

# Hydrographic National Report of Denmark

Marts 2013

## 1. Hydrographic Office

January 1, 2013 Kort & Matrikelstyrelsen (KMS) changed its name to the Danish Geodata Agency and a new organization was implemented.

The present report outlines and sums up the activities carried out in 2012 by the Danish Geodata Agency.

### New organisation in the Danish Geodata Agency 1 January 2013

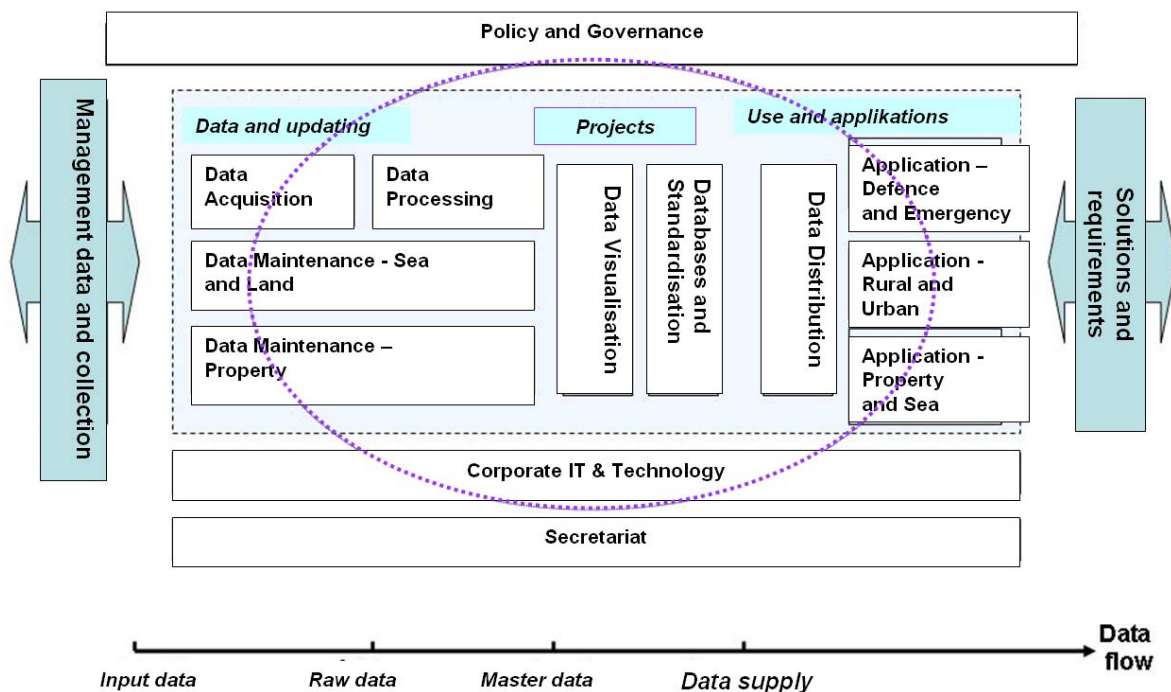


Figure. The new organisation of the Danish Geodata Agency.

The new organisation is established in order to fulfil and support the new strategy which was developed in 2012. The main focus in the new strategy is directed towards the potential use of Geodata and the new mission is to secure that spatial data provides maximum benefit to society.

The main drivers for the new organisation have been:

- Application-orientation - contact with users
- Harmonise / streamline data processes
- Support Functions
- Organizing for value chain

In the establishment of the new organisation a more uniform structure in the organisation has been chosen with focus on:

- Fairly uniform in size for the different areas
- Only one manager responsible for an area
- Fewer function managers

The Danish Geodata Agency in the role as the Hydrographic Office has the responsibility for hydrographic surveys and charting in Denmark. The practical work of hydrographic surveys is still done with personnel and ships from the Royal Danish Navy. Survey personnel from the Navy are stationed in The Danish Geodata Agency.

