

NATIONAL REPORT OF SWEDEN

Executive summary

This report gives a summary of the main activities within the Swedish Hydrographic Office since the last report given at the 54th NHC meeting in Reykjavik in April 2010.

The previous hydrographer Mr Åke Magnusson did reach retirement age during the autumn 2010 and retired by the end of 2010. New director of the Swedish Hydrographic Office and Hydrographer from January 1st 2011 is Mr Patrik Wiberg.

1. Hydrographic Office

At the time of compiling this report 106 persons are employed by the Hydrographic Office. The operations are certified by Lloyd's register quality assurance in accordance with ISO 9001:2008. Yearly quality audits are conducted by Lloyds and internal auditors.

A significant change in the number of staff has occurred since the previous report. The manning of our hydrographic survey vessels is managed by the HO once again. The number of survey vessel crew members presently employed is 17.

2. Surveys

Most Swedish waters are surveyed to some degree over the years and most of the areas, especially fairway areas, to a high standard. The long term objective is that all Swedish waters should be surveyed in accordance with the international standard S-44.

Surveys and resurveys now and in the coming years are focused to fairway areas in the *SMA Safe Seaways concept* (Säkra sjövägar). This concept encompasses over 80 000 km² out of totally 165 000 km² within the Swedish EEZ. During 2010 a total of 800 km² were surveyed by SMA vessels. These surveys were mainly conducted in very shallow and consequently time consuming areas. During 2010 these surveys have been conducted in the fairways to Norrköping, Falkenberg, Stenungsund and Varberg as well as in fairway areas east of Anholt, northern Öresund and at Lilla Middelgrund. Within an internal periodic re-survey program, fairways in Svanesund, Sunningesund, Varberg and Flintrännan have been surveyed. The aim is to control the fairway depths, other fairway dimensions and the need for dredging.

The area delivered from external hydrographic survey companies totalled 4 200 km² during 2010.

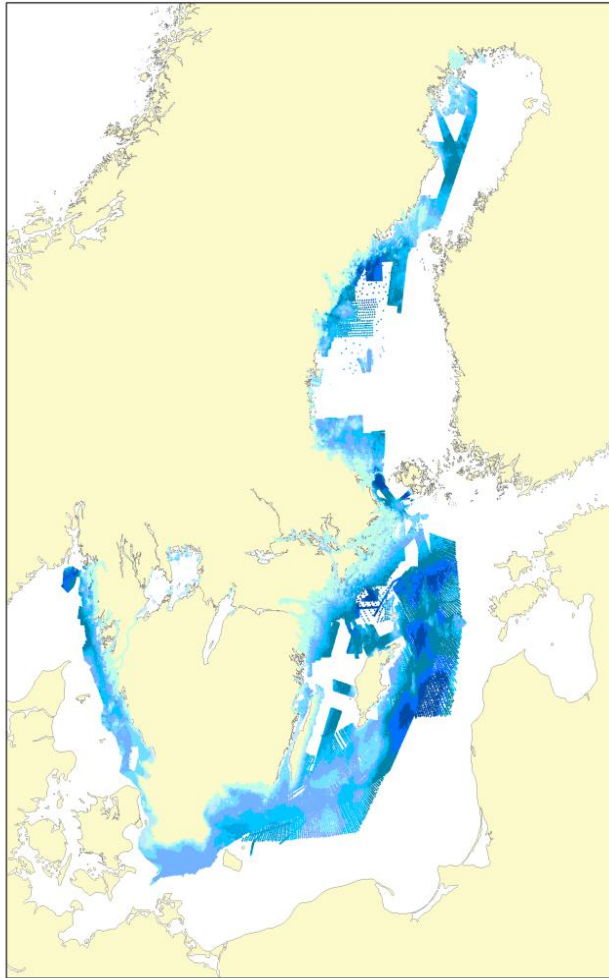


Fig 1 All data in the soundings database DIS including charts from ScanDIS at the end of 2010

