

1st IHO-HSSC Meeting
The Regent Hotel, Singapore, 22-24 October 2009

Paper for Consideration by HSSC

IHO EU MEMBER STATE INVOLVEMENT IN INSPIRE DEVELOPMENTS

Submitted by:	The Netherlands
Executive Summary:	This paper describes developments in the EU INSPIRE Project in related to hydrography and encourages active participation by EU IHO Member States
Related Documents:	HSSC1-06.7A - <i>Progress Report on the Development of S-100 and its Introduction as an IHO Standard</i> IHO Resolution K.4.7 - <i>Marine Spatial Data Infrastructure Policy</i>

Introduction/Background

1. The European INSPIRE Directive is steadily developing and influencing other geospatial standardisation developments. ISO cites INSPIRE in their ISO/TC211 Standards Guide as a relevant example of the user community using the ISO/TC211 standards (http://www.isotc211.org/Outreach/ISO_TC%20211_Standards_Guide.pdf). The influence of IHO Member States on the development of the INSPIRE Directive appears to be fragmentary and incomplete. The latest and final publication of Annex 1 (version 3.0) of the INSPIRE data specifications published in September 2009 illustrates this.

Analysis/Discussion

2. INSPIRE underpins the infrastructures for spatial information established and operated by the 27 Member States of the European Union. The Directive addresses the following 34 spatial data themes needed for environmental applications, with key components specified through technical implementing rules. These themes are subdivided in the three Annexes of the Directive as shown in Annex A to this paper. The specifications for Annex I of the Directive have been completed, but the process of defining the data specifications and implementing rules for Annexes II and III have not started yet. Opportunities therefore remain to influence the development of these Annexes.

3. In June 2009 the 4th EHC adopted IHO Resolution K4.7, concerning a Marine Spatial Data Infrastructure Policy. This Resolution indicates that IHO Member States should participate actively in relation to SDI initiatives in the interests of the entire hydrographic community. INSPIRE is a typical initiative that requires hydrographic stakeholder involvement. The following RHCs will potentially be affected by INSPIRE: NSHC, MBSHC, BSHC, and even the MACHC.

4. The IHO is a recognised SDIC (Spatial Data Interest Community), while some European Hydrographic Offices are represented through other SDICs or are recognised as an LMO (Legally Mandated Organisation) in their own right.

5. Although the hydrographic community is formal recognised in the INSPIRE development framework, in practice the influence of the hydrographic community so far has been limited. For example, 'Hydrography' has been misrepresented as 'Hydrology', or at best a land based interpretation of 'Hydrography'. As a result, the INSPIRE Data Specification "*Hydrography*" contains few elements that fall under the business of Hydrographic Offices.

6. Various members of the MSDIWG who have dealt with INSPIRE indicate that neither S-57, nor S-100 has been taken into account in developing the data specifications and definitions. Time pressures, the huge amount of complex paperwork involved and the limited number of hydrographic representatives involved prevented better progress being made. Generally, those involved addressed individual issues in isolation on a national basis. The Netherlands concentrated on Coordinate Reference Systems and Transport Networks. LAT and MSL were missing in the specification on Coordinate Reference Systems, and have only been added after considerable effort by The Netherlands. In the specification on Transport Networks the sea-related features were at first ignored,

resulting in only a rudimentary representation of sea related network features in the latest version (version 3.0), after some correspondence.

7. INSPIRE requires EU member states to make data available according to the INSPIRE data specifications. For HOs, this implies a necessary mapping between S-100 and INSPIRE specifications (all ISO 191xx based) to ensure future use.

Conclusion

8. Better coordination is needed to maximise the impact of the HOs involved in the development of the INSPIRE Directive. A list of national participants and their potential roles would be useful.

9. An S-100 / INSPIRE crosswalk of definitions, comparable to the DNC/ENC crosswalk is needed to ensure a unified approach by the HOs involved. The structure of the crosswalk will be a little more complex than for the DNC/ENC crosswalk, due to the more hierarchical structure of the INSPIRE specifications. A positive benefit could be that the S-100 encoding gets harmonized better for the HOs involved.

Recommendations

10. EU Member States should be encouraged to participate in the INSPIRE specification process, for Annexes II and Annex III, through active involvement in the relevant Thematic Working Groups and Drafting Teams, but also by commenting on the work. EU Member States should be encouraged to inform other MS about their activities related to INSPIRE.

11. In the longer term, it may be beneficial to consider involving TSMAD in coordinating a unified mapping between the INSPIRE and IHO S-100 specifications.

Action Requested of HSSC

12. The HSSC is invited to:

- a. Take **note** of the contents of this paper.

Grouping of Themes in INSPIRE Directive Annexes I, II and III

The grouping of themes in INSPIRE Directive **Annexes I, II and III** represents a grouping for addressing different actions concerning harmonisation, dissemination and other actions formulated in the Directive. Different time schedules are linked to the data in the three annexes I, II and III. There is no thematic hierarchy in the INSPIRE Directive, however each theme represent a cluster/collection of different data sets.

The INSPIRE Directive addresses 34 spatial data themes needed for environmental applications. These themes are subdivided in the three annexes of the Directive as follows:

Annex I	Annex II	Annex III
<ol style="list-style-type: none"> 1. Coordinate reference systems 2. Geographical grid systems 3. Geographical names 4. Administrative units 5. Addresses 6. Cadastral parcels 7. Transport networks 8. Hydrography 9. Protected sites 	<ol style="list-style-type: none"> 1. Elevation 2. Land cover 3. Orthoimagery 4. Geology 	<ol style="list-style-type: none"> 1. Statistical units 2. Buildings 3. Soil 4. Land use 5. Human health and safety 6. Utility and governmental services 7. Environmental monitoring Facilities 8. Production and industrial facilities 9. Agricultural and aquaculture facilities 10. Population distribution and demography 11. Area management/restriction/regulation zones & reporting units 12. Natural risk zones 13. Atmospheric conditions 14. Meteorological geographical features 15. Oceanographic geographical features 16. Sea regions 17. Bio-geographical regions 18. Habitats and biotopes 19. Species distribution 20. Energy Resources 21. Mineral Resources