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 53rd NHC meeting in Helsinki in April 2009.

1. Hydrographic Office

Nearly 100 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 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 a management company. A process in now underway to employ all the crew members for our survey vessels at the Hydrographic Office from the 1st of May this year.

2. Surveys

All Swedish waters are surveyed 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 70 000 km² out of totally 165 000 km² within the Swedish EEZ. During 2009 a total of 1 060 km² were surveyed by SMA vessels. These surveys were mainly conducted in very shallow and consequently time consuming areas. During 2009 these surveys have been conducted in the fairways to Umeå, Studsvik, Oxelösund and Ångermanälven as well as in a fairway area west of Gotland and at Lilla Middelgrund.Within an internal periodic re-survey program, fairways in Mälarleden, Kalmarsund, Forsmark and Flintrännan have been surveyed. The aim is to control the fairway depths, other fairway dimensions and the need for dredging.

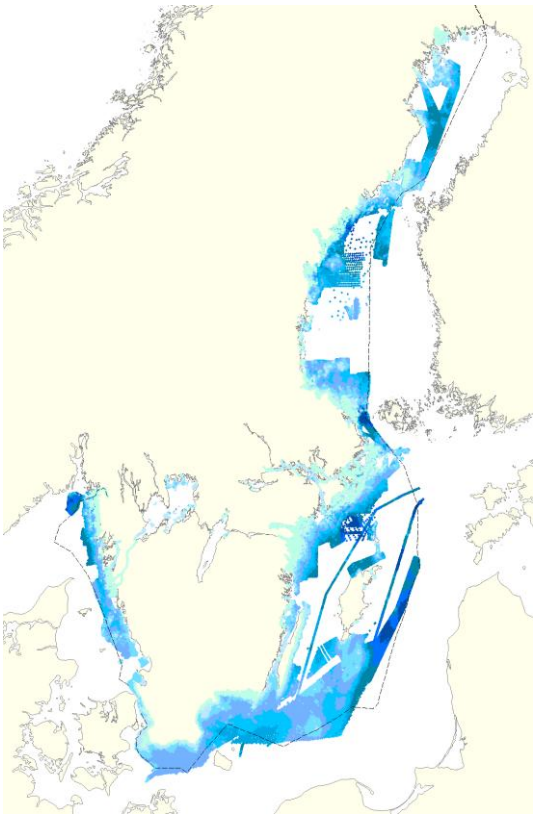


Fig 1 All data in the soundings database DIS including charts from ScanDIS at the end of 2009

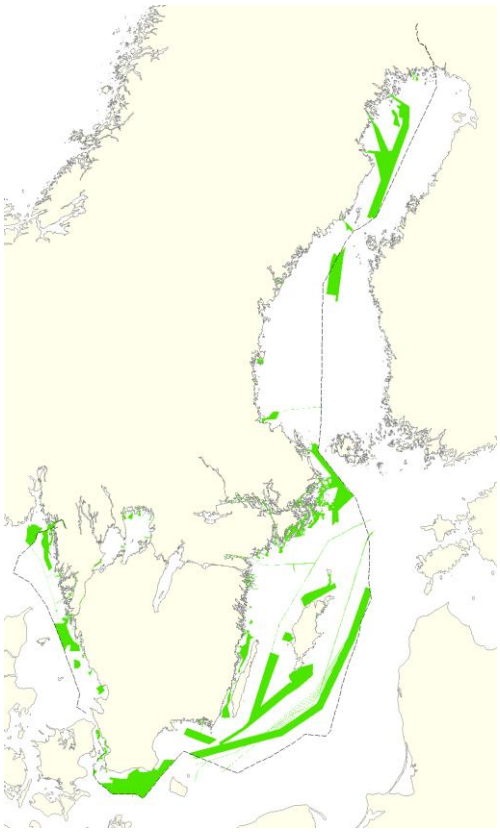


Fig 2 Data that fulfills IHO S-44 at the end of 2009

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 and by an external contractor.

