

Bycatch issues in the ASCOBANS Area

*ACCOBAMS-ASCOBANS Joint Bycatch Working Group,
First Meeting (On-line), 10-12 February 2021*

Peter G.H. Evans

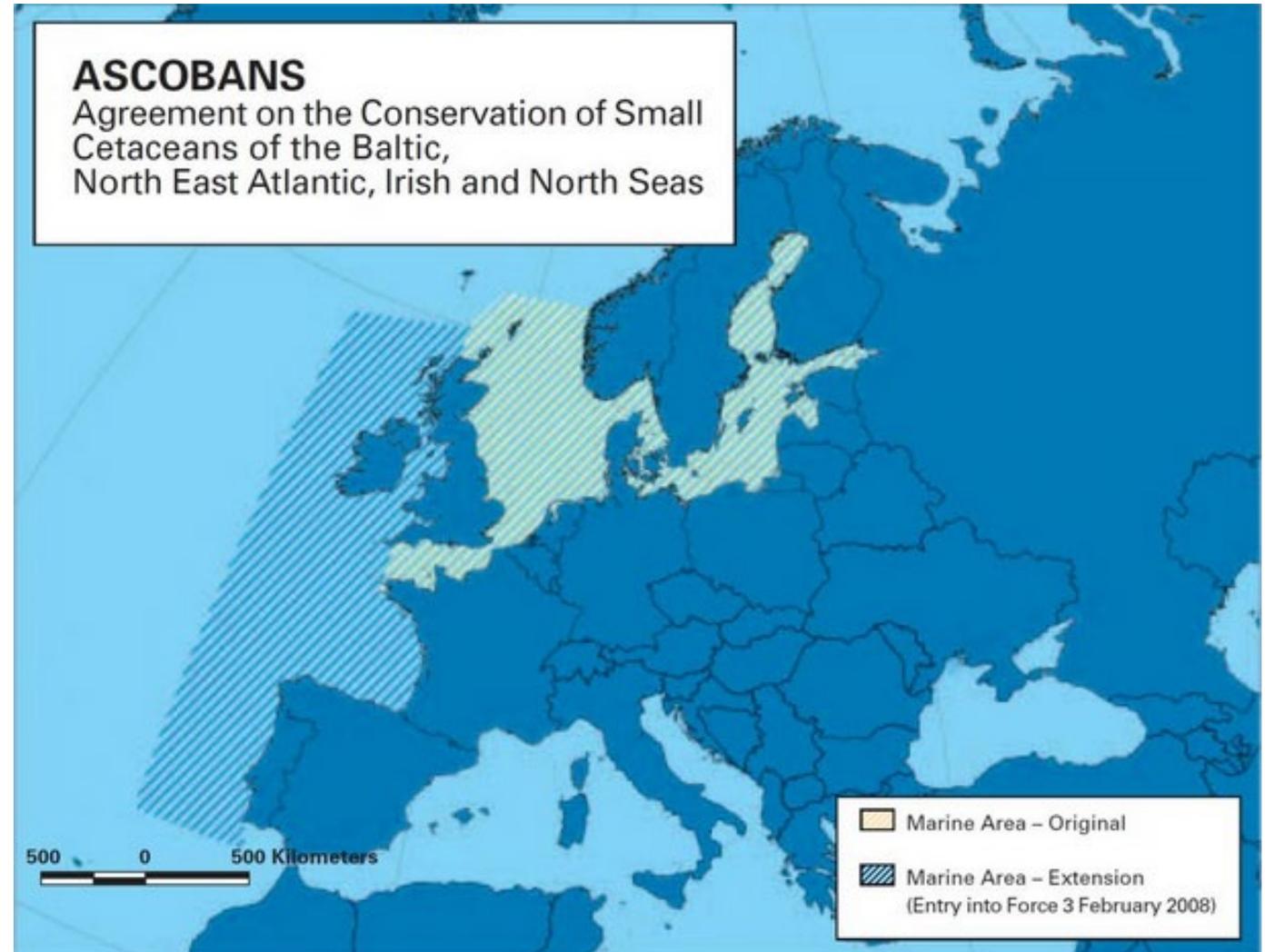
Co-Chair, JBWG ACCOBAMS-ASCOBANS

School of Ocean Sciences, Bangor University/Sea Watch Foundation, UK

What is ASCOBANS?



