



Finnish Transport Agency

BSHC (+NHC) ENC Coverage, Overlaps and gaps

Juha Korhonen
22 September 2012

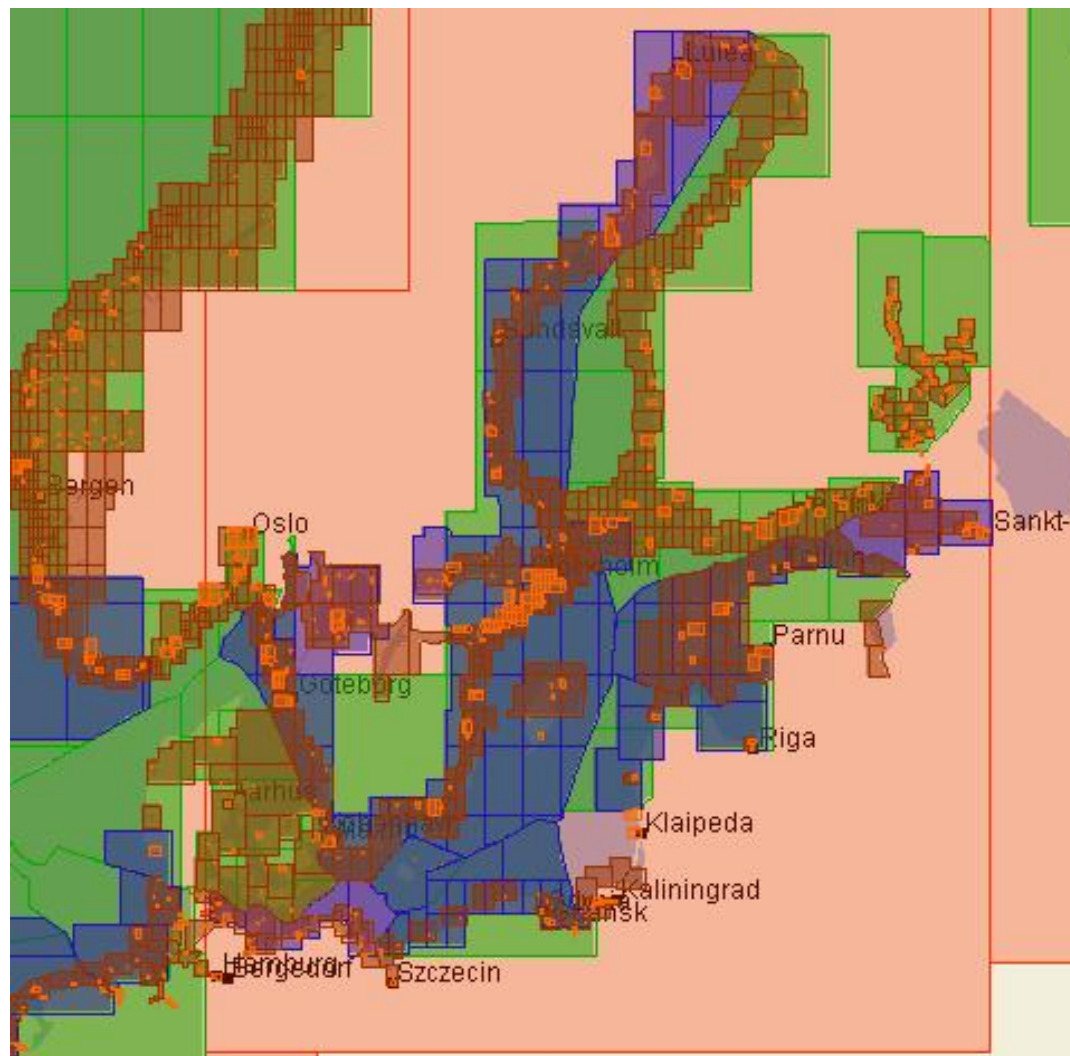
ENC Overlaps and gaps

BSHC ENC Harmonisation Recommendations

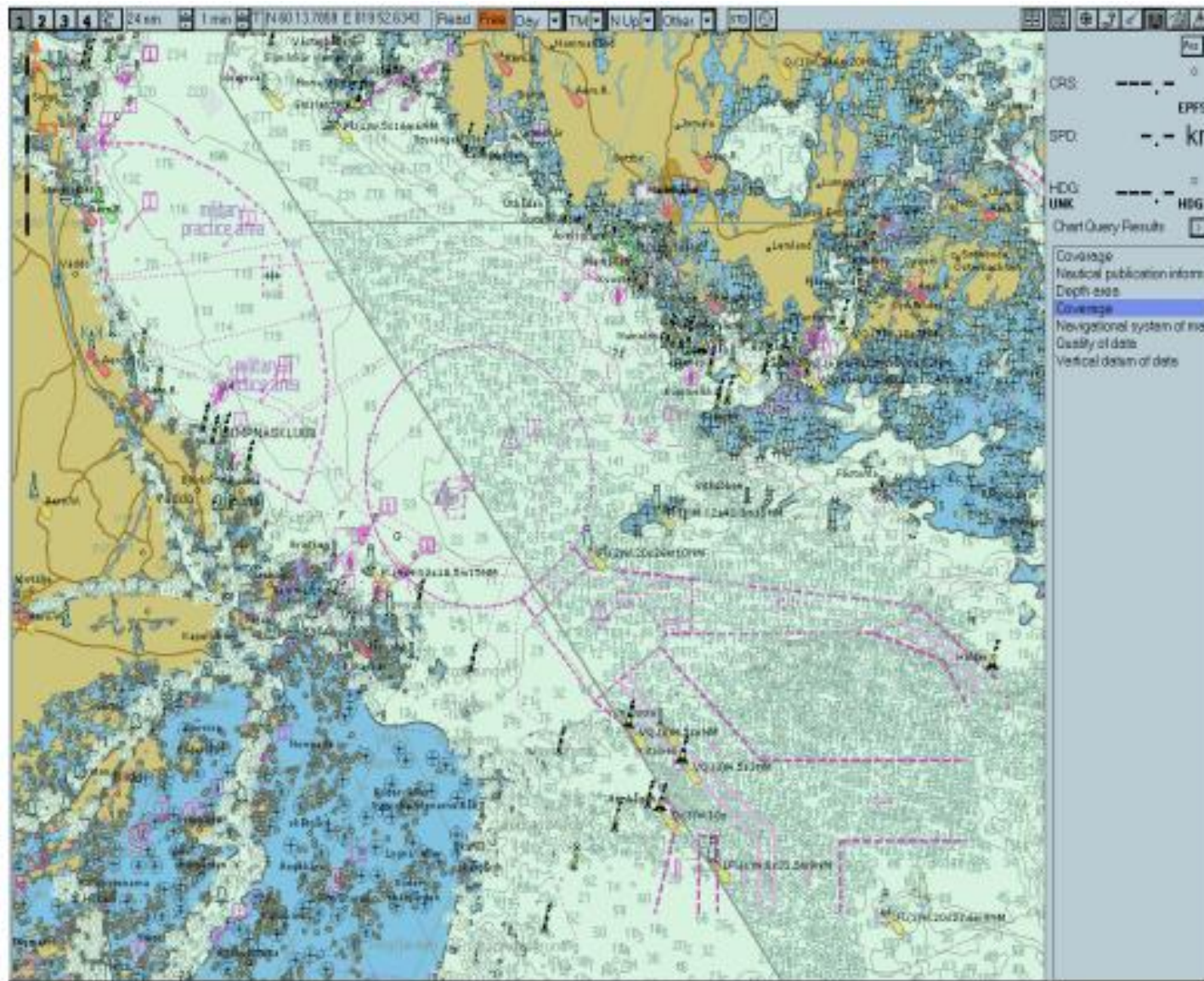
- Baltic Sea ENC coverage already almost complete, also Lithuanian ENCs should be soon available
- BSICCWG has in its TORs task to coordinate Baltic Sea ENC harmonisation
- In 2008 the BSHC Approved 17 ENC Harmonisation recommendations
- Most of these are already implemented
- The status of implementation is reported annually to BSHC Conferences
- Regarding to the harmonisation of depth information, a BSHC WG was established 2009, but this was not able to proceed (due different national practices to process depths in national databases)
- BSHC 17th Conference 2012 approved a pilot project with Sweden and Finland to evaluate this task

BSHC ENC Coverage

Link



Rec. #	Issue	Recommendation	Responsibility	Implementation Schedule			Status/Remarks/Comments
				Country	Start date	End date	
		bilaterally/multilaterally so that possible inconsistencies to the mariners could be avoided.					LIT: Completed POL: Done. Only IHO recommended contour intervals are using. RUS: SWE: Ongoing
7	Harmonisation of features continuing/extending over national borders	All BSHC countries should ensure that bilateral agreements are in place with their neighbouring countries concerning harmonisation of features continuing/extending over national borders.	All			When adopted	DEN: Ongoing EST: Ongoing FIN: Ongoing GER: Done LAT: Adopted LIT: Completed with Latvia in future with Russia and Sweden. POL: Ongoing RUS: SWE: Ongoing
