

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 14th BSHC meeting in Copenhagen in September 2009.

1. Hydrographic Office

Approximately 110 people 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 by internal auditors.

Concerning the operations it can be noted that since last report all chart data has been migrated to a new modern Oracle database. This will better enable future important improvements than was the case in the older file based system. Furthermore an additional and totally separated local data network has been established in order to meet security demands when dealing with classified information.

During the last ten years the manning of the surveying vessels has been outsourced to different management companies. This system of manning has now been abandoned and from the 1st of May this year all crew members of the surveying vessels are employed by the Hydrographic Office.

2. Surveys

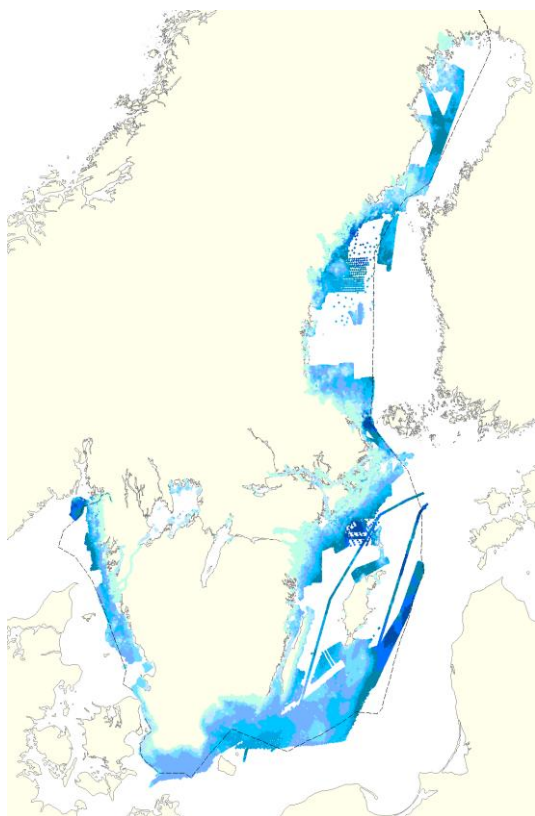
Most Swedish waters have been surveyed with varying methods over the years. A large part of the important fairway areas have been surveyed to modern standards. The long term objective is that all Swedish waters should be surveyed in accordance with the international standard, S-44.

Surveys and resurveys now and in the coming years are focused to fairway areas in the HELCOM concept and the Swedish national *Safe Seaways concept* ("Säkra sjövägar"). This is also known as Category I and II in accordance with the BSHC/HELCOM re-survey plan. This concept encompasses over 81 500 km² out of totally 165 000 km² within the Swedish EEZ. During 2009 a total of 1 060 km² were surveyed by our vessels. These surveys were mainly conducted in very shallow and consequently time consuming areas.

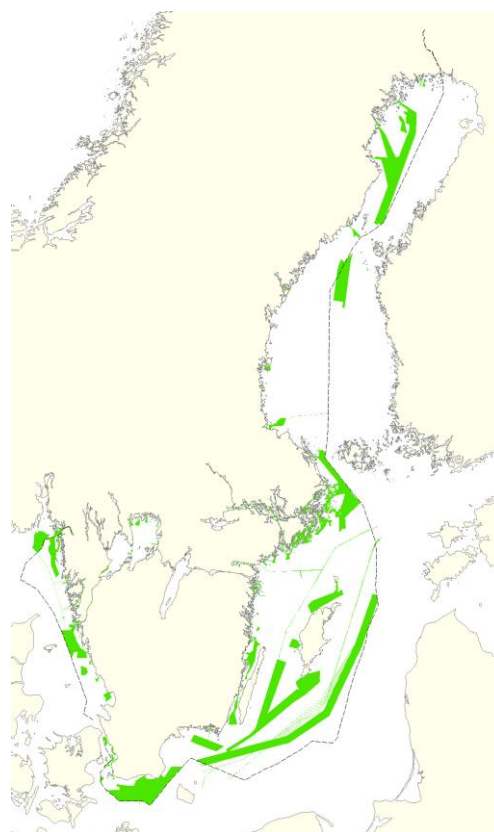
In addition 8 200 km² were surveyed in open sea, south and east of Gotland island in Central Baltic Sea. These surveys were conducted in accordance with the BSHC/HELCOM resurvey plan by an external contractor (FUGRO OSAE GmbH).

