

## BSHC Chart Datum Working Group (ChartDatumWG) Commenting to INSPIRE Draft Specifications

[9 September 2011]

### 1. Introduction

There are many INSPIRE Documents where there are references to depths and vertical references, e.g.

- a) *D2.8.I.1 INSPIRE Specification on Coordinate Reference Systems – Guidelines* (INSPIRE\_Specification\_CRS\_v3.1.pdf, 2010-04-26)
- b) *D2.8.I.8 INSPIRE Data Specification on Hydrography – Guidelines* (INSPIRE\_DataSpecification\_HY\_v3.0.1.pdf, 2010-04-26)
- c) *D2.8.II.1 INSPIRE Data Specification on Elevation – Draft Guidelines* (D2.8.II.1\_v2.0(.4), 2011-06-15)
- d) *D2.8.III.16 INSPIRE Data Specification on Sea Regions – Draft Guidelines* (D2.8.III.16\_v2.0, 2011-06-15)

The draft specifications in c) and d) are under review. Totally there are now more than 20 draft documents for review. Not all of them have been reviewed, but likely they contain also similar specifications for depths and vertical references. The INSPIRE has the deadline 21 October 2011 for commenting these drafts.

The ChartDatumWG agreed at its meeting on 30-31 August 2011 that the BSHC should comment these drafts and to present the draft proposal at the BSHC 16<sup>th</sup> Conference on 20 -21 September 2011. The draft proposal will be distributed also to all ChartDatumWG members.

There was also discussion on which way the commenting is most appropriate to make; via national contacts, by the BSHC or perhaps by the IHB. The BSHC 16<sup>th</sup> Conference is expected to decide on further actions and on procedures to forward comments to INSPIRE.

### 2. Draft comments and proposals to INSPIRE

The ChartDatum Working Group proposes the comments and proposals to the INSPIRE Draft Specifications, especially regarding to the references to depths and vertical references, as written in Annex 1.

3. Actions for the BSHC 16<sup>th</sup> Conference:

The BSHC 16<sup>th</sup> Conference is requested to

1. note this information
2. agree on detailed wording of the comments and proposals to INSPIRE
3. decide on procedures to forward the comments and proposals to INSPIRE

Annexes:

1. Draft comments and proposal to INSPIRE
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Annex 1: Draft BSHC Comments and Proposals to INSPIRE

*[To be discussed further and agreed in details at the BSHC 16<sup>th</sup> conference]*

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The Baltic Sea Hydrographic Commission (BSHC) of the International Hydrographic Organisation (IHO) has studied these INSPIRE Specifications, especially their references to depths and vertical references.

Totally there are now more than 20 draft documents for review. Not all of them have been reviewed, but likely they contain also similar specifications for depths and vertical references.

The BSHC has following comments and proposals to the Draft specifications in c) and d) which are under review (deadline 21 October 2011).

BSHC Comments

1. The specifications of vertical references are specified in the document a). These specifications have been already approved.
2. The draft specifications of vertical references in document c) and d) are copied from the document a).
3. The coordinate specifications in all these documents are not satisfactory (e.g. inappropriate specifications, lakes and rivers are missing), and now these are being copied to other specifications (with more unclear specifications). The drafts include very many references to depths and vertical references. There are some misunderstandings of the IHO specifications.
4. The IHO has recognised the need to clarify and develop further its definitions for vertical references for non-tidal and inland waters. This work is ongoing and it has a goal to enhance the current specifications so that these can be categorized into three categories. These are:
  1. Tidal waters: The reference level (Chart Datum) is LAT. NOTE: On oceans and on depths over 200 meters the difference between LAT and MSL may be neglected due to overall inaccuracy of the depth measurements.

2. Non-tidal sea areas: MSL or a reference level, which is close to MLS and the height of this reference level is defined in a gravity related vertical reference systems, preferable EVRS. The use of EVRS as a reference level on these sea areas is recommended.
3. Inland lakes and rivers: The height of the reference level to which the depths are counted is given in gravity related vertical reference system, preferably EVRS.
5. The BSHC notes that quite many Baltic Sea countries intent to move into the EVRS when necessary preparations are completed. In our understanding this goal is well in line with the goals of the INSPIRE for harmonising the distribution of depth data.
6. The current INSPIRE specification document structure is complex and laborious to maintain, because same specifications are copied to many documents. This will be laborious to keep all the specifications up-to-date and consistent when new specifications are approved (e.g. by the IHO M-3, S-4, S-57, S-100).
7. The title of ref b) "Data Specification on Hydrography" is misleading because the document deals mainly with hydrological issues.

Based on the above issues the BSHC forward the following proposals to these drafts:

#### BSHC proposals

8. The BSHC proposes that the specifications for depths and vertical references for non-tidal and inland waters should be re-opened totally and should be clarified and completed by hydrographic experts including the comments above. The BSHC is willing to contribute on these developments.
9. Furthermore, the BSHC proposes that the document structure will be enhanced so that the depth and vertical references will be defined only once in the INSPIRE Specification on Coordinate Reference Systems and the other specifications have only references to these specifications.