The Danish Geodata Agency is responsible for e.g. technical support for delimitating the maritime boundary of the Danish waters, charting, issuing of Chart Corrections and related nautical publications such as INT 1 and Pilots (sailing directions).

Issuing of Notices to Mariners, List of Lights and MSI is the responsibility of The Danish Maritime Authority.

Tide tables and operational tide gauges are the responsibility of Danish Meteorological Institute.

General information about the Danish Geodata Agency

The Danish Geodata Agency ensures that geographical information about land and sea is collected, quality checked and made accessible on the internet. Information such as the location of roads, houses, lakes and streams or what the landscape looks like and where boundaries are located. This information is used by public authorities for a wide range of administrative purposes e.g. in connection with climate protection, the provision of mobile access to data, information services to citizens and by the Police and emergency services when carrying out their tasks.

The Danish Geodata Agency houses the Centre of Expertise for Spatial Information for the Ministry of the Environment and thus plays a central role in the organizing of the use of shared public data which forms the foundation for a more efficient and modern public sector. Accurate and precise data are required by public administrators and the Ministry of Defence. As a consequence The Danish Geodata Agency regularly carries out land surveys and aerial photography of the country.

The Danish Geodata Agency is responsible for the production of nautical charts of the waters surrounding Denmark, the Faroe Islands and Greenland, just as The Danish Geodata Agency also represents Denmark internationally within the field of geographical information. The Danish Geodata Agency employs approximately 300 people.

## **2. Surveys**

### **Coverage of new surveys**

The Danish hydrographic survey operations have been carried out in the following areas:

1. Danish waters inside the Skaw according to the HELCOM RE-SURVEY plan of the Baltic Routes and areas.
2. The west coast of Greenland.
3. North of Greenland in connection with UNCLOS surveys.

### **Danish waters:**

The hydrographic surveys inside the Skaw are re-surveys carried out in accordance with the HELCOM Copenhagen Declaration adopted on 10 September 2001 by the HELCOM Ministerial Meeting. In addition, survey of areas with intense traffic in the North Sea has been initiated.

In accordance with the Declaration a coordinated survey plan has been made for the Baltic. Therefore, the main survey effort has been placed on the primary shipping routes through the Danish waters and entrances to major ports. The routes will be re-surveyed to meet the standards of "Special Order" or "Order 1" as set in the International Hydrographic Organization "Special Publication No 44".

Denmark is working on a general national survey plan which is expected to be ready by the end of 2013. This plan is in accordance with the HELCOM Moscow declaration of May 2010 and covers all areas of interest to navigation named Cat. 2, and areas that are in need of survey for other reasons than safety of navigation.

Denmark and Sweden is in the process of optimizing the shipping routes through Kattegat, based on AIS and statistical data. The new optimized routes will be submitted to IMO and incorporated in the HELCOM resurvey plan. The Surveys in 2013 will be a continuation of the revised coordinated re-survey plan for the Baltic area.

### **Greenland waters:**

The surveys on the West Coast of Greenland were carried out in the archipelago in unsurveyed waters in order to allow safe access to major ports and to locate sheltered coastal fairways. A prioritized program for the resurvey of Greenland waters are in force. The main emphasis is placed on the most populated areas on the West Coast.

All surveys were carried out with multibeam echo sounder systems.

The surveys in the Greenland waters in 2012 are a continuation of the re-surveying program of the entrances to the main ports and inshore routes between ports in Greenland. Some near shore areas are being surveyed for the safety of cruise ships operating on the west coast.

### **New ships**

No new ships have been put in to service since the last report.

A new survey concept for Greenland is under development. The concept aims at a more geographically flexible capacity with one large ship and two in situ launchers.

### **Problems encountered:**

No new problems were encountered in 2012.

### **3. New charts & updates**

Charts (paper as well as electronic navigational charts (ENC)) covering the Danish, Faroese and Greenlandic waters are produced and updated by The Danish Geodata Agency.

#### **ENC**

The Danish waters have been covered by ENCs in various navigational bands since June 2000.

