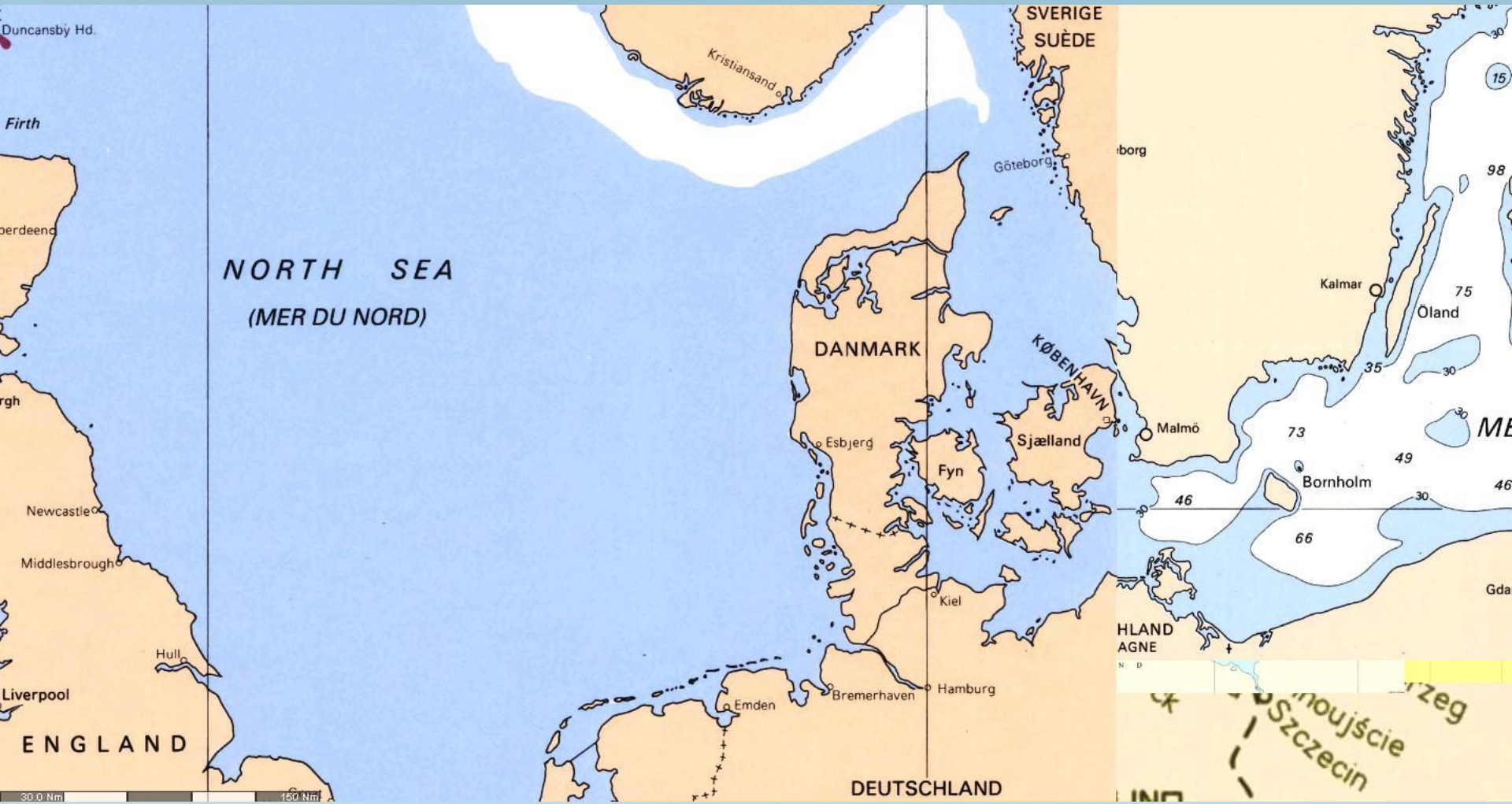


Marine Spatial Planning in the EU - An introduction

Danish fishing industry

Henrik S. Lund Biolog DFPO

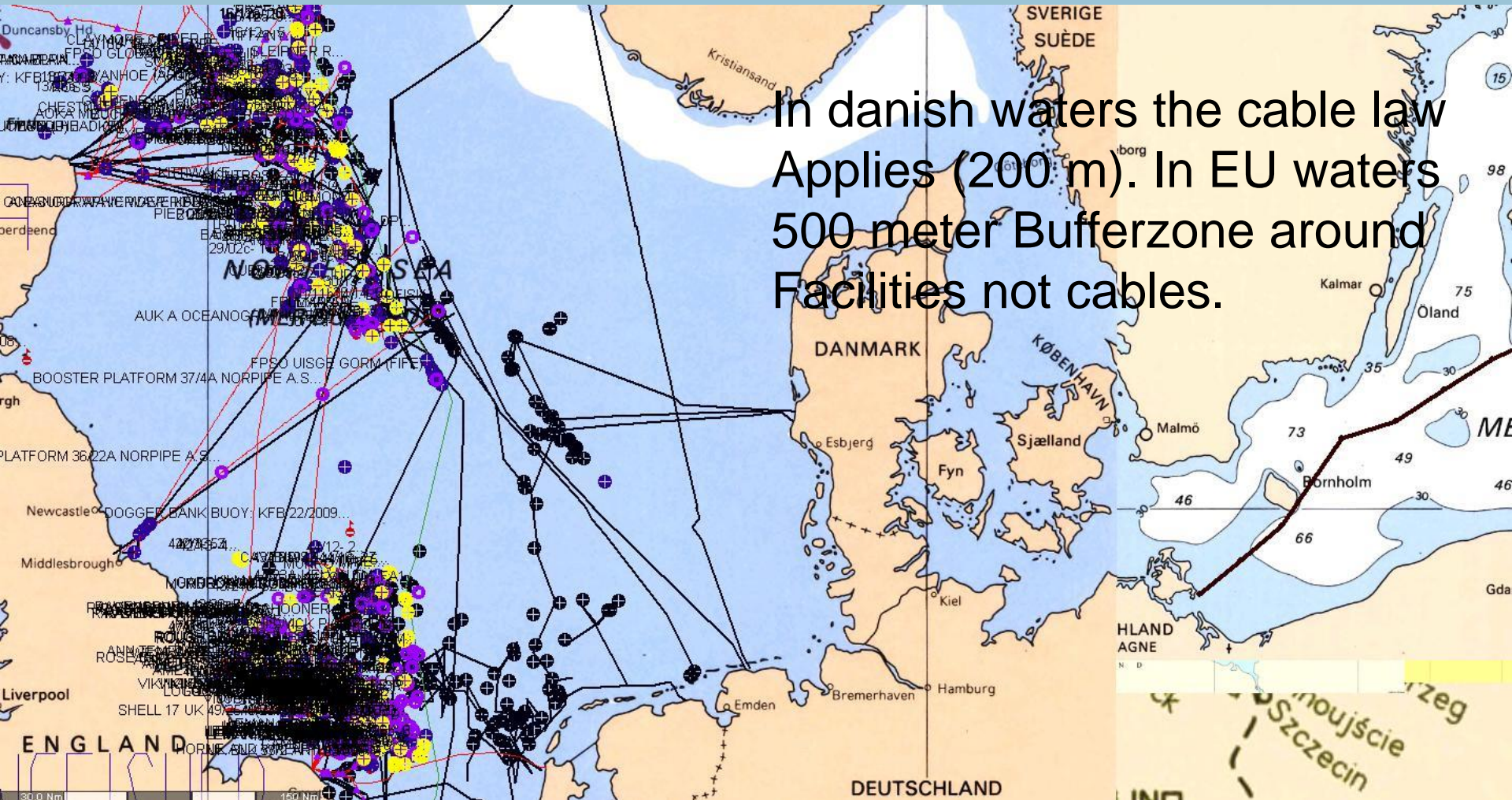
- More and more focus on areas at sea
- New and more activities
- Implementations of Nature directives in EU



Fishery closures



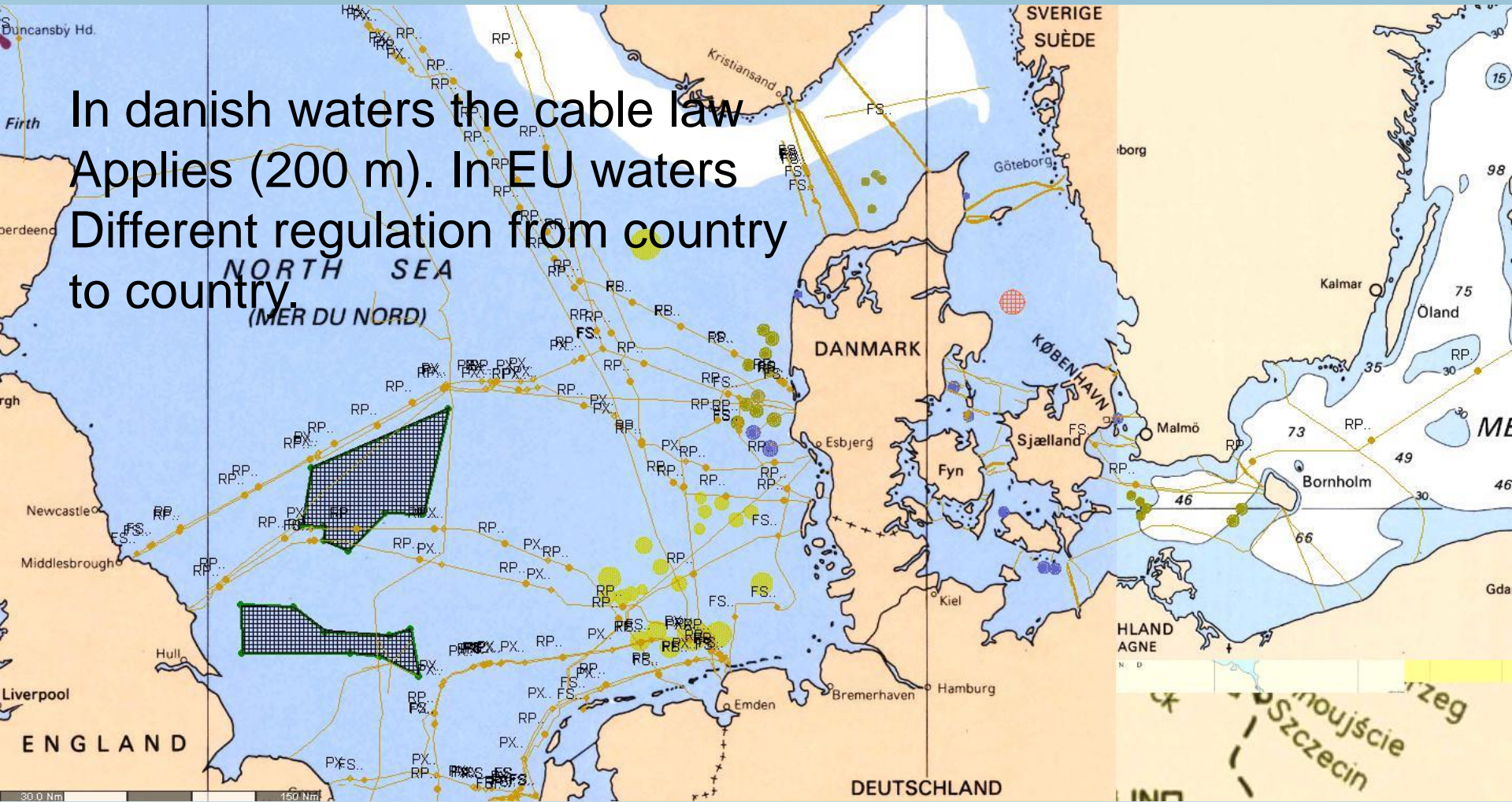
- Implemented many years ago
- Work together with Danish scientist to improve selectivity in Gear to reopen areas if possible.



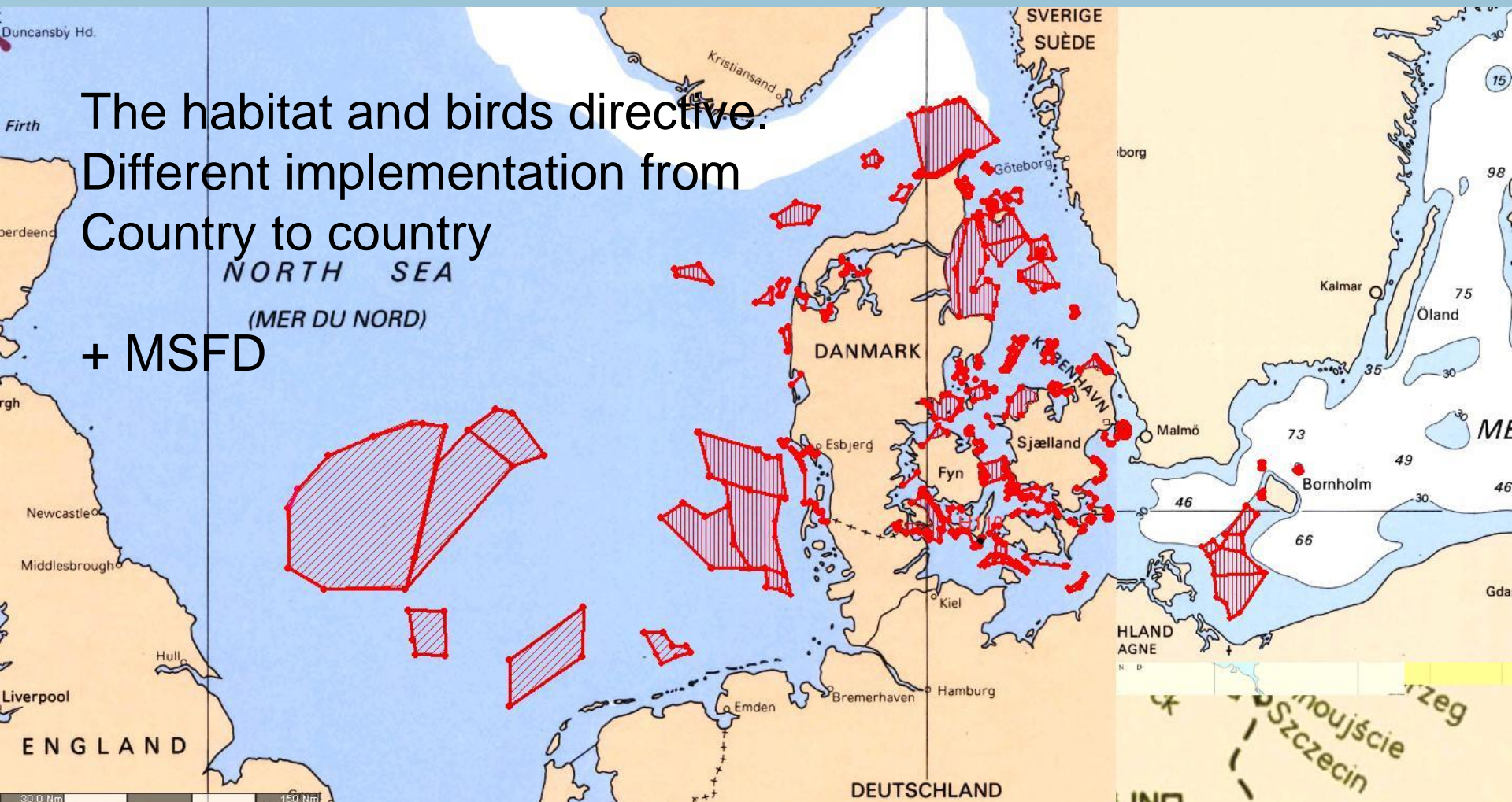
In danish waters the cable law Applies (200 m). In EU waters 500 meter Bufferzone around Facilities not cables.