Within the national concept "Säkra Sjövägar" surveys have been conducted during 2009 in fairways to Umeå, Studsvik, Oxelösund and Ångermanälven as well as in a fairway area W of Gotland and at Lilla Middelsgrund. During 2010 these surveys have continued in the fairways to Falkenberg, Norrköping and Varberg as well as in the fairway area at Fladen and Lilla Middelsgrund.

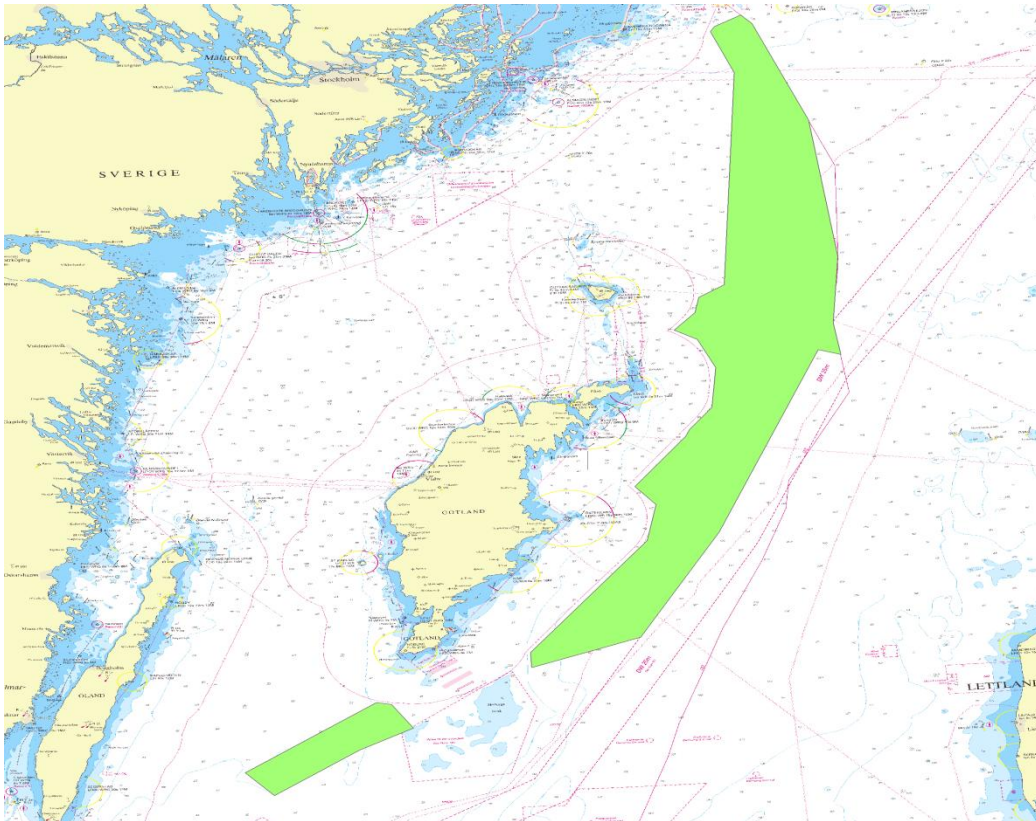
Within an internal periodic resurvey program fairways in Mälärleden, Kalmarsund, Forsmark and Flintrännen have been surveyed during 2009 and during 2010 continued at Svanesund and Sunningesund in the fairway to Udevalla at the Swedish westcoast . The aim is to control the fairway depth, other fairway dimensions and the need for dredging. During 2010 (until September) so far 509 km² has been surveyed by own vessels. The goal for 2010 is 560 km². No purchase of external surveying have been done during 2010.



All data in the soundings database DIS including charts from ScanDIS at the end of 2009



Data that fulfills IHO S-44 at the end of 2009



Area (8 200km²) of survey by external contractor FUGRO OSAE during 2009

The total area of surveys during 2009 was 9 260 km² and for 2010 so far 509 km²

Survey vessels

The surveying fleet consists of JACOB HÄGG (with multibeam, Simrad 3002D) and NILS STRÖMCRONA (with Reson 8101 and barsweeping equipment).