8	Checking harmonisation before launching new ENC's	All BSHC countries should check and carry out harmonisation before launching updates or new editions of ENC's.	All			When adopted	DEN: Ongoing EST: Ongoing FIN: Ongoing GER: Done LAT: Adopted LIT: Ongoing POL: Ongoing RUS: SWE: Ongoing
9	Buffer zones along the national borders	All BSHC countries should check that there are no gaps between cells at national borders by establishing a buffer zone of up to 5 metres, if necessary.	All	Denmark Estonia Finland Germany Latvia	2008 2008 2008 2008 2008	2008 2008 2008 2008 2008	DEN: Done EST: Done FIN: Ongoing GER: Done LAT: Done



- Status
- Not Started
 - In Progress
 - Finished
 - Unknown

300km



Helsinki Commission

Welcome to the Public Site of the HELCOM Hydrographic Re-Survey-plan.

Performed and monitored by the memberstates of The Baltic Sea Hydrographic Commission in accordance with the Copenhagen Declaration decided in 2001 and the Moscow Helcom declaration 2010.

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58°24.077'N 014°22.847'E

Cat I Cat II Cat III

Section filters (reset)

View Map

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BSHC (+NHC) ENC Overlaps and gaps

- WEND-WG1 reported many ENC overlaps and gaps
- I have distributed these to BSHC members in April 2012 and asked actions to clarify and eliminate these
- Many of these overlaps has been removed

- WEND-WG2 documents include revised overlap and gap analysis
- I have distributed information on these to BSHC (and NHC) members 12 September 2012