Wind farms and cables

In danish waters the cable law
Applies (200 m). In EU waters
Different regulation from country
to country



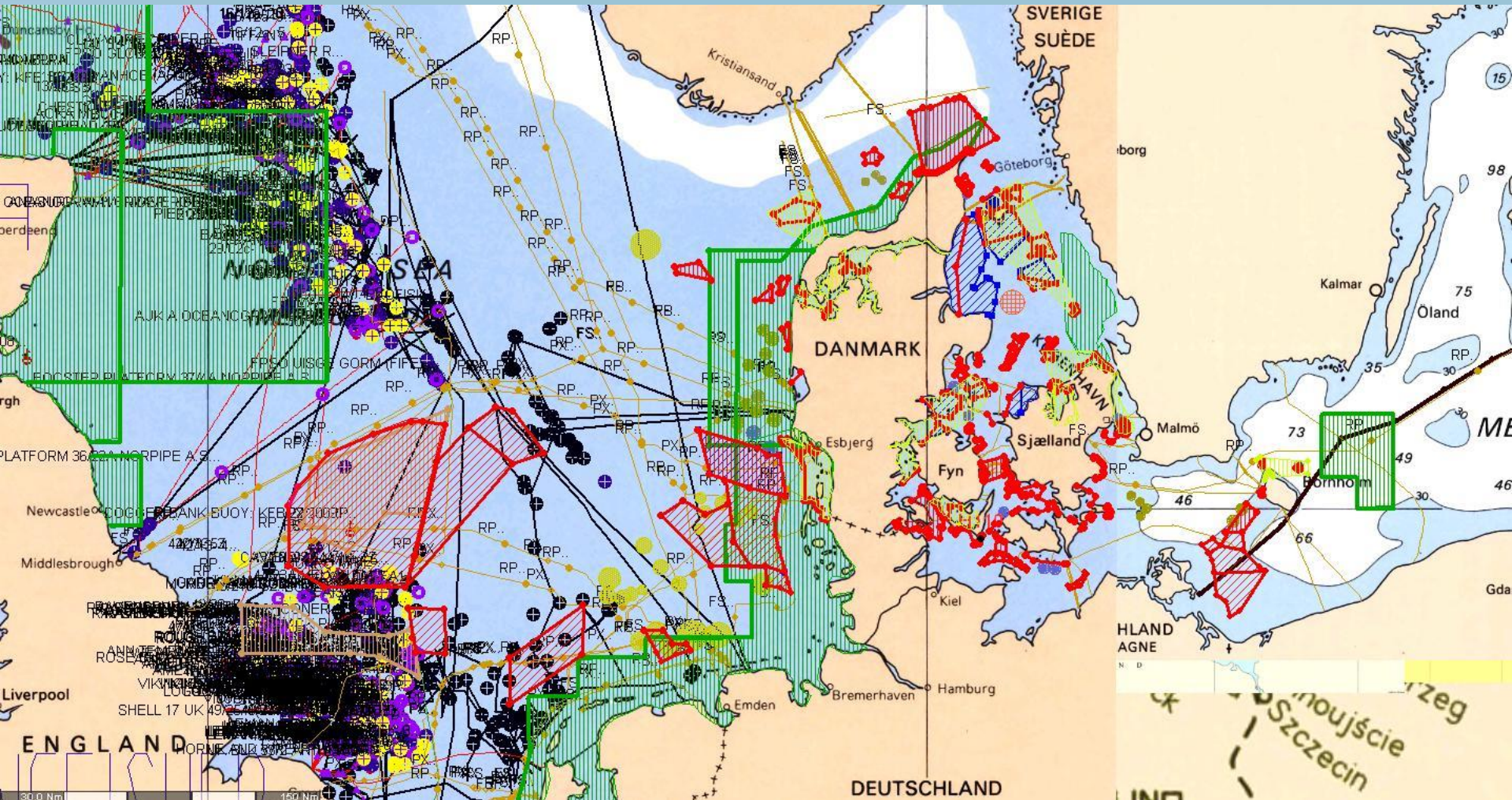
The habitat and birds directive:
Different implementation from
Country to country
+ MSFD

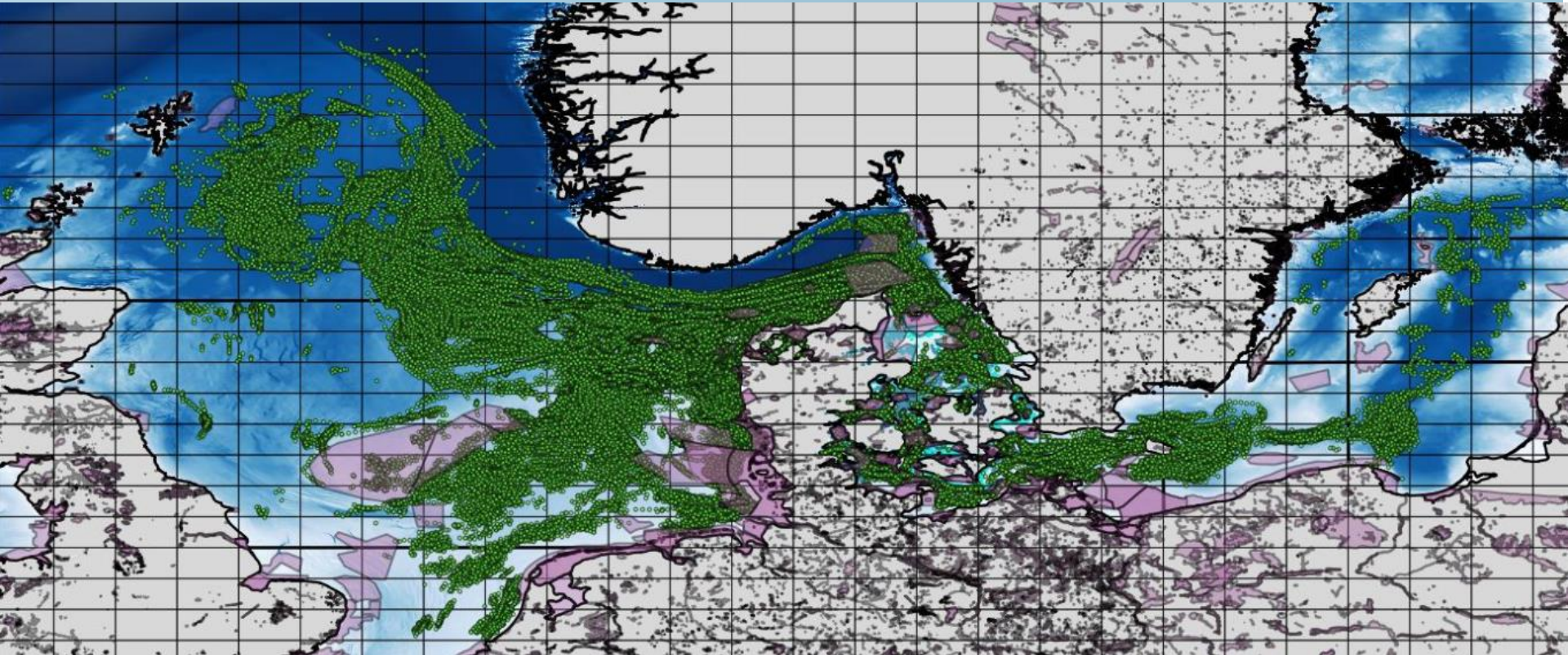


NGO areas Denmark

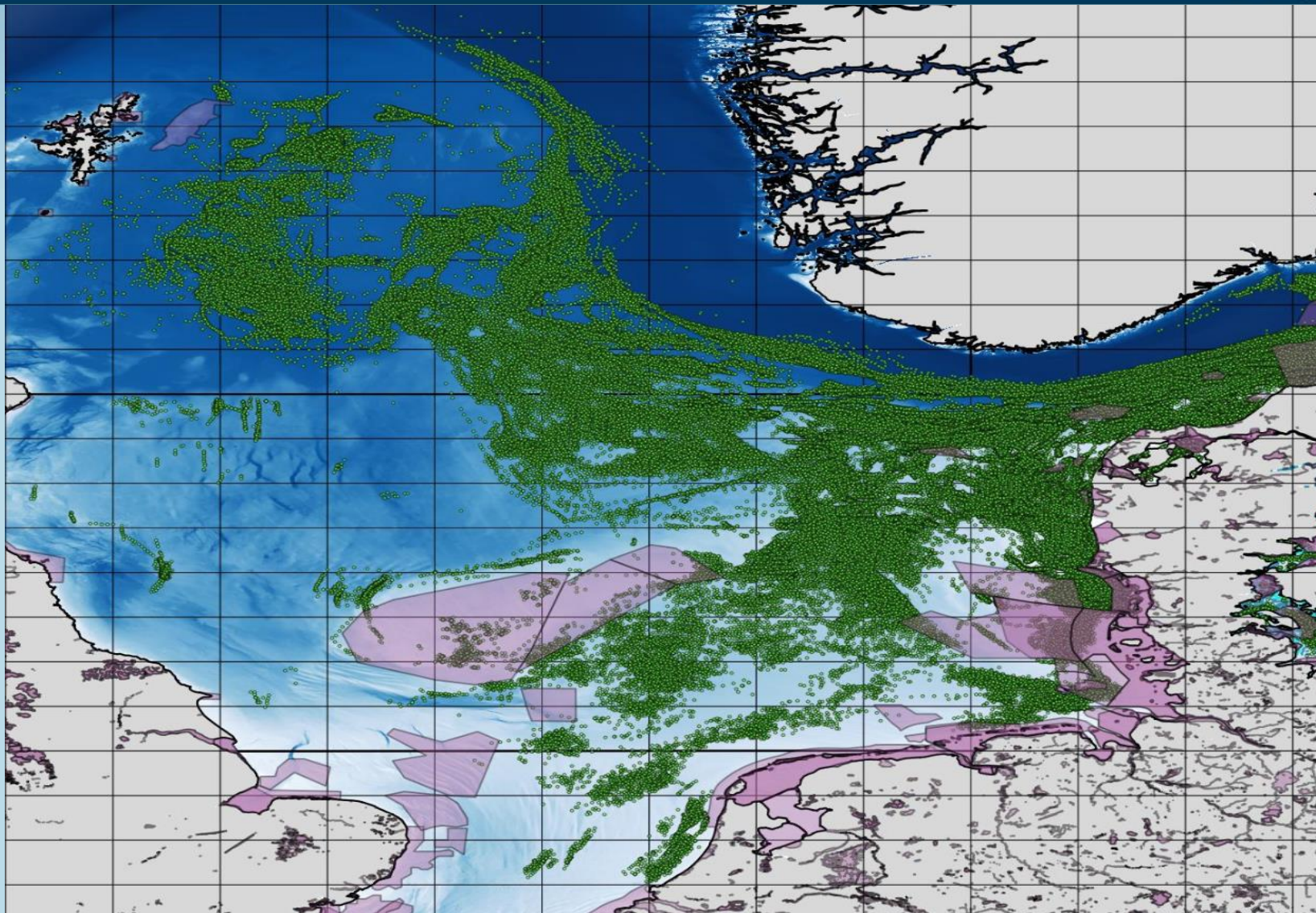


All activities





Need access to the areas where the fish is found!



Danish VMS and Natura2000 in the North Sea

Natura 2000 is a network of protected areas throughout Europe.
Comprehensive pt. 25 countries.

Natura 2000 is a collective term for:
SACs (1992)
Bird Protection Areas (1979)
Ramsar areas (1977)

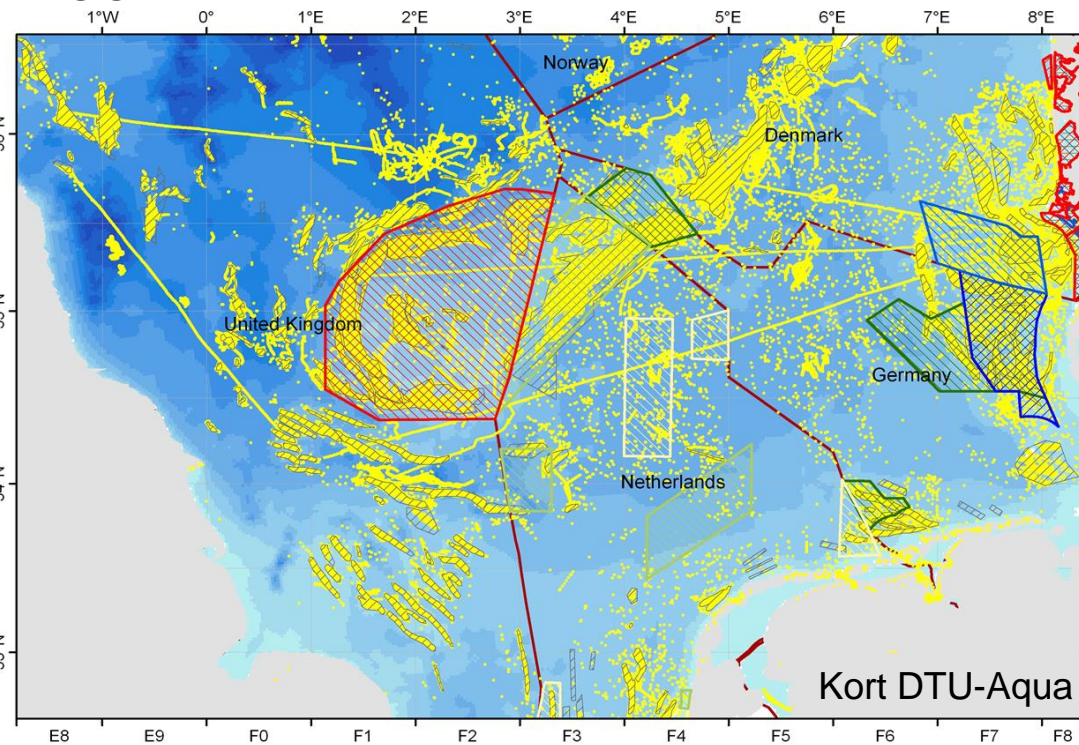
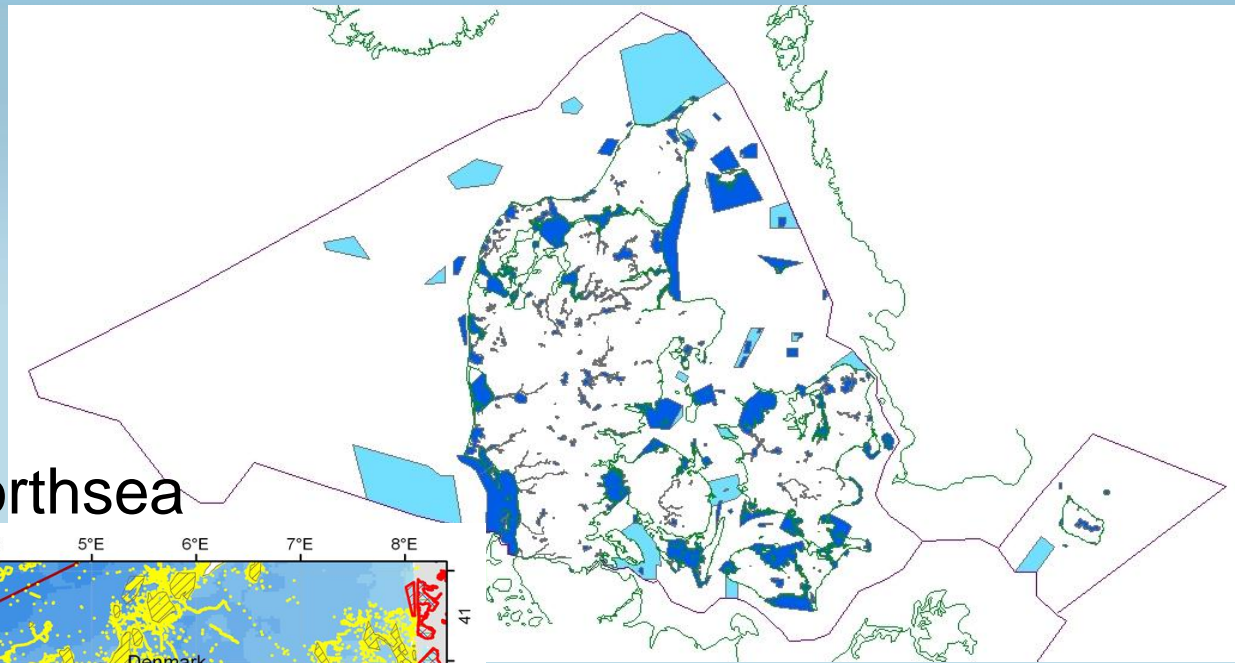
Implementing minimum requirement throughout the EU that prevents EU countries from competing among themselves at the expense of the environment.

[Marine Strategy Framework Directive](#)
adopted on 17 June 2008.