Jacob Hägg



Nils Strömcrona

In 2009 two new survey vessels were delivered.



JOHAN MÅNSSON a 20m boat equipped with RESON 7125 multi-beam echo sounder for work in the archipelago. The crew is 3-4 persons with two work places for post processing.



PETTER GEDDA, a 8.5m boat built for near shore and port jobs.
Equipped with RESON 7125 multibeam echo sounder.

3. New charts and updates

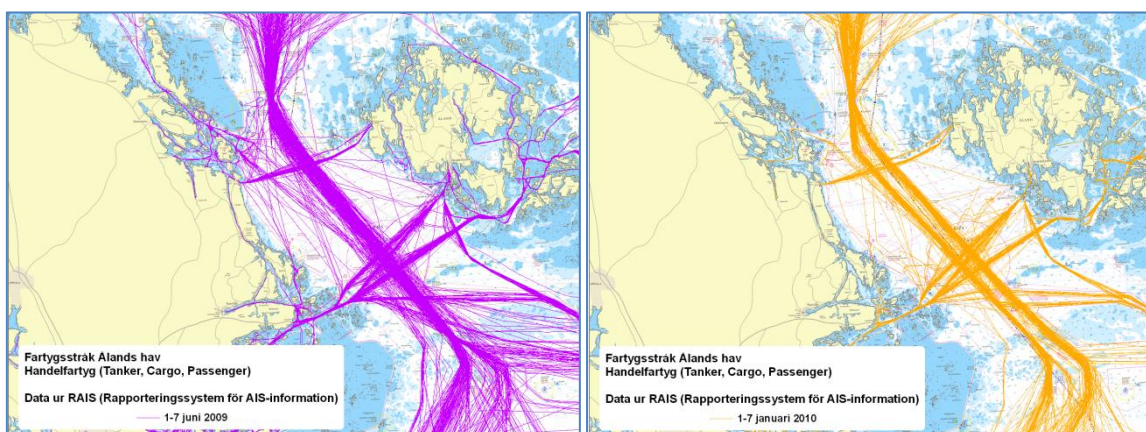
Swedish Paper Chart portfolio

The Swedish paper chart portfolio consists of approximately 120 charts and 15 series of small craft charts. Special charts, tailored to the customer, are also produced as well as chart data for other purposes, such as GPS's, mobile phones and PDA's.

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

SE 619	1:150 000	INT1240	Ålands hav
SE 937	1:50 000	INT1313	Strömstad – Idefjorden
SE 8	1:500 000	INT 1020	Skagerrak – Kattegatt
SE 7413	1:12 500		Port of Karlskrona

The chart 619 was produced primarily to better present the new traffic separation scheme active from 2010-01-01 in the Sea of Åland. Figure 6 below describes the traffic pattern as a history of AIS tracks before and after the TSS came into effect.