- Feedback received from many BSHC Members

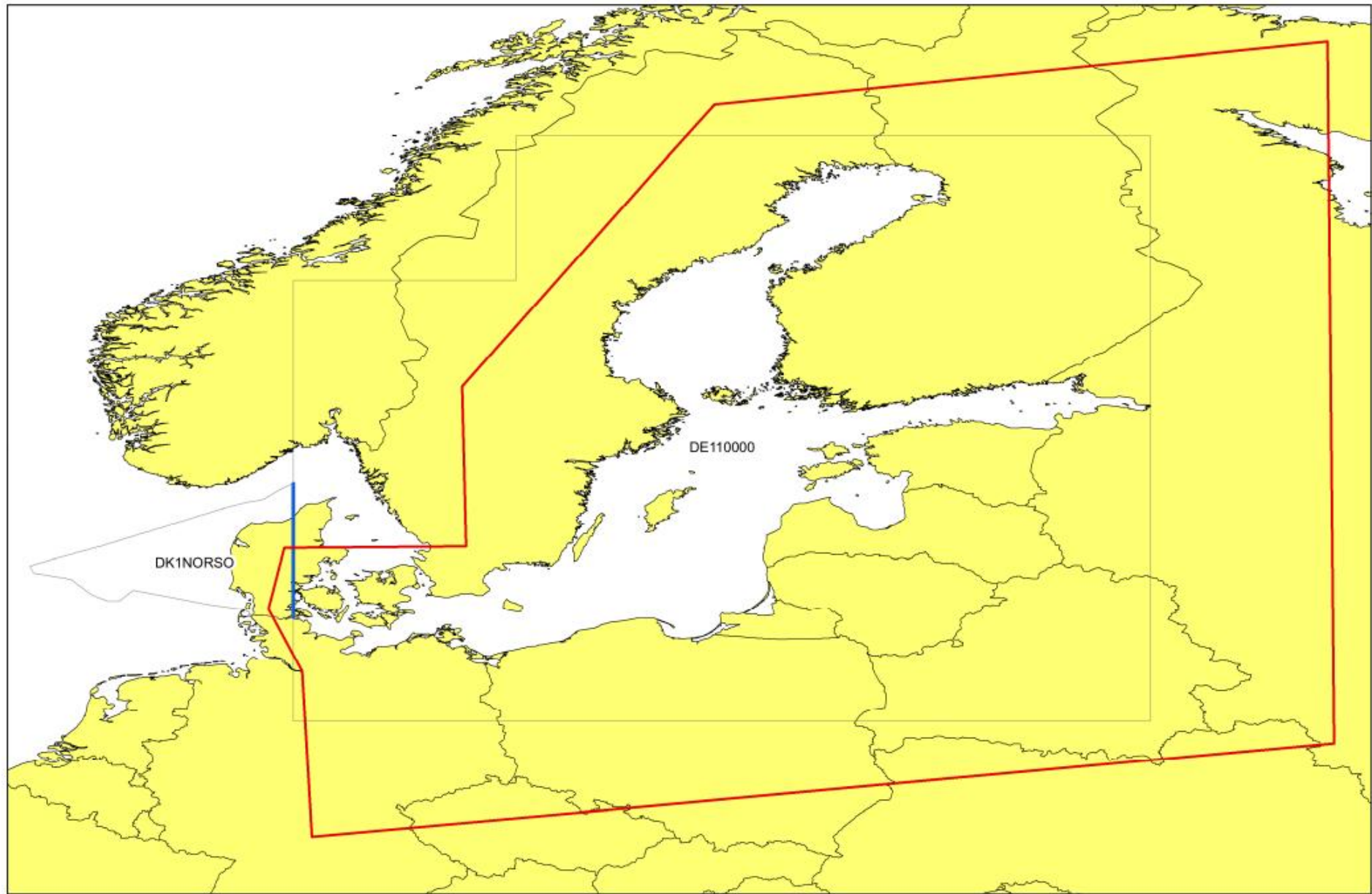
BSHC (+NHC) ENC Overlaps and gaps

Overlapping ENC Cells Aug 17th 2012 BSHC			
CELLNAME	CELLNAME_1	USAGEBA	Comments received to my e-mails on 2 April 2012 and 12 September 2012
DK1NORSO	DE110000	1	
NO1A3000	DK1NORSO	1	
FI29NBAL	EE203064	2	Finland (10.9.): Overlap mainly 1.5 m, but in one case max 14 m overlap. Will be corrected in the next update of the cell.
LV211251	EE203055	2	Latvia (17.9.): Overlap is within 5m limit in the Sea area. There is more than 5m overlap in Land area in some places.
LV211252	EE203056	2	Latvia (17.9.): There is one overlap of max 14.5m in Sea area, will be corrected working together with Estonian HO.
SE2BHS1C	DK2KATGN	2	
SE2BHS1C	DK2KATGS	2	
SE2BHS1C	DK2SUNDT	2	
SE2BHS1S	DK2BORNH	2	
SE2BI9U8	EE203064	2	
LV331011	EE3E1608	3	Latvia (17.9.): There are a couple of overlaps of more than 5m on Land areas, and there are some gaps in Sea areas. Will be corrected working together with Estonian HO
PL3MP153	DK3BORNH	3	
RU3NSKI9	EE3A0403	3	Russia (20.9.): RU3NSKI9 и EE3A0403, EE3E0201 – further harmonization of the data limits is needed at the governmental level, because there is no accepted boundary.
RU3NSKI9	EE3E0201	3	Russia (20.9.): RU3NSKI9 и EE3A0403, EE3E0201 – further harmonization of the data limits is needed at the governmental level, because there is no accepted boundary.
RU3NTKQ0	RU3NSKO9	3	Russia (20.9.): RU3NTKQ0 и RU3NSKO9 – overlap will be eliminated in the nearest future
SE3CI9U8	EE3E0014	3	
DK4LGLGS	DE416030	4	Germany (18.4.): DK4LGLS and DE416030: These two cells have a very systematic and regular overlap of about 3.5m.
DK4LGLGS	DE416050	4	Germany (18.4.): DK4LGLS and DE416050: The edge that is matching between these two cells needs to be improved. This will be done by accomplishing the new edition which is planned for spring 2013.
DK4LILBS	DE416010	4	Germany (18.4.): DK4LILBS and DE416010: The overlap is not regular and partly too big. We will solve the problem with the new edition of the cell which is planned for middle or end of 2012.