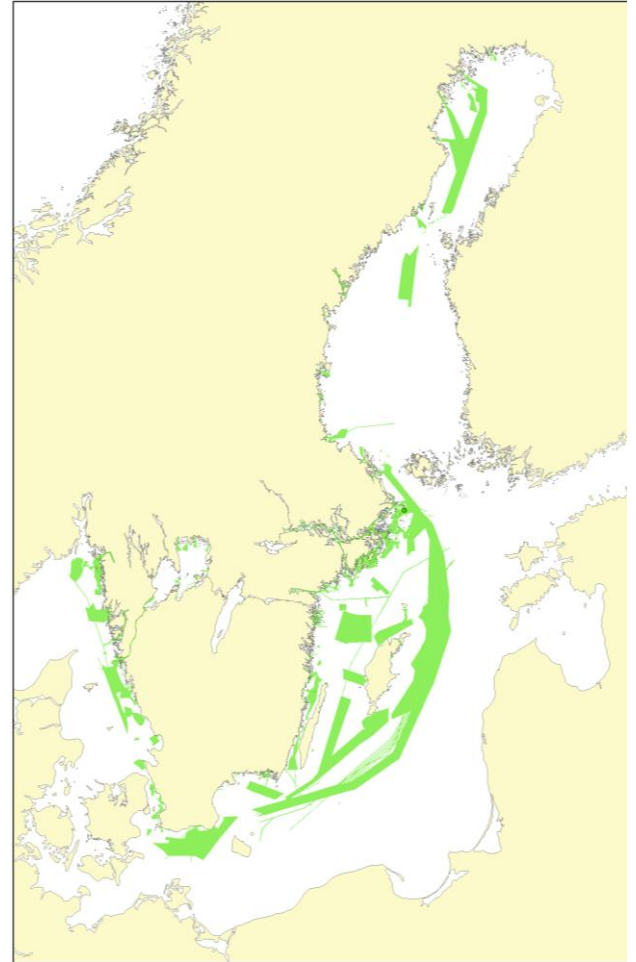


Fig 2 Data that fulfills IHO S-44 at the end of 2010

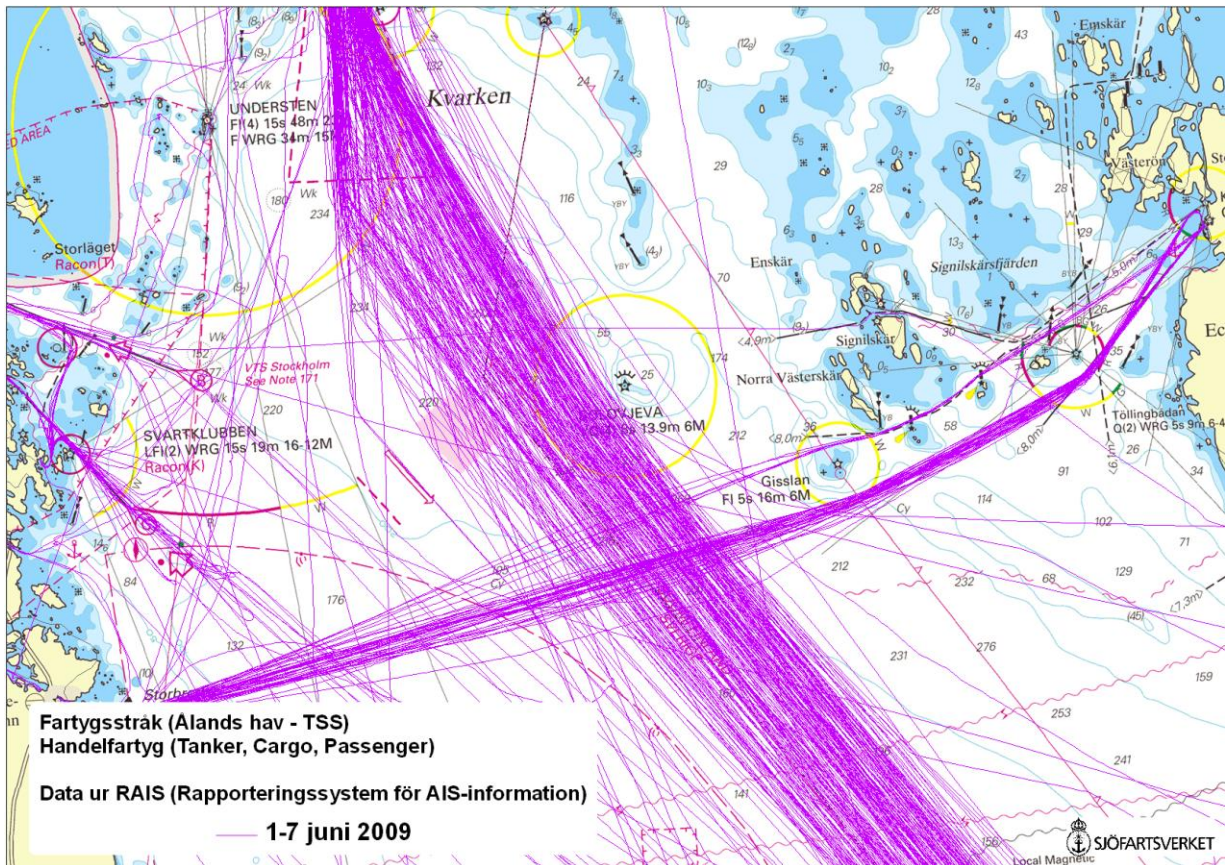
3. New charts and updates

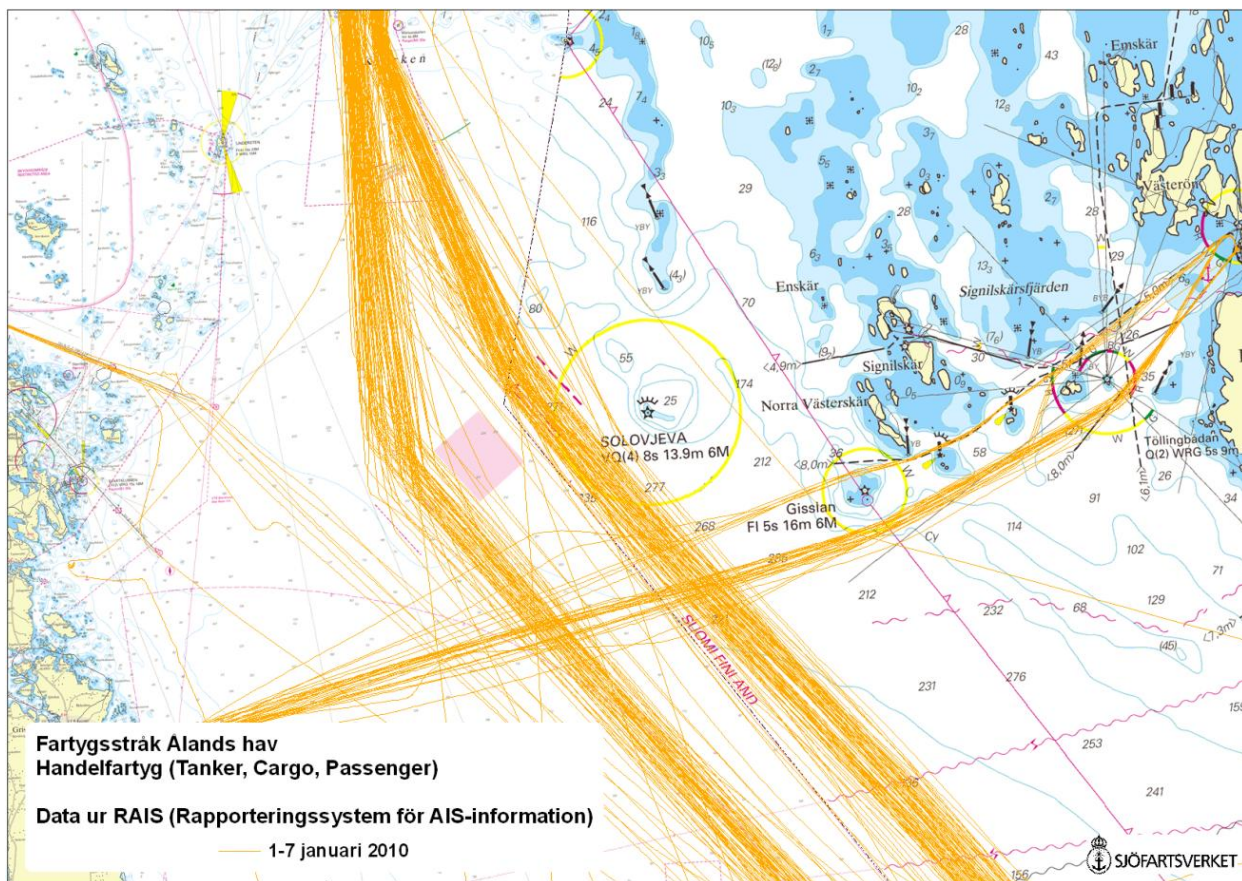
The Swedish paper chart portfolio consists of approximately 120 charts and 15 series of charts for small craft. Special charts, tailored to the customer, such as “print on demand” charts are also available as well as a service to provide chart images to mobile phones and PDA’s.