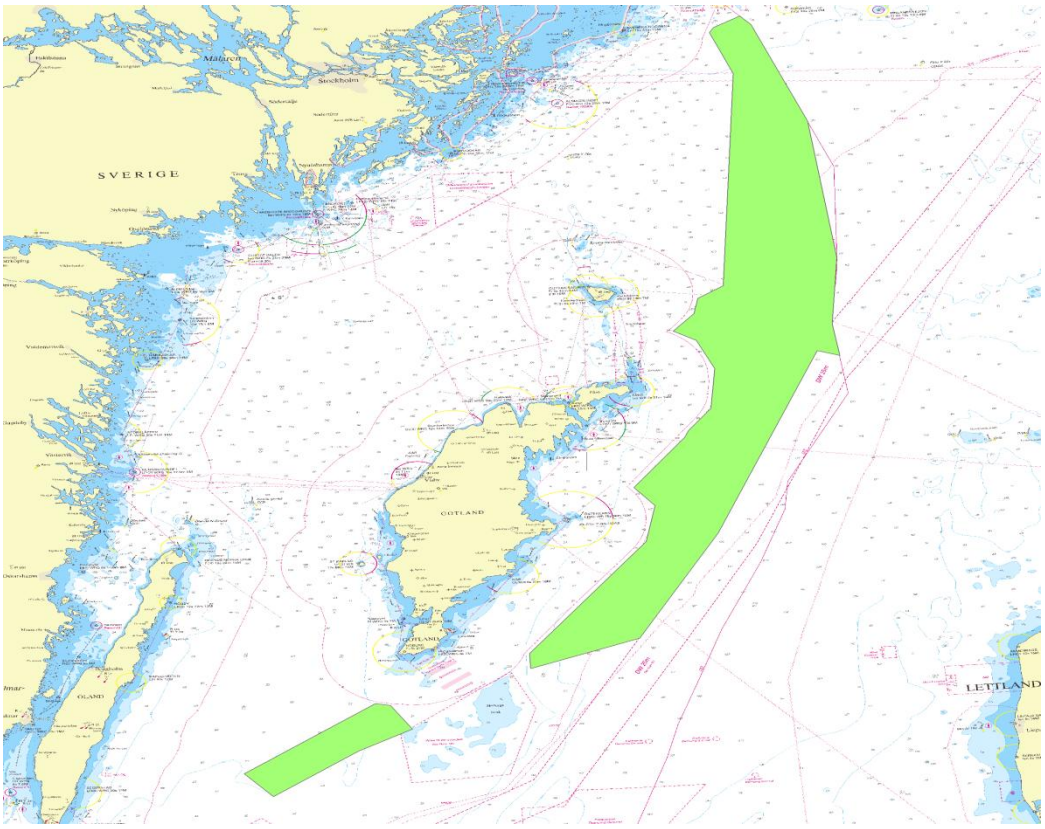


Fig. 3 Area (8 200km²) of survey by external contractor FUGRO OSAE during 2009

The total area of surveys during 2009 then amounts to 9 260 km².

New ships

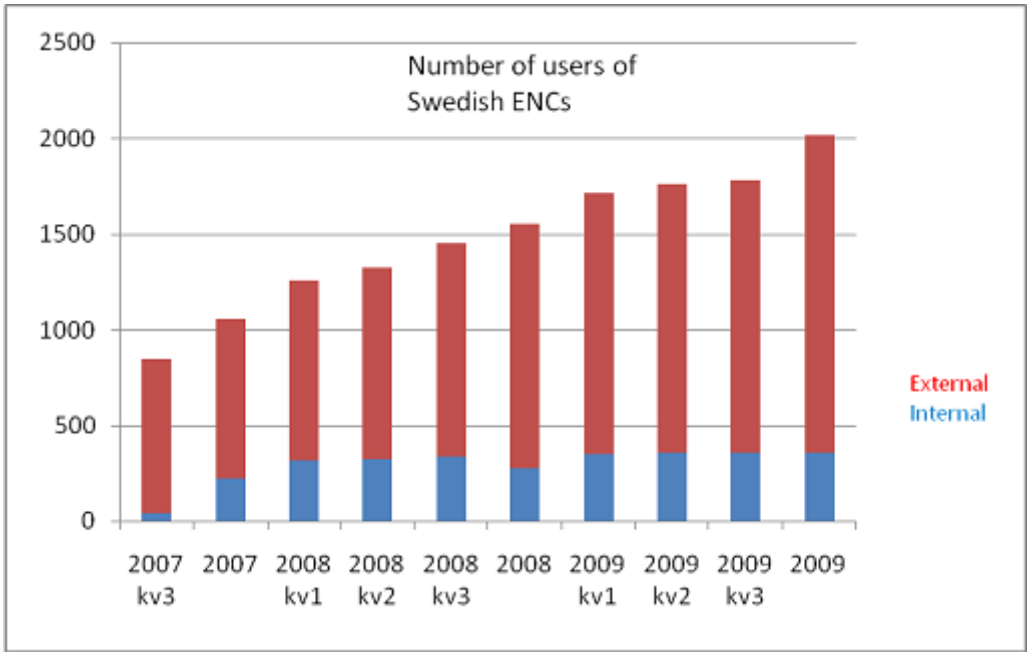
The surveying fleet consists of two vessels JACOB HÄGG (SIMRAD 3002D) and NILS STRÖMCRONA (RESON 8101). Nils Strömcrona also has barsweeping equipment. During 2009 two new vessels were delivered in October - November.