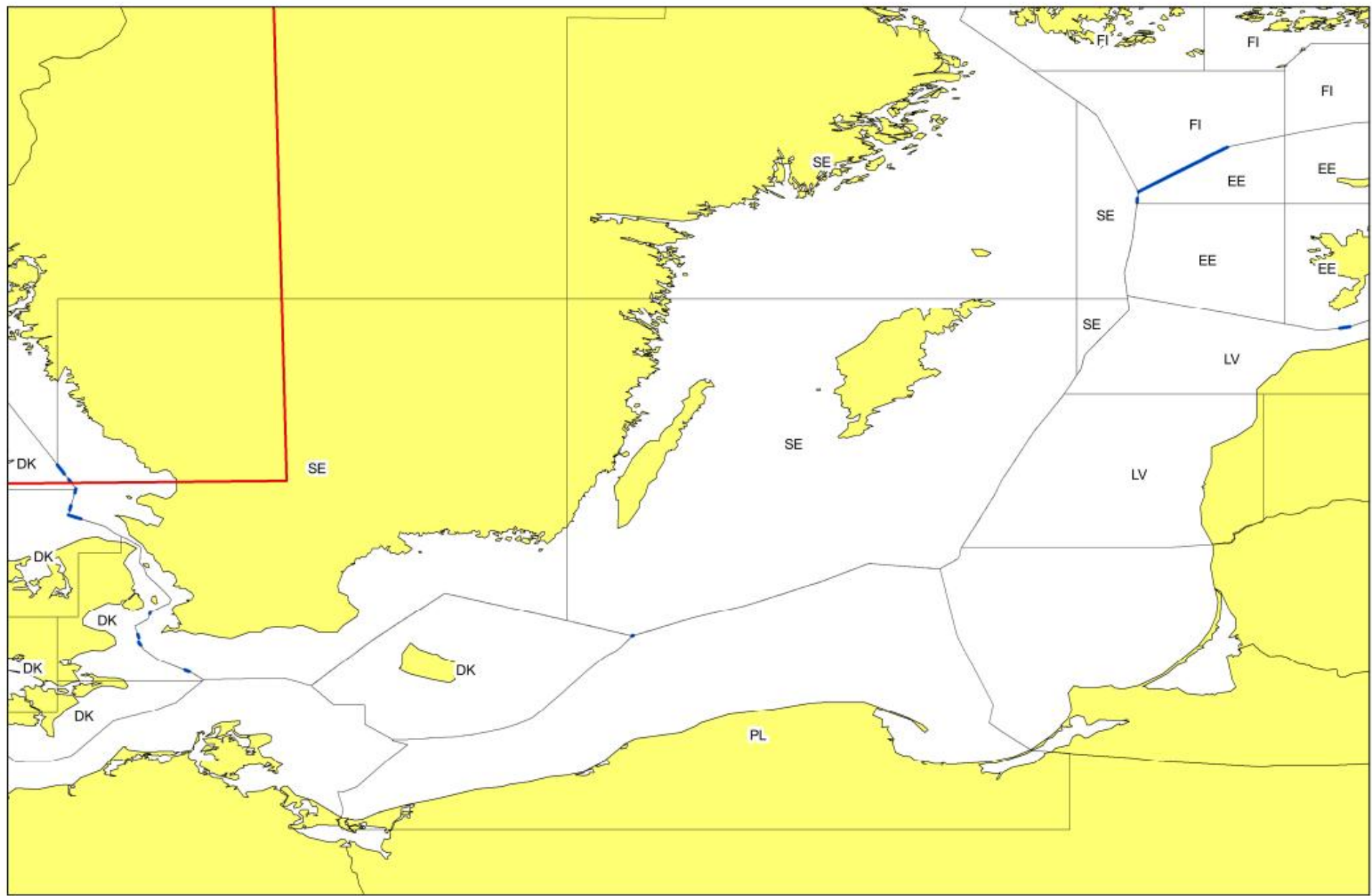
BSHC (+NHC) ENC Overlaps and gaps

DK4LILBS	DE416012	4	Germany (18.4.): DK4LILBS and DE416012: The overlap between these two cells is too big and not regular. We will solve the problem with the new edition which is planned for end of this year or beginning of next year.
PL4MAP37	DE416090	4	Germany (18.4.): PL4MAP37 and DE416090: Basically these two adjacent cells match. In some areas the overlap is bigger than 5m. This is caused by the individual shape of the cells.
RU4NDJS8	PL4MAP41	4	
RU4O0KM9	FI4EIJV2	4	Finland (10.9.): Data coverage on Russian cell not cut exactly according to the border line. The cell and the coordinates of the border line has been sent to Russia. Russia (20.9.): 4. RU4O0KM9, RU4O1KN9 и FI4EIJV2 – we ask Hydrographic Service of Finland to resend us the coordinates of the boundary line in WGS-84 for further harmonization
RU4O1KN9	FI4EIJV2	4	Finland (10.9.): The cell and the coordinates of the border line has been sent to Russia, Russia (20.9.): RU4O0KM9, RU4O1KN9 и FI4EIJV2 – we ask Hydrographic Service of Finland to resend us the coordinates of the boundary line in WGS-84 for further harmonization
SE4CJ4YO	FI4EJ76N	4	Finland (10.9.): Overlap exists many cases about 8 m, maximum 17 m. Will be corrected in the next update of the cell.
SE4DHWHE	DK4GSMON	4	
SE4DHWHE	DK4SUNDT	4	
SE4DHHWG	DK4GSMON	4	
SE4DHYPE	DK4SUNDT	4	
SE4DI0XC	DK4KATGS	4	
SE4DI0XE	DK4SUNDT	4	
SE4DI35C	DK4KATGS	4	
SE4EIGI6	FI4EIHM6	4	Finland (10.9.): Overlaps between 1 - 4 m.
SE4EIGI7	FI4EIHM6	4	Finland (10.9.): Overlaps between 1 - 4 m.
SE4EIHM5	FI4EIHM6	4	Finland (10.9.): Overlaps between 1 - 4 m.
SE4EIHM6	FI4EIHM6	4	Finland (10.9.): Overlaps between 1 - 4 m.
SE5GI0XE	DK5HLSNS	5	
			(Denmark 16.5.): Denmark is performing harmonisation procedures before a new cell is released. In Danish waters we have no gaps to our neighbours.
			We have overlaps to German cells, We expect that the Germany will take care of this matter. Germany has received a copy of relevant cells from Denmark.

