DANISH MINISTRY OF THE ENVIRONMENT
National Survey and Cadastre
MAPS, GEODATA AND SPATIAL INFRASTRUCTURE

THE NORTH SEA HYDROGRAPHIC COMMISSION 29th Conference

Information about the work done in the BSEHWG and the development of an automated tool for ENCs in the BLAST project

Status on the work done in the BSEHWG

(Baltic Sea ENC Harmonisation Work Group)

The Baltic Sea Hydrographic Commission (BSHC) has recognized the need for ENC harmonisation at its 12th Conference in June 2007. The BSHC established a Baltic Sea ENC Harmonisation Working Group (BSEHWG) with TORs to review inconsistencies between ENCs and to propose actions to resolve them. The BSEHWG should report by the end of July 2008.

Terms of Reference for the Baltic Sea ENC Harmonisation Working Group (BSEHWG)

(14 June 2007)

With referencing to

- IHO Work Programme 2008 – 2012: Task 3.3.4 ENC Production, Distribution and Update,
- IHO CL 32/2007: Recommendations for Consistent ENC Data Encoding,
- WEND Report to the XVII IH Conference [CONF.17/WP.3 Page 6] and
- WEND principle 2.8,

the BSHC at its 12th Conference recognised the need to study the harmonisation of the ENCs in the Baltic sea in order to ensure ENC consistency and a common level of IHO data quality.

Therefore the BSHC 12th Conference established the BSEHWG with the task to study the level of harmonisation of the ENCs in the Baltic Sea.

The Working Group should

- Identify and analyse existing inconsistencies within ENCs on the Baltic Sea.
- Propose solutions and measures to avoid inconsistencies in the future.
- Arrange a harmonisation workshop by end 2007 with the aim to develop concrete actions to Member States for harmonising the ENCs.
- If necessary, to propose amendments to the IHO and RENC recommendations.
- To present a Final report to the BSHC by Mid 2008. This should include an Action plan with specified time schedule for future ENC harmonisation actions.
- The BSEHWG should monitor the progress of the Baltic Sea ENC harmonisation actions.
- If deemed appropriate, to send reports to relevant IHO and IMO bodies.

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From an general approach to an regional approach:

- International **–> Regional –> National (Bilateral)**
- **Only focus in areas that influence in ENC harmonisation** (Harbour, Berthing)

The biggest challenge in harmonisation –
to agree on more specified figures in accordance with recommendations

General approach:

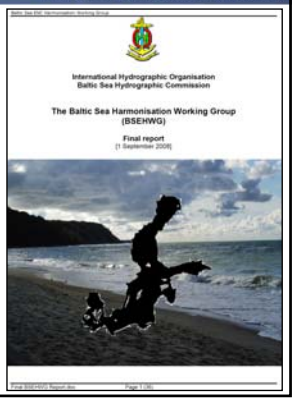
- **The BSEHWG believes that a complete harmonisation of the use of SCAMIN may not be possible worldwide.**
- **It is more important that within a given sea area the harmonisation has been done as far as possible.**
- **The BSEHWG has tried to develop regional interpretations of the IHO recommendations for the Baltic Sea.**
- **The harmonization of the navigational purposes Harbour and Berthing are less critical in the Baltic Sea. The reason being that data in these navigational purposes in principle only covers one country waters.**

The BSEHWG has found many practical recommendations.

When these are implemented, the consistency of the Baltic Sea ENCs will be improved and thus increase the safety of navigation.

Recommendations:
- 7 recommendations to national HOs
- 10 recommendations to BSHC

Recommendation: 17
Reporting of the implementation of the recommendations:
BSHC members should report annually to BSHC Conferences on the implementation of these recommendations.