AIS patterns in Sea of Åland before and after new TSS

New Routeing Measures around Gotland and New Swedish INT-Charts

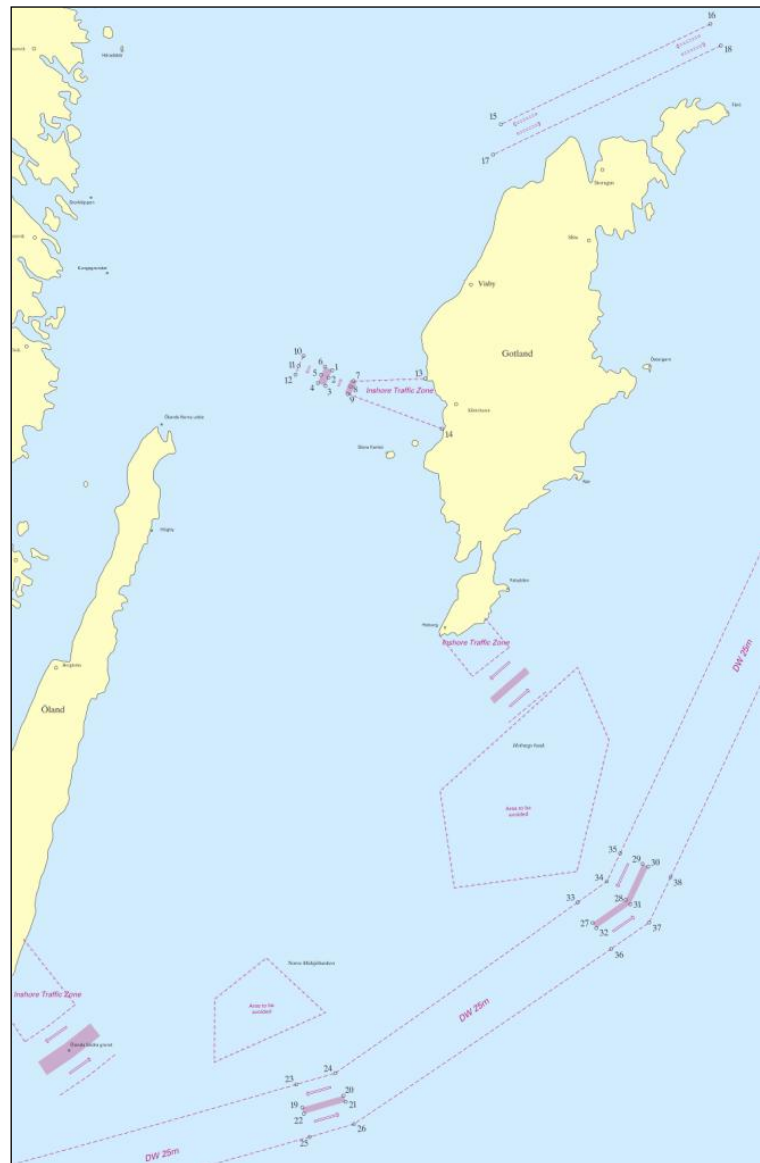
At the IMO MSC87 meeting in May 2010 the final approval of new routeing measures near the island of Gotland was made. The new routeing measures will come into force 1st January 2011. As seen in figure 7 below one new two-way route part will be established north of Gotland, one of the new traffic separation schemes will be established west of Gotland and the other two in the already existing 25m DW-route. For more details see Swedish NtM (Ufs) 2010:309/6449. The other two traffic separation schemes which can be seen in the picture in annex A, south of Gotland and south of Öland, are already in existence.

In combination with the establishment of these new routeing measures the Swedish Maritime Administration (SMA) will publish two new INT charts at scale 1:250 000 with the INT-numbers 1203 (national number 71) and 1204 (national number 62), see illustration on following page.

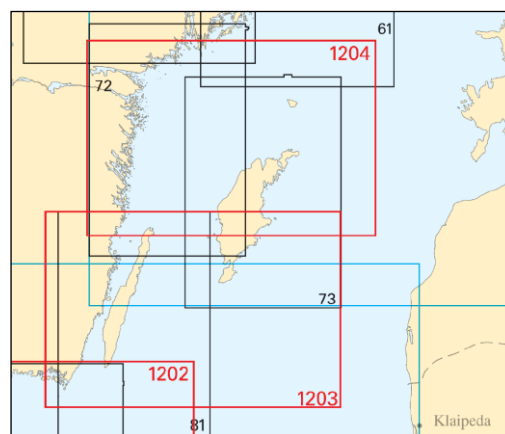
These charts have been previously planned within the Baltic Sea International Charting Committee (BSICC) and will replace the existing Swedish charts with the national numbers SE72, SE73 and SE81 at scale 1:200 000. The extent of the new charts will be approximately the same as proposed in S11 INT Chart Catalogue, Region E Baltic Sea, but the chart limits will be adjusted slightly in order to cover the new routeing measures

properly. Publication date of INT-chart 1203 and 1204 will be the last week of October 2010.

Apart from the above mentioned INT chart another INT chart covering The Quark (the passage between Sea of Bothnia and Bay of Bothnia) at scale 1:125 000 will be published the first week of December 2010. This chart with the INT-number 1175 (national number 429) has also been previously planned within the BSICC and will replace the existing Swedish chart with the national number SE515.