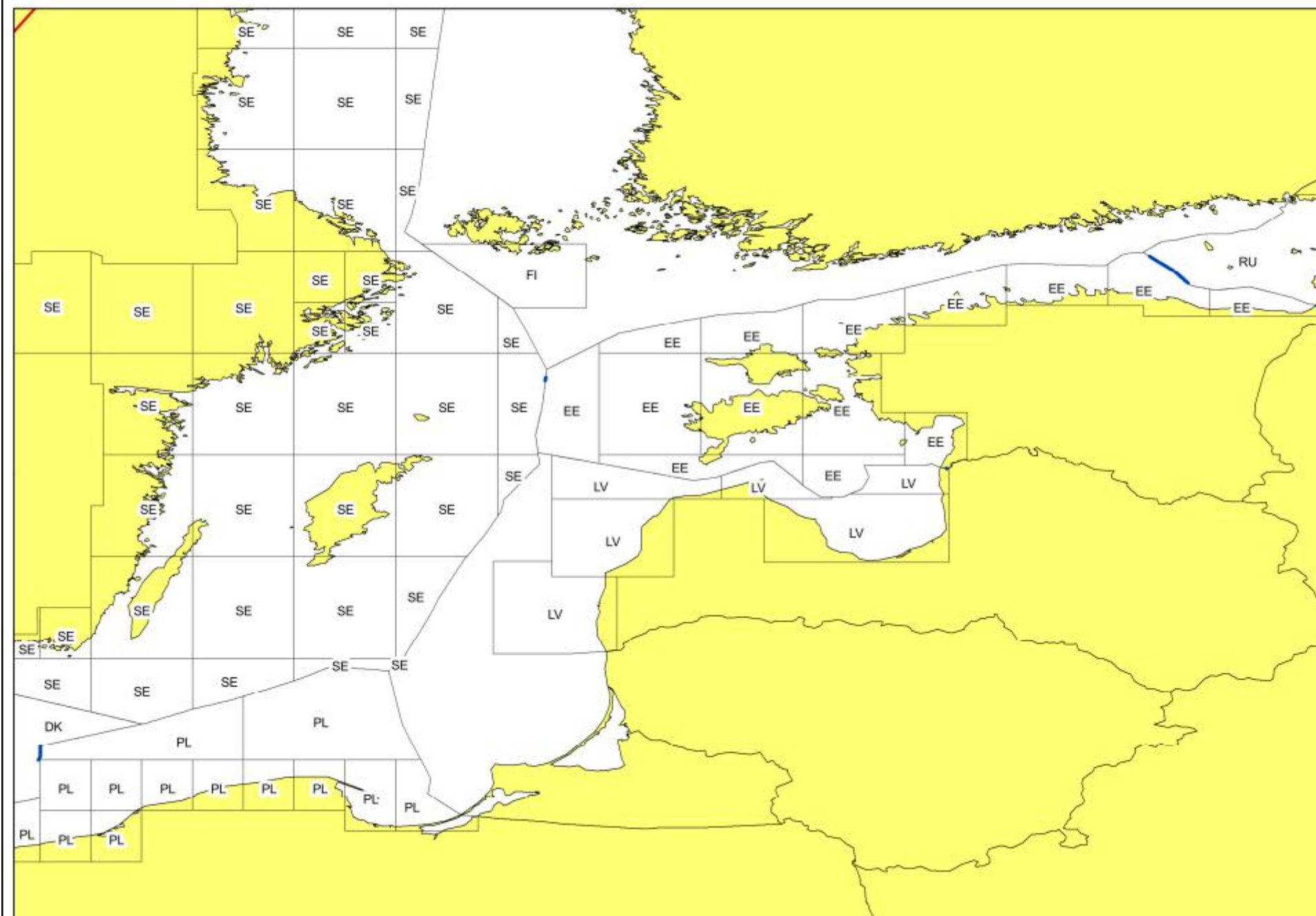
Baltic Sea Hydrographic Commission - Overview Overlaps



Baltic Sea Hydrographic Commission - General Overlaps



Baltic Sea Hydrographic Commission - Coastal Overlaps



BSHC (+NHC) ENC Overlaps

Summary:

- Almost all of the overlaps are unintentional
 - Amount of overlaps has been reduced since spring 2012
 - Most of the existing 30 overlaps are identified by MSs
 - In many cases only one feature is extending over 5 m buffer
 - There are also listed some overlaps less than 5 m [inaccurate method?]
 - None of them is critical to safety of navigation [some on land features]
 - The HOs have plans to eliminate most of them in the next editions
- ➔ In my understanding the overlaps are quite well in control within BSHC and could be eliminated in the next editions
- ➔ If the overlap analysis will be reported to wider audience (e.g. IMO), I propose that the basis of the analysis should be clarified and erroneous overlap reports eliminated.

