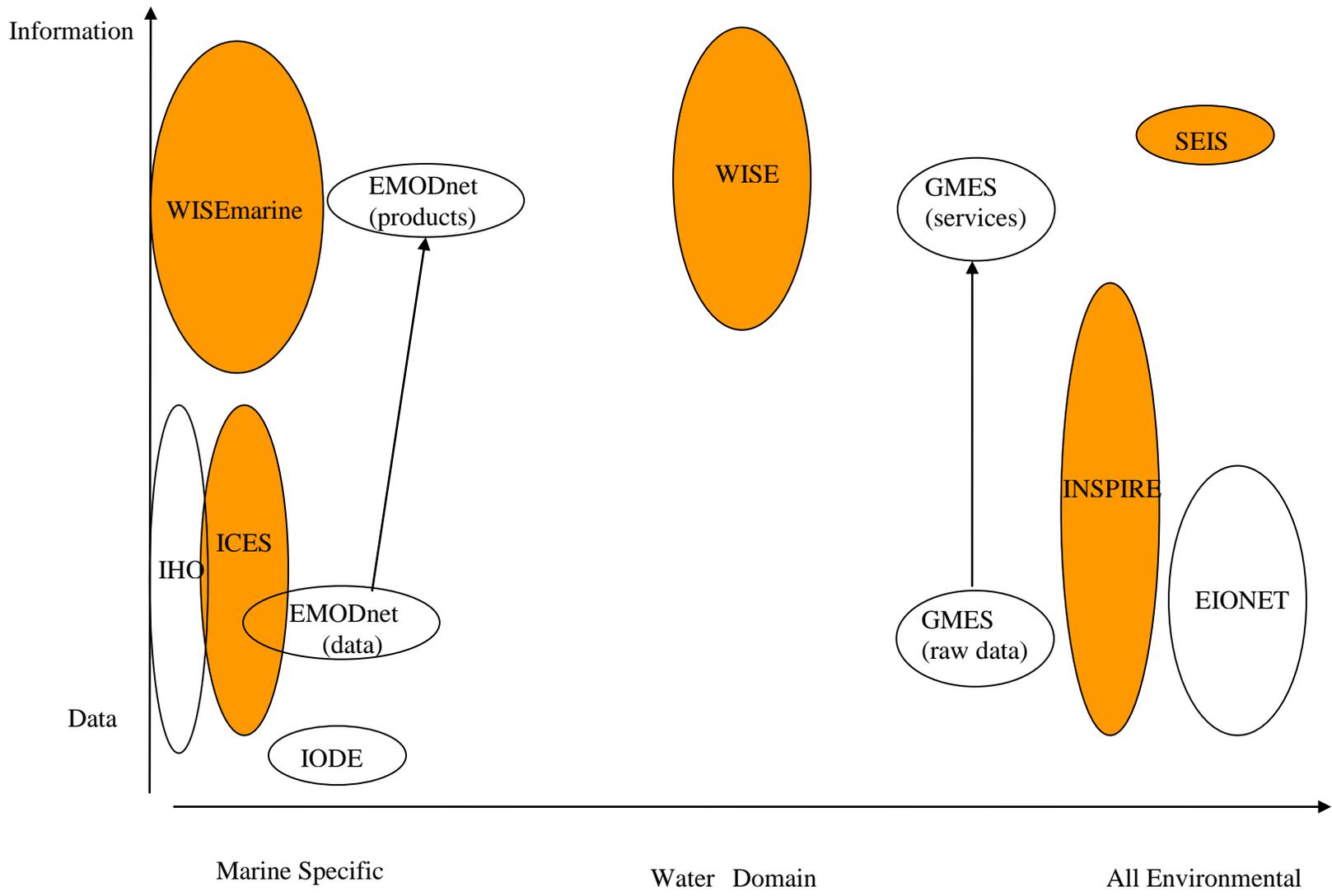


International data initiatives relevant to the UK marine sector – a MEDIN summary
Last updated March 2012

There are many European data and information initiatives particularly in the marine domain which are in the process of being developed. This document gives a summary of these describing where relationships have been established and the interaction with those initiatives by individuals and organisations in the UK. Specifically the initiatives considered are:

- Water Information System for Europe (WISE) and WISEmarine
- Shared Environmental Information Service (SEIS)
- 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) (Kopernikus)
- International Hydrographic Organisation (IHO)
- Intergovernmental Oceanographic Commission (IOC)
- European Spatial Data Research (EuroSDR)

The A3 sheet gives details of these initiatives and the figure below gives a summary on what type of data those initiatives consider. Shading denotes initiatives that currently are, or anticipated will, manage data and information taken to satisfy EC Legislation or International Conventions.



