

NHC/58

Agenda Item D4

## ENCs to the leisure market





Danish Ministry of the Environment  
Danish Geodata Agency

# “Safe course”

A project targeted leisure craft navigation



Danish Ministry of the Environment  
National Survey and Cadastre



Logo used on app at the iOS website

# General

## Purpose

Establishment of a base of experience as basis for the eventual introduction of an future official ENC service targeted non-commercial navigation in Danish waters.

## Participants

132 testpilots with at least 15 years navigation experience,  
Seapilot AB, DGA, SMA and Danish Maritime Authority

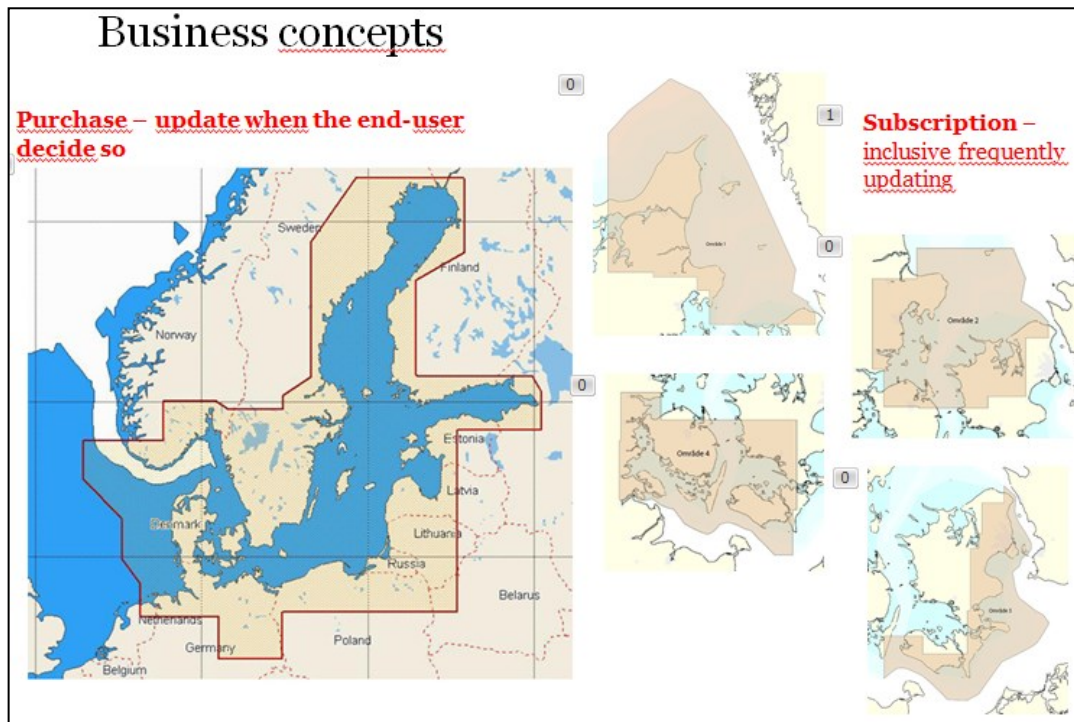
Test period: May – September 2013



# General

Test included:

- Selection and use of four ENC folios of Danish waters.
- Applying a subscription model for the ENC folios.



Subscription:

1 , 2 , 3, 4 or 5  
months



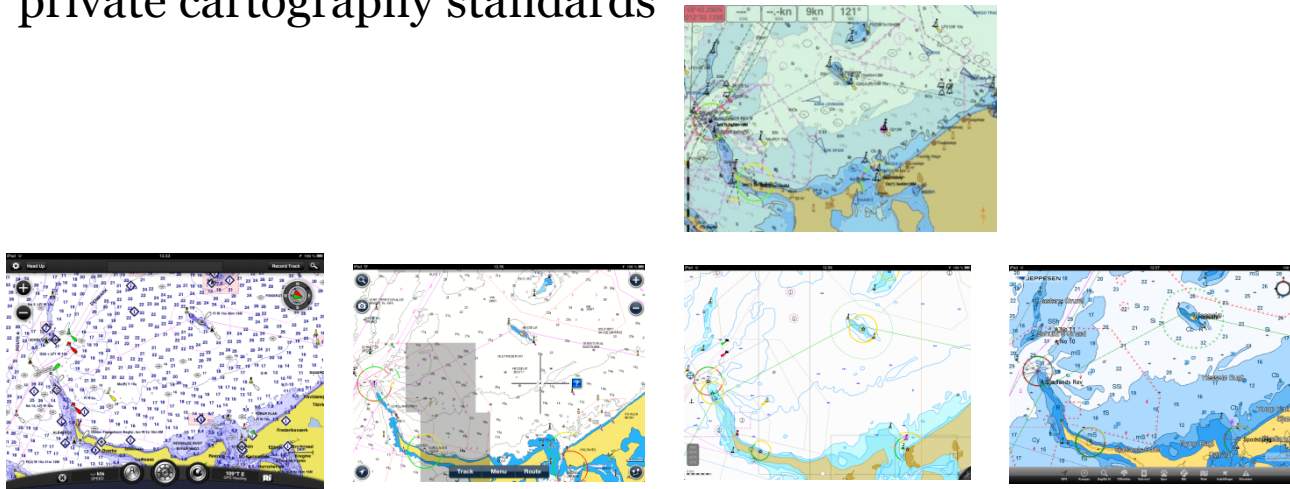
# General

- Using an tablet-PC as a portable chart plotter with an app developed by Seapilot AB and navigation on ENC's from DGA and SMA in SENC format. AIS data from national AIS server. Real time weather data from 60 Swedish weather stations and 5 days local weather forecast incl. 1-hours intervals from Meteogroup.
- The app to meet the majority of items of standard IEC 62376
- Monthly updating of the Danish ENC folios and weekly updating of Swedish ENC folios "on-the-fly" via Internet connectivity.
- Using AIS data via Internet connectivity by an built-in AIS receiver



# General

- Comparing the IHO S52 data presentation against existing private cartography standards



- Evaluate the weekly chart corrections to the paper charts against the monthly updating of the Danish ENC folios.
- Two questionnaires to be filled to document the experience of the testpilots from their participation.



# Results

- The use of a tablet-PC as a chart plotter has been a succes and has proven to be an alternative to the traditional chart plotters.
- The test software has proven to be a relevant and practical alternative that fulfil the leisure craft navigators needs in daylight, evening twilight and by night.
- The majority of the testpilots have expressed satisfaction with the IHO S52 presentation.
- The "on-the-fly" updating method via internet connectivity has proven to be safe and technical reliable in Danish waters.





# Results

- The "ordering" of the ENC folios combined with optional different subscription periods has proven to fulfil the testpilots real needs during the test period.
- The majority of the testpilots have clearly indicated that they prefer the use of the ENC as their primary mean for the planning and navigation but they were divided regarding the preferred back-up arrangement.
- In spite of their divided view of the preferred back-up arrangement the majority felt safety having a paper chart onboard even without having it updated.



# Selected replies from the questionnaires

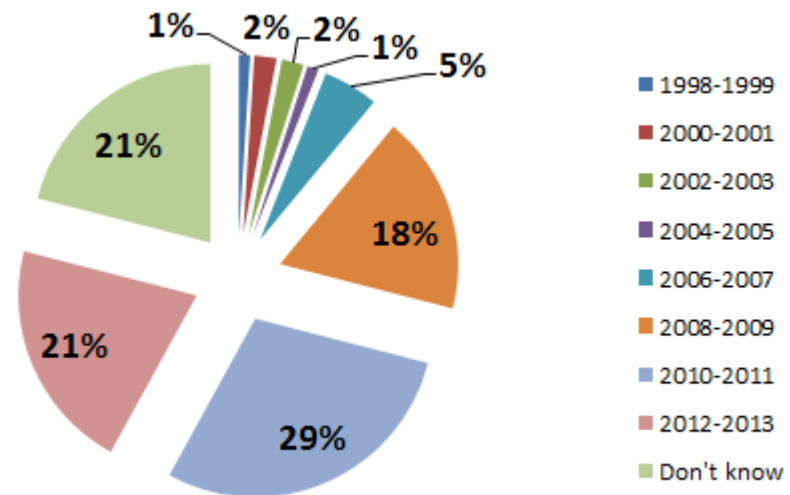
97% navigate between 1-9 weeks per season.