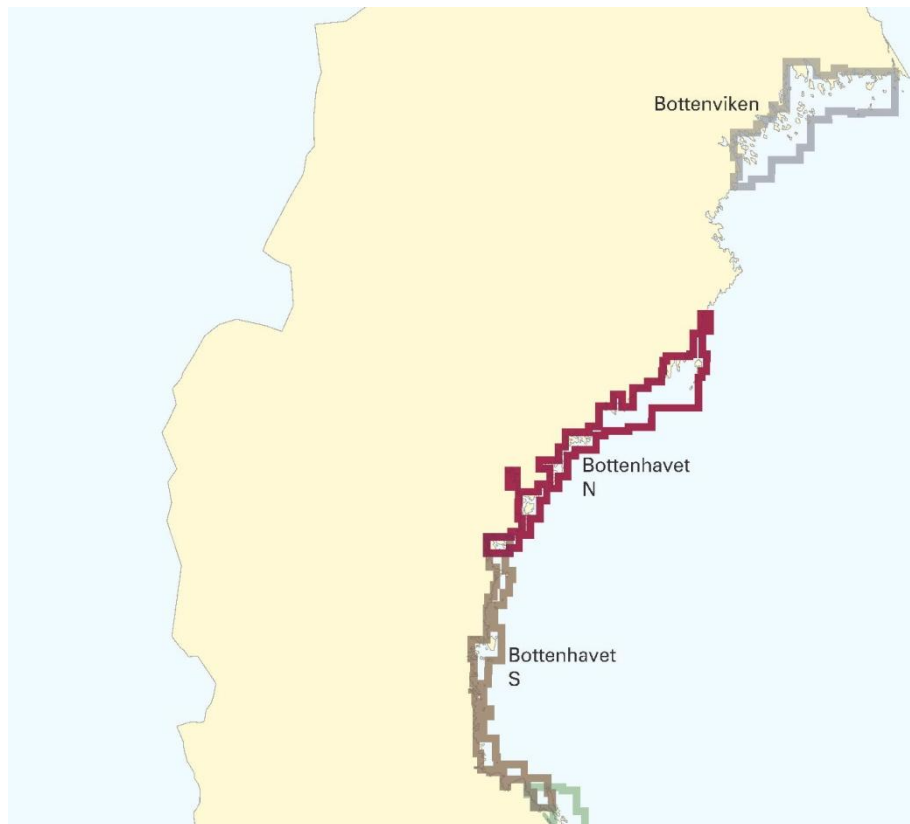
New Routeing Measures near Gotland



New Swedish INT Charts 1203 and 1204

New Small Craft Charts

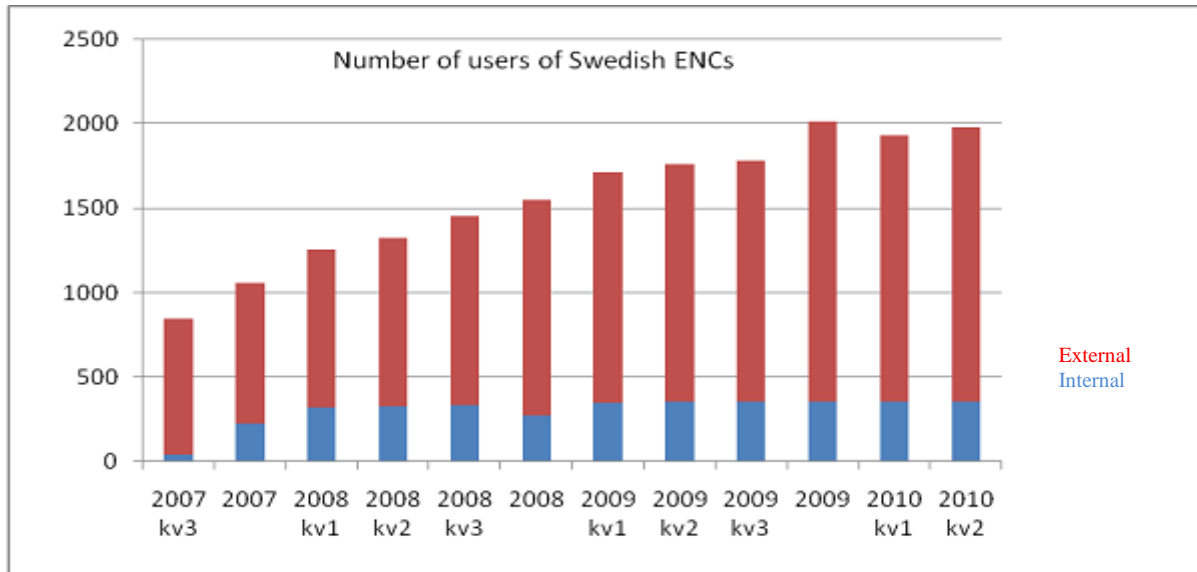
During the last year we have issued another three series of small craft charts for the northern part of the Baltic. These series are named 'Southern Sea of Bothnia', 'Northern Sea of Bothnia' and 'Bay of Bothnia'.