	Water Information System for Europe (WISE) and WISEmarine	Shared Environmental Information Service (SEIS)	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)**	International Hydrographic Organisation (IHO) and Intergovernmental 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 environmental quality for decision makers, and for the public. This system would tie in better all existing data gathering and flows. Can also be thought of as a set of data management principles (information being managed close to its source, along with harmonized formats etc.)	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 experts from over 300 national environment agencies and other bodies aiming to provide timely and quality-assured data, information and expertise for assessing the state and pressures of the 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 to promote the efficient distribution and use of oceanographic and hydrographic data and information. IOC carries out this through the International Oceanographic Data and Information Exchange (IODE) programme. IHO is an intergovernmental consultative and technical organization
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 convention and CFP	The European Commission and the European Space Agency (ESA).	UNESCO, UN, International Maritime Organisation.
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 and is now being overseen by a Marine Strategy Framework Directive Working Group on Data, Information and Knowledge Exchange	A Commission Communication 'Towards a SEIS' was issued in 2008, which was complemented with visits to Member States. DG Environment are now drafting a legal proposal on environmental reporting obligations, embodying the SEIS principles An implementation plan is also in preparation.	The directive was transposed into national legislation in 2009. 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. 6 contracts let in a preparatory phase to demonstrate capacity in specific themes of Hydrography, Geology, Chemical, Habitats, Biology and Physical. 2 nd phase starts in 2012 and will also include human activities and 'sea basin check points'.	Established in 1994.	Established since 1904.	GMES is a joint programme between ESA and the EC. ESA supplies the satellite data, and the EC is supporting the derived data and information services.	IODE was established in 1961, a year after IOC was formed. IHO was established in 1921; both have been operational since inception. In 2003 IOC adopted an '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 although it is currently not clear if this will be taken forward. This will include a proposal for the revision of the Standardised Reporting Directive (91/962/EC)	INSPIRE is a Commission Directive. The detail of INSPIRE is being enforced by 'Implementing Rules'	No legislative basis at present but recent communication suggests it will be used to make data available for the Marine Strategy Framework Directive in coordination with WISEmarine.	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 predominantly from the OSPAR convention and the Common Fisheries Policy. Other data is provided on an <i>ad hoc</i> basis.	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 will include other water related Directives in the future. WISEmarine will support the implementation of the Marine Strategy Framework Directive.	Theme is environmental, spatial scope is EU Member States. The legal proposal 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 are being finalized in 2012. INSPIRE considers any data collected by public authorities in EU member states within those themes.	EMODnet mainly deals with data and capacity demonstration in 7 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. The Marine Environment is one of 5 themes that have been supported.	IODE and IHO consider all oceanographic and hydrographic data and information respectively on a worldwide basis. IHO and IOC collaborate on the General Bathymetric Chart of the Ocean (GEBCO).
Does it consider raw data or	Aggregated data, information (e.g.	Both - current examples include Water Watch	Both	Raw data which is then used to make 'products'	Raw Data	Raw Data	Raw data (core services) and interpreted information	Raw data, information and capacity building.