International Hydrographic Organisation
Baltic Sea Hydrographic Commission

The Baltic Sea Harmonisation Working Group (BSEHWG)

Final report

Proposed actions and time schedule:

Rec. #	Issue	Recommendation	Responsibility	Implementation Schedule		
				Country	Start date	End date
1	Navigational purpose *Overview*	1a) *Overview* navigational purpose should be in harmony with other navigational purposes within the producers' portfolios.	All	Denmark Germany	2008 2008	2008 2008
		1b) The *Overview* cell should be harmonised with adjacent cells in the North Sea.	Germany	Germany	2008	
2	Navigational purpose *Harbour* and *Berthing*	The *Harbour* and *Berthing* navigational purposes should be in harmony with other navigational purposes within the producers' portfolios.	All	Denmark Estonia Finland Germany Latvia Lithuania Poland Russia Sweden	2008 2008 2008 2008 2008 2008	2012 2015 2011 2009 2011 2008
3	Use of Compilation Scale	On the Baltic Sea, the following values for the compilation scales should be used: 180,000 (*General*) 90,000 (*Coastal*) 22,000 (*Approach*)	All	Denmark Estonia Finland Germany Latvia Lithuania Poland Russia Sweden	2008 2008 2008 2008 2008 2009	2010 2015 2011 2009 2011 2009

Proposed actions and time schedule:

Rec. #	Issue	Recommendation	Responsibility	Implementation Schedule		
				Country	Start date	End date
4	Exceptions in the use of Compilation Scale	If a Hydrographic Office (HO) wants to use a compilation scale other than those recommended above, it may do so if all the following conditions are met: i) the value used is in line with the intention of the IHO CL 47/2004 ii) use of it is agreed bilaterally with neighbouring HO(s) concerned, in order to avoid inconsistencies at the border, and iii) every effort is made to minimise possible inconsistencies due to deviations from the recommended compilation scale.	All	When adopted		
5	Use of SCAMIN	BSHC should adopt the guidelines as stated in the Annex J.	All	Denmark Estonia Finland Germany Latvia Lithuania Poland Russia Sweden	2008 2008 2008 2008 2008 2009	2009 2015 2011 2010 2011 2009

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Bringing Land and Sea Together



WP4 - Navigating the North Sea

Develop an Automated Tool for ENCs

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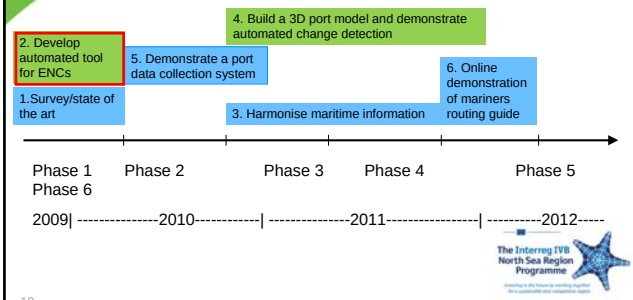
WP4 Time Line



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Act 2 – Develop an Automated Tool for ENCs

- HOs produce valid ENCs according to S57 Product Specification
- Inconsistencies in the encoding practices for ENCs exist between Hydrographic Offices
- This leads to differences in displayed information when used in ECDIS
  - This happens particularly where ENCs from different producers are adjacent in the display.
- Inconsistent display makes the mariner mistrust the data.


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Act 2 – Develop an Automated Tool for ENCs

- Determine the object classes – work shop
- T-Kartor developed a tool to check adjacent ENCs
- Tested at hydrographic offices:
  - Norway
  - Denmark
  - UK
  - Belgium