Ports without ENC Coverage

BSHC (+NHC) Ports without ENC coverage

Ports with No coverage at Large Scale ENC coverage (Usage Bands 4 - 6) - BSHC						
UNIQUE_POR	PORT	COUNTRY	RANK_2006	LATITUDE	LONGITUDE	Comments:
P1001	St Petersburg	Russian Federation	88	59,93333300	30,30000000	Russia (20.9.): Port Saint-Petersburg – there are ENCs with usage band 5: RU5NTL01, RU5NTL00 and RU5NTKT7
P1267	Butinge Terminal	Republic of Lithuania	1006	55,96666700	20,71666700	Lithuania (13.9.): LT562520 is already available through PRIMAR and is shown on their coverage catalog. The cell's coordinates although not in the centre, but more or less falls inside the coverage of this ENC cell (centre coordinates - 56,00694445 and 20,92500001). The reason that this cell is shown as a gap may probably be because it has just been recently made available and the list is not updated.
P1068	Skelleftea	Sweden	1094	64,73333300	20,95000000	
P1286	Koping	Sweden	1240	59,51666700	16,00000000	
P1003	Varkaus	Finland	2163	62,33333300	27,83333300	Finland (10.9.): Due inaccurate coordinates. Correct coordinates are: 62.315555 27.909695
P1734	Berne	Germany	2396	53,18333300	10,50000000	
P0998	Kuopio	Finland	2770	62,85000000	27,50000000	Finland (10.9.): Due inaccurate coordinates. Correct coordinates are: 62.876036 27.676679
P1173	Mersrags	Republic of Latvia	2934	57,36666700	23,13333300	
P0932	Petrozavodsk	Russian Federation	3112	61,76666700	34,31666700	Russia (20.9.): Ports Petrozavodsk, Podporozhye, Medvezyegorsk and Otrdanoye – ENCs are not updated because of the lack of recent data. Republishing of charts on specified ports is not planned until 2014
P1069	Sipoo	Finland	3163	60,36666700	25,31666700	Finland (10.9.): Due inaccurate coordinates. Correct coordinates are: 60.253775 25.387709
P0939	Podporozhye	Russian Federation	3379	60,91666700	34,03333300	Russia (20.9.): Ports Petrozavodsk, Podporozhye, Medvezyegorsk and Otrdanoye – ENCs are not updated because of the lack of recent data. Republishing of charts on specified ports is not planned until 2014

BSHC (+NHC) Ports without ENC coverage

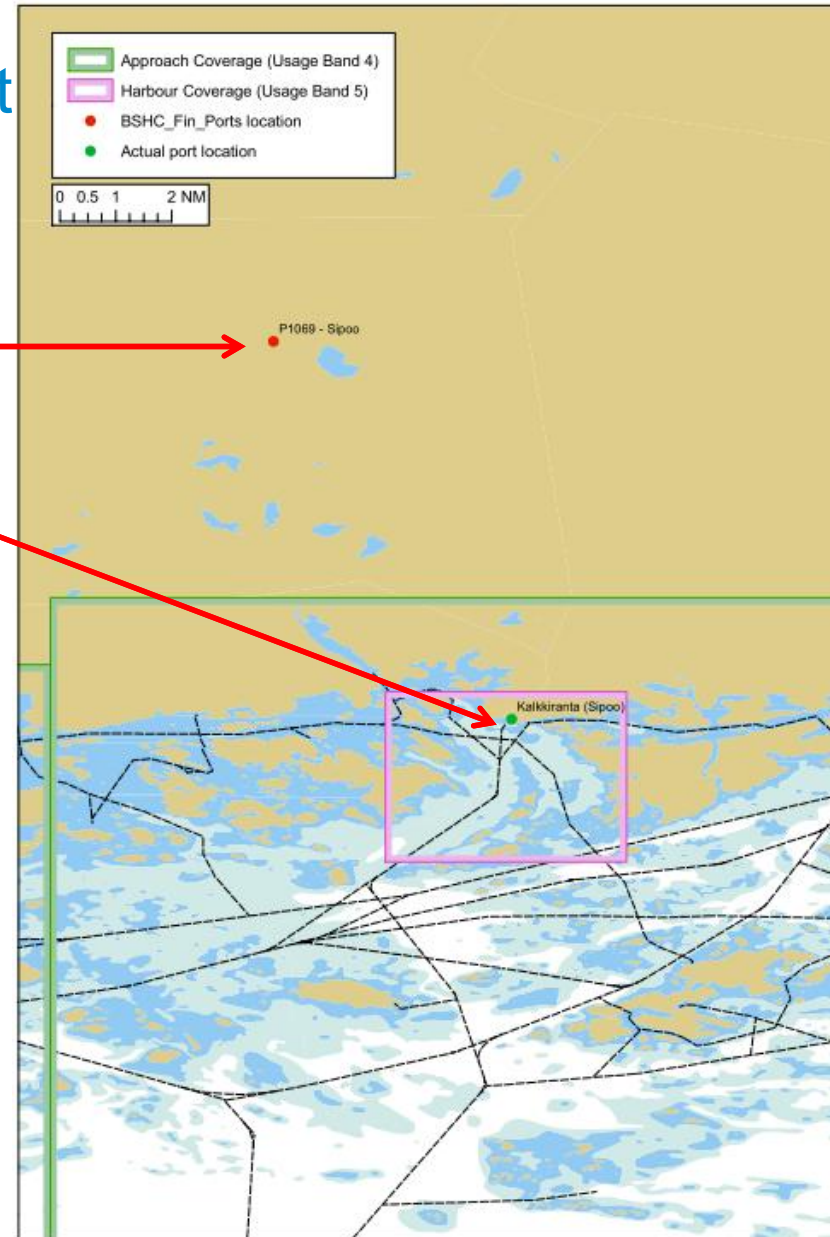
P0939	Podporozhye	Russian Federation	3379	60,91666700	34,03333300	Russia (20.9.): Ports Petrozavodsk, Podporozhye, Medvezyegorsk and Otrdanoye – ENCs are not updated because of the lack of recent data. Republishing of charts on specified ports is not planned until 2014
P0925	Medvezhyegorsk	Russian Federation	3439	62,93333300	34,46666700	Russia (20.9.): Ports Petrozavodsk, Podporozhye, Medvezyegorsk and Otrdanoye – ENCs are not updated because of the lack of recent data. Republishing of charts on specified ports is not planned until 2014
P1771	Salzgitter	Germany	3576	52,21666700	10,33333300	
P1408	Nekso	Denmark	3592	55,06666700	15,15000000	
P1518	Heringsdorf	Germany	3820	53,96666700	14,16666700	
P0996	Otrdanoye	Russian Federation	3835	59,76666700	30,80000000	Russia (20.9.): Ports Petrozavodsk, Podporozhye, Medvezyegorsk and Otrdanoye – ENCs are not updated because of the lack of recent data. Republishing of charts on specified ports is not planned until 2014
P4401	Hasle	Denmark	9999	55,20000000	14,71666700	
P4414	Skaelskor	Denmark	9999	55,25000000	11,30000000	
P5194	Lomonosov	Russian Federation	9999	59,83333300	29,80000000	Russia (20.9.): Port Lomonosov – there are ENCs with usage bands 4, 5, 6: RU6NKT0, RU5NKT2 and RU4NKT9
P5207	Borgholm	Sweden	9999	56,83333300	16,66666700	
P4391	Allinge	Denmark	9999	55,30000000	14,81666700	
P5246	Pataholm	Sweden	9999	56,91666700	16,36666700	
P4400	Hammerhavn	Denmark	9999	55,28333300	14,75000000	
P4418	Svaneke	Denmark	9999	55,13333300	15,16666700	