Fig 4 PETTER GEDDA, a 8.5m boat built for near shore and port jobs. Equipped with RESON 7125 multibeam echo sounder.

Fig 5 JOHAN MÅNSSON a 20m boat equipped with RESON 7125 multi-beam echo sounder for work in the Swedish archipelago. The crew will be 3-4 persons with two work places for post processing.

3. New charts and updates

Swedish ENC's continue to be distributed through services provided by PRIMAR in Norway and the trend of increasing usage is quite stable.



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.

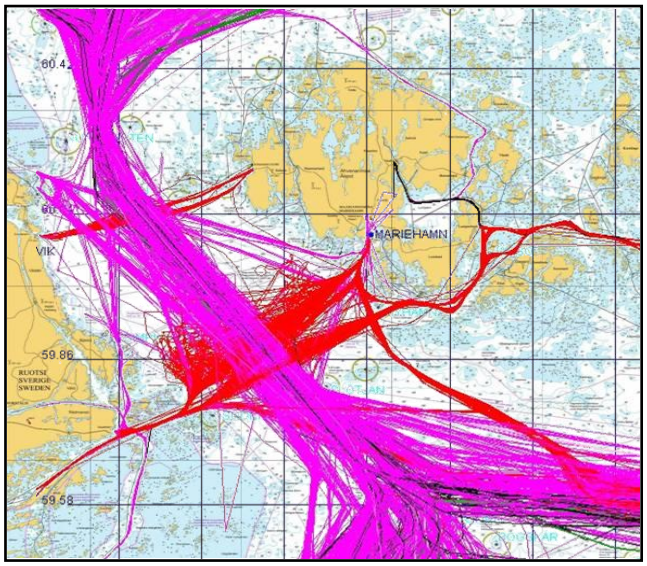
We have during the period continued to develop and commission our service regarding preliminary and temporary updates to EN. Its basically in full operation and the "trial" categorisation at PRIMAR will be removed shortly.

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:

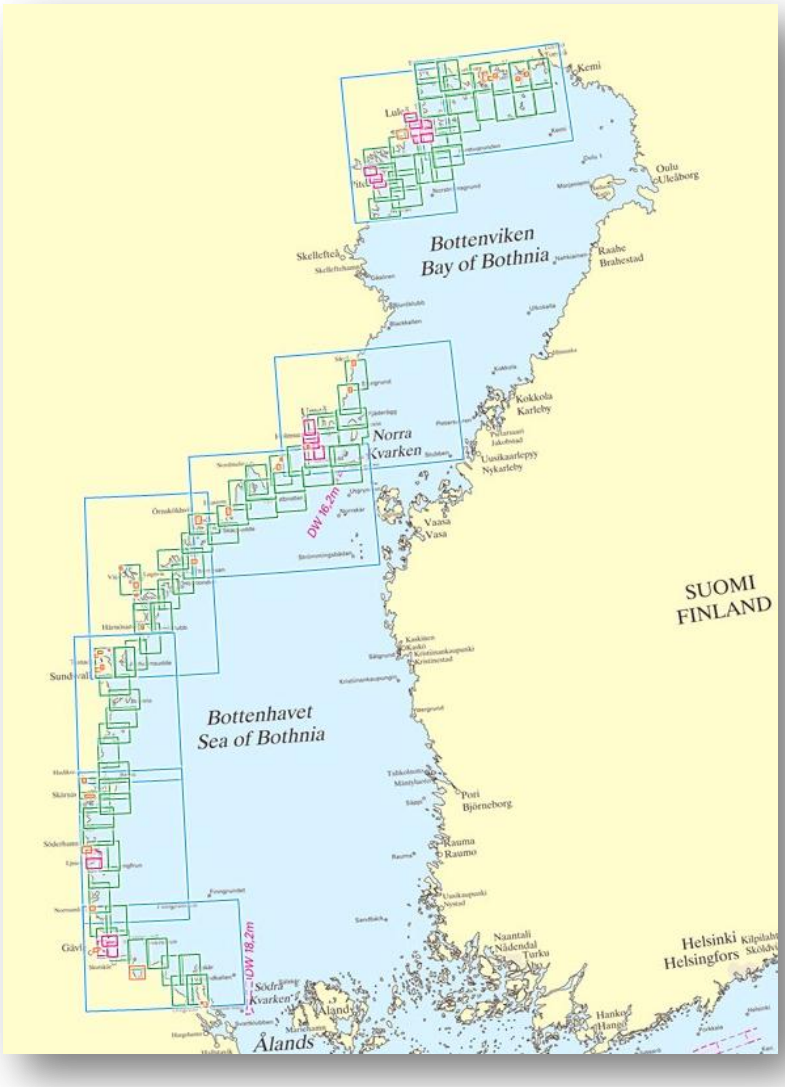
SE 619	1:150 000	INT1240	Ålands hav
SE 937	1:50 000		Strömstad-Idefjorden

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 below describes the traffic pattern as a history of AIS tracks before the TSS came into effect. It could be interesting to follow up on this for future NHC meetings.



AIS patterns in Sea of Åland before new TSS

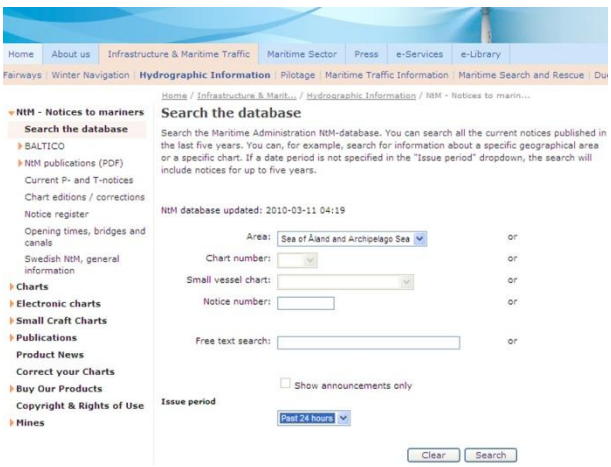
During the last year we have issued another three series of small craft charts for the northern part of the Baltic. These series are named ‘Southern Sea of Bothnia’, ‘Northern Sea of Bothnia’ and ‘Bay of Bothnia’.



New small craft chart series in the north

4. New publications and updates

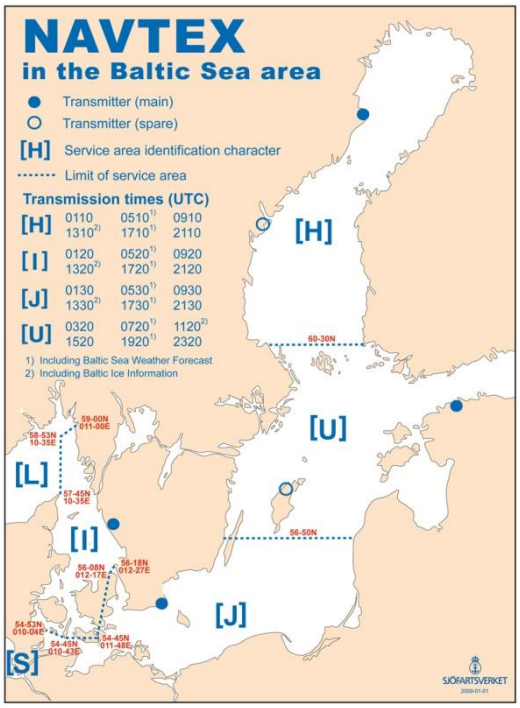
An Internet service named WebbUfs (http://www.sjofartsverket.se/ntm) makes it possible to search information in the Swedish NtM database in many different ways, e.g. geographical area, a certain chart, publishing period etc. Almost every day new notices are published and it is possible to chose between English or Swedish langauge. 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