New small craft chart series in the north

ENC

Swedish ENC's continue to be distributed through services provided by PRIMAR in Norway.



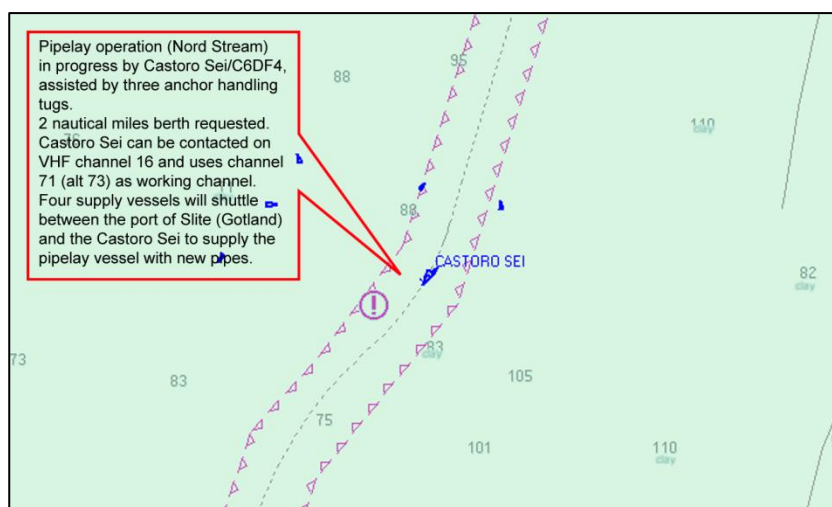
As a result of the harmonisation guidelines produced by a BSHC working group in 2008 all Swedish cells were adjusted and released in new harmonised editions during the autumn of 2009.

Since 2009 Swedish ENCs are including Temporary and Preliminary updates corresponding to T- and P-notices in NtM.

The temporary and preliminary changes are displayed in ENCs 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/Infrastructure--Maritime-Traffic/Hydrographic-Information/NtM--Notices-to-mariners/Search-the-database/?navigate=qRcnqusRKOKaiimTr5c2DGQHbyBHPbC0&ufsid=6360>).



The new pipeline Nord Stream "under construction" is shown on Swedish paper charts and ENC. This picture shows a section where pipelaying is in progress, which is shown on ENC by means of a "caution area" with associated text.

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, a certain chart, publishing period etc. Almost every weekday new notices are published and it is possible to choose between English or Swedish language. On a weekly basis all new notices since the previous week are published in the printed publication Ufs as well as in PDF-format on the Web. The number of subscribers has decreased in recent years and therefore the future of the weekly printed booklet will be considered.