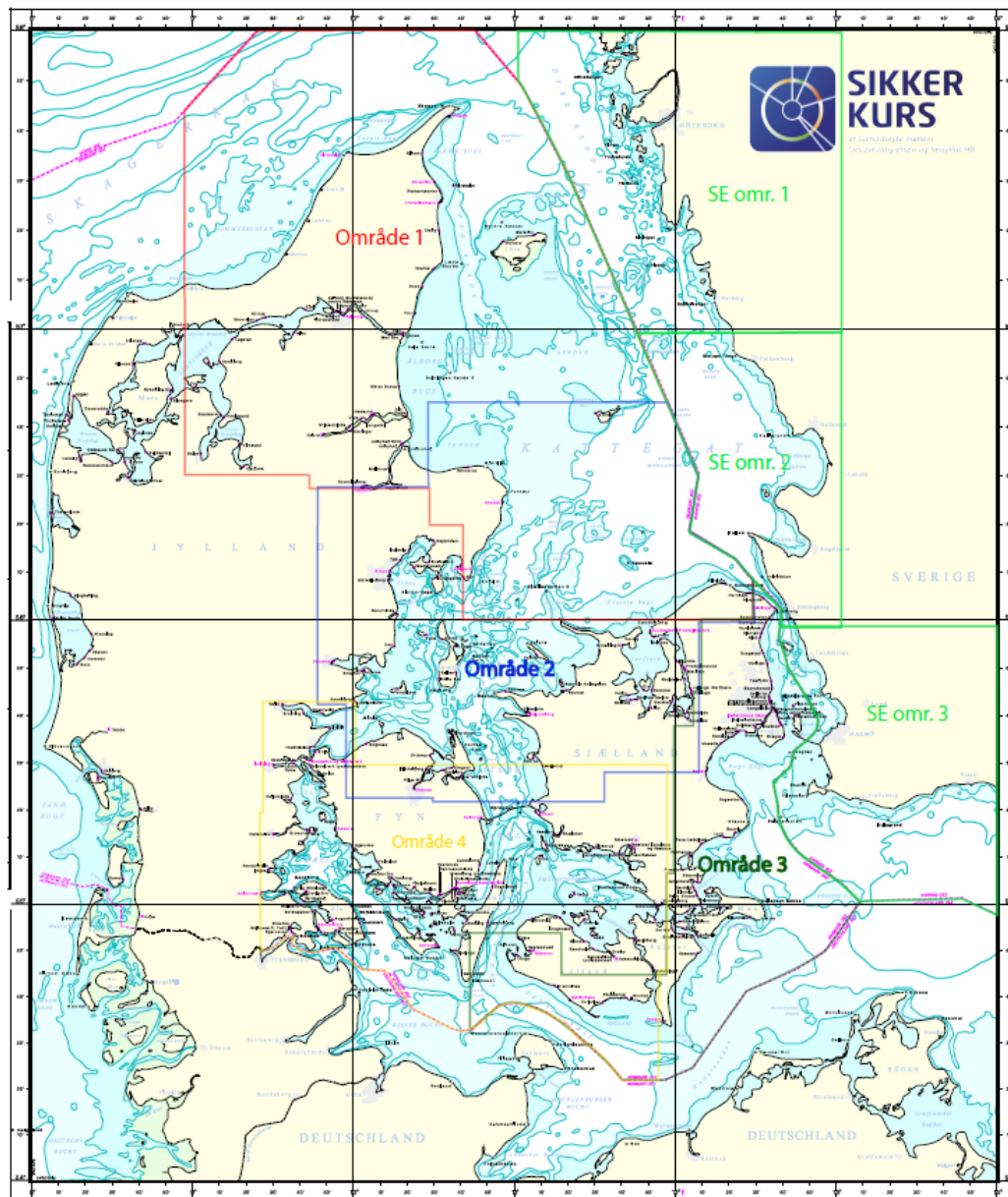
61% use the paper chart for the planning of the route.

99% has paper chart onboard but the majority do not keep it updated.

Half of the test pilots indicated that they will prefer the tablet-PC as their chart plotter in future.

Year of last purchase of ECS:





# Statistics:

## Ordering of ENC folios and subscription periods

		Pakkebestilling						Pakkebestilling				
		DK1	DK2	DK3	DK4	Alle		SE1	SE2	SE3	Alle	
Antal		82	111	95	101	33		47	53	66	22	
		62%	84%	72%	77%	25%		36%	40%	50%	17%	

		Abonnementsperiode					Abonnementsperiode			
		DK1	DK2	DK3	DK4	Alle/5	SE1	SE2	SE3	Alle/5
Antal i pct.	1 mdr abonnement	14%	11%	10%	8%		8%	9%	8%	
	2 mdr abonnement	3%	6%	7%	7%		5%	5%	4%	
	3 mdr abonnement	4%	11%	5%	9%		2%	2%	5%	
	4 mdr abonnement	1%	5%	5%	3%		1%	2%	3%	
	5 mdr abonnement	38%	49%	43%	47%	15%	17%	20%	30%	14%

# Preparations for the future

- National regulations and guidelines have to be revised as they do not include any text regarding the use of ECS with official ENC's as primary means for navigation.
- No current recommendations regarding back-up arrangement if a ECS with official ENC's is applied as primary means of navigation.
- European standard EN 62376 with additional national requirements to be applied if the ECS is used as primary means of navigation.
- Prerequisite that ECS software have been certified by a notified body.
- IHO S63 encryption / SENC encryption.
- Frequency of updates of the Danish ENC's when used for non-commercial navigation.