In 2012, The Danish Geodata Agency has produced 3 new ENCs of the Greenlandic waters. All the ENCs are updated on a weekly basis.

The Faroese waters were covered with ENCs in 2012.

#### **ENC distribution method**

All the Danish-produced ENCs and updates (ERs) are in 2012 distributed through a network of PRIMAR-authorized distributors.

#### **INT charts**

20 new editions have been published in 2012.

#### **National paper charts**

The chart portfolio of the Danish waters comprises 63 charts, all produced according to international standards.

The chart index showing the Danish waters is available at:

<http://www.danskehavnelods.dk/indexkort/danskesoekort.html>

The chart index showing the Greenlandic waters is available at:

[http://www.danskehavnelods.dk/indexkort\\_gronland/gronlandskesoekort.html](http://www.danskehavnelods.dk/indexkort_gronland/gronlandskesoekort.html)

#### **Geometric rectification of the Greenlandic charts**

The geometric rectification of the Greenlandic charts, mentioned in the Hydrographic National Report 2011, will continue in the coming years.

4 charts were rectified and published in 2012.

6 charts are expected to be rectified and published in our new ESRI production system in 2013.

#### **Faroese waters**

All the Faroese paper charts were converted to ENCs and released in 2012.

## 4. New publications & updates

### New publications

- Produktkatalog/Charts and publications catalogue (in Danish)

### Updated publications

The Danish Maritime Safety Authority updates the following publications and reports online:

- Navigation through Danish Waters
- Tide tables for Danish, Faroese and Greenland waters

The Danish Geodata Agency, Hydrographic Office's online publications:

- Produktkatalog/Charts and publications catalogue (in Danish)
- Kort 1/INT 1 (bilingual)
- Søkortrettelser/Chart Corrections (bilingual)
- Bag om søkortet/Behind the nautical chart (in Danish/in English)
- Den danske Lods, generelle oplysninger/The Mariner's Handbook (in Danish)
- Den danske Havnelods/The Danish Harbour Pilot (in Danish)

The Danish Geodata Agency, Hydrographic Office's printed publications:

- Produktkatalog/Charts and publications catalogue (in Danish)
- Kort 1/INT 1 (bilingual)
- Den grønlandske Lods I (Vestgrønland)/The Greenlandic Pilot (West Greenland) - (in Danish)
- Den grønlandske Lods II (Østgrønland)/ The Greenlandic Pilot (East Greenland (in Danish)
- Den grønlandske Havnelods/The Greenlandic Harbour Pilot (in Danish)
- Den færøske Lods/The Faroese Pilot (in Danish)
- Havneoplysninger for Færøerne/The Faroese Harbour Pilot (in Danish)
- Den danske Havnelods, Erhvervshavne/The Danish Harbour Pilot (in Danish)

## 5. MSI

NAV Warnings, Information to mariners and oceanographic forecasts are still available in English on the following web pages:

<http://www.dma.dk/Ships/Sider/MaritimeSafetyInformation.aspx>

<http://frv.dk/en/SailingInformation/SailingForecast/Pages/default.aspx>

## 6. S-55

### State of surveys updated March 2013

Area	A1	A2	B1	B2	C1	C2	Comment
Denmark south	95	100	5	0	0	0	Contributes to the HELCOM harmonised re-survey programme.
Denmark Faeroes	100	100	0	0	0	0	Revision of ports and resurveys are ongoing
Denmark Greenland	25	20	25	10	50	70	The coastline of Greenland is very complex and the total sea area of the EEZ is ca. 2.000.000 square kilometres. Due to permanent ice cover, the limit for navigable waters has been set to 75 degrees northern latitude. Thus the percentages are rough approximations. The East coast is sparsely populated and only surveyed near populated areas. A prioritised programme is in force to resurvey navigable routes to and between populated areas on the West Coast of Greenland, to modern standards.