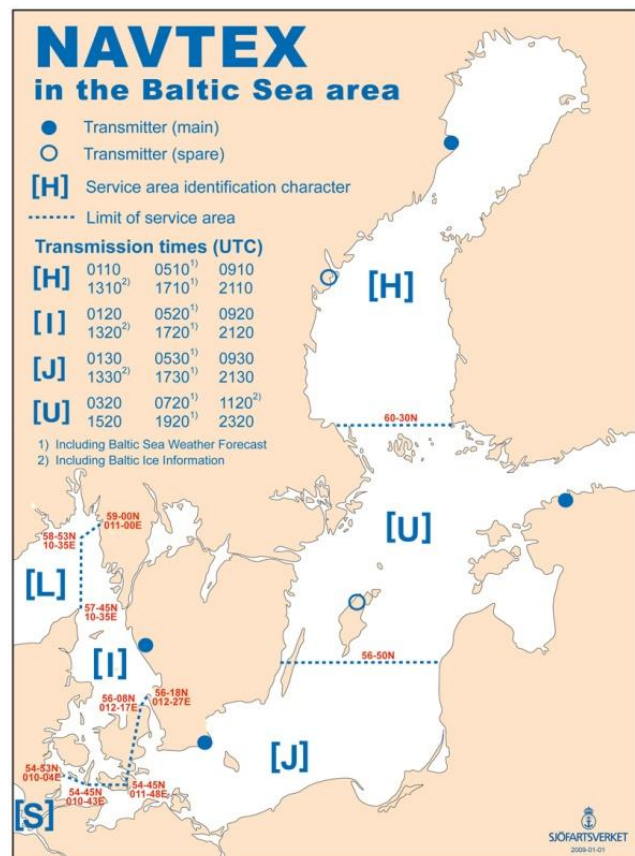
5. MSI

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.



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

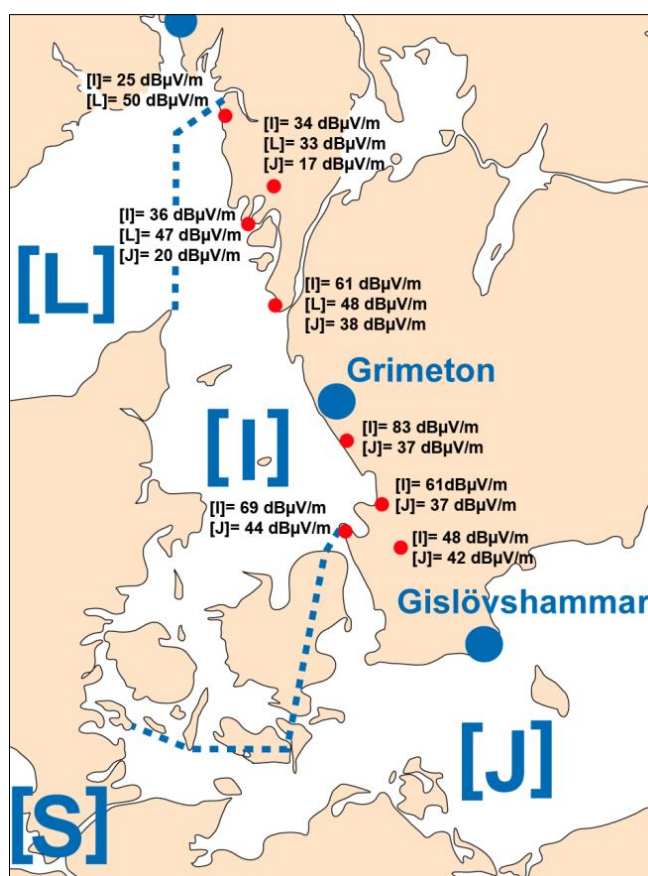
	Telephone H24	E-mail
Denmark	+45 89 43 32 11	mas@sok.dk
Estonia	+372 620 5665	navinfo@vta.ee
Finland	+358 204 48 6400	turku.radio@fta.fi
Germany	+49 4927 1877 283	seewarndienst.wsa-emd@t-online.de
Latvia	+371 673 231 03	navarea@lhd.lv
Lithuania	+370 46 391 258	mrcc@mil.lt
Poland	+48 58 626 62 08	bhmw@mw.mil.pl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

The number of navigational warnings on NAVTEX have been quite equal over the past years, see table on next page. In the southern and south-eastern parts of the Baltic Sea the majority of messages are dealing with information about military exercises. The total number of navigational warnings is expected to increase in 2010-2012 due to the establishment of



the Nord Stream gas pipeline which will stretch across the EEZ of Russia, Finland, Sweden, Denmark and Germany.

The pipeline has been displayed as “under construction” in Swedish paper charts and ENC since the beginning of 2010. 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, see illustration on page 8.

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

6. C-55

Information has not been changed during the period.

7. Capacity building

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

8. Oceanographic activities

The 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.

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 program and will probably 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 made approximately 2 500 of an estimated 6 000 items.

10. Conclusions