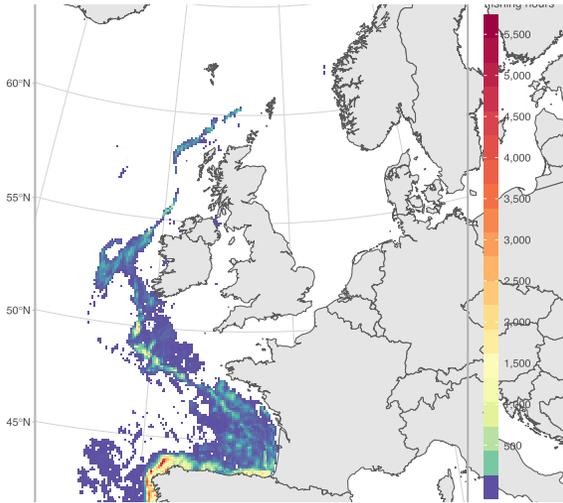
- Legally-binding, international UN Agreement under the auspices of the Convention on Migratory Species (CMS)
- Available for signature in 1992, and entered into force in 1994
- 10 Parties
- 7 Non-Party Range States
- Covers any species, subspecies or population of toothed whales (*Odontoceti*) occurring in the Agreement Area (except sperm whale)



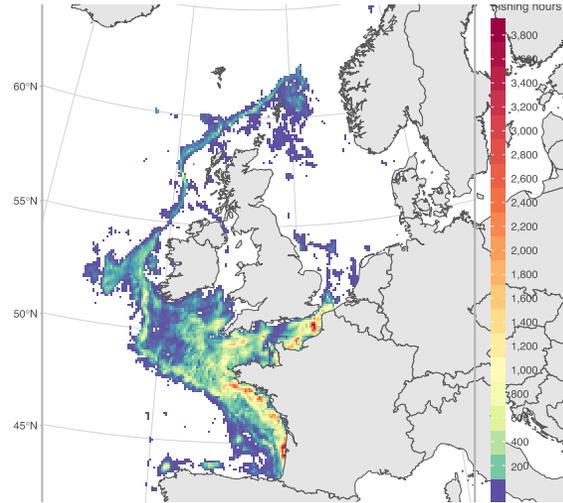
Fishing Effort by Country



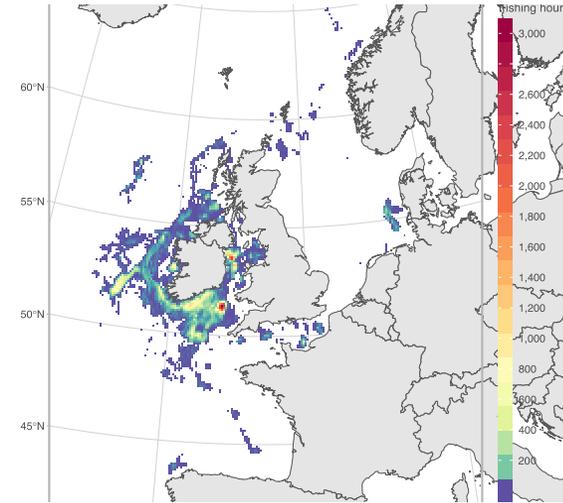
Spain



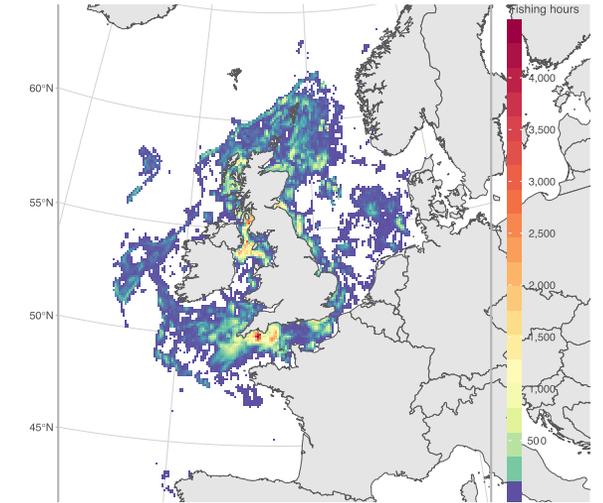
France



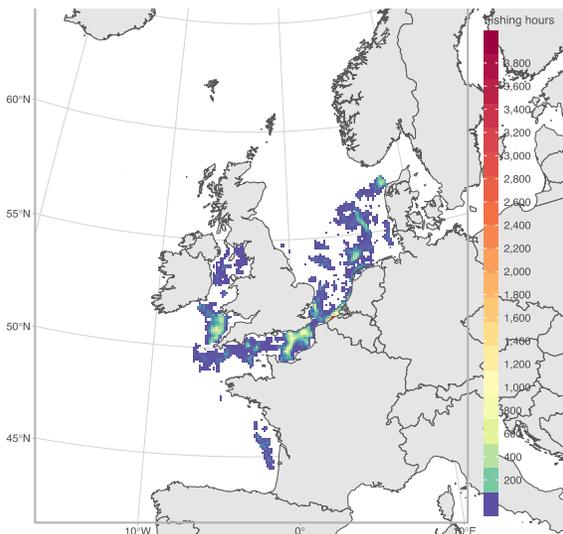
Ireland



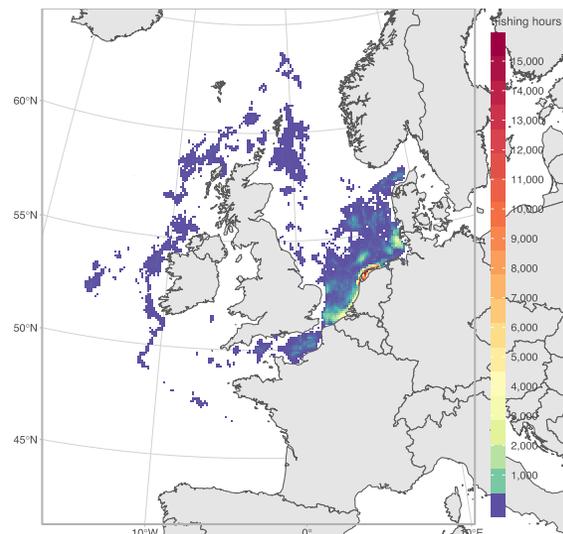
United Kingdom



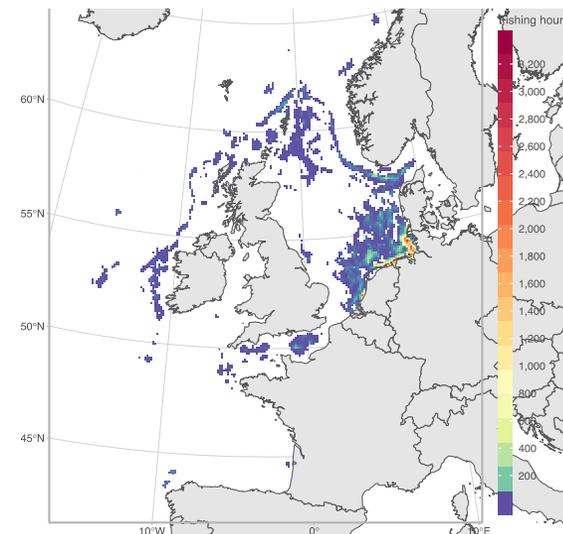
Belgium



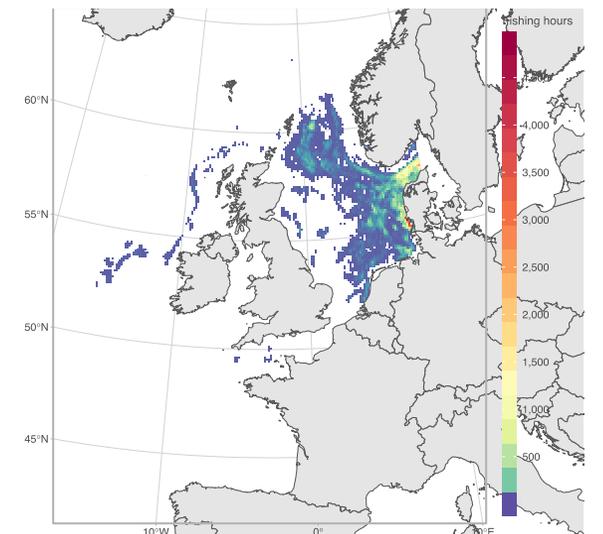
