

# 8<sup>th</sup> NIOHC – GOA

## SDI DEVELOPMENTS IN EUROPE

### UK UPDATE

- **INSPIRE**
- **IHO Marine Spatial Data Infrastructure Working Group (MSDIWG)**
- **UK Marine Environmental Data and Information Network (MEDIN)**



# INSPIRE

Directive of the European Parliament and the Council

establishing an

**In**frastructure for **SP**atial **In**fo**R**mation in **E**urope



# Bringing Data and Services together through a Spatial Data Infrastructure



Like a road infrastructure makes it possible to connect different places, a spatial data infrastructure makes it possible to connect data and services located at different sources



Data and services easily discoverable and accessible to users



Easier development of new applications and services

## Components

<b>Institutional framework</b>	<b>Technical standards</b>
<b>Fundamental data sets</b>	<b>Information Services</b>



## Why INSPIRE?



- EU Marine Strategy
- EU Maritime Policy
- Thematic strategy on natural resources
- Revision of SEVESO Directives on hazardous substances
- Proposal for Directive on control of pipelines
- Integrated Coastal Zone Management
- EU Noise Directive
- EU Water Framework Directive
- EU Habitats Directive
- European Action programme on flood risk management



## Why INSPIRE?

- **Data policy restrictions**
- **Lack of co-ordination**
  - across borders and between levels of government
- **Lack of standards**
  - incompatible information and information systems
- **Existing data not re-usable**
  - fragmentation of information
  - redundancy
  - inability to integrate



# INSPIRE Components

- METADATA
- INTEROPERABILITY OF SPATIAL DATA SETS AND SERVICES
- NETWORK SERVICES
- DATA SHARING
- COORDINATION AND COMPLEMENTARY MEASURES

*INSPIRE is a Framework Directive*

*Detailed technical provisions for the issues above will be laid down in Implementing Rules*



# What Kind of Spatial Data ?



- Spatial data held by or on behalf of a public authority
- Digital data
- 34 Spatial Data Themes, including:
  - Hydrography
  - Agricultural and aquaculture facilities
  - Oceanographic geographical features
  - Sea regions
  - Elevation
  - Transport Networks



# Timetable



- Preparatory phase (2004-2006)
  - Consultations
  - Initial work on Implementing Rules
- Transposition phase (2007-2009)
  - Preparation of Implementing Rules
  - Directive enters into force
  - Transposition into national legislation
  - Phased adoption of Implementation Rules
- Implementation phase (2009 -2013)
  - implementation and monitoring of measures



## METADATA

INTEROPERABILITY OF SPATIAL DATA SETS AND SERVICES

NETWORK SERVICES

DATA SHARING

COORDINATION AND COMPLEMENTARY MEASURES



- Metadata - “data about data”
- To be created and kept up to date
- Metadata to include:
  - Conditions for access and use
  - Quality and validity
  - The public authorities responsible
  - Limitations on public access



METADATA

INTEROPERABILITY OF SPATIAL DATA SETS AND SERVICES

NETWORK SERVICES

DATA SHARING

COORDINATION AND COMPLEMENTARY MEASURES



- Based on relevant user requirements
- Integrate existing international standards, if appropriate
- Feasible, proportionate, take cost-benefit into account
- Stakeholders will participate in development of these Implementing Rules
- Harmonised data specifications



METADATA  
INTEROPERABILITY OF SPATIAL DATA SETS AND SERVICES  
NETWORK SERVICES  
DATA SHARING  
COORDINATION AND COMPLEMENTARY MEASURES



## A network of services:

- Discovery
- View
- Download
- Transformation
- Services allowing spatial data services to be invoked

Will establish an INSPIRE GEO portal



METADATA

INTEROPERABILITY OF SPATIAL DATA SETS AND SERVICES  
NETWORK SERVICES

DATA SHARING

COORDINATION AND COMPLEMENTARY MEASURES



## Sharing of data and services between public authorities

- for public tasks relating to the environment
- without restrictions at the point of use
- may charge if this is not an obstacle to sharing.
- if provided for reporting obligations under Community law relating to the environment then not be subject to charging



# For more information...

<http://www.ec-gis.org/inspire/>

**INSPIRE DIRECTIVE**

Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) was published in the official Journal on the 25th April 2007. The INSPIRE Directive entered into force on the 15th May 2007

Full text of the directive (EN)

The directive is available in the official languages.  
Official Journal of the European Union

**SDICs and LMOs**

Registered SDICs and LMOs can add new reference material and projects to the Implementing Rules Development databases.  
Read More

Login to update your entry  
Register a new SDIC/LMO.

