Water Information System for Europe (WISE) and WISEmarine

Shared Environmental Information Service (INSPIRE)

Infrastructure for Spatial Information in Europe (INSPIRE)

European Marine Observation and Data Network (EMODNET)

European Environment Information and Observation Network (EIONET)

International Council for the Exploration of the Sea (ICES)

Global Monitoring for Environment and Security (GMES) (now called Kopernikus)**

International Hydrographic Organisational (IHO) and International Oceanographic Commission (IOC)

What are the aims of the initiative?

To provide a mechanism to report compliance with EC water directives and provide that information to the public.

To provide timely, relevant and reliable information on the environment for decision makers, and for public information on environmental quality. This system would tie in better all existing data gathering and information flows related to EU environmental policies and legislation.

The INSPIRE directive sets obligations on what the public authorities do with the data they collect. In doing so it aims to deliver improvements in the sharing of and access to public sector spatial information leading to better environmental policies and outcomes in Europe.

To open up opportunities for high technology commercial companies in the maritime sector, improve the efficiency of activities such as marine observation, management of marine resources and marine research in European laboratories.

A network of some 900 national environmental agencies and other bodies aiming to provide timely and quality-assured data, information and expertise for assessing the state and pressures of the marine environment. It includes Reportnet - web applications and processes that support international environmental reporting.

‘coordinates and promotes marine research on oceanography, the marine environment, the marine ecosystem, and on living marine resources in the North Atlantic.’ To underpin these aims ICES collect data for their own purposes and to support other conventions.

‘to bring data and information providers together with users, so they can better understand each other and make environmental and security-related information available to the people who need it through enhanced or new services.’

IOC and IHO carry out work specifically to promote the efficient distribution and use of oceanographic and hydrographic data and information. IOC completes this using the International Oceanographic Data and Information Exchange (IODE). IHO is an intergovernmental consultative and technical organisation.

Who is driving the initiative?

European Commission (DG Environment, EUROSTAT and JRC) and EEA

European Commission and EEA

European Commission

The European Commission are driving to provide data for the EU Maritime Policy

EEA

ICES. Submission of marine and fisheries data also enforced by OSPAR and Common Fisheries Policy

The European Commission and the European Space Agency.

Status of implementation

EA, SEPA and EHS have already reported some WFD information using WISE. Plans to establish WISEmarine were put to consultation in 2008 which the UK raised some concerns. We await feedback.

A Commission Communication ‘Towards a SEIS’ was issued in 2008, which was complemented with visits to Member States. DG Environment is now drafting a legal proposal.

The directive was published in the April 2007 and comes into force on the 15th May 2007. The UK has until May 2009 to transpose into national legislation. In England the implementation is being overseen by Defra and the Spatial Data Infrastructure being produced via The Location Strategy.

Conceived in 2007, first expert group meeting was held in 2008. More recently 4 contracts have been let to demonstrate capacity in specific themes of Hydrography, Geology, Chemical data and Biology. Established in 1994.

Established since 1994. ESA supported pre-operational water quality and oil spill monitoring services in the MARCOAST project (2005-2008). EC FP7 is supporting MyOcean to provide ‘Marine Core’ services. The EC has issued a call for ‘Oceanographic Data Exchange Policy’ which promotes the timely, free and unrestricted international exchange of oceanographic data.

What is the legislative status?

The legislative basis for the provision of information to the EC is in the water directives themselves rather than from new legislation.

DG Environment are drafting a legal proposal. This will include a proposal for the revision of the Standardised Reporting Directive (91/952/EC)

INSPIRE is a Commission Directive. The detail of INSPIRE is being enforced by ‘Implementing Rules’

No legislative basis at present. Defra originally objected to its development in 2007. A recent House of Commons Select Committee suggested that the UK should reconsider this position.

No legislative commitment identified but a set of priority annual data flows are monitored and country performance is reported against these. Flow of marine data is via ICES.

The legislative commitment to provide data is from the OSPAR convention and the Common Fisheries Policy. Other data is provided by UK institutes on an ad hoc basis.

The state of the environment and its evolution are monitored to support policy decisions or investments. Services are global in scope – though primarily focused in Europe.

A general focus on supporting environmental policy.

IHO was established in 1921 whose functions are further justified by the SOLAS Convention and is supported by the UN. UNESCO established IOC in 1960.

Thematic and Spatial scope

Currently WFD information (Articles 3, 5 and 8) but expected to include other water related Directives in the future and specifically WISEmarine will support implementation of the Marine Strategy Framework Directive.

Theme is environmental, spatial scope is EU Member States. Initially SEIS will be focused on data collected under community legislation.

INSPIRE considers data in 34 themes in 3 annexes. The themes in the first annex are ‘building blocks’ for the other themes. Specifications for themes in annex 1 are in draft form. INSPIRE considers any data collected by public authorities in EU member states within those themes.

EMODNET mainly deals with data and capacity demonstration in 4 themes.

5 themes, one of which is ‘water’. Some themes are more developed than others. Spatially it considers data from any EU Member States. Marine data appears to be limited to that submitted to ICES.