BSHC (+NHC) Ports with

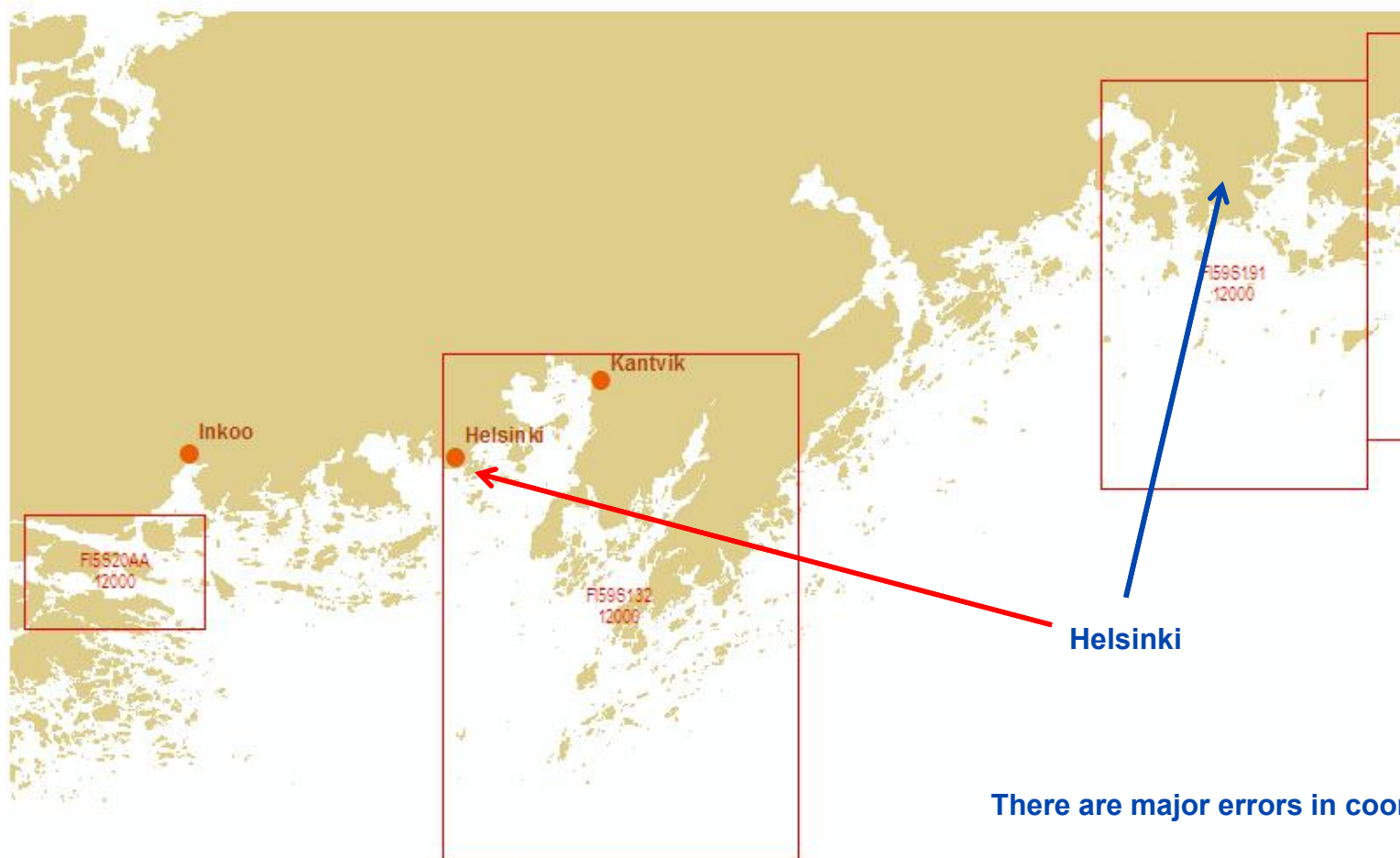
Position used by UKHO on
overlap analysis

Correct position

It seems that the coordinates of many
harbours refers more closely to the
coordinates of the centre of the town
which may locate far away of its
harbour.