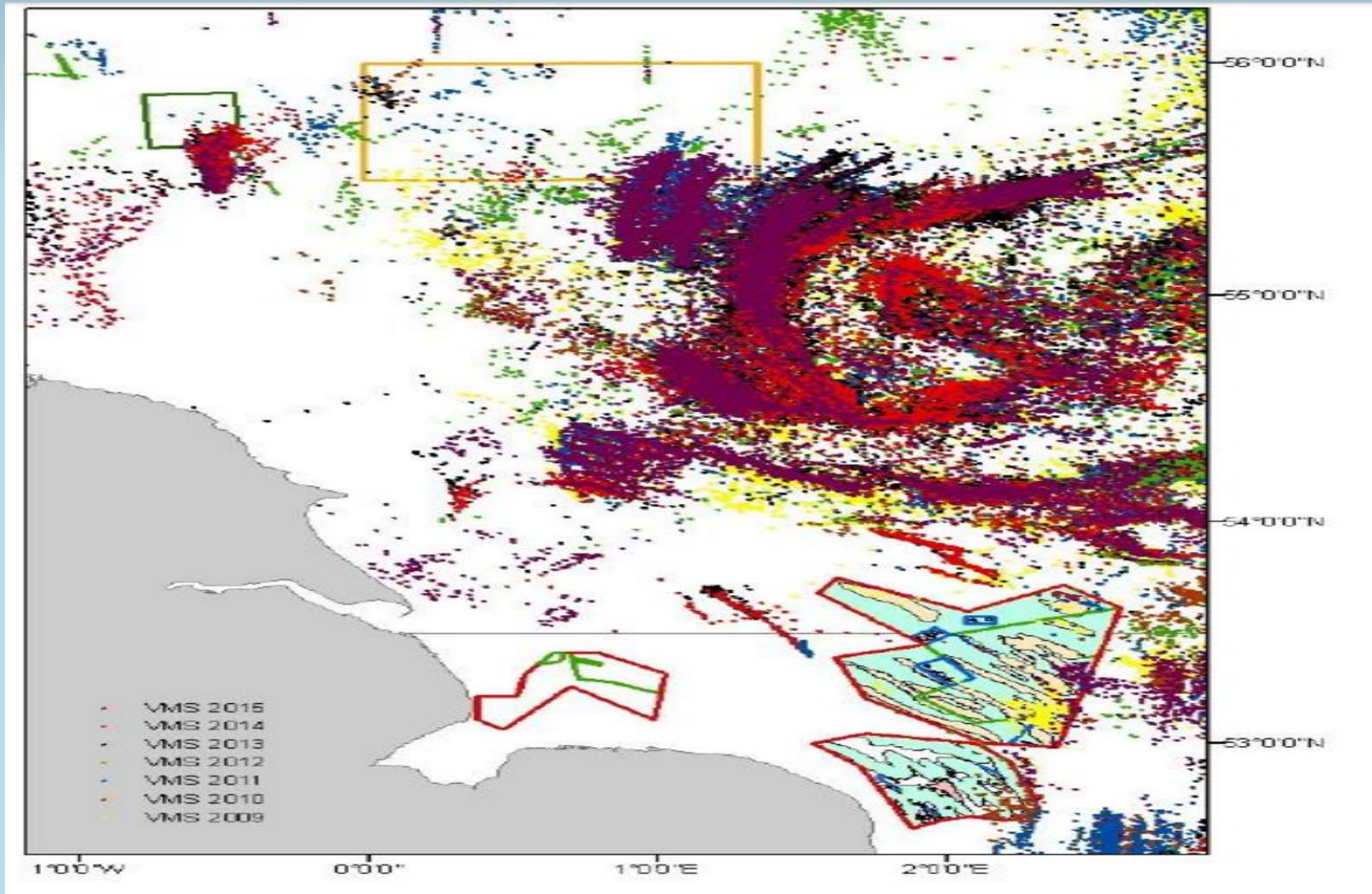
Implemented by delegated acts through the Commission

- Different approach from member state to member state
- Necessary to obtain consensus with other member states
- N2000 no socioeconomic considerations
- MSFD need socioeconomic considerations

Bigger areas in the Northsea

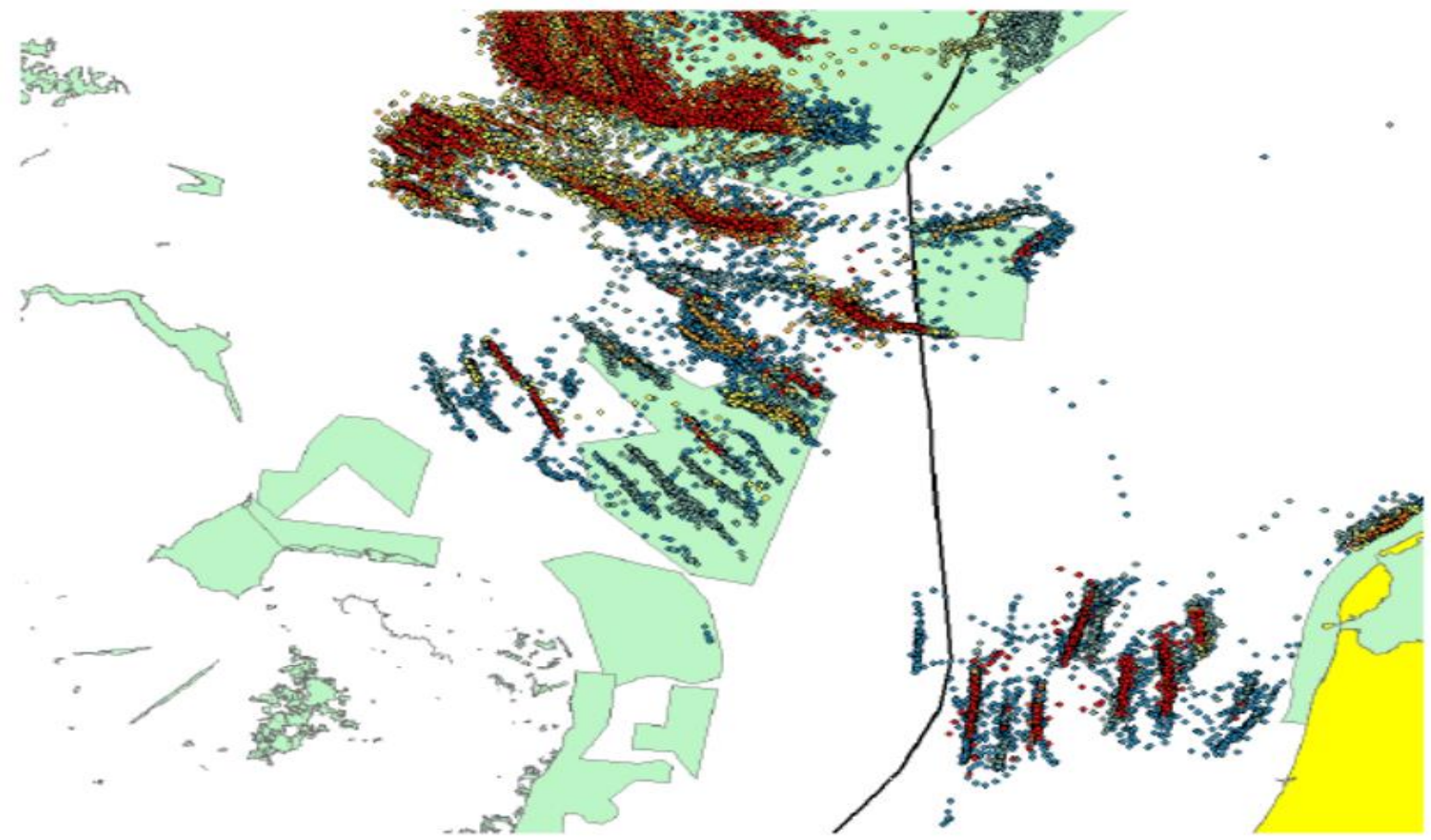


UK MSFD and N2000

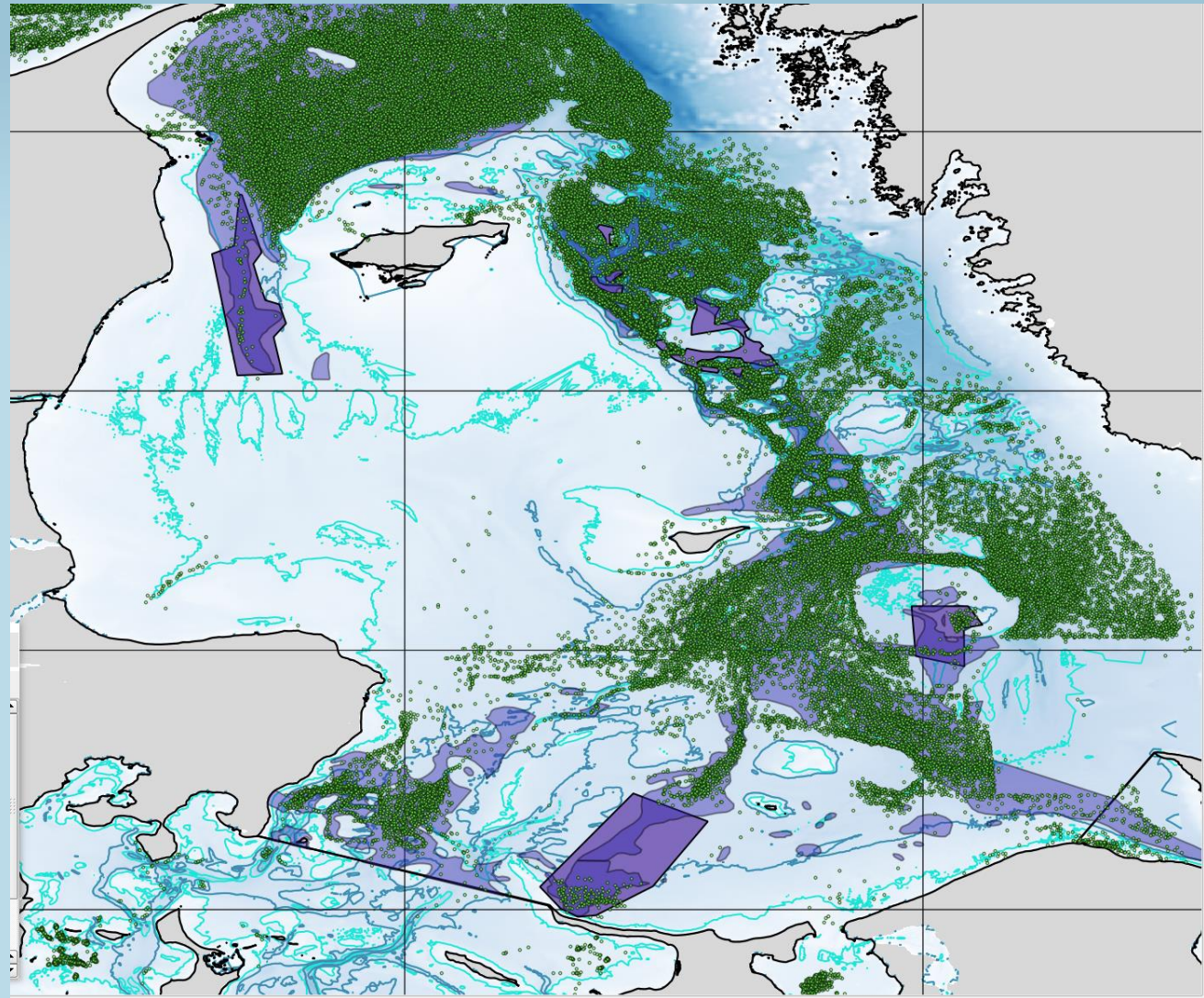


UK N2000 and sandeel fishery

Map 2 VMS sand-eel fishery (period 20xx-2011)



