

**14<sup>th</sup> CHRIS MEETING  
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**DENMARK  
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**Status of the Danish ENC Production**

This report provides a status for the Danish ENC production.

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**Danish waters:**

The Danish waters have been covered by ENC's since July 2000. The total number of cells is now 341 but will be frequently increasing due to the production of paper charts in better scales where necessary. The produced cells include the following harbours:

ESBJERG, KØBENHAVN, AALBORG, KALUNDBORG, ÅRHUS, NÆSTVED, FREDERICIA, RØNNE, FREDERIKSHAVN, KORSØR, SØNDERBORG, KARREBÆKSMINDE.

The ENC's are updated weekly and distributed through PRIMAR STAVANGER.

The ENC cell scheme is largely based on a regular grid much like the cell structure described in S-57, version 2 and the source material is the current 62 standard (paper) charts (incl. 30 INT charts). These charts are produced in accordance with international standards and are all in digital vector format.

Verification:

For verification the DKHO is using the programs CARIS Easy ENC, Hydroservice dKart Inspector and 7C's ENC Analyzer. Two ECDIS programs, Transas Marine's Navisailor and OSL ECPINS have been installed. These programs, together with manual proof reading of the cell contents, present adequate information for quality assurance. The verification is done in accordance with the PRIMAR STAVANGER procedures.

**Greenland and Faroe Islands:**

There are no immediate plans for digitisation and ENC production of these areas.

**Plans for improvements of the ENC's**

Feedback from ECDIS users has revealed that the most pressing task now, is to harmonize the contents of ENC's between neighbouring countries. The problems do not arise from the S57 standard as such, but more in the different interpretation of the object presentation. Examples are: cables versus cable areas, the density of soundings, different depth contour interval, the use of caution areas etc.

Later comes the task of producing cells in better navigational bands than today where deemed necessary, to add the CATZOC and SCAMIN attributes and to improve the geometric accuracy by recompiling ENC's from source material.