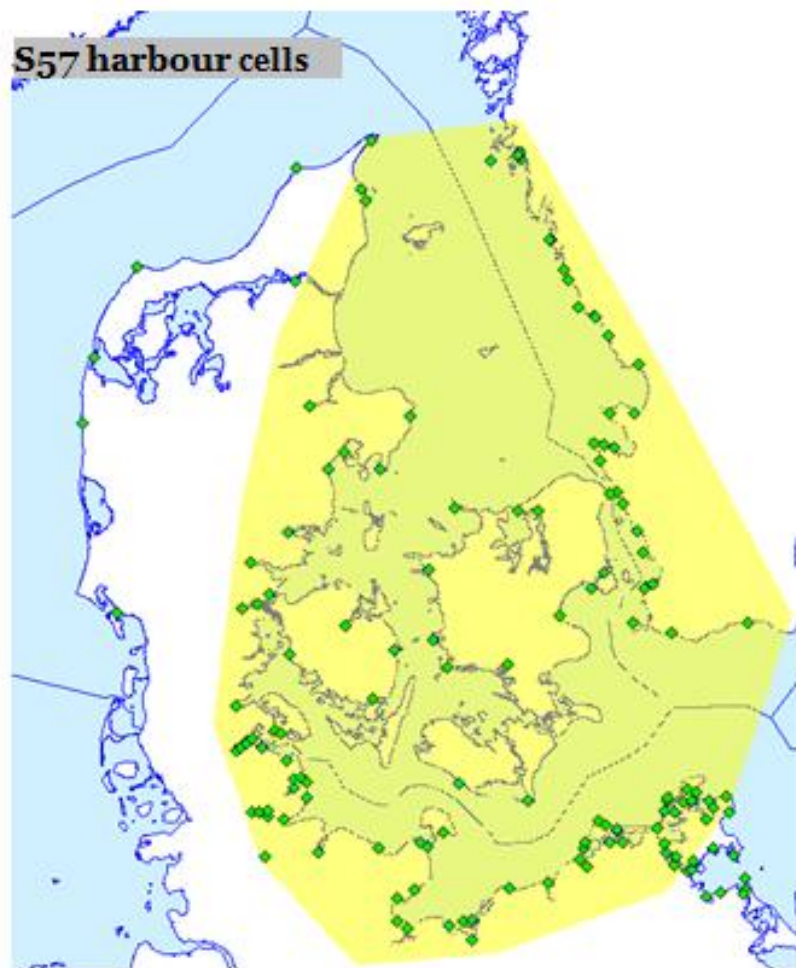



BSHC (+NHC) Ports without ENC coverage

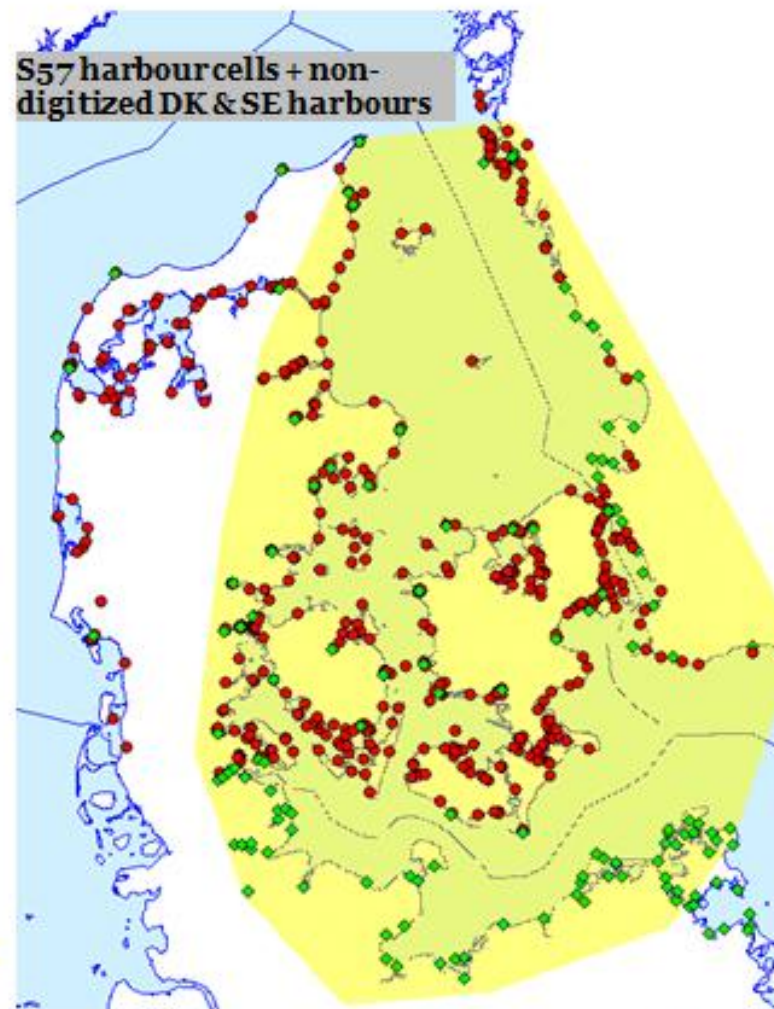


There are major errors in coordinates.

Coverage – pilot project



 National Survey and Cadastre



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BSHC (+NHC) Ports without ENC coverage

Summary:

- The analysis is based on inaccurate source data (Loyds list of ports)
- Looks like the coordinates of the ports are defined for statistical purposes, not for GIS use
- Now there are listed some 25 ports without ENCs
- Most of these seems to be erroneously

- What about small craft harbours and leisure boat marinas?

- ➔ This analysis gives an erroneous assessment of the Baltic Sea ENCs
- ➔ If this analysis will be reported to wider audience (e.g. IMO), I propose that the basis of the analysis should be clarified and erroneous ports missing ENCs to be eliminated from the list.

Thank you!

Liik
enne
vira
sto

Finnish Transport Agency