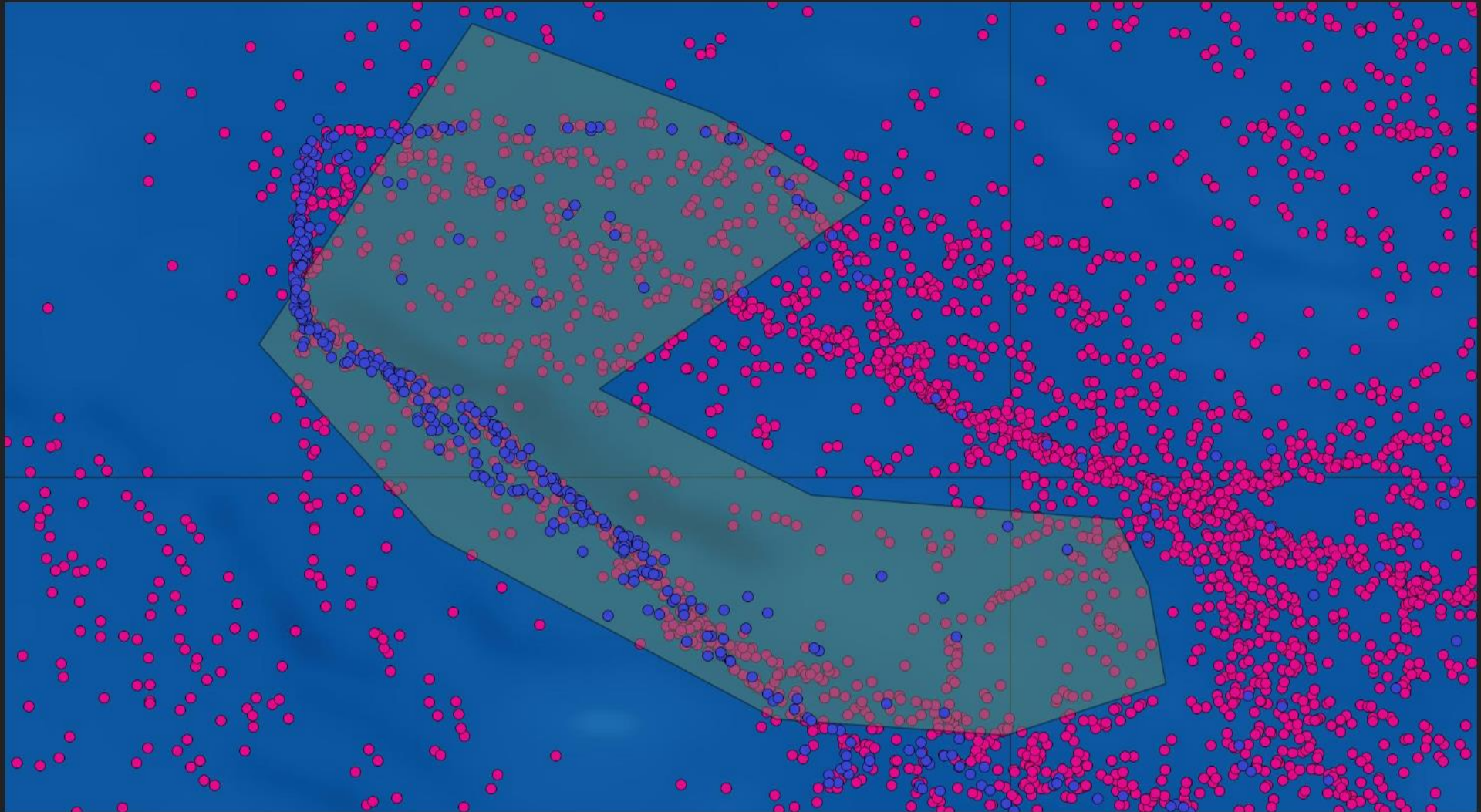
Danish MSFD
Kattegat
Mud 10 %



Scotland Central Fladen Norway pout



DANMARKS FISKERIFORENING
Producent Organisation



The Dogger Bank Proces

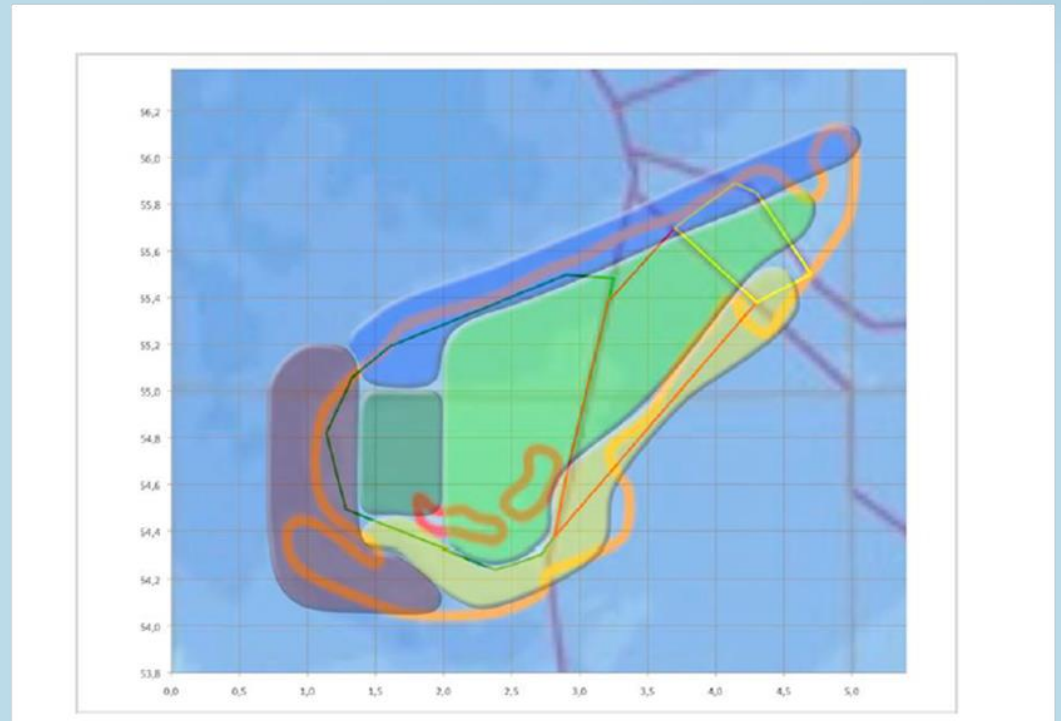
Protection of sandbanks 1110

3 member states

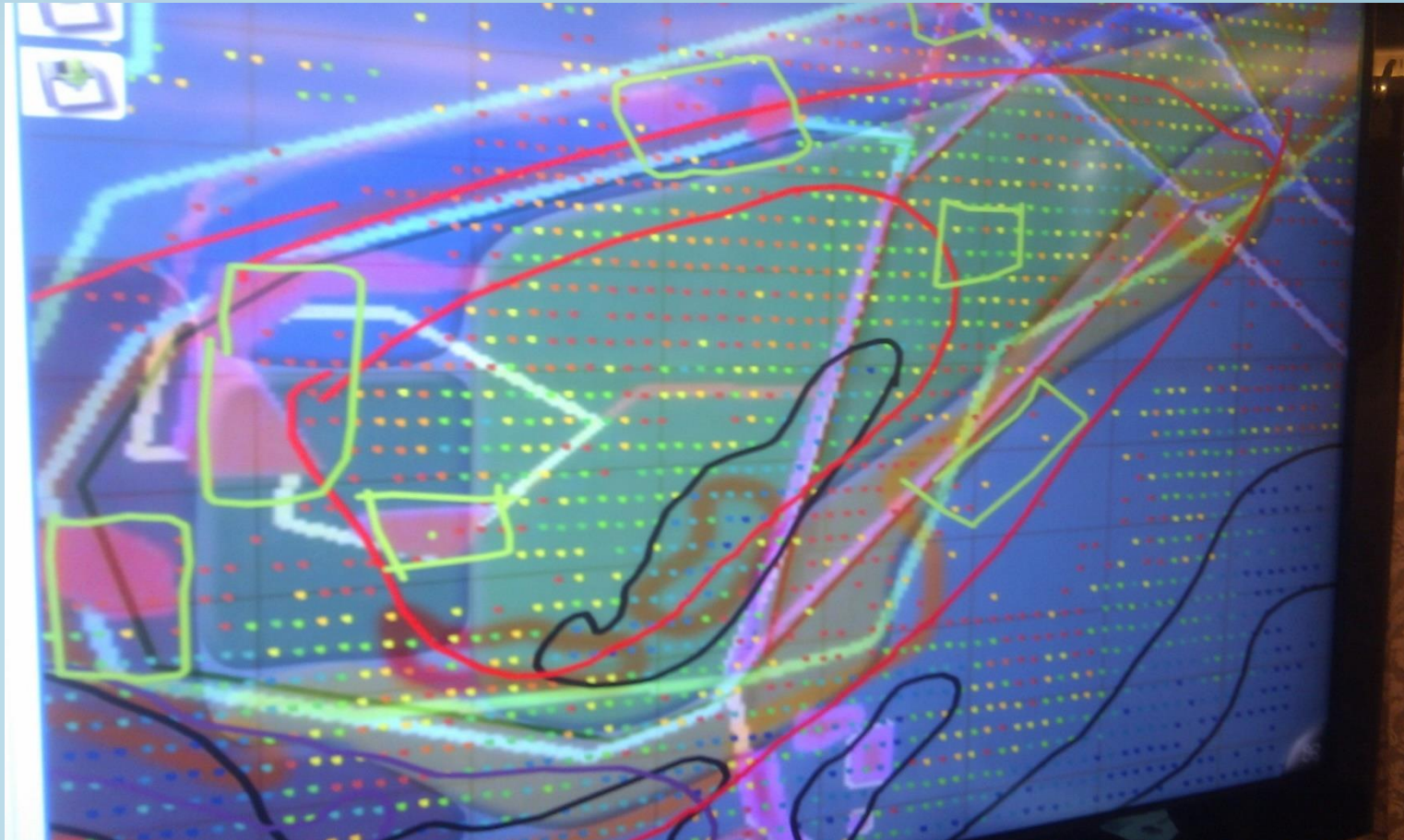
UK

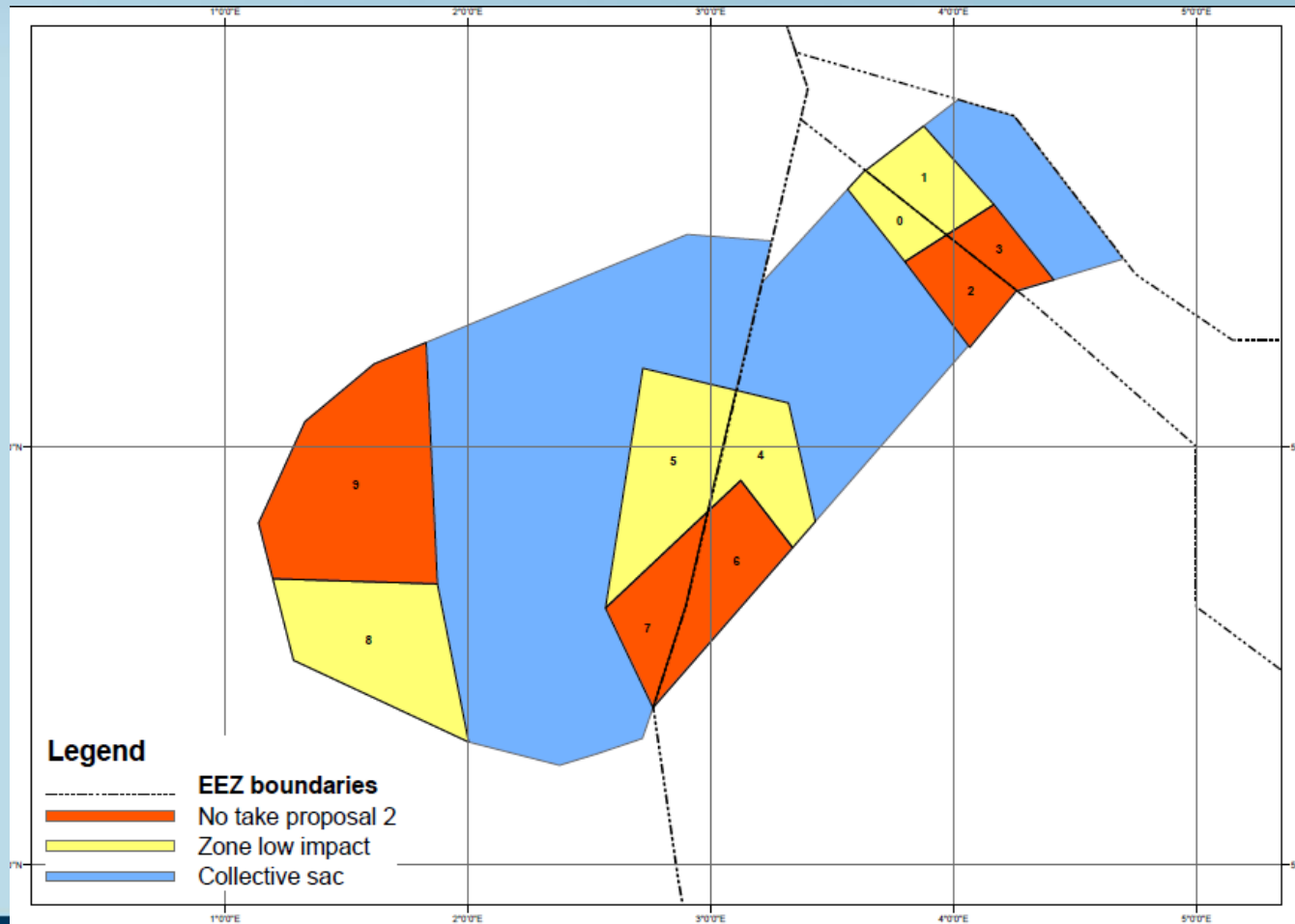
Holland

Germany

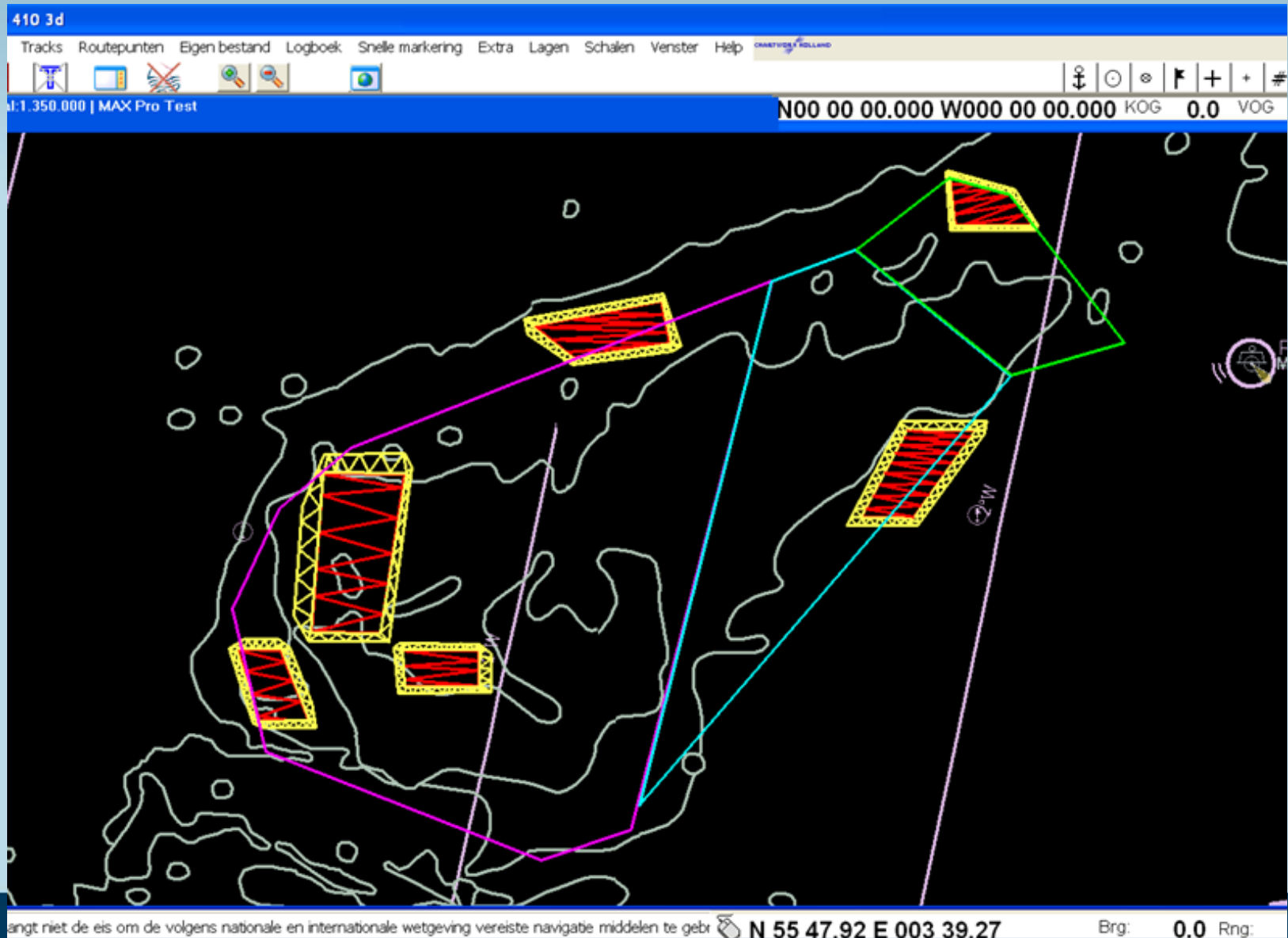


Workshop FIMPAS

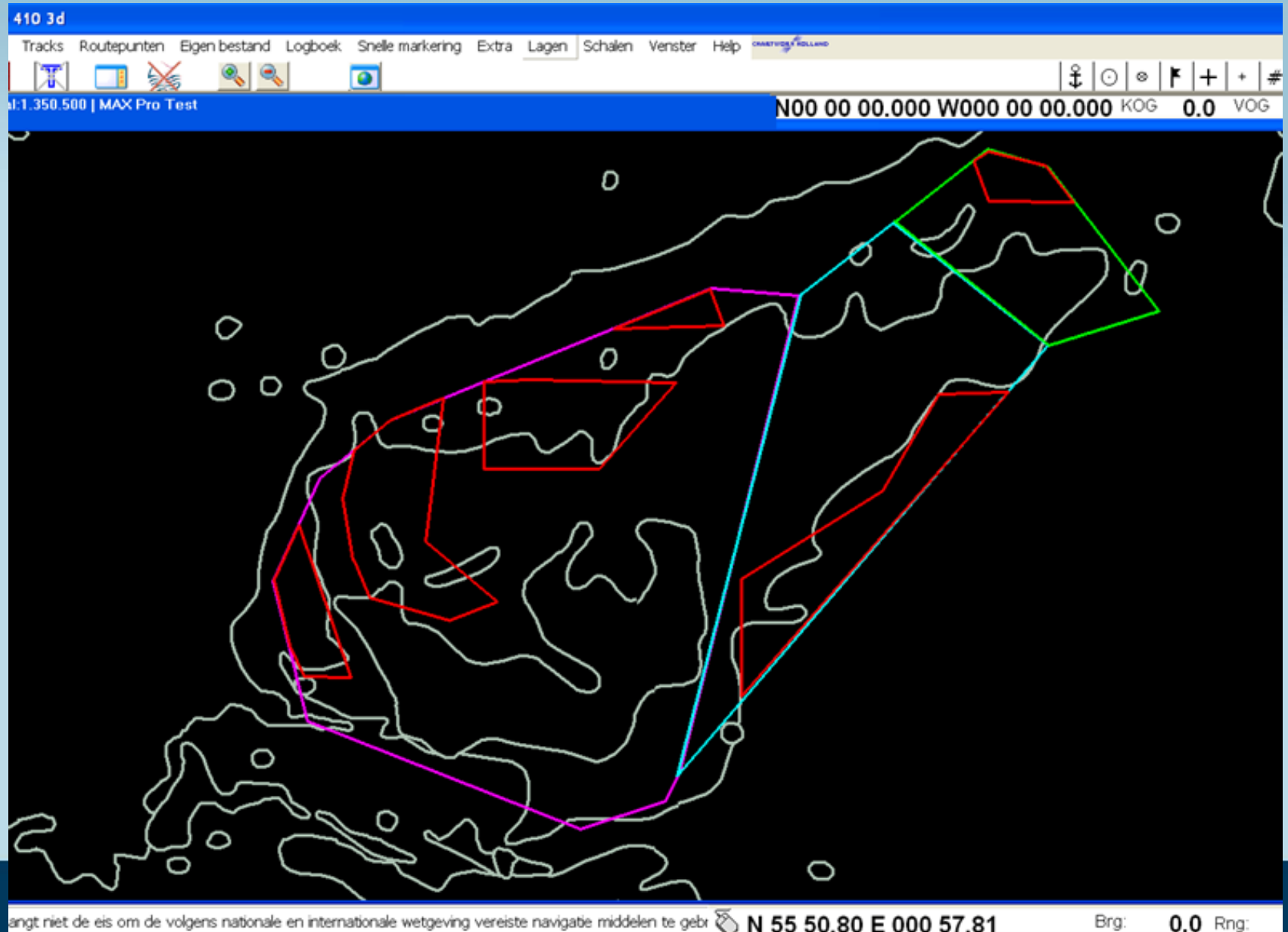




