

## Agenda Item for Consideration by ARHC

ARHC2-08B

2nd Arctic Regional Hydrographic Commission Meeting  
Copenhagen, Denmark, September 28-29, 2011

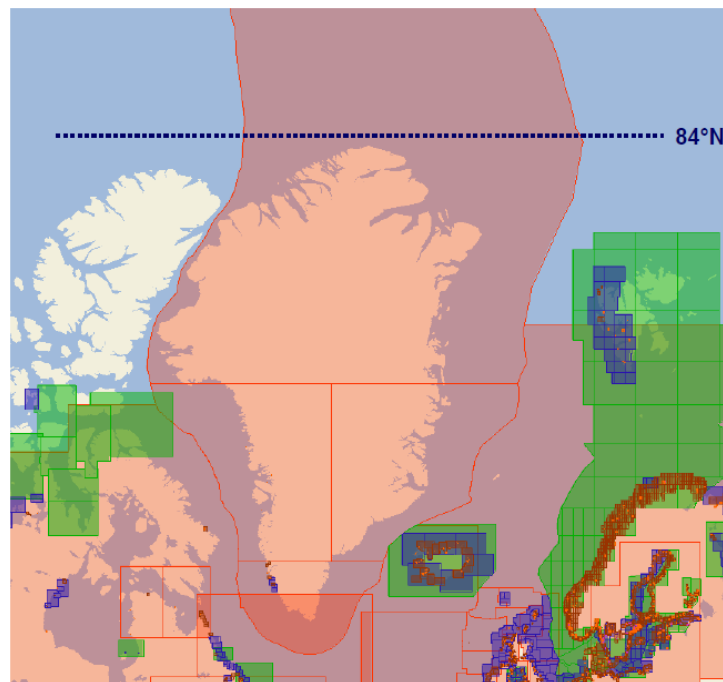
### ENC and ECDIS in northern part of Greenland

<i>Submitted by:</i>	<i>Denmark</i>
<i>Executive Summary:</i>	<i>Problems displaying ENC north of 84 °N</i>
<i>Related Documents:</i>	<i>Paper submitted by Canada</i>
<i>Related Projects:</i>	<i>None</i>

#### Some remarks on the current situation

KMS has been informed that some ECDIS have problems displaying ENC north of 84 °N.

Vendors who have systems that can display both the gnomonic and the polar stereographic projection show our cell DK1GNORT in a correct manner. Their ECDIS is prepared for navigation in the northern area. Vendors who have ECDIS without the ability to use these gnomonic and the polar stereographic projection can't be sure that their ECDIS will present the ENC as expected.

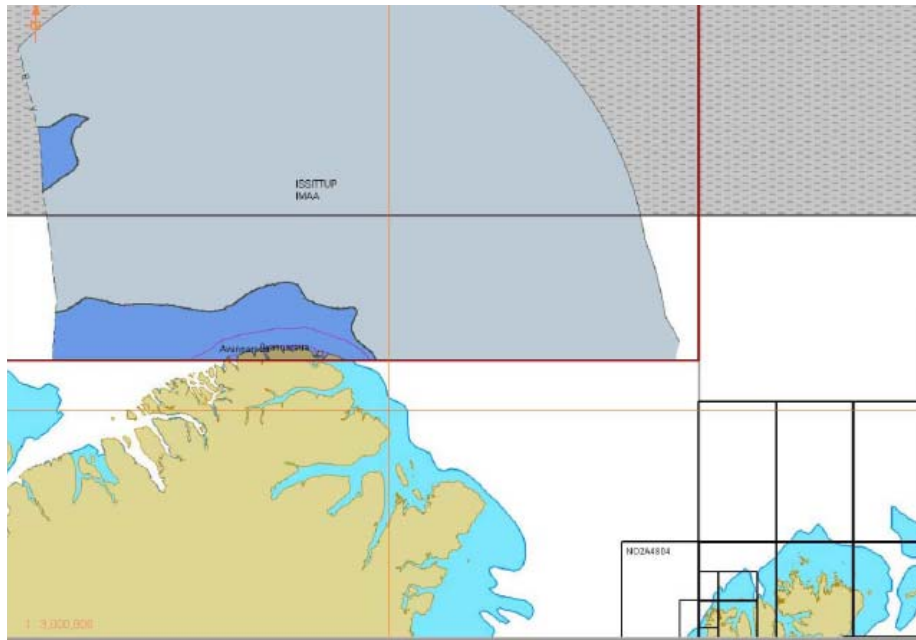


As a consequence, KMS has divided our northern ENC in 2 new ENCs, 1 north of 83,5°N. (DK1NORN) and 1 south of 83,5°N. (DK1NORT).

To solve the problem we have initiated an investigation together with PRIMAR and the ECDIS suppliers, Transas, Adveto and Furuno. At the moment, we await feedback from PRIMAR and the suppliers.

It is possible to load ENCs for the area north of 84 ° N into an ECDIS system, but for some systems there are limitations and, as a consequence, data cannot be used optimally.

*The screen shot shown below shows our cell in an ECDIS. Using a system like this, it will not be possible or safe to travel farther north than 84 ° N.*



Displaying ENCs in areas north of 84 ° N will require a different type of projection, for example a polar stereographic projection. The challenge is that these are not defined by the current IMO ECDIS performance standards.

Information from some of the suppliers confirms that their systems can't use data covering the polar area if the data can't be displayed in a Mercator projection.

## **Conclusions**

A way to solve the problem for the northern area could be that ECDIS have the ability to switch over to, for example, a polar stereographic projection. To ensure that these projections are supported by the ECDIS suppliers, the IMO ECDIS performance standard has to be updated in order to include these different types of projections.

Denmark has informed IHO on the issue at the last TSMAD meeting, and it was decided that Denmark should produce a test dataset. This test dataset is expected to be available through IHO.

## **Recommendations**

Until a solution is found, and in order to enhance safety, we find it important to inform mariners, suppliers and others with an interest in navigating in the Arctic area.

## **Action Required of ARHC**

The Conference is invited to take note of the information and, if deemed necessary, to take appropriate action.