interpreted information?	WFD water body boundaries), results of assessments	http://www.eyearth.eu/EN/Map/Pages/default.aspx					(downstream services). The MARCOAST programme provides water quality information services	
Is data/ information managed centrally or distributed?*	Centralised at present but it strives towards a distributed approach	Distributed	Distributed at European level. Also likely to be distributed at a UK level.	The 6 themes are all working on the principle of a distributed architecture.	Centralised. Marine data is provided to EIONET from ICES.	Centralised. Data is submitted each year in specified format.	Distributed	Dependent on different aspects of the initiatives. IODE is establishing an Ocean Data Portal (ODP) to provide access to distributed data sources.
How is the management of the initiative structured?	The WG on Data, Information and Knowledge Exchange oversees the implementation of WISEmarine.	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.	There are several different working groups implementing different aspects of the directive and the UK is well represented on all of these.	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.	The network is made up of National Focal Points and National Reference Centres	The most senior group is the ICES Council under which the advisory and consultative committee sit and then many expert groups. Some of these expert groups are data specific.	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.	For oceanography UNESCO>IOC>IODE> Working Groups. For hydrography a Directing Committee, coordinates the technical programmes and provides advice and assistance to Member States
Who is involved or leads in the UK?	The EA, SEPA and NIEA all represent on WISE working groups and at a UK level is coordinated by a UK TAG Information Strategy Group. The policy lead for WISEmarine is the Defra MSFD group	James Tucker (Defra) represents the UK on the SEIS taskforce group.	DEFRA is the lead department for the UK Govt, and hosts the UK Location Programme which is managing 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.	Experts from BGS, BODC and University of Sussex plus 2 independents (ex-SAHFOS and EuroGOOS/NOC) are on MODEG. UK organizations are represented in consortiums themes of hydrography, geology, chemistry, habitats and physics.	Christine Holleran (Defra) is the UK national focus point.	Marine Scotland and Cefas 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.	DEFRA provides the policy lead and organizes GMES Network groups and forum events. The Met Office, NERC and PML are contributing to Core services (through MyOcean).	NERC and UKHO represent the UK on IODE. UKHO represents the UK on IHO.
How does it link to the other initiatives?	May form a 'hub' of SEIS and will use the INSPIRE data specifications for implementation. WISEmarine may link to EMODnet for MSFD reporting purposes in the future.	SEIS will go beyond the scope of INSPIRE by considering non spatial information and other themes. WISE would likely become a 'module' of SEIS focusing on water related information. Metadata will likely use INSPIRE format.	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.	Anticipated that EMODnet will provide raw data that will be linked to assessments reported to WISEmarine for implementation of the MSFD.	ICES transfer the UK marine data that is used in EIONET. Technical links to SEIS and WISE are unknown.	ICES transfer the UK marine data that is used in EIONET. ICES is involved in EMODnet (MODEG and EMODnet pilots).	GMES forms the European contribution to GEOSS. Links to WISE, EMODNET are under discussion.	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. IODE has had close links with the ICES Data Centre for many years.
What is MEDIN's input to these initiatives	MEDIN provides technical input to the Working Group on Data, Information and Knowledge Exchange.	MEDIN maintains a watching brief on SEIS.	MEDIN is involved in various UK Location Programme groups and is a thematic portal for the UK implementation of INSPIRE. Further details here .	MEDIN DACs are partners in almost all of the initial portals and so making data available via that route. MEDIN staff also attend MODEG.	MEDIN staff are a National Reference Centre for the marine theme (?) providing data advice and checking assessment outputs for accuracy.	MEDIN staff are involved in the ICES WG on Data and Information Management and also through other projects provide environmental data to ICES.	No direct involvement	For IODE, BODC is the lead and provides input on behalf of MEDIN. IODE are likely to use MEDIN-like accreditation criteria for their network of NODCs.
What does this mean for UK policy?	The UK already submits data and information to WISE to meet its WFD reporting	The development of SEIS needs to be closely monitored so that the resource commitments and benefits are fully	Implementation of the INSPIRE directive in the UK is underway and further interaction is required to ensure integration with	Resource implication may appear if all raw data used for MSFD has to be reported via this route. Coordination	The future of the theme 'water' for EIONET is unclear given developments in WISE. Keeping developments	Ensuring that reporting lines to ICES are not duplicated with EMODnet and WISEmarine	Coordination with other UK and international initiatives is required. Communication of the downstream services to UK scientists may	Ensuring that outputs from these initiatives are used and the policies are adhered to is required. Integration is required to

	commitments. The UK must have input to the development of WISEmarine so it does not duplicate existing reporting.	understood and commensurate with other national and international initiatives.	existing UK and European initiatives.	with other UK and international initiatives is required.	coordinated with UK requirements are required. Keeping a watching brief on how the UK data are assessed is also required	development is important to save resources.	improve assessments and research.	coordinate the developments with UK needs.
Links and suggested contact point	http://water.europa.eu/en/welcome WISE, Rory Wallace (Defra), Ingrid Baber (SEPA) WISEmarine, Naomi Matthiessen (Defra)	http://ec.europa.eu/environment/seis/index.htm Christine Holleran christine.holleran@DEFRA.GSI.GOV.UK	http://inspire.jrc.ec.europa.eu/ Ray Boguslawski (Defra), Alex Ramage (Transport Scotland)	http://ec.europa.eu/maritimeaffairs/policy/marine_knowledge_2020/index_en.htm Lesley Rickards (BODC) ljr@bodc.ac.uk	http://www.eionet.europa.eu/ Christine Holleran christine.holleran@DEFRA.GSI.GOV.UK	http://www.ices.dk/indexfla.asp Lesley Rickards (BODC) ljr@bodc.ac.uk for data enquiries.	http://www.gmes.info http://www.marcoast.eu/ http://www.myocean.eu.org/ David Cotton (MEDIN) dcott@oceannet.org	IODE: http://www.iode.org/ Lesley Rickards (BODC) ljr@bodc.ac.uk IHO: http://www.iho-ohi.net/english/home/ Rob Hensley (UKHO)

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*i.e. based on data submitted to a central database (centralized) or data held at in each organisation and harvested (distributed)

** for the purposes of this table only the marine aspects of GMES are described