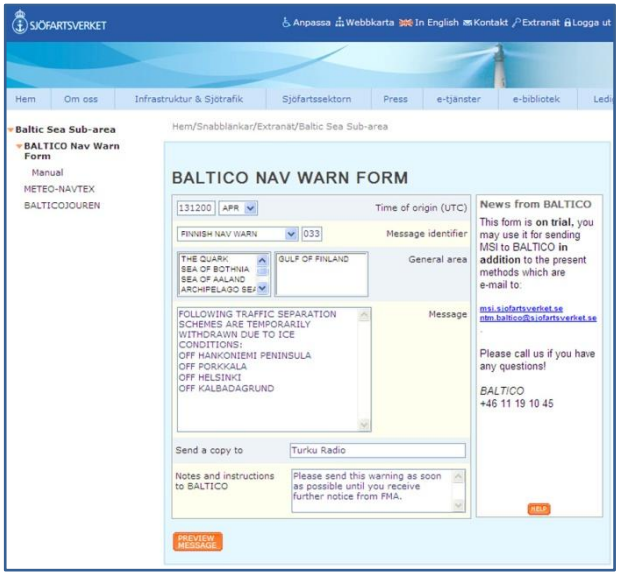
5. MSI

BALTICO at the HO of SMA is the Baltic Sea Sub-area co-ordinator as well as Navtex co-ordinator for the Navtex service areas H, U, J and I. Existing infrastructure, service areas and regular transmission times are shown on the adjoining map.



Every second year a meeting with MSI co-ordinators and meteorologists within the Baltic Sea sub-area is arranged by Baltico. The latest meeting took place in Hamburg in April 2008 and the following will be held in Poland in June 2010. Documents and meeting information is available on : http://www.sjofartsverket.se/templates/SFVXPage__9731.aspx .

At the Baltico Meeting 2008 a Web Form for sending navigational warnings to Baltico was discussed. Later on the form became available on trial on the SMA website. The intension is to make it fully operative after the Baltico Meeting 2010 and subsequently it will fully replace the use of e-mail for sending MSI to Baltico. Templates, instructions and recommendations for drafting navigational warnings will be integrated in the form. This will make it easier for the national co-ordinators to draft warnings in accordance with IHO S-53 and the Navtex Manual.



Due to reports of poor Navtex reception in Skagerrak and northern Kattegat an extensive field strength measurements were carried out in October 2008. The measurements confirmed unacceptable poor signals but no fault could initially be detected at the following troubleshooting. After further investigation it was discovered that a slight confusion of aerials had taken place in connection to a restoration of the antenna masts. This incident shows the importance of continuous monitoring of transmissions and checks of power output and regular field strength measurements as well as strict routines regarding maintenance etc. and a contingency plan.

For many years SMA has engaged Stockholm Radio for the transmission of MSI on VHF, MF and NAVTEX. In the autumn 2009 the economical chrisis made it necessary to finish the contract with Stockholm Radio and since 15 December 2009 the transmissions are carried out by VTS West Coast under the name MSI SWEDEN.

The table below shows the number of navigational warnings handled during 2009

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Originating country	Number of warnings received	Transmitted on NAVTEX	% transmitted on NAVTEX
Sweden	456	97	21
Finland	30	28	93
Russia, Petersburg	29	29	100
Russia, Kaliningrad	49	49	100
Estonia	6	3	50
Latvia	29	24	83
Lithuania	30	27	90
Poland	72	70	97
Germany	86	73	85
Denmark	311	98	32
TOTAL	1098	498	45

6. S-55

The S-55 database part concerning Sweden has not been updated during the period.

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.

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.