**Headline News**

Apr 1, 2008

Following the recent adoption of the Commission Communication on the Shared Environmental Information System (SEIS), the first Europa web site of the Shared Environmental Information System is now available at: <http://ec.europa.eu/environment/seis/index.htm>.

March 14, 2008

**INSPIRE Draft Implementing Rules for Monitoring and Reporting** are now available for public view and for comments from SDICs and LMOs. Commenting this draft is restricted to registered Spatial Data Interest Communities and Legally Mandated Organisations ONLY. Based on all the comments received, the Monitoring and Reporting Drafting Team will issue a new version of the Implementing Rules which will constitute the basis for a legal instrument to be prepared by the European Commission and to be submitted for opinion to the INSPIRE regulatory committee before the end of 2008. The deadline for receiving comments is 11 May 2008. Registered SDIC/LMOs can submit their comments here.

**NEWS**

- 02-Apr-08 Report published: The Socio-Economic Impact of the Spatial Data Infrastructure of Catalonia
- 01-Apr-08 Shared Environmental Information System SEIS
- 14-Mar-08 Report on use of the elements of spatial and temporal schema published
- 14-Mar-08 INSPIRE Draft Implementing Rules for Monitoring and Reporting
- 14-Mar-08 INSPIRE: Unique Identifiers report published
- 03-Mar-08 INSPIRE Conference: Call for papers

More News



<http://www.inspire-geoportal.eu/>

**INSPIRE Geoportal**  
the EU portal for Geographic Information

European Commission / INSPIRE GEOPORTAL / home

**quick links**

**Applications**

- INSPIRE Metadata Catalogue
- INSPIRE Map Client
- Map of the month

**INSPIRE Community Geoportal**

**Welcome**

The INSPIRE Community Geoportal is Europe's Internet access point to a collection of geographic data and services within the framework of the infrastructure for Spatial Information in Europe (INSPIRE) Directive. INSPIRE aims at making available relevant, harmonised and quality geographic information to support formulation, implementation, monitoring and evaluation of policies and activities which have a direct or indirect impact on the environment.

The geoportal does not store or maintain the data. It acts as a gateway to geographic data and services, distributed around Europe, allowing users to search, view or, subject to access restrictions, download geographic data or use available services to derive information.

**What's inside**

**Information tours**

Find out what INSPIRE is, what this portal offers, and how to use the pages and tools.

**Catalogues**

Search, discover and access geographic information provided by European governmental, commercial, and non-commercial organizations.

**News**

- 02-04-2008 Report published: The Socio-Economic Impact of the Spatial Data Infrastructure of Catalonia (more...)
- 01-04-2008 Shared Environmental Information System SEIS (more...)
- 14-03-2008 Report on use of the elements of spatial and temporal schema published (more...)
- 14-03-2008 INSPIRE: Unique Identifiers report published (more...)
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**EVENTS**

- 12-11-2008 [Potsdam, Germany ] ISDE Summit on Geoinformatics: Tools for Global Change Research (more...)
- 23-06-2008 [Maribor, Slovenia ] INSPIRE Conference: Implementation and Beyond (more...)

**Map of the Month**

**Interoperability in action**

Browse this online map showing varying topics of interest for the

# IHO

## Marine Spatial Data Infrastructure Working Group (MSDIWG)

- Established by CHRIS (as directed by the 17th IHC)
  - to analyze and recommend the level and nature of the IHO role in assisting Member States in support of their National Spatial Data Infrastructure.
  - to submit a report, guidelines, and recommendations to CHRIS/20 in November 2008 for consideration at the 4th EIHC in 2009.
- Chaired by UK
- Aligned with the requirements coming from INSPIRE

# MSDIWG

- Objectives for 2008:
  1. Audit of IHO Member States to establish:
    - level of knowledge and understanding of the benefit of supporting National SDI initiatives
    - capability in supporting the development of Marine SDI.
  2. Analysis of the results of the audit to establish the benchmark for future IHO support and/or capacity building required
  3. A preliminary IHO SDI Guide for Member States by end September 2008.
  4. For CHRIS/20 in November 2008
    - a report of WG activities to date
    - recommendation (if necessary) on an extension to the life of the WG