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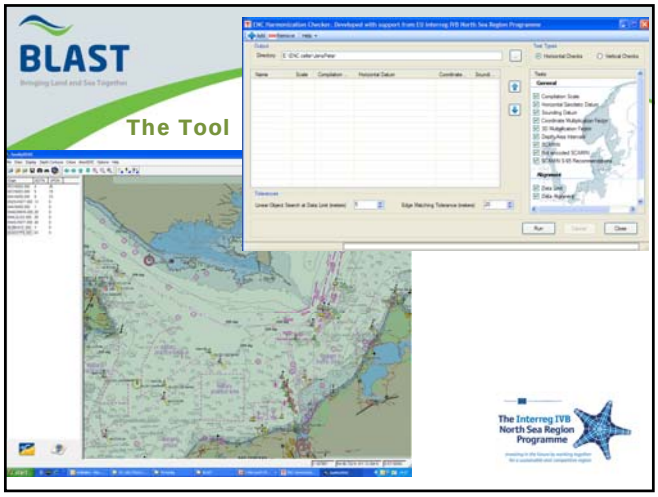
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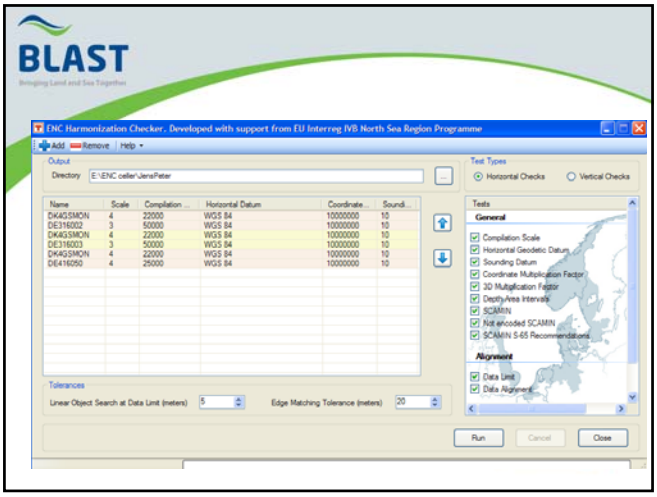
The Tool
The Interreg IVB North Sea Region Programme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Bringing Land and Sea Together
ENC Harmonization Checker. Developed with support from EU Interreg IVB North Sea Region Programme
Add
Remove
Help
Output
Directory
E:\ENC celler\JensPeter
Test Types
Horizontal Checks
Vertical Checks
Name
Scale
Compilation ...
Horizontal Datum
Coordinate ...
Sound...
DK4GSMON 4 22000 WGS 84 10000000 10
DE316002 3 50000 WGS 84 10000000 10
DK4GSMON 4 22000 WGS 84 10000000 10
DE316003 3 50000 WGS 84 10000000 10
DK4GSMON 4 22000 WGS 84 10000000 10
DE416050 4 25000 WGS 84 10000000 10
Tests
General
Compilation Scale
Horizontal Geodetic Datum
Sounding Datum
Coordinate Multiplication Factor
3D Multiplication Factor
Depth Area Intervals
SCAMIN
Not encoded SCAMIN
SCAMIN S-65 Recommendations
Alignment
Data Limit
Data Alignment
Tolerances
Linear Object Search at Data Limit (meters)
5
Edge Matching Tolerance (meters)
20
Run
Cancel
Close


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<Report Message="Sounding datums identical">
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</Test>
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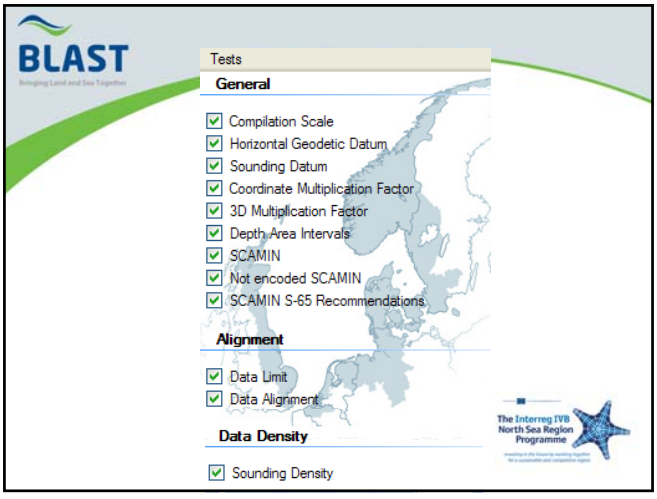
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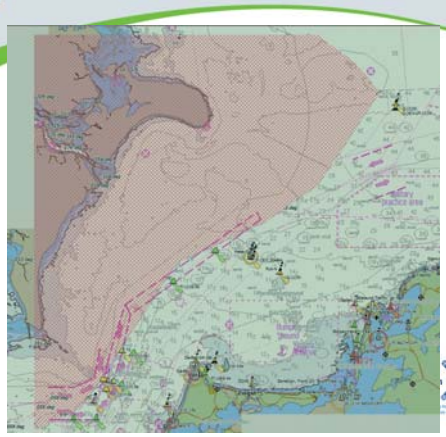

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THANK YOU FOR YOUR ATTENTION