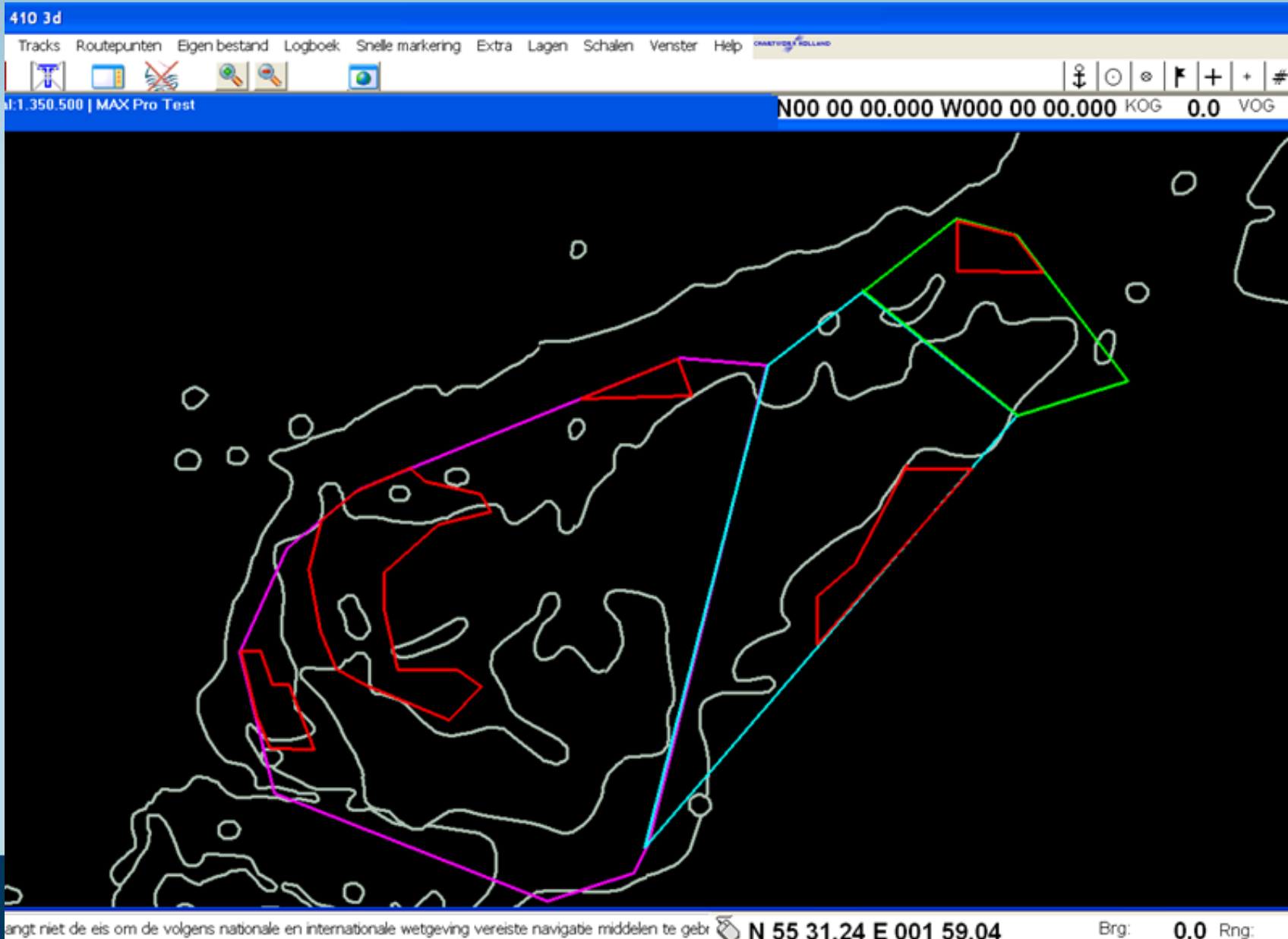
Industry 1st draft



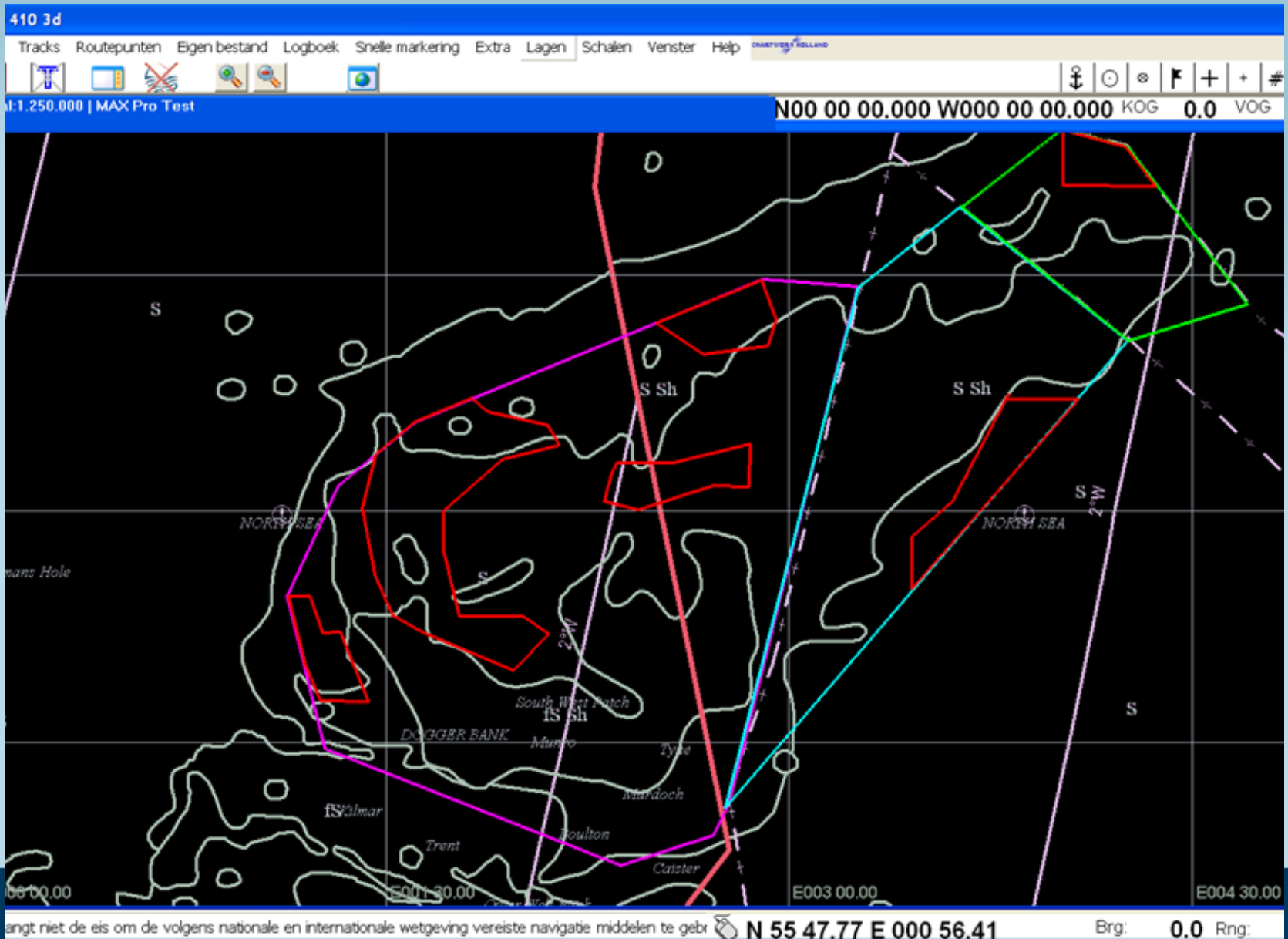
Industry 2nd draft



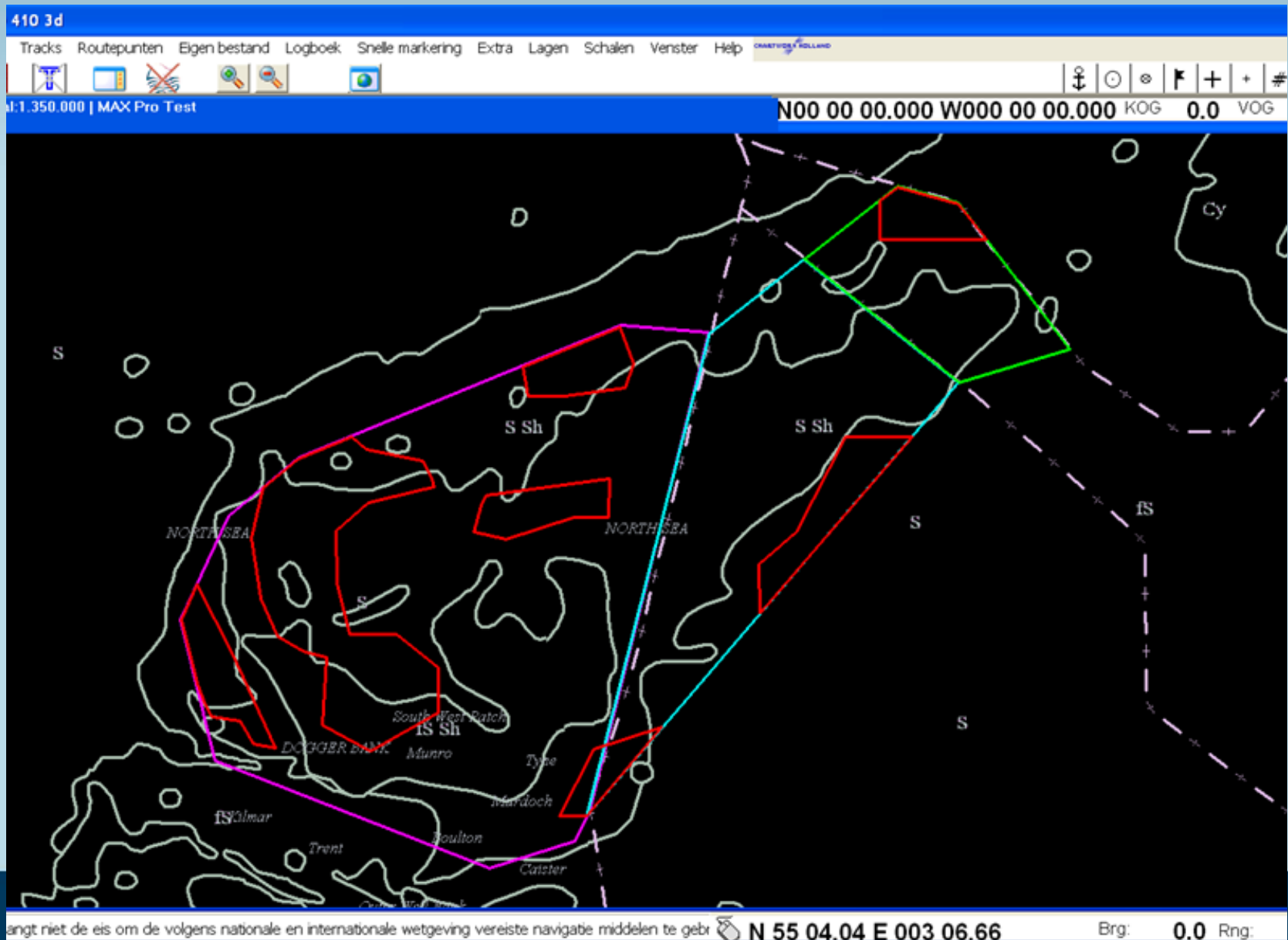
Industry 3th draft

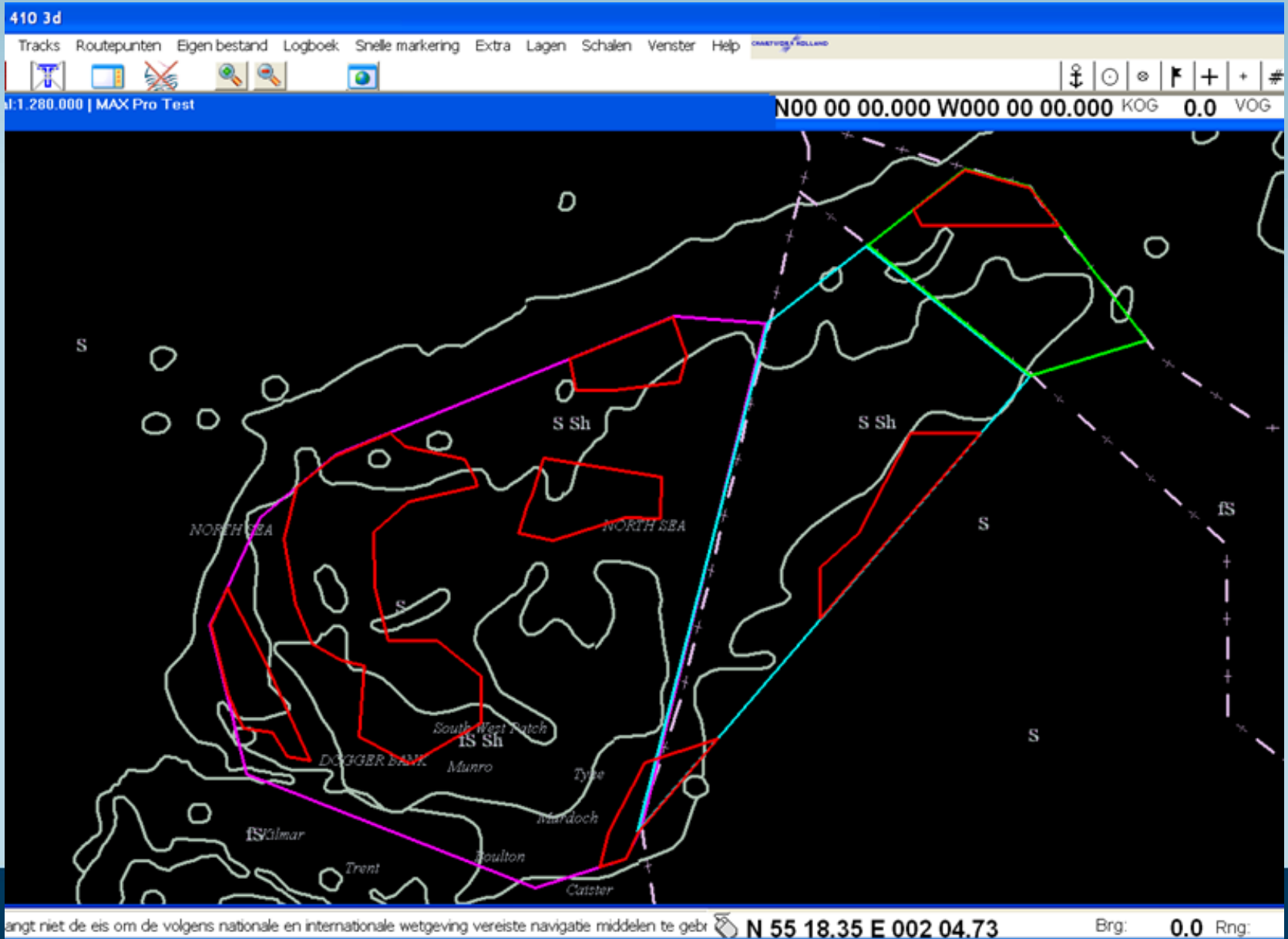


Industry 4th draft

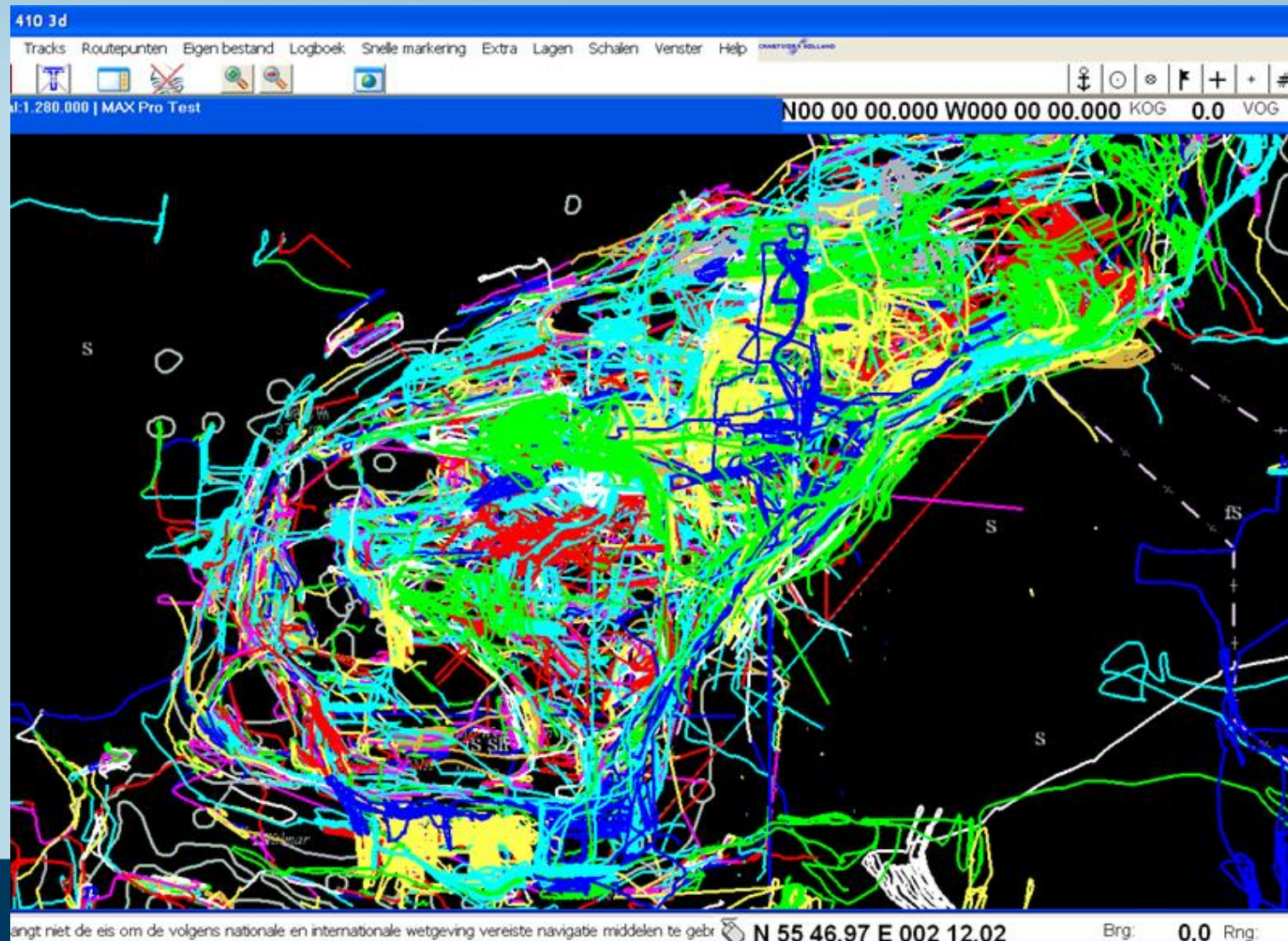


angt niet de eis om de volgens nationale en internationale wetgeving vereiste navigatie middelen te gebruiken N 55 47.77 E 000 56.41 Brg: 0.0 Rng:

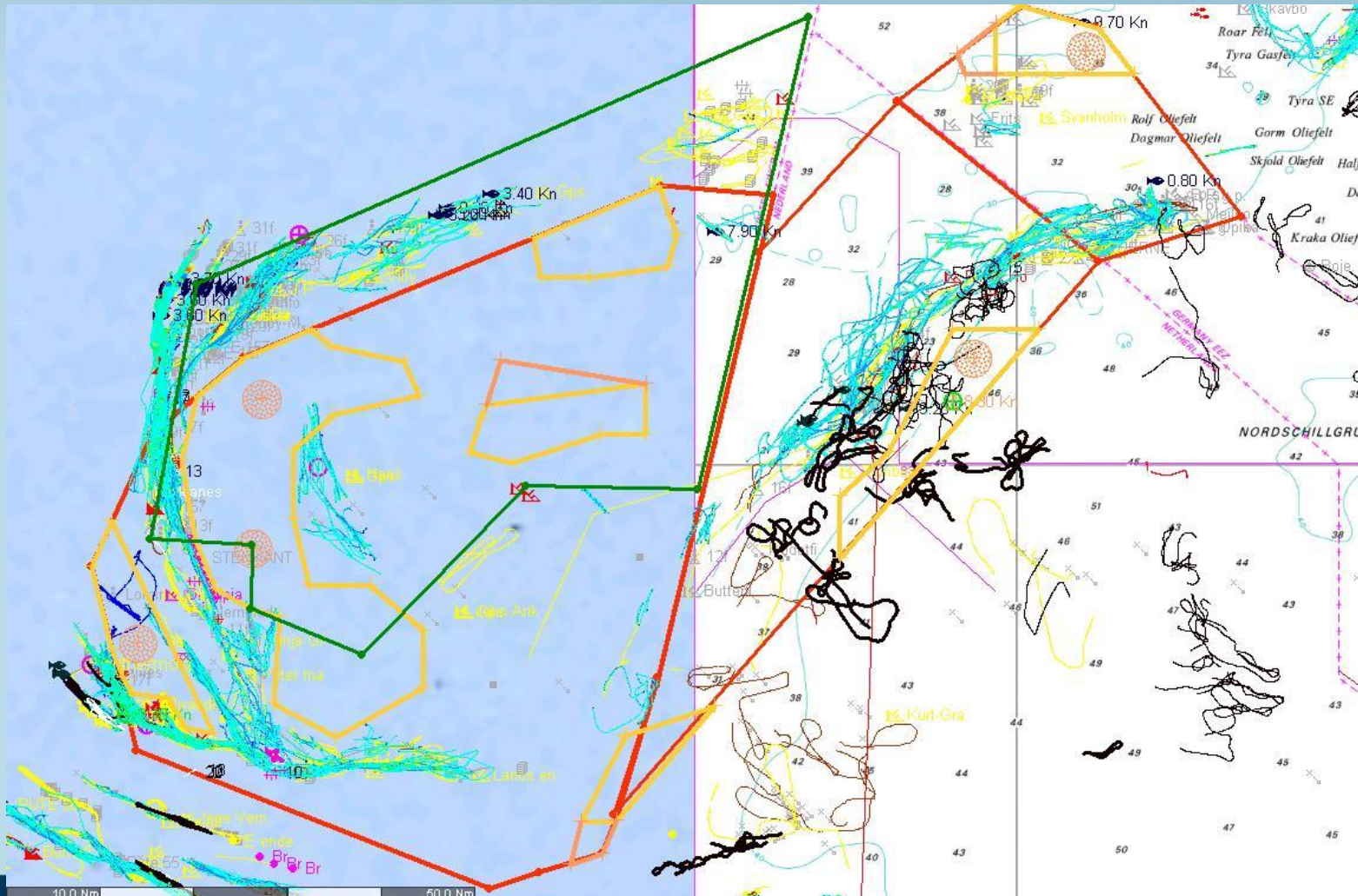




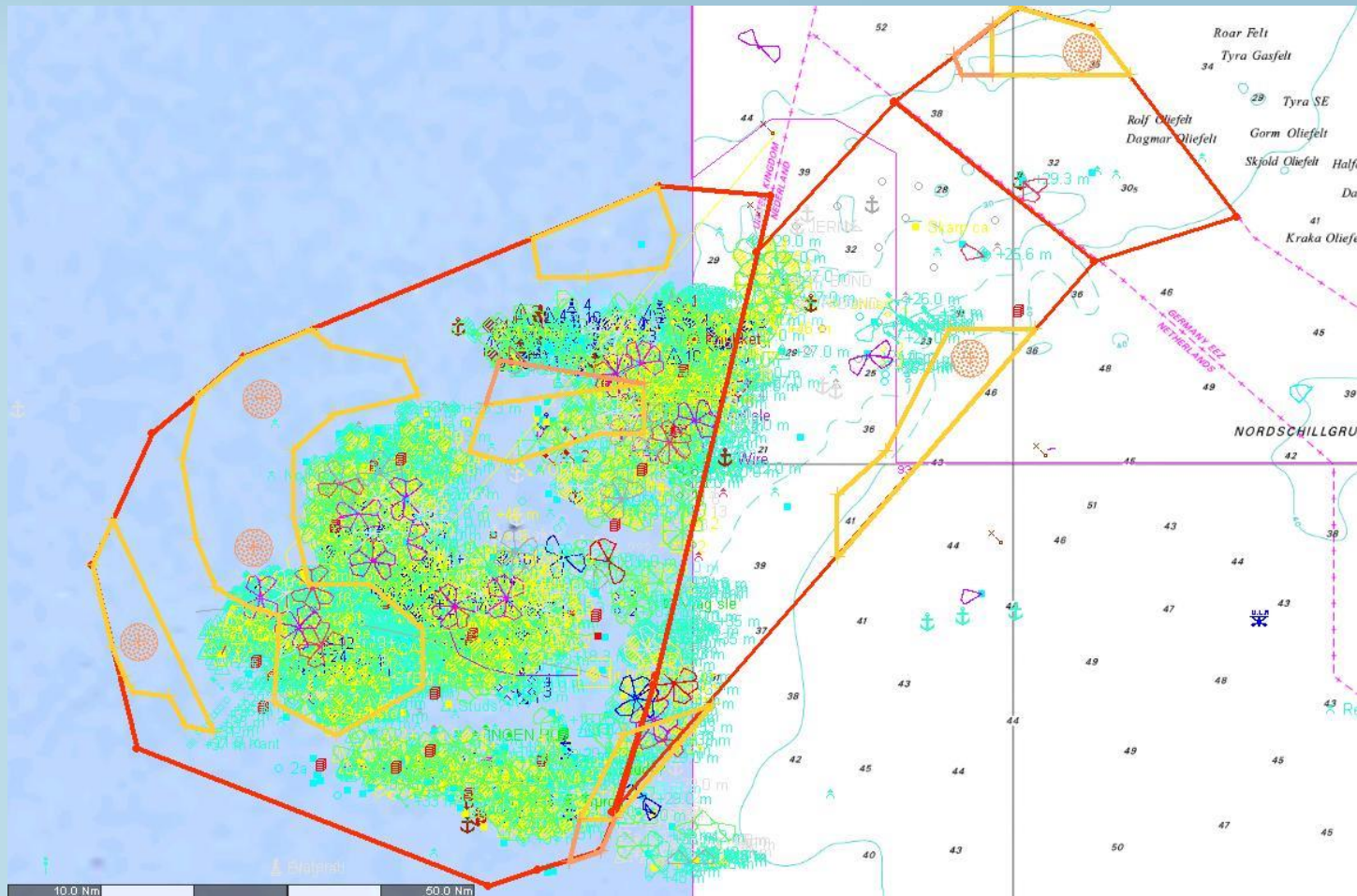
Bom trawl og Twin rig (Holland)