Netherlands



Germany



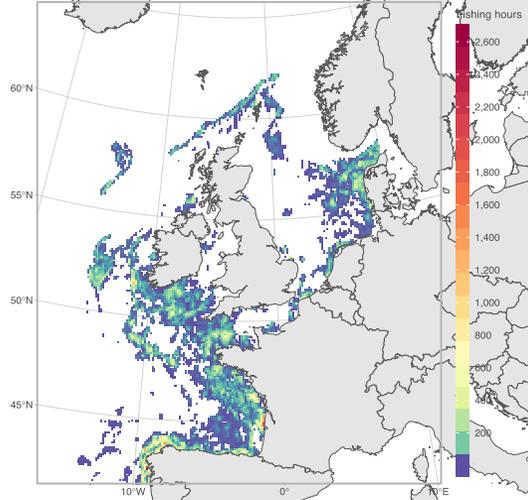
Denmark



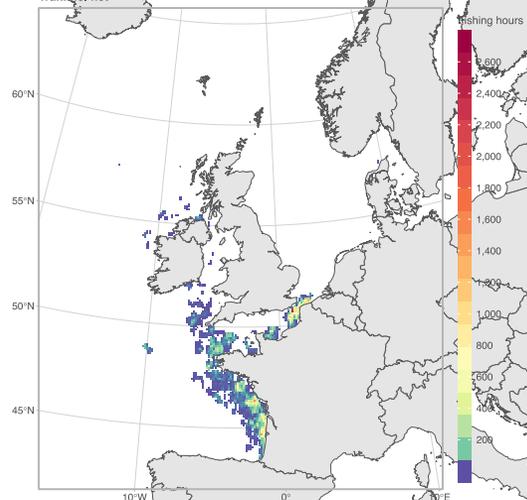
Fishing Effort by Gear Type



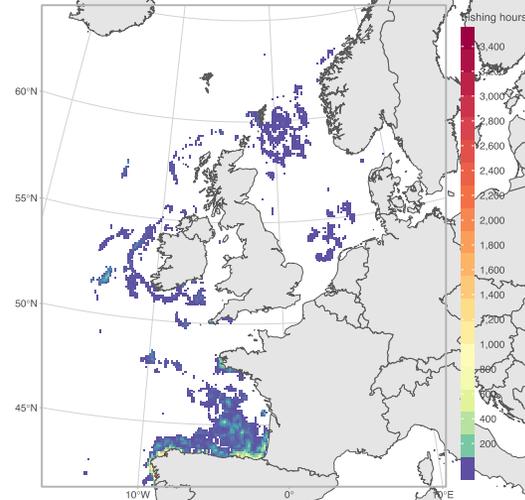
Gillnets (GNS, GNC, GTN)



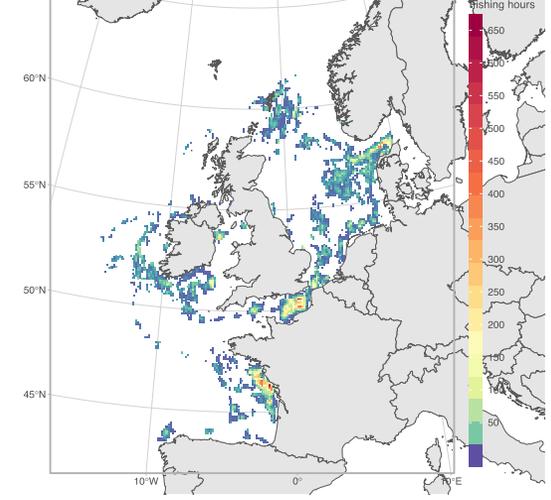
Trammel Nets (GTR)



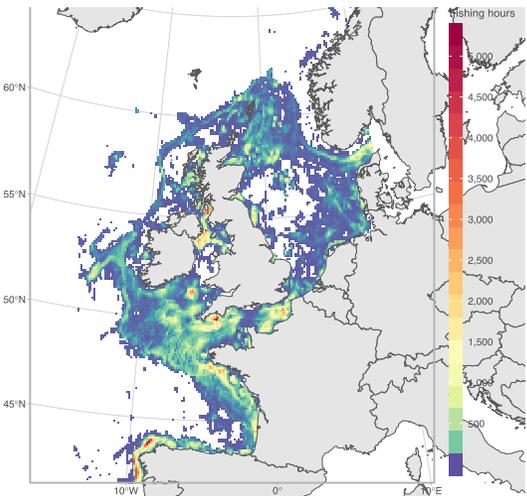
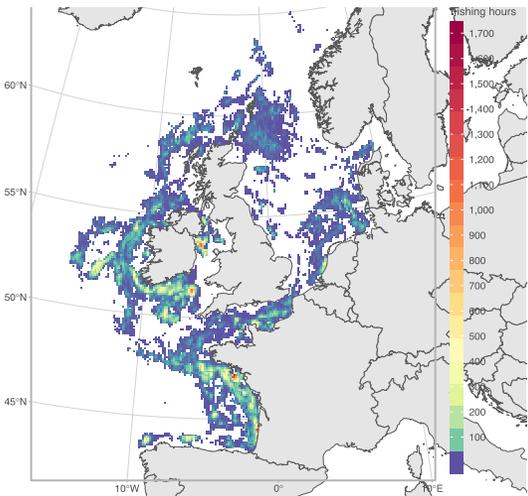
Purse Seines (PS, LA)