Thematic scope is marine. Members of the ICES community now include all coastal states bordering the North Atlantic and the Baltic Sea, with affiliate members in the Mediterranean Sea and southern hemisphere.

The state of the environment and its evolution are monitored to support policy decisions or investments. Services are global in scope – though primarily focused in Europe.

IODE and IHO consider all oceanographic and hydrographic data and information respectively on a worldwide basis.
<table>
<thead>
<tr>
<th>Does it consider raw data or interpreted information?</th>
<th>Mostly information (e.g. WFD water body boundaries) but has capacity to accept raw data in the future.</th>
<th>Both - current examples include Water Watch <a href="http://www.eyeonearth.eu/en/Map/Pages/default.aspx">http://www.eyeonearth.eu/en/Map/Pages/default.aspx</a></th>
<th>Both</th>
<th>Raw data</th>
<th>Raw Data</th>
<th>Raw Data</th>
<th>Raw data (core services) and interpreted information (downstream services).</th>
<th>Raw data, information and capacity building.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data/Information managed centrally or distributed?</td>
<td>Distributed</td>
<td>Distributed</td>
<td>Distributed at European level. Unknown at UK level but also likely to be distributed.</td>
<td>Unknown at present.</td>
<td>Centralised. Marine data is provided to EIONET from ICES under OSPAR.</td>
<td>Centralised. Data is submitted each year in specified format.</td>
<td>Distributed</td>
<td>Dependent on different aspects of the initiatives.</td>
</tr>
<tr>
<td>How is the management of the initiative structured?</td>
<td>Unknown</td>
<td>A SEIS taskforce has been established to assist the Commission in preparing its policy proposals for the implementation of SEIS and bring together all relevant stakeholders. It first met in September 2008.</td>
<td>There are several different working groups implementing different aspects of the directive and the UK is well represented on all of these.</td>
<td>A Marine Observation and Data Expert Group (MODEG) has been established, whose mission is to provide the Commission with the scientific, technical and operational expertise it needs to ensure that EMODNET meets the needs of its future users.</td>
<td>The network is made up of National Focal Points and National Reference Centres. The most senior group is the ICES Council which the advisory and consultative committee sit and then many expert groups. Some of these expert groups are data specific.</td>
<td>The GMES Advisory Council (GAC) brings together the EU Member States, the Commission, ESA, and relevant other Agencies active in Earth Observation. The GMES Bureau, a specialized core team, coordinates GMES activities within the European Commission and has the task to contribute to the long-term sustainability of GMES.</td>
<td>For oceanography UNESCOIOCIODE Working Groups. For hydrography a Directing Committee, coordinates the technical programmes and provides advice and assistance to Member States</td>
<td></td>
</tr>
<tr>
<td>Who is involved or leads in the UK?</td>
<td>The consultancy ‘WRc’ are contracted to technically develop aspects of WISE. Further UK interaction is currently unknown.</td>
<td>David Lee (Defra) represents the UK on the SEIS taskforce group. The Location Council oversees the development and interaction with INSPIRE. There are a range of other individuals from OS, Met Office, BADC, Environment Agency et al who are involved in the many working groups.</td>
<td>Representatives from SAHFOS, BGS, BODC and IMarEst are on MODEG. UK organizations have bid for work to develop networks under the themes of hydrography, geology, chemistry and biology.</td>
<td>David Lee (Defra) is the UK national focus point.</td>
<td>FRS and AFBI represent the UK on the ICES Council. Many UK scientists participate in the expert groups. BODC representatives sit on expert groups that consider marine data management.</td>
<td>DEFRA provides the policy lead and organizes GMES Network groups and forum events. The Met Office, POL and PML are contributing to Core services (through MyOcean). The MetOffice, PML, BMT and SatOC are partners in MARCOAST.</td>
<td>BODC and UKHO represent the UK on IODE. UKHO represents the UK on IHO.</td>
<td></td>
</tr>
<tr>
<td>How does it link to the other initiatives?</td>
<td>May form a hub of SEIS and anticipated to use the INSPIRE data specification ‘Hydrography’ for implementation. UK has concerns on how it links to ICES.</td>
<td>SEIS will go beyond the scope of INSPIRE by considering non spatial information and other themes, but generally details of interaction are unclear. WISE would likely become a ‘module’ of SEIS focusing on water related data and information.</td>
<td>Some of the thematic data specifications will be used by other data initiatives such as WISE. Links to GMES and SEIS are not currently clear.</td>
<td>Relationships with the other initiatives is under discussion</td>
<td>ICES transfer the UK marine data that is used in EIONET. Technical links to SEIS and WISE are unknown.</td>
<td>ICES transfer the UK marine data that is used in EIONET. ICES is involved in EMODNET. Links to other initiatives currently unclear.</td>
<td>GMES forms the European contribution to GEOSS. Links to WISE, EMODNET are under discussion.</td>
<td>As these initiatives are global and in specific fields, strong links to the European initiatives are not required, however many participants in the European initiatives also participate in IODE and IHO.</td>
</tr>
</tbody>
</table>