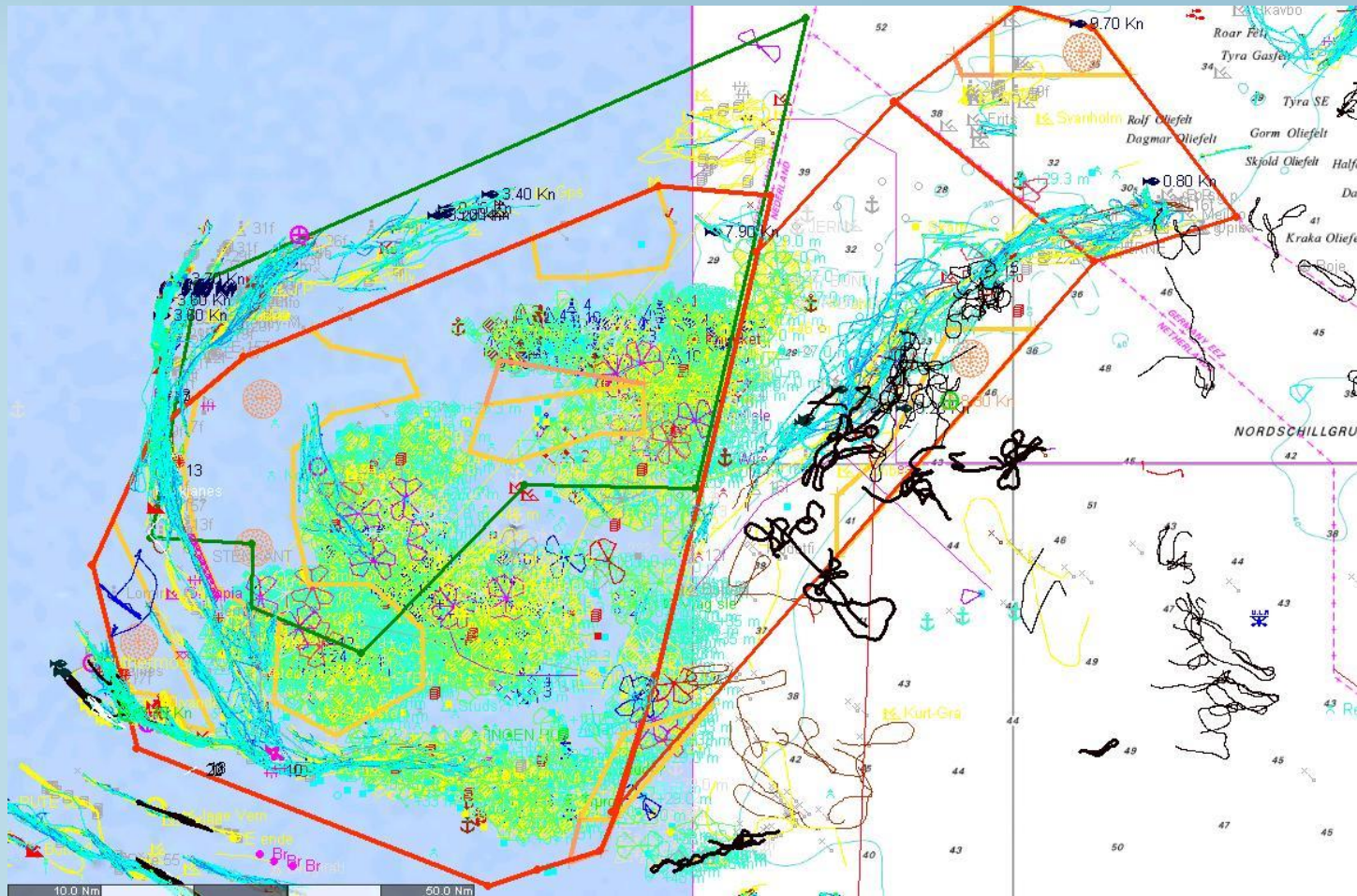
Sandeel banks on the Dogger Banke



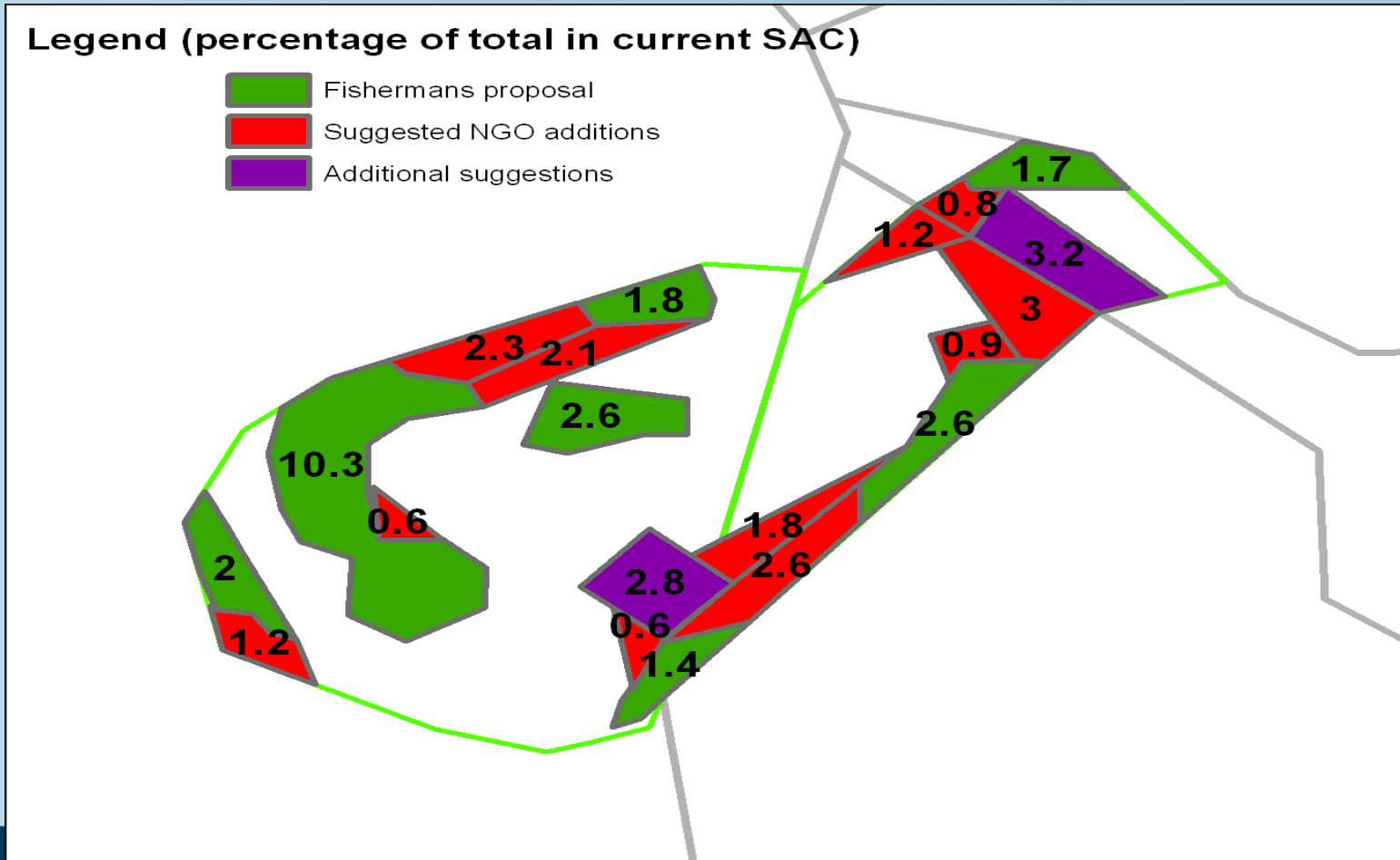
Danish Seine on the Dogger Banke



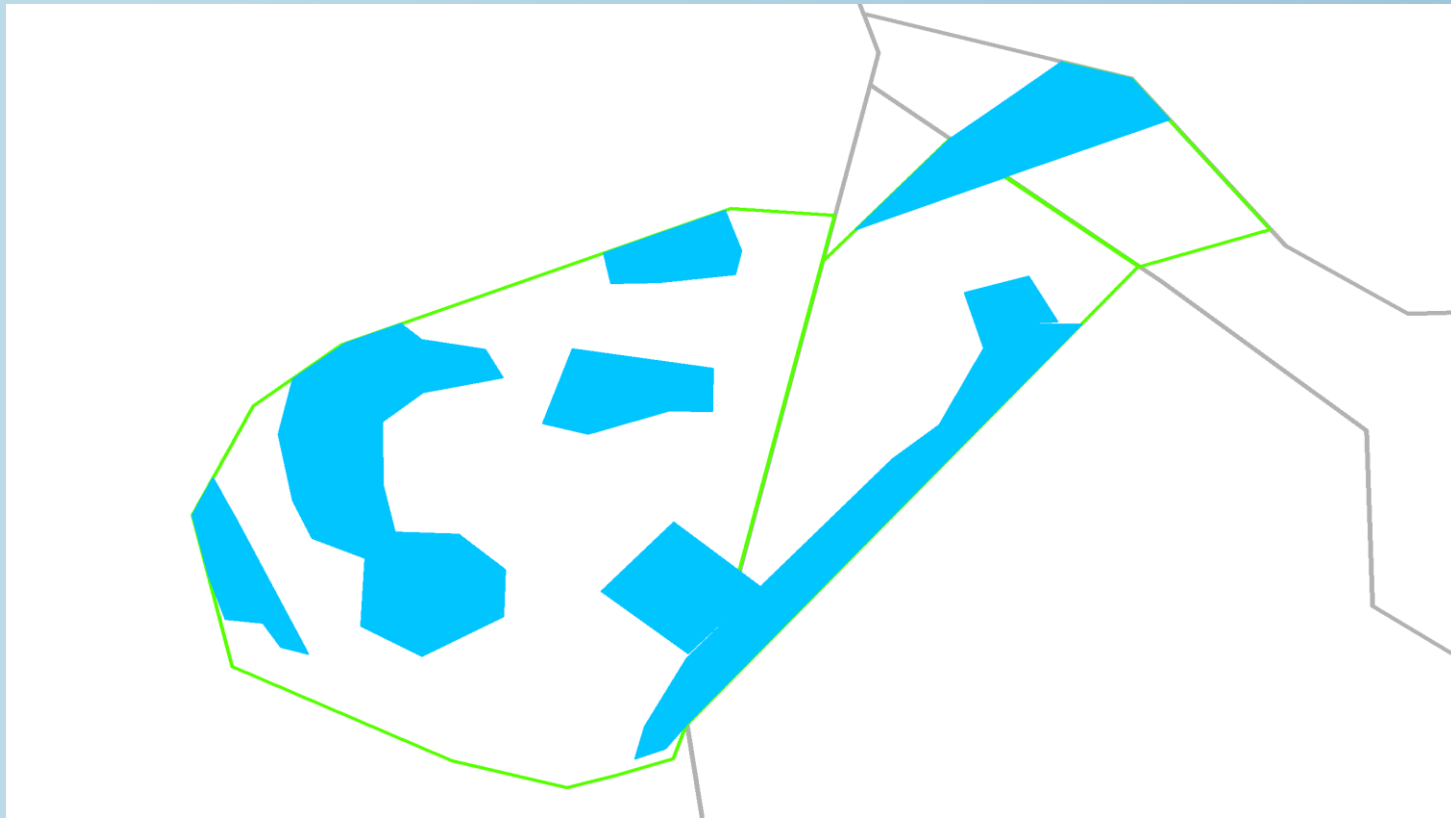
Sandeel and seine combined



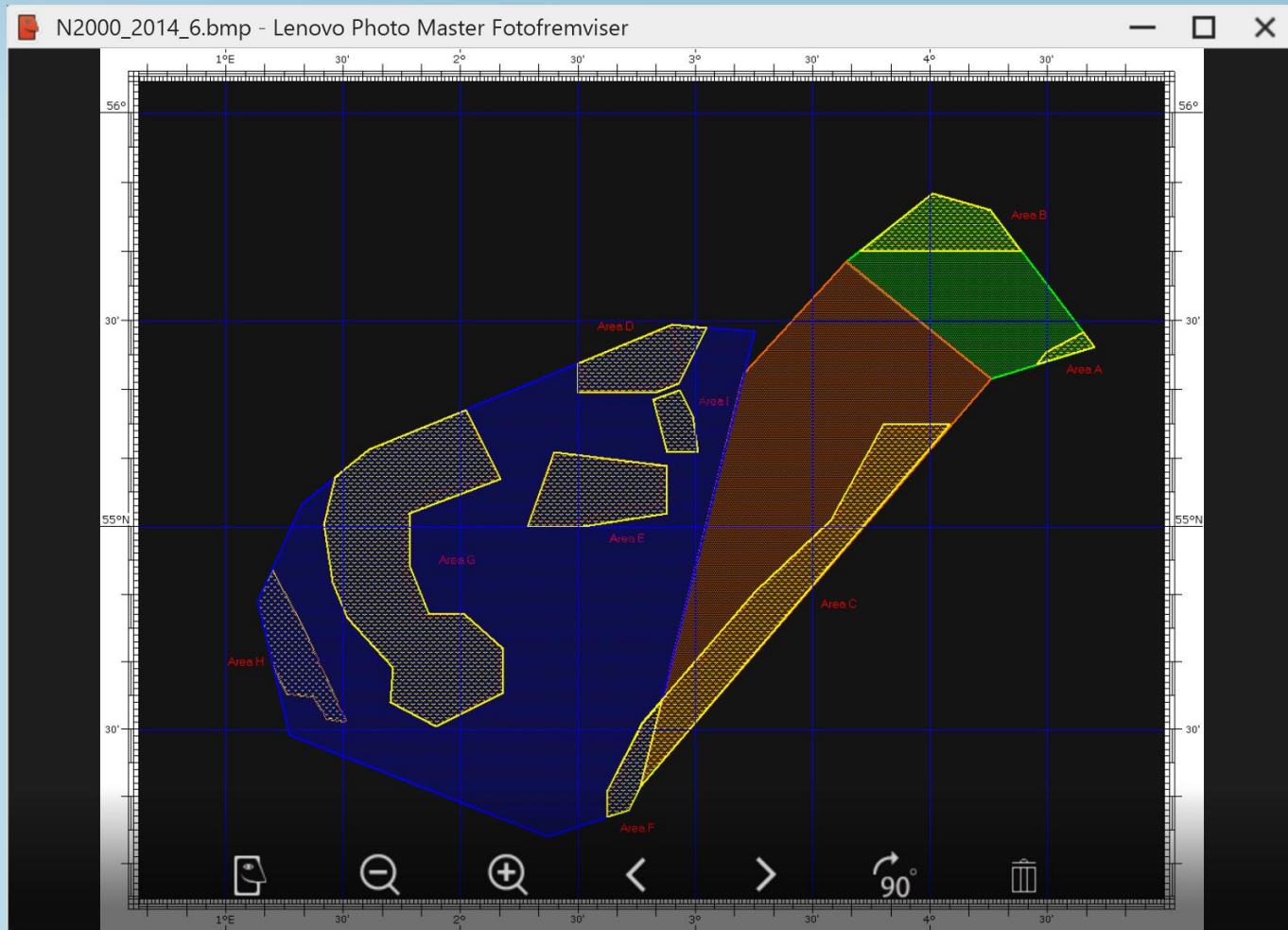
Industry on 22,5% will try to get to 25% and meet the conditions



2014 card (about 33%) Not approved by fishermen



Industry 30 % !



Windfarms

The Danish Fishery Law

Chapter 15

Fishing compared to other activities

A. Regulations for the protection of fisheries

§ 76. Legal fishing activities must not be hindered in any way.

The Danish Fishermen PO aim to maintain fishing possibilities most places.

1. Vindeby (1991) 11 møller, 4,95 MW
2. Tunø Knob (1995) 10 møller, 5 MW
3. Middelgrunden (2000) 20 møller, 40 MW
4. Horns Rev I (2002) 80 møller, 160 MW
5. Rønland (2003) 8 møller, 17,2 MW
6. Nysted (2003) 72 møller, 165,6 MW
7. Samsø (2003) 10 møller, 23 MW
8. Frederikshavn (2003) 3 møller, 7,6 MW
9. Horns Rev II (2009) 91 møller, 209,3 MW
10. Avedøre Holme (2009/10) 3 møller, 10,8 MW
11. Sprogø (2009) 7 møller, 21 MW
12. Rødsand II (2010) 90 møller, 207 MW
13. Anholt (2013) 111 møller, 399,6 MW




- Horns Rev 3 (2020) 400 MW
- Kriegers Flak 600 MW
- Kystnære havmølleparker (Vesterhav Nord og Syd) 350 MW
- Nissum Bredning forsøgsmøller 28 MW

Cables on the sea bottom


Agreements are made between the fishing industry and the cable owners in order for fishing to be conducted over the power cable from land and to the wind farm when this is put down.

SAMARBEJDSAFTALER OM SØKABLER

KONTEK SØKABLET I STORSTRØMMEN OG ØSTERSØEN




Oplysninger om fiskeri i 200 m's beskyttelseszonen for Kontek søkablet i Storstrømmen og Østersøen (400 kV HVDC kabel)



KOORDINATER OG KORT FOR BESKYTTELSESONEN OMKRING SØKABLET
 Koordinatliste 400 kV HVDC kabel (Grader og minutter med 3 decimaler)

Luftefartning Storstrømmen		UTM 32 WGS 84 (decaimalfgrader)	
X	Y	X	Y
681 698,93	6 100,720,29	11° 50,536	55° 01,326
681 345,62	6 099,974,32	11° 50,176	55° 00,811
681 340,95	6 094 938,74	11° 50,449	54° 58,088
681 799,73	6 093 935,61	11° 50,372	54° 57,549

Luftefartning Gædder Systemet		UTM 32 WGS 84 (decaimalfgrader)	
X	Y	X	Y
691 480,72	6 050 132,68	11° 57,699	54° 33,745
691 371,48	6 048 905,57	11° 57,589	54° 33,625
693 157,01	6 048 892,99	11° 59,007	54° 30,447
693 472,32	6 043 366,91	11° 58,283	54° 30,056
694,038,21	6 041 375,84	11° 59,273	54° 28,971
694,073,54	6 040 860,72	11° 59,226	54° 28,692
699 545,55	6 022 113,99	12° 04,140	54° 18,689
703 394,17	6 009 059,26	12° 07,016	54° 11,352
703 420,33	6 008 942,46	12° 07,012	54° 11,287
704204,31	6 008 882,23	12° 07,789	54° 11,226