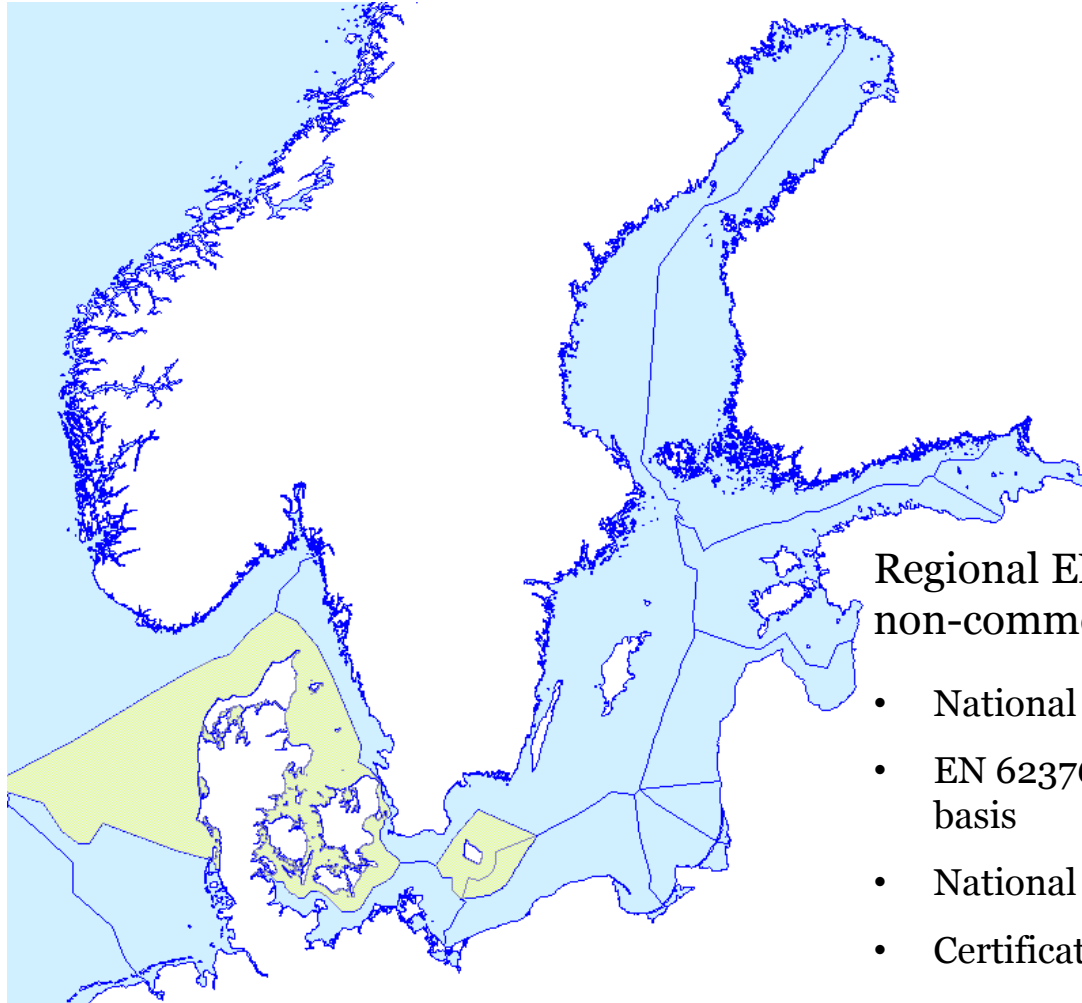
# Preparations for the future

- Distributor contract to be developed.
- National ENC delivery mechanism to be established.
- Folios of Danish ENCs to be decided.
- Pricing and subscription periods for the ENC folios to be decided.
- Existing licensing policy to be revised.

Recommendations to be forwarded to the DMA Board and DGA Board at the end of September 2014.



# Preparations for the future



Regional ENC service targeted the non-commercial market ?

- National regulations and guidelines
- EN 62376 standard as a mutual ECS basis
- National ENC folios and pricing
- Certification of ECS software