During the period the following new (or totally renewed) charts were issued:

Chart	Scale	INT	Name
SE 8	1:500 000	INT 1020	Skagerrak-Kattegatt
SE 62	1:250 000		Gotland North-Landsort
SE 71	1:250 000		Utlängan-Öland-Gotland South
SE 429	1:125 000	INT 1175	Norra Kvarken
SE 523	1: 50 000	INT 1244	Härnön-Kramfors
SE 7413	1:12 500		Port of Karlskrona

In the national report to NHC 54 we described charts produced as a consequence of new traffic separation schemes (TSS) around Åland. The effects of introducing the TSS is illustrated in a smaller part by the images below.



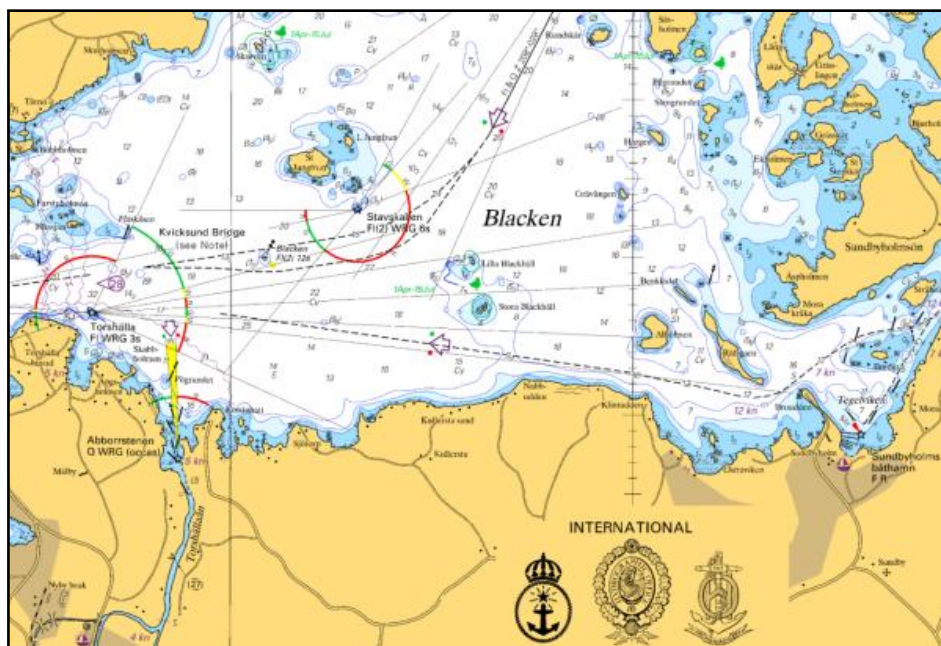


AIS patterns in Sea of Åland before and after new TSS

During the period the introduction of TSS has continued. The new charts 62 and 71 were published 2010 and present several new TSS around Gotland and Öland that came into regulation from January 2011.

Report on NHC54 Action 2, Paper Chart Harmonisation

The implementation of the harmonising rules resulting from the work of the Nordic WG on Paper Chart Harmonisation is considered to be completed in Sweden. There are remaining issues related to harmonisation with S-4 that we try to correct when appropriate. It is worth mentioning that this harmonisation very much simplifies the procedure for adoption of swedish charts by other HO's. Other HO's adoption of swedish charts has also proven to be a good secondary quality control of our products.