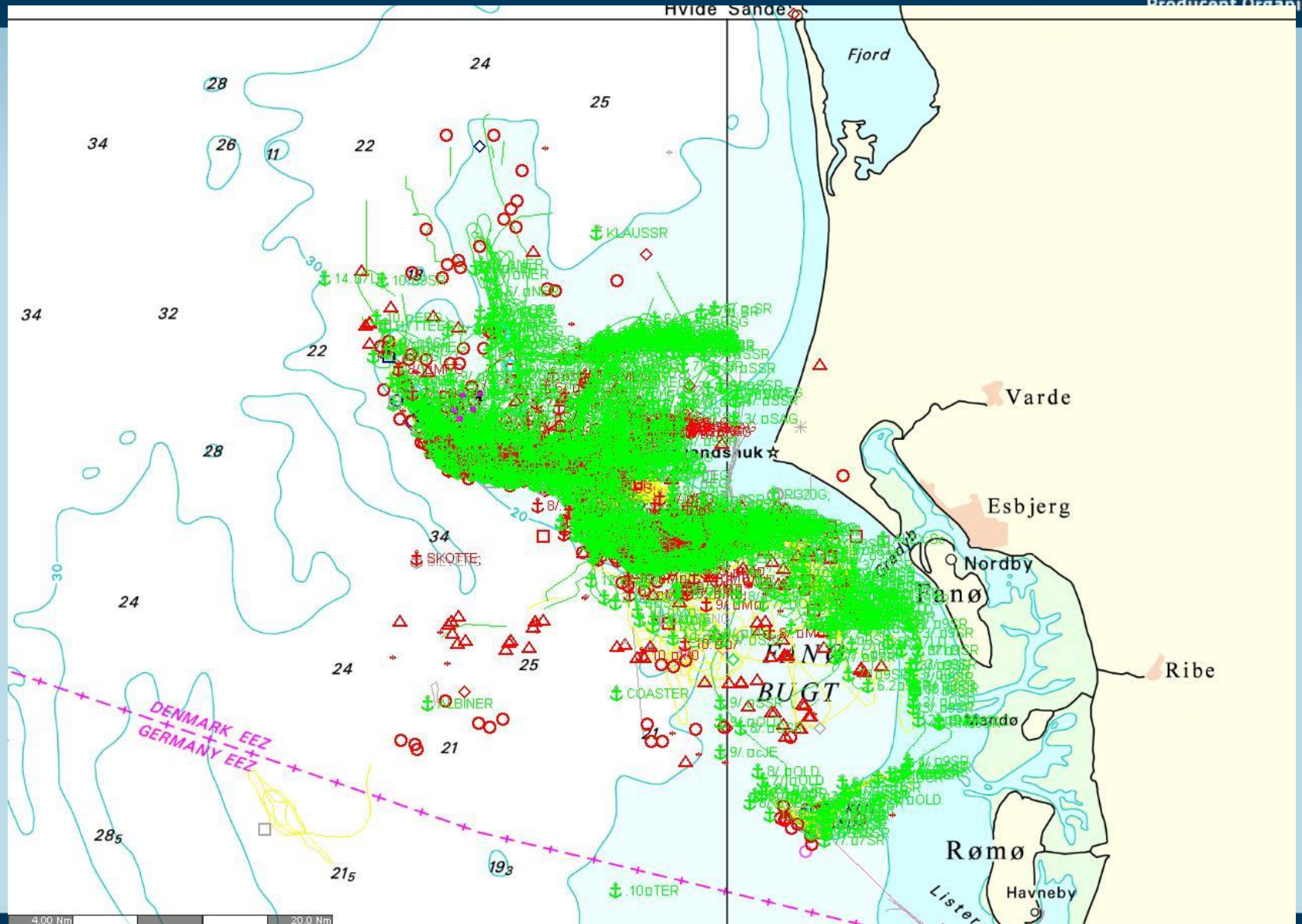


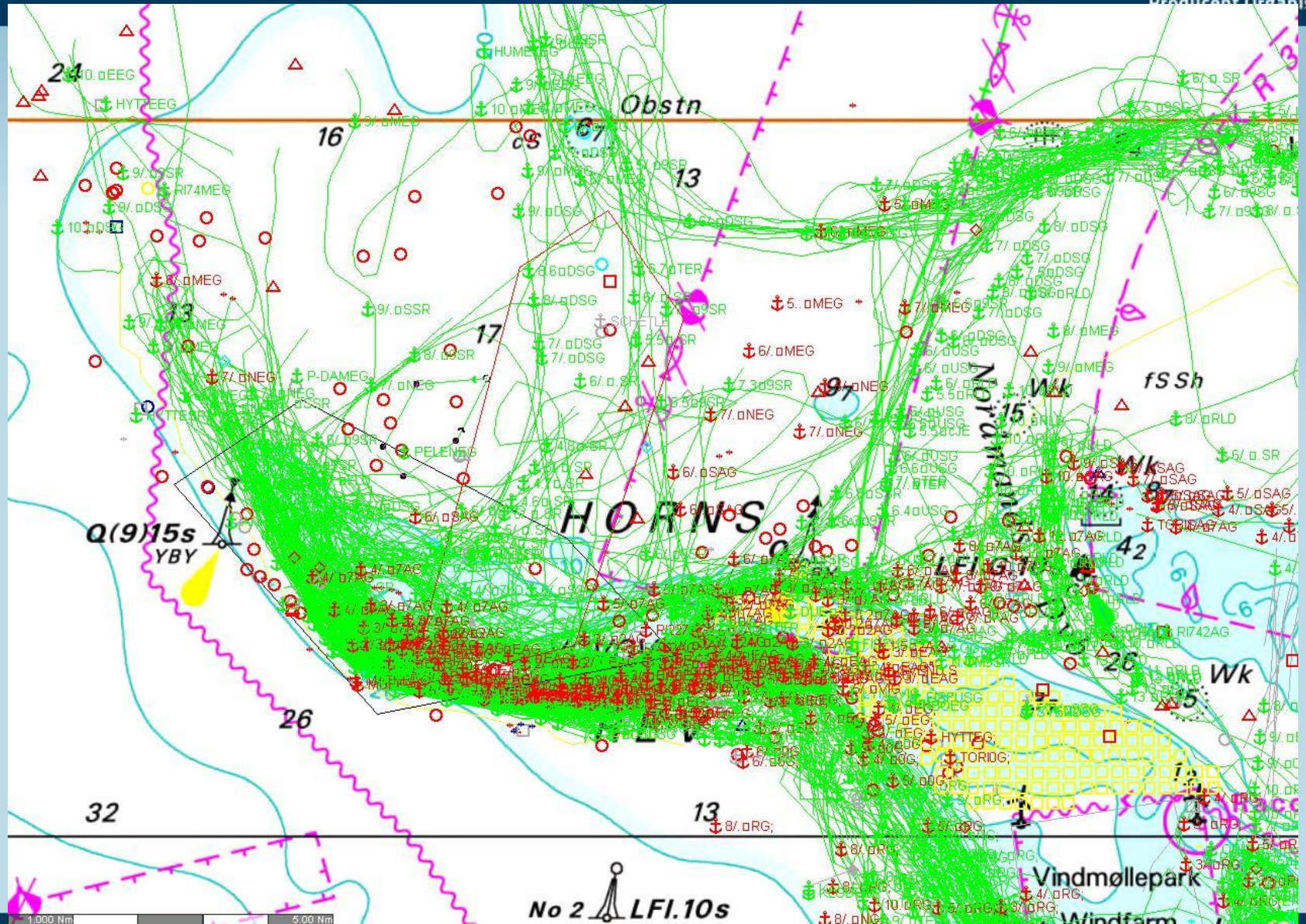
Compensation

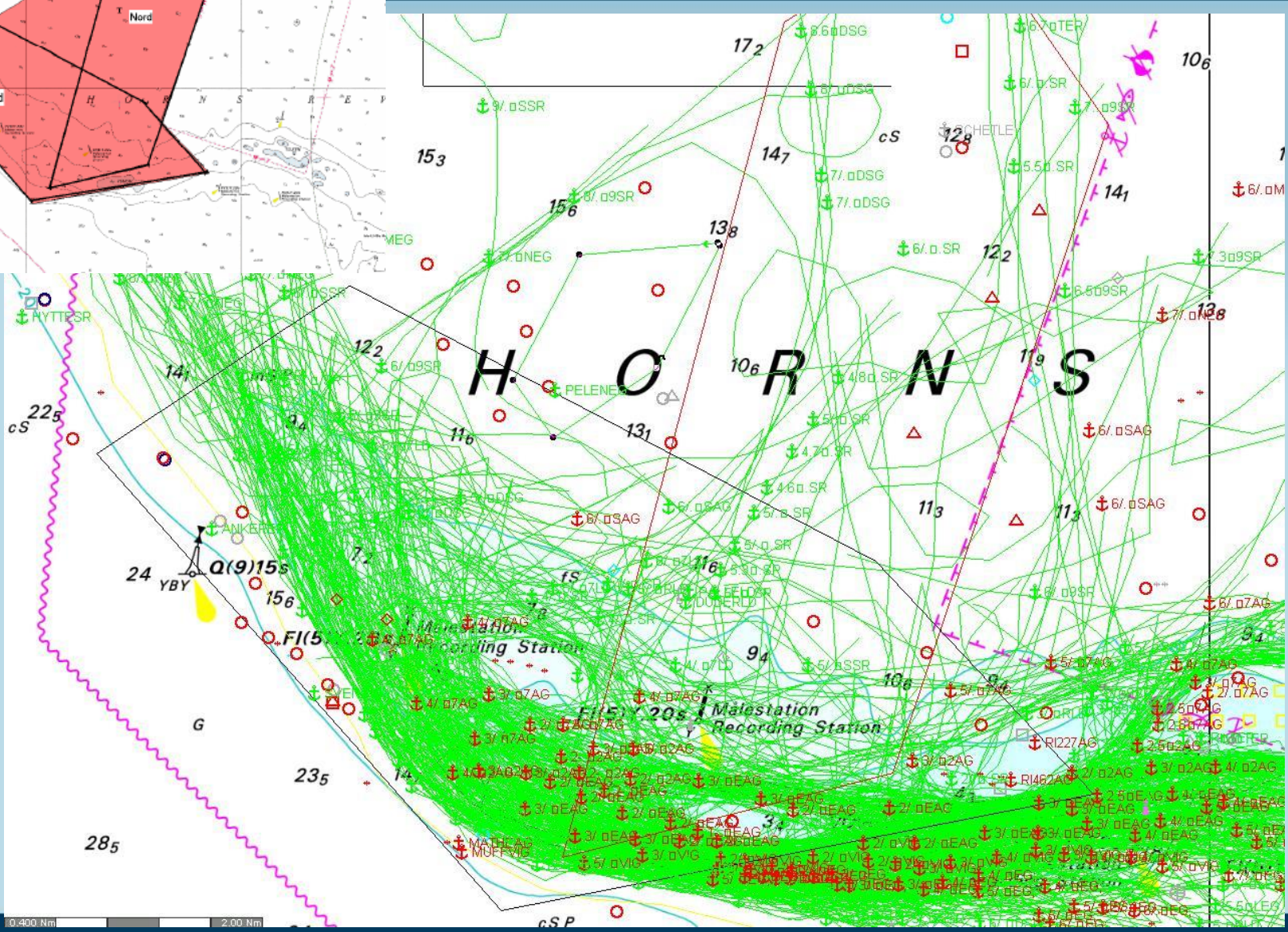
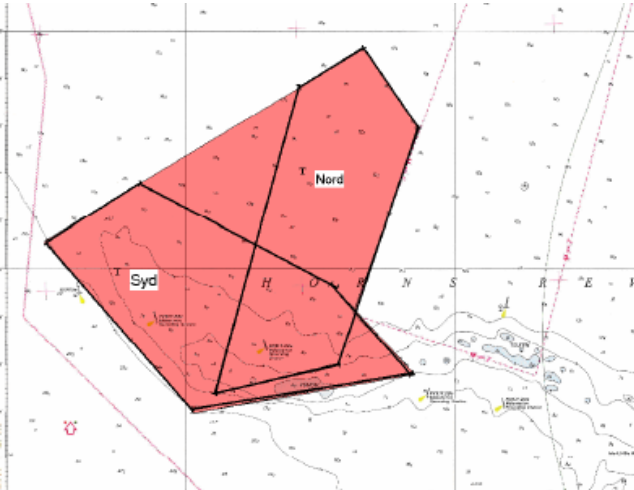
- Based on the Danish fishery law the Danish fishermen are entitled to be compensated when a wind farm is built in Denmark.
- The compensation depends on the area's value to the fishermen over the last 10 years.

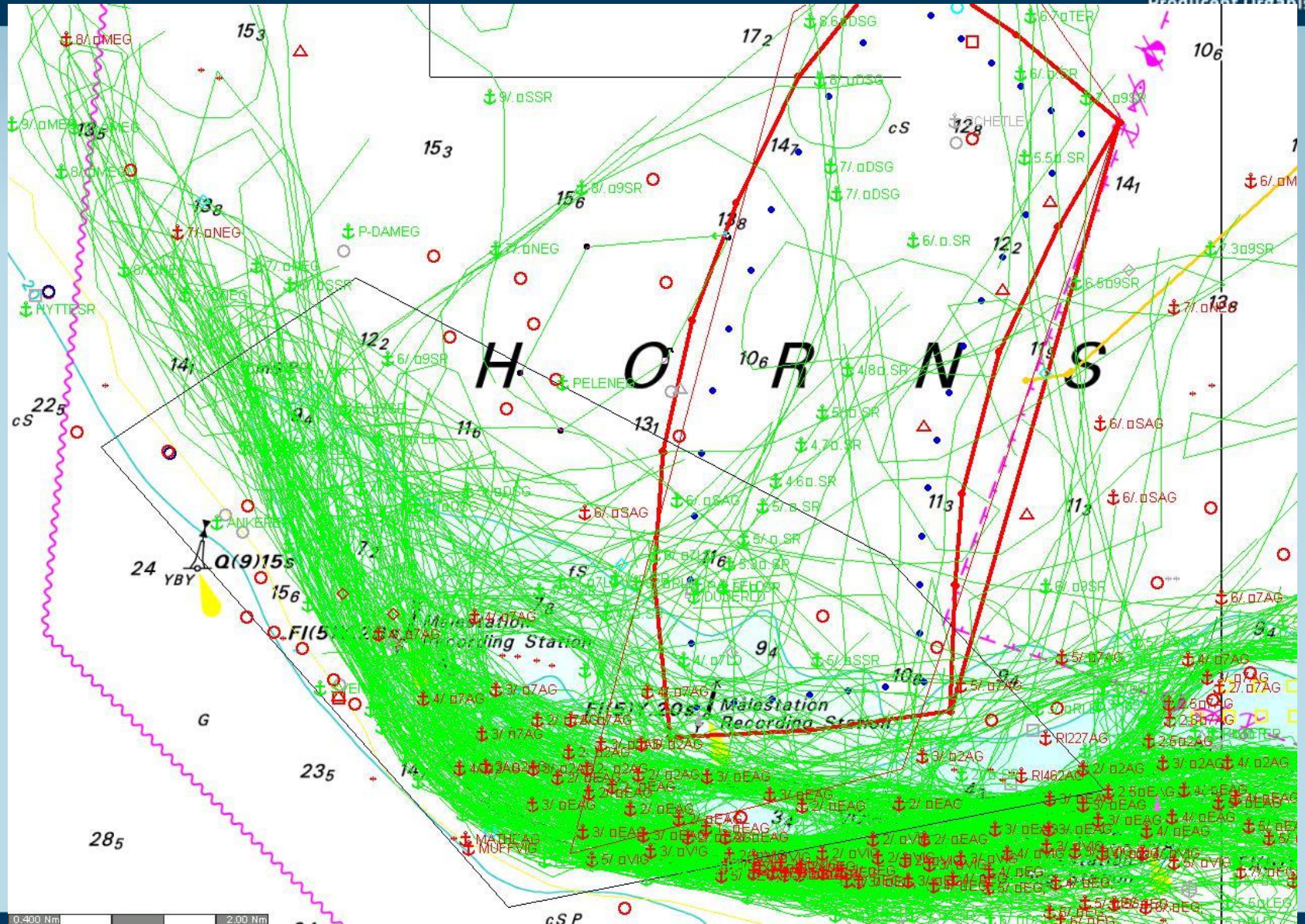
Compensation

- Landing values by the whole ICES square are used.
- Scaled down to fit the area of the wind farm.
- Landing values of the most important species of the area are used.
- Evaluation - if the area of the wind farm is better or worse than the main area. Species are then multiplied by the factor.

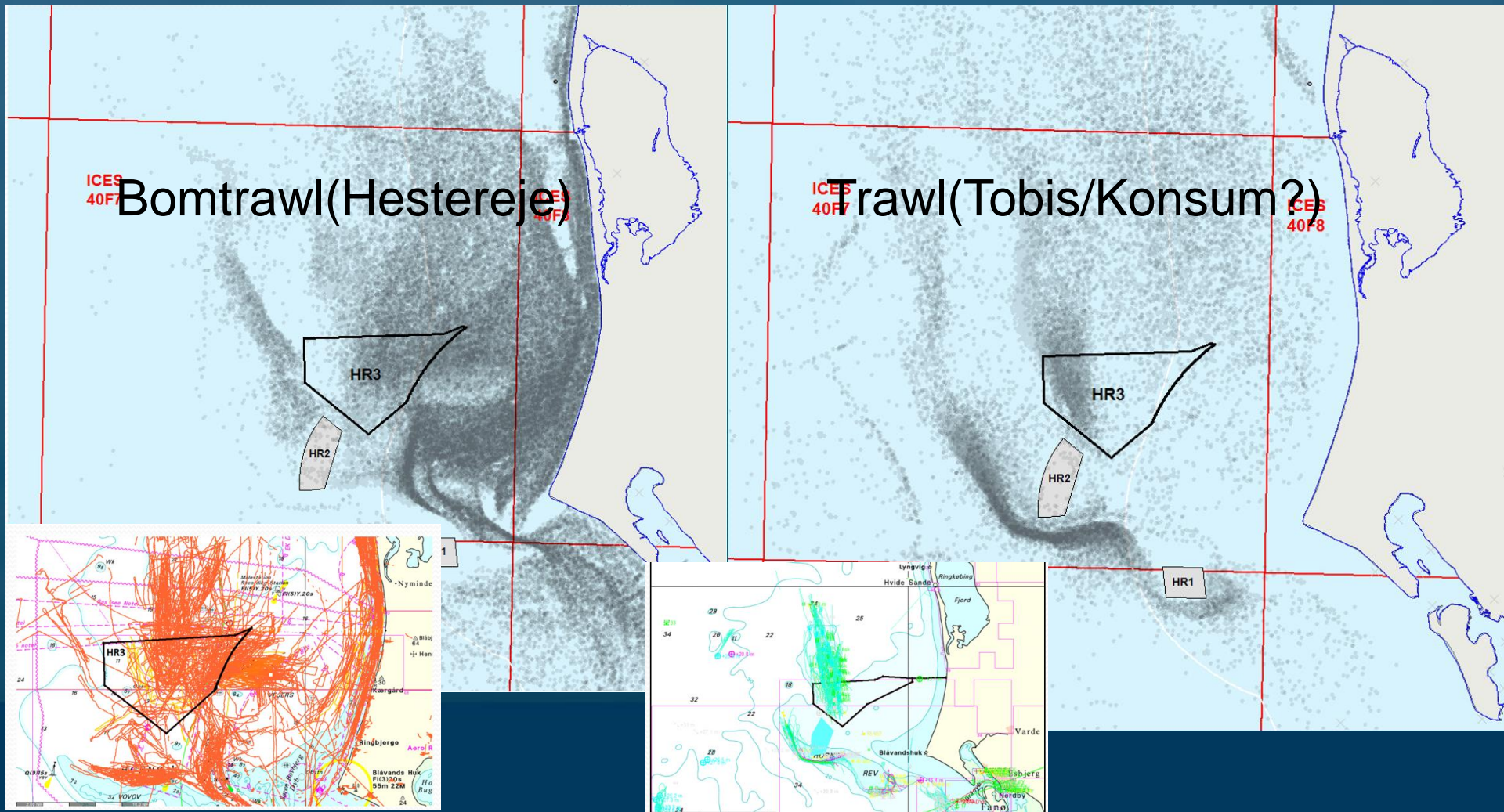








VMS data for shimp fishing and sandeel fishing respectively.
Provides a good picture of where the fishing is specifically driven.
Also available for plotter data from fishermen.



Wind farms and fish

- In Denmark, most of the early wind farms have been placed in areas with very little fishing.
- Rising conflicts as wind turbines are set to an ever greater depth of water
- Some of the earliest wind farms are entirely closed to fishery, while all newer (2010) are open for fishery with static gear.
- Today, not much fishing occurs inside wind farms in Denmark, because of harder navigation compared to outside and low fish stocks inside most farms.

Wind farms and fish

- New structures in the areas of wind farms, create new habitats and attract new fish species to the areas.
- In the future, new specialized fisheries will develop inside the wind farms.

Future legislation

The Danish Fishermen PO believes that it will soon be allowed to conduct fishing over the cables within danish wind farms.

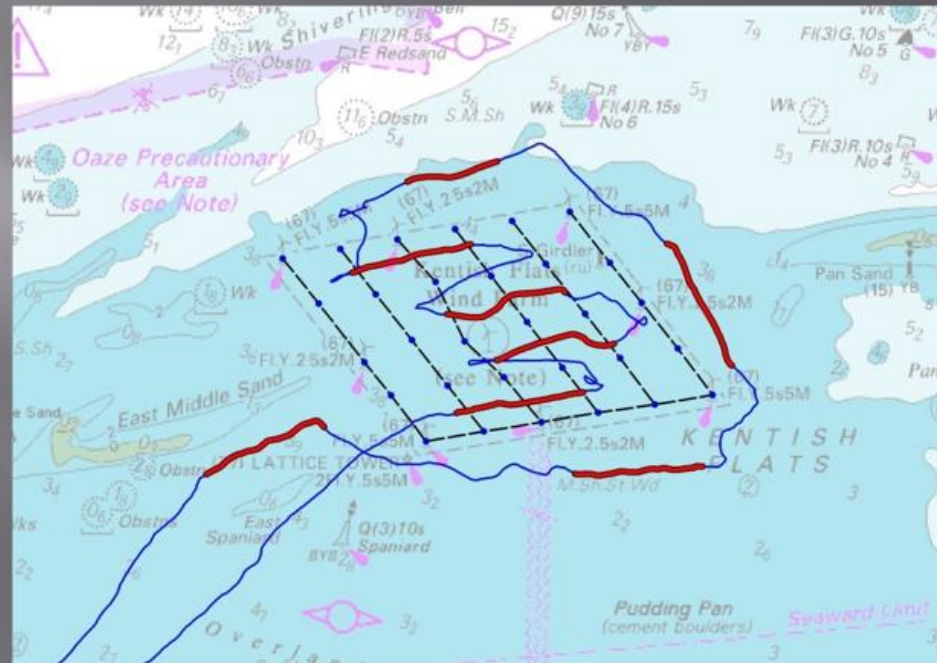
Wind farm design and new techniques to put the cables down will make this possible.

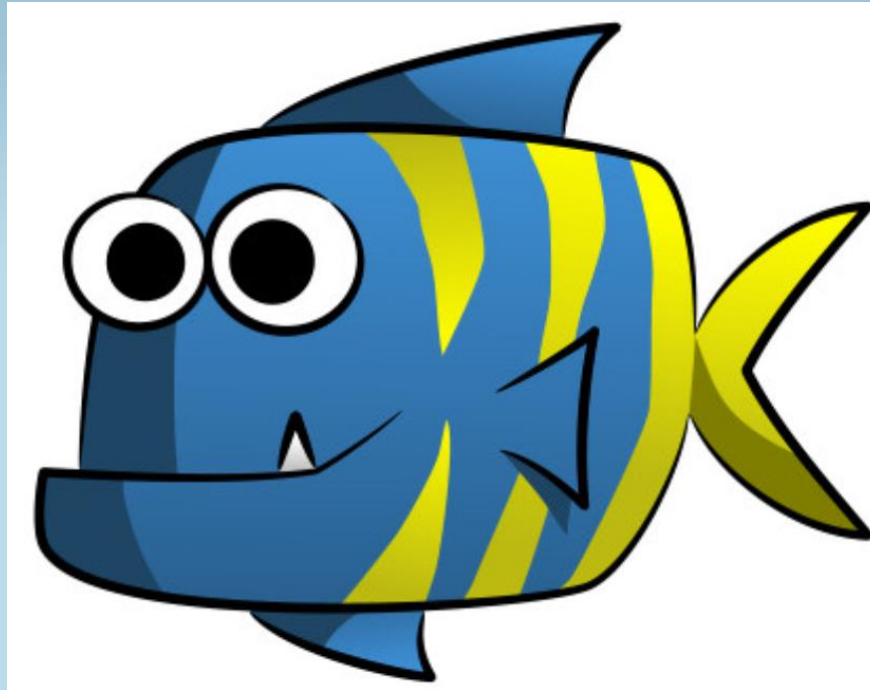
Otter Trawl Tow Tracks – Kentish Flats Wind Farm

This figure shows the tracks the vessel took during the August survey (blue Lines). Actual trawl tows are highlighted as red lines.

Inter-array cables are shown as dark broken lines.

Tows were undertaken in the direction of the tide.





Thank you for your attention