## 7. Capacity Building

### Status of national, bilateral, multilateral or regional development projects with hydrographic component (In progress, planned, under evaluation or study)

Joint survey project in Flensburg Fjord between The Danish and German hydrographic offices. Joint Danish-Polish survey in the disputed area south of Bornholm.

### New technologies and/or equipment

All ships in the Danish survey fleet are equipped with Reson 7125 200/400 KHz SW2 multi-beam systems. Test trials will be conducted in 2013 with the aim to survey directly on a LAT-model of the waters around Greenland. This method will (if it works!) make tide gauges redundant for surveys.

## 8. Oceanographic activities

### Tide gauge network

The Danish Meteorological Institute maintains a network of water level stations spread across Denmark. The data are used in several ways, primarily for navigation safety, but the data are also an integral part of the national storm surge monitoring and prediction system. The data are transferred by telephone from each site to the oceanographic database every ten minutes.

In addition, DAMSA has in the past measured water levels in Greenland from 1990 until 2004 for the purpose of obtaining sufficient data to enable the prediction of tide levels for the coming many years. The Danish Defence is maintaining three oceanographic monitoring stations. These three stations are located at Drogden and at two sites in Storebælt (the Great Belt). These data are transferred to the database every 30 minutes. Online observations and forecasts are available in Danish on the web site:

<http://fcoo.dk/>

## **UNCLOS**

The Danish Geodata Agency is actively involved in the work for The United Nations Convention on the Law of the Sea (UNCLOS) in the waters around Greenland and the Faroe Islands.

The Danish Geodata Agency is responsible for the data quality assessment on existing bathymetric data and planning and technical specifications for new surveys. In 2012 The Danish Geodata Agency conducted bathymetric work during an expedition to the East and North Coast of Greenland. There are no planned UNCLOS surveys for 2013.

## **9. Other activities**

### **Participation in IHO Working Groups**

The Danish Geodata Agency has the chairmanship for the IHO MSDI Working Group and the Baltic Sea MSDI Working Group (BSMSDIWG).

The Danish Geodata Agency is actively involved in the work done by CSPCWG, SNPWG, TSMAD, DIPWG, DQWG, EUWG and HSSC.

### **National**

Within the framework of the Danish "basic data programme" a large part of the geographic data at the GST will be available for commercial and non-commercial purposes - free of charge. This includes topographic data (maps), the cadastral map and the Danish Elevation Model. It does not include nautical charts and underlying data from hydrographic surveys.

### **General information on the "basic data programme"**

As part of the common public-sector eGOVERNMENT strategy 2011-2015, the government and Local Government Denmark have agreed on a basic data programme.

The programme contains a number of specific improvements and initiatives in public-sector basic data, which will underpin greater efficiency and economic growth.

Basic data is widely used throughout the public sector and is an important basis for public authorities to perform their tasks properly and efficiently. Basic data is also a potential driver for innovation, growth and job creation in the private sector.

### **International**

The Danish Geodata Agency has together with the Hydrographic Offices in Norway, Sweden and Finland prepared new bilateral arrangements with the United Kingdom Hydrographic Office.

The Danish Geodata Agency has actively taken part in the work done by the IMO Correspondence Group on e-Navigation.

The Danish Geodata Agency is participating in work done by the HELCOM Monitoring Working Group.

The Danish Geodata Agency has participated in the project "Bringing Land and Sea Together"

(BLAST). The project was completed in autumn 2012.

BLAST was a co-operation between the countries around the North Sea.

The main theme for the project is integrated coastal zone management with five work packages:

- Developing the marine and coastal reference base
- Harmonisation of maritime information
- Regional monitoring, information, integration and distribution functionality
- Climate change and integrated coastal zone management
- Dissemination and communication

## **Websites**

Geodatastyrelsen, the Danish Geodata Agency:

<http://www.gst.dk/English/>

Søfartsstyrelsen, the Danish Maritime Authority:

<http://www.dma.dk/>

Danish Meteorological Institute:

<http://WWW.DMI.DK>