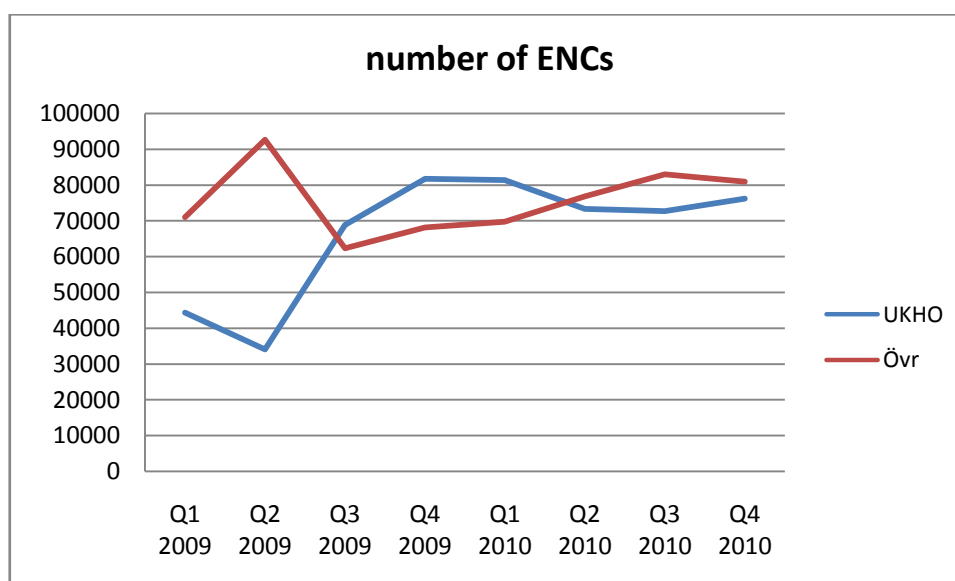
Example from chart adopted by UKHO

Report on NHC53 Action 9 and 10, Improved Data Exchange

The status of these actions are reported in a separate report to NHC55.

The sales of Swedish ENC's continues to grow, however not as fast as in the last couple of years. We have approximately 2,200 users with a total of 230,000 ENC's in use.

UKHO is the distributor with the largest sales of swedish ENC's, with approx. 50% share of the total sales.



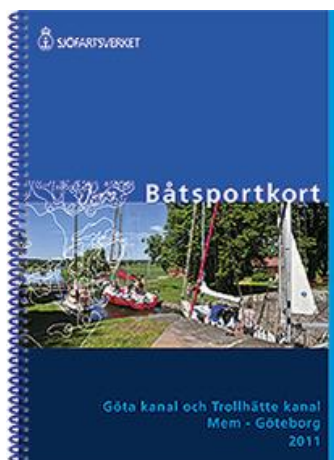


Works in progress in the port of Visby. The affected area is shown in ENC as a “caution area” with associated text.

Since 2009 Swedish ENC's are including Temporary and Preliminary updates corresponding to T- and P- notices in NtM. The temporary and preliminary changes are displayed in ENC's in accordance with the recommendations in IHO S-65 Annex B (Guidelines for encoding Temporary and Preliminary ENC updates).

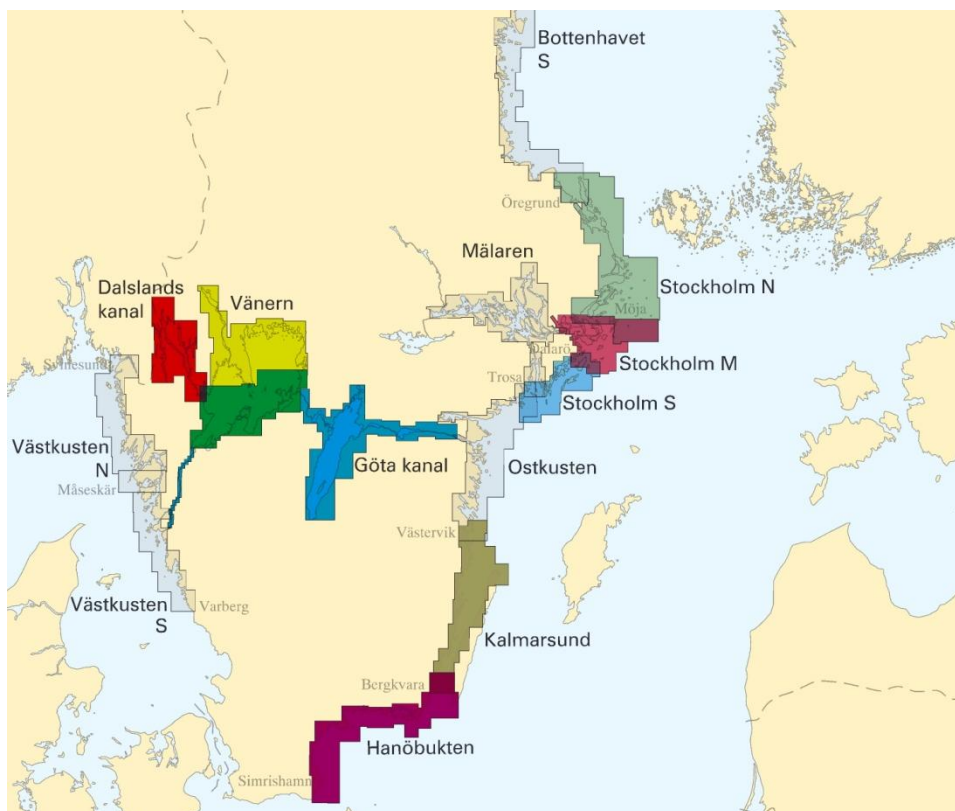
Information about the way Sweden is dealing with T- and P in ENC is given in the yearly Ntm Ufs A and have been published in notice No 6360 in the Swedish NtM:

(<http://www.sjofartsverket.se/en/Our-Activities/Hydrographic-Information/NtM---Notices-to-mariners/Search-the-database/?navigate=qRcnqusRKOKaiimTr5c2DGQHbyBHPbC0&ufsid=6360>)



The sales of Swedish small craft charts has not declined in spite of GPS use. For the 2011 season we have produced the following booklets in New Editions: Stockholm norra, Stockholm mellersta, Stockholm södra, Kalmarsund, Hanöbukten, Göta kanal/Trollhätte kanal, Vänern and Dalslands kanal.

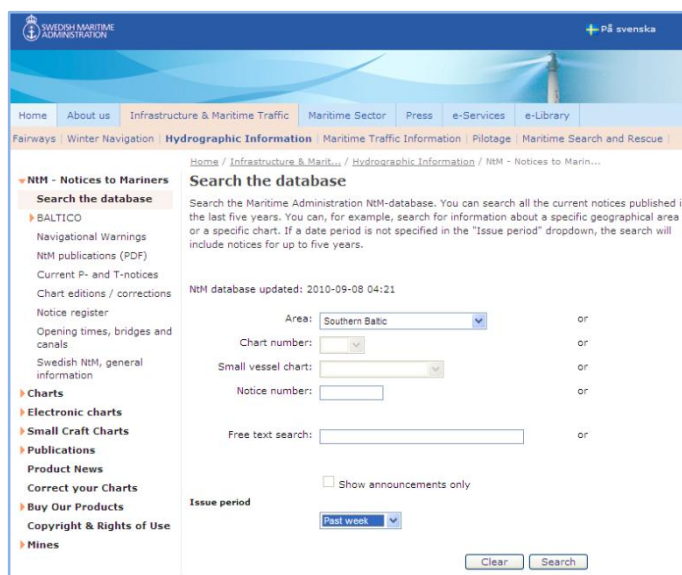
Except from the sales of paperchart and ENC's we also have seen an increasing demand for chart data for other purposes than navigational.



Small craft chart series in southern Sweden

4. New publications and updates

An Internet service named WebbUfs (<http://www.sjofartsverket.se/ntm>) makes it possible to search information in the Swedish NtM database in many different ways, e.g. geographical area, certain charts, time for publication etc. Almost every weekday new notices are published and it is possible to chose between English or Swedish language. This web-page is one of the most frequently visited on the SMA web. On a weekly basis all new notices since the previous week are included in the printed publication Ufs as well as published in PDF-format on the Web.



The number of subscribers of the paper publication has decreased in recent years and therefore the future of the weekly printed version will be considered.

5. MSI

The Baltic Sea, eastward of the boundary between NAVTEX service areas L and I, constitute a Sub-area under Navarea I.

BALTICO at the Hydrographic Office of SMA is National Co-ordinator of Sweden as well as Sub-area co-ordinator and Navtex co-ordinator for the four International Navtex service areas in the Baltic Sea area.

The location of the NAVTEX transmitters and the extension of the service areas and schedule for the regular transmission are shown on the adjoining map.

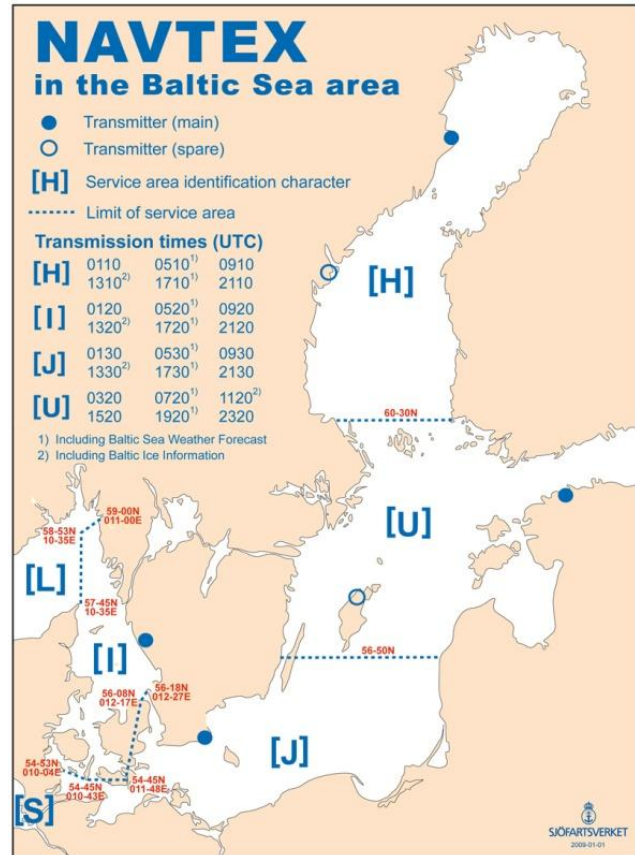
In addition to the international NAVTEX service Germany is operating a national service on 490 kHz, covering the SW Baltic.