# UK Marine Environmental Data and Information Network (MEDIN)

- Partnership across marine community in UK
- Objective to improve knowledge of, access to and dissemination of marine data across all sectors
- Phase 1 established the principles
- Phase 2 (2008-2011)
  - Will set up data specific centres of expertise – Data Archive Centres (DACs) (e.g. UKHO for bathymetric data)
  - Financed by funding from Government (including UKHO) and commercial organisations
  - Will establish a metadata portal for marine data
  - Supports INSPIRE and the emerging UK Location (GI) Strategy

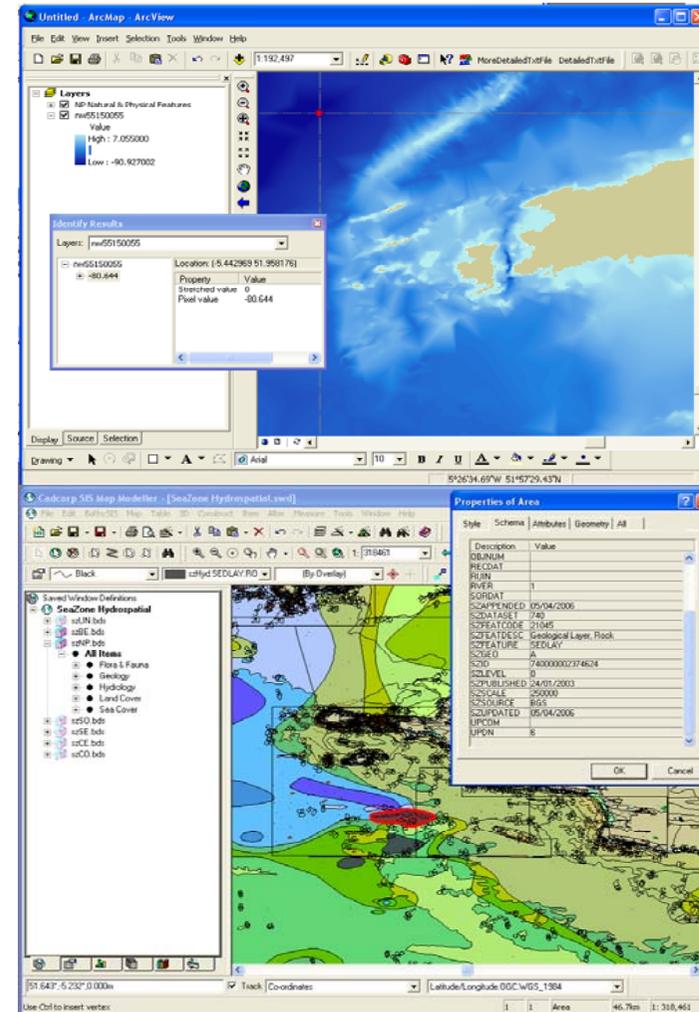


# SeaZone Hydrospatial Topic Layers

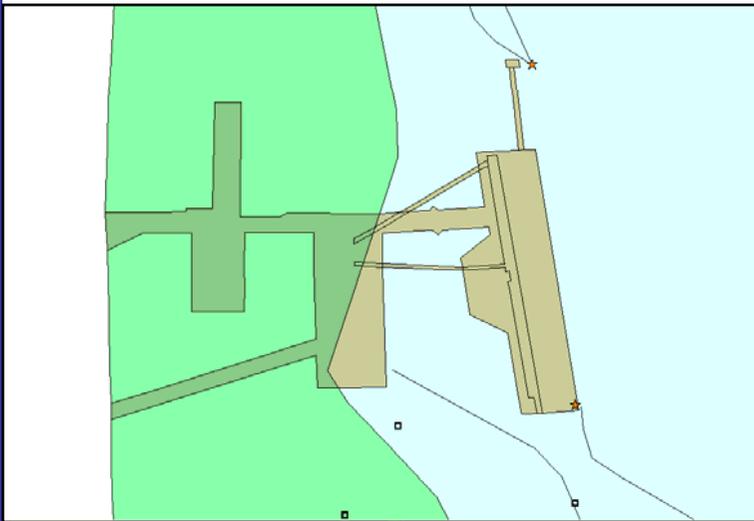
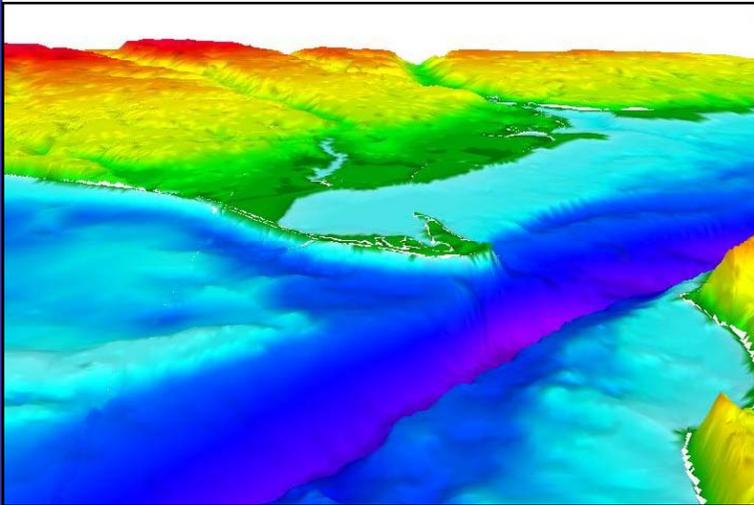
Provided in 6 Topic Layers:

- Bathymetry & Elevation
- Natural & Physical Features
- Structures & Obstructions
- Socio-Economic & Marine Use
- Conservation & Environment

Complies with existing & emerging standards for base reference information & provides an ideal framework for 'project based' datasets



# SeaZone Coastal Mapping Improvement Programme



- SeaZone developed staged process:
  1. Create 'Base Reference' shoreline (MHW) from OS MasterMap Topography Layer
  2. Address natural topographic inconsistencies and fill in 'data holes'
  3. Modify shoreline constructions to OSMM geometries (where available)
  4. Address associated features (e.g. beacons)
  5. Address administrative boundaries
- Complements OS MasterMap Topography Layer and provides base reference data for UK's DNF offshore
- Method & tools applicable overseas



Service hydrographique et océanographique de la marine

# Putting flesh on MSDI

(maritime spatial data infrastructure)

## SHOM practical experience



Goa 14 – 17 April 2008



# The European Blue book



**A new integrated governance framework for maritime affairs requires cross-cutting tools comprising....**



**➤ the development of maritime spatial planning**

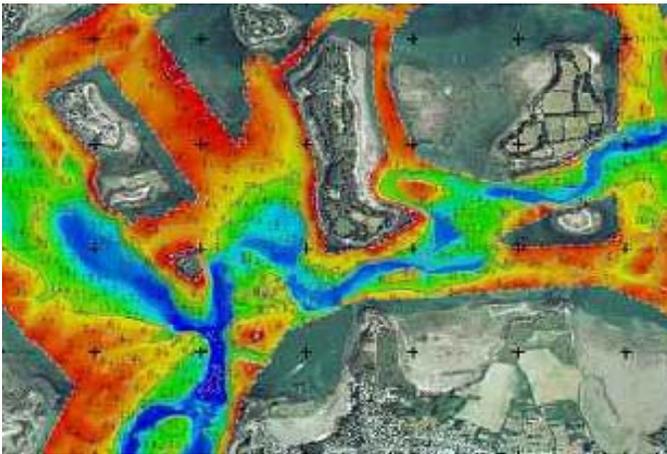


**Therefore SHOM is implementing INFRAGEOS-H**

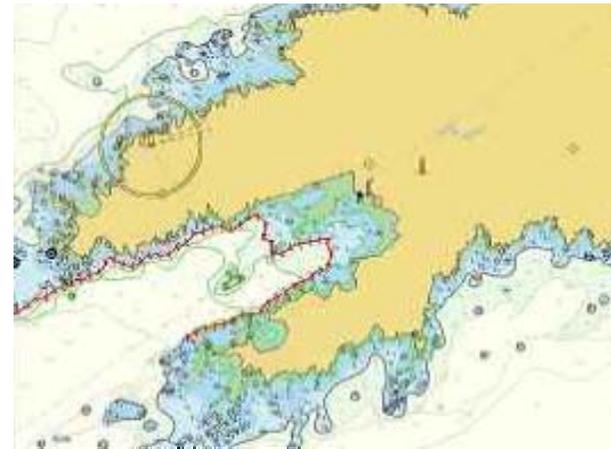
Source: Bundesamt für Seeschifffahrt und Hydrographie, Hamburg and Rostock

# The point of INFRAGEOS-H

- SHOM Navaid, tidal and bathymetric databases tools need to be upgraded with a friendly GIS
- SHOM has selected CARIS to set up a Geospatial Infrastructure compliant with INT standards (INSPIRE, IHO) and dissemination policies



*CARIS Bathy DataBase@*

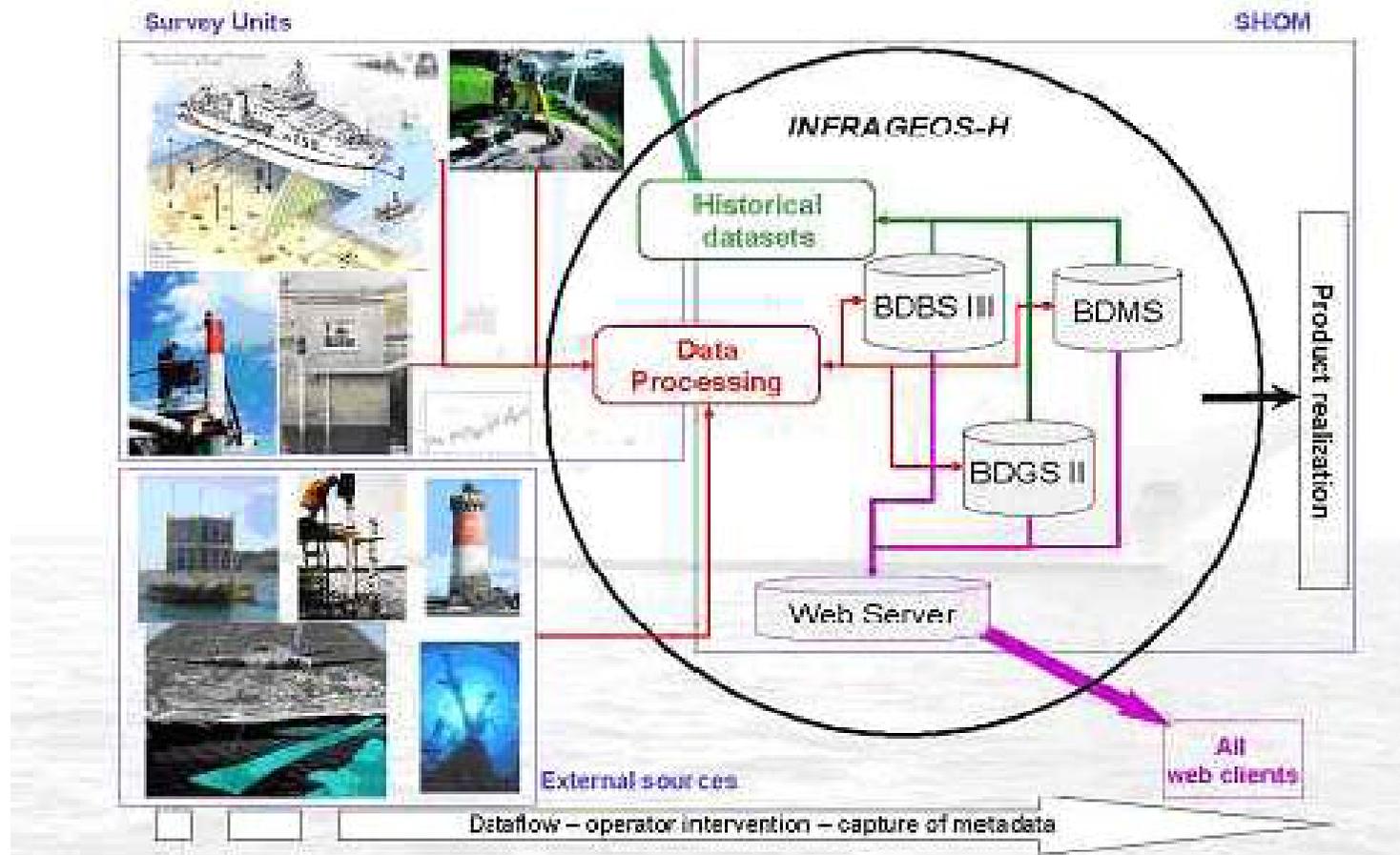


*CARIS HPD Source Editor@*

# INFRAEOS-H fonctionnalités

- A core of interoperable databases (GIS)
- A set of management and processing solutions (multilayer display, vector, raster data, etc.)
- A control and transfer system of hydrographic information;
- A workflow control system;
- Some tools to support web publication.

# LAY-OUT



# Schedule & performances



## Processing speed X 60



Service hydrographique et océanographique de la marine

# Putting flesh on MSDI

(maritime spatial data infrastructure)

## SHOM practical experience

**Thank you for your attention**



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