

## Experiences on Contracting Surveys in Sweden

### Background

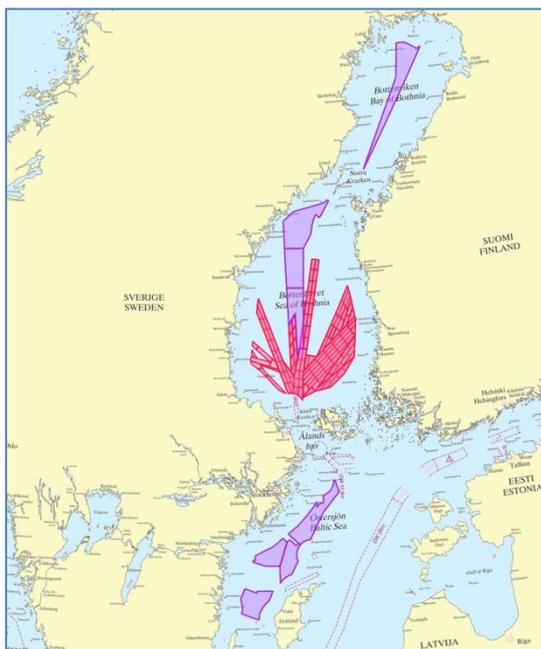
The Swedish Maritime Administration has since 2007 combined hydrographic surveying with own resources and contracting external companies. All procured areas have been in the EEZ except for a small part in the territorial sea. During the period 2011 – 2013 the amount of survey areas in Swedish waters have been extended due to extra funding from the EU TEN-T program where both Sweden and Finland have been involved in the MONALISA project. Within this project an area in Swedish waters of approximately 19 000km<sup>2</sup>, with depths mostly between 20 – 150m, has been surveyed by the German company Fugro OSAE and the Swedish company Marin Mätteknik (MMT). When compiling this paper, approximately 60 % of these areas have been surveyed. According to the contract all field work shall be finished by 30 September 2013 and all data accepted by SMA by 30 November.

### Procurement procedures

Within the MONALISA project two public procurements have been made.

In 2011 there was a joint procurement between SMA and FTA (Finnish Transport Agency) and for 2012-13 we procured surveys using an almost identical specification as for 2011. The following surveys have been purchased by SMA:

- 2008 South and East of Öland: 2329 km<sup>2</sup>, depths 20-190m, 10 MSEK
- 2009 Southwest of Gotland and East of Gotland: 8240 km<sup>2</sup>, depths 22-200m, 20 MSEK
- 2011 Sea of Bothnia main routes: 4612 km<sup>2</sup>, depths 9-210m, 1.55M€
- 2012-13 Sea of Bothnia, Bay of Bothnia and central Baltic sea: 14816 km<sup>2</sup> 4.14 M€



**Fig 1** Areas surveyed, or being surveyed, by Fugro OSAE and MMT 2011 – 2013. Areas marked in red also indicate the common procurement with FTA 2011.

The overall experience is that in order to sign a contract ensuring depth data delivery in time and with a quality in accordance with S-44, the organisation is dependent on experienced senior staff surveyors familiar with the latest technology. SMA and FTA have agreed upon a common implementation of the S-44 named FSIS-44 in order to make it possible to make a common procurement and to make it easier for the tenderers.

To maintain the level of competence required within the organisation SMA is of the opinion that the organisation needs to continue surveying with its own resources.

The senior staff surveyors need to be involved in the process of writing the specification of requirements. This is a very time consuming process. During the latest public procurement SMA used approximately 3500 hours within 9 months from starting writing the specification to signing the contracts. This involves mostly senior surveyors, but also purchasing and legal experts.

SMA carries out procurements in accordance with applicable regulations. The primary law governing procurement processes in Sweden is the Public Procurement Act, which is based on several EC directives. Some differences exist between the Swedish and Finnish legislations and also somewhat larger differences in the actual routines used.

**Hinders during procurement:** According to both Swedish and Finnish law a “Tender” is valid only if it is without reservation. In all procurements we have been forced to disqualify some of the tenderers due to reservations similar to: “*our tender is subject to vessel availability at time of contract award*” or “*Vessels, systems and personnel are subject to availability*”. These reservations appear to be standard terms for several companies but if not removed they will disqualify them according to Swedish Procurement regulations.

## **Market**

The numbers of companies within the hydrographic surveying market are fairly limited. Many of them are involved in the lucrative offshore oil and gas industry. Fugro OSAE and MMT are the only companies which have come into question for SMA due to the fact that these two companies have offered their services at a lower cost than others. There are reasons to believe that also these two companies will need to raise their prices in the future in order to increase profit margins.

## **Quality and Delivery experiences**

The foundation for getting depth data delivered in time and with a quality in accordance with S-44 is the *Specification requirement*. SMA has gained experience each time a public procurement has been made. However it is very complicated to foresee every possible upcoming situation when writing the specification. SMA has experienced continuous problems with data quality in accordance with S-44. In order to secure depth areas shallower than 20m (Special Order), which have been a very limited amount of areas SMA has in these cases set on board one of our own senior surveyors. This is to emphasize the importance of safeguarding the higher quality required within Special Order and make sure that the accurate procedures in the contract are followed.

In all our procurements we have requested that each vessel has to prove that the complete survey system fulfils the requirements by surveying over a fixed benchmark prior to

commencing the survey. We also have had the demand that a small area (eight short runlines) in the survey area should be used as a reference to be surveyed in the beginning and as a final check to see that nothing has changed in the system setup during the surveys. This area has also been used when the survey company has had a break in the survey and then it has been surveyed prior the ship leaving and at return to the area. The tests at the benchmarks have in some cases resulted in static depth errors of up to 46 cm that the companies has been unaware of.

All surveying have been carried out using traditional tidal corrections and for that reason SMA has requested that tables of dynamic draft/squat should be used. This seems not to be a standard procedure for the surveying companies and on all the used vessels the depth dependant squat has been significantly higher than the companies expected. In SMA opinion the vessels dynamic draft and squat needs to be taken into account both when using traditional tide but also in order to make it possible to compare traditional tides with tides derived using GNSS technology.

It is also fundamental to have experienced in-house staff that can take care of and evaluate the delivered depth data in order to ensure that it meets the specified requirements. Many data sets have been rejected after the first delivery and there have been several discussions regarding differing interpretations of the specifications. SMA has also encountered gaps in delivered depth data which in some cases has arrived several months after the vessel has left the area and therefore in these cases it is very complicated to arrange infill of these areas.

SMA has also experienced several problems with the companys' abilities to deliver data according to an agreed delivery schedule. There are examples where the external company, probably in order to reduce costs, has minimized their post processing staff which has led to very delayed data deliveries.

### **General Cost Levels**

Comparison of cost between different vessels and different depth areas is extremely complicated. Using external companies has set focus on cost efficiency. In order to achieve the same cost efficiency (or better) than an external company SMA has worked hard with cost reduction for its own vessels. Surveying 24/7 is now standard on both Jacob Hägg and Baltica (the two vessels which are of sufficient size).

When SMA today compare own surveying with purchased surveying, we have lower costs using our own vessels.