BALTICO is presently giving assistance to the Danish Maritime Safety Administration (DaMSA) in the MSI-part of the EfficienSea project (WP4 e-navigation).

The following table is giving contact information for matters related to navigational warnings for each country within the sub-area.

	Telephone H24	E-mail
Denmark	+45 89 43 32 11	mas@sok.dk
Estonia	+372 620 5665	navinfo@vta.ee
Finland	+358 204 48 6400	turku.radio@fta.fi
Germany	+49 4927 1877 283	seewarndienst.wsa-emd@t-online.de
Latvia	+371 673 231 03	navarea@lhd.lv
Lithuania	+370 46 391 258	mrcc@mil.lt
Poland	+48 58 626 62 08	bhmw@mw.mil.pl
Russia	+7 812 717 59 00	navarea13@gunio.ru
Sweden	+46 11 19 10 45	msi@sjofartsverket.se

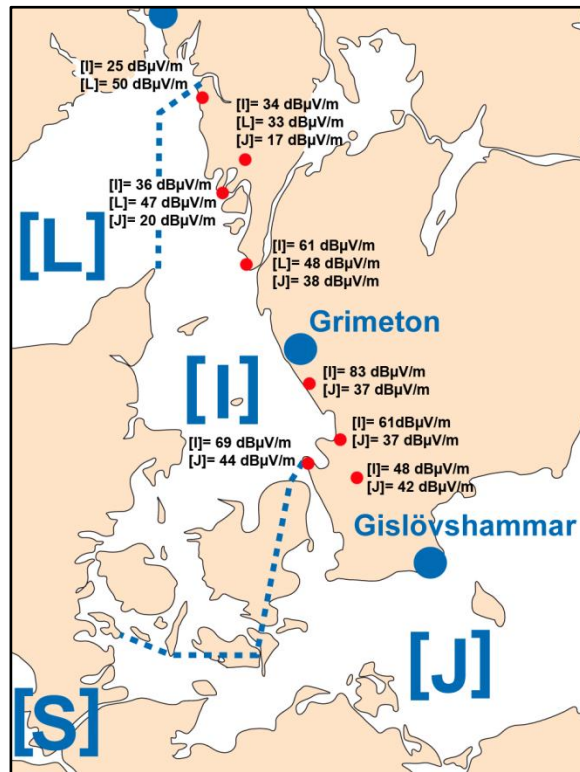
Every second year a meeting with National Co-ordinators and meteorologists within the Baltic Sea sub-area is arranged in one of the member states. The purpose of these meetings is to improve and harmonise the MSI services within the Baltic Sea region. The latest *Baltico meeting* took place in Gdynia in June 2010. Documents and meeting information is available on <http://www.sjofartsverket.se/balticomeeting>.



Stockholm Radio was engaged for many years for the transmission of MSI on VHF, MF and NAVTEX. In the autumn 2009 the economical situation made it necessary to finish the contract with Stockholm Radio and plan for the service to be performed by own resources. Since December 2009 the transmissions are carried out by one of the Swedish VTS-centres under the name *MSI SWEDEN*.

NAVTEX field strength measurements have been carried out in 2008 and 2009 in Skagerrak and Kattegat. The measurements were a result of ships reports of poor Navtex reception in the northern part of Skagerrak. The result, which is shown in the adjoining map, does not reveal any alarming problems. However further investigations will take place and additional monitoring receivers will be established in the area.

Discussion have also started with Kystverket, Norway and the International Navtex panel that, if it turns out that we have a coverage problem, possibly adjust the boundary between Navtex area “L” and “I” southward.

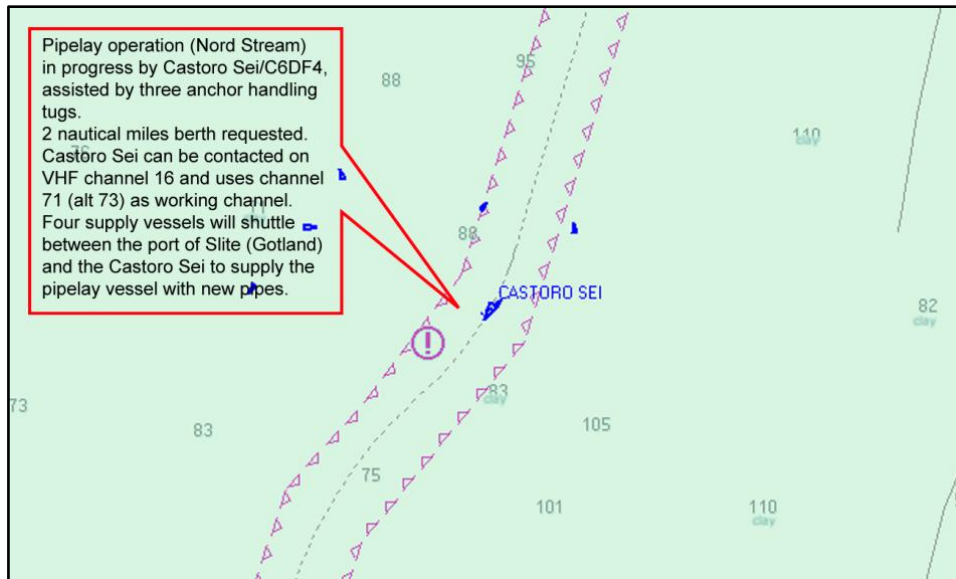


The number of navigational warnings on NAVTEX have increase in 2010, mainly due to the ongoing establishment of the Nord Stream gas pipeline across the EEZ of Russia, Finland, Sweden, Denmark and Germany.

Since the beginning of 2010 the pipeline has been displayed as “under construction” in Swedish paper charts and ENC. This has been shown to facilitate

the task of informing shipping about current works along the pipeline by means of Navigational Warnings and Notices to Mariners.

Nation	2007	2008	2009	2010
Denmark	123	105	98	87
Estonia	6	5	3	7
Finland	29	13	28	91
Germany	127	71	73	99
Latvia	17	22	24	20
Lithuania	32	34	27	34
Poland	86	72	70	74
Russia, Kaliningr.	151	32	49	66
Russia, Petersb.	5	16	29	33
Sweden	66	97	97	117
TOTAL	642	467	498	665



Part of ENC showing the new pipeline Nord Stream “under construction”. This picture shows a section where pipelaying is in progress, which is shown in ENC by means of a “caution area” with associated text.

6. C-55

An update regarding Sweden in the C-55 database has been delivered in March 2011. Response to NHC54 Action 4.

7. Capacity building

Sweden has not been active in the area of capacity building during the period.

8. Oceanographic activities

The Swedish Maritime Administration (SMA) is responsible for a number of water level stations but it is the Swedish Meteorological and Hydrological Institute (SMHI) that has the main responsibility for the Swedish oceanographic activities. Other actors are the Swedish Geological Survey and universities and research institutes.

9. Other activities

National Geodata Portal and Inspire

The Swedish HO continues to take part in the national activities to implement the Inspire directive of the EU and the establishment of the national SDI (Spatial Data Infrastructure) and a geodata portal. A national geodata portal is established and Swedish HO contributes with metadata according to the Inspire directive and some basic datasets to start with.

National Shore Line data quality improvement

For a number of years the HO is involved in a joint project with the National Land Survey to manage and improve a national shore line data theme together. One fundamental aim apart from a need to improve quality is to facilitate products that are cross-shore-line for coastal zone management and other applications. For new and totally revised charts this data has been used for some years now. In 2010 we also started to do thematic updates in the chart database of the shore line based on this high quality data starting with layers corresponding to the the largest scale charts. This is a major improvement for use together with absolute GPS navigation.

Converting fair sheet archive (ScanDIS)

The digitizing of soundings from fair sheets and similar maps in our archive continues with the overall aim to create national coverage in the soundings database (DIS). For the Hydrographic Office in particular, this will enable new and more efficient production of chart information.

This operation is, after some years as a project, since 2007 permanent in our organization and will continue at least until 2013. The Swedish government supports us financially as a part of a special Baltic Sea programme and will hopefully do that for another couple of years. We cooperate with the Swedish Environmental Protection Agency (Naturvårdsverket) in planning and prioritizing this work. So far we have processed approximately 3500 of an estimated 8 000 sheets and maps in the archive.