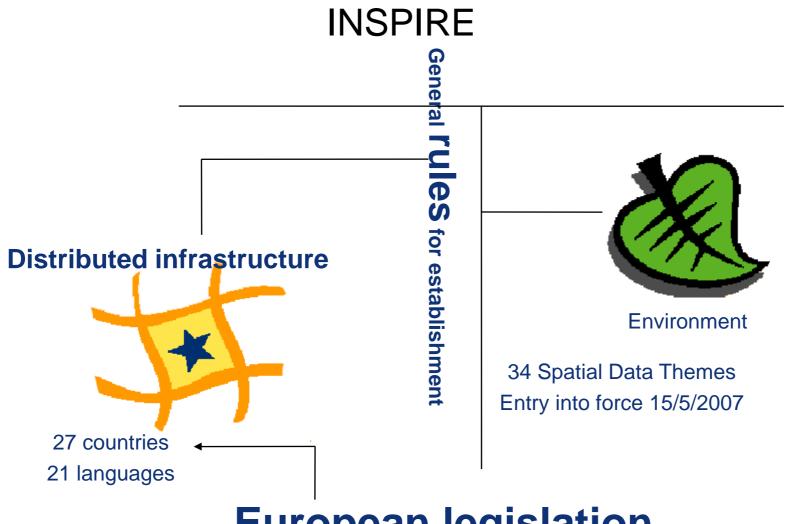


### BADC/STFC in OGC

- 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.







**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)

(Acts adopted under the EC Treaty/Euratem Treaty whose publication is obligatory)

DIRECTIVES

Alessandro

DIRECTIVE 2007/2/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 March 2007

EN

Official Journal of the European Union

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





## 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
   Meterological 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 21<sup>st</sup> 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

  BACKTERIAL PARTIES if necessary...

  Science & Technology

Facilities Council

Version 3.0 (final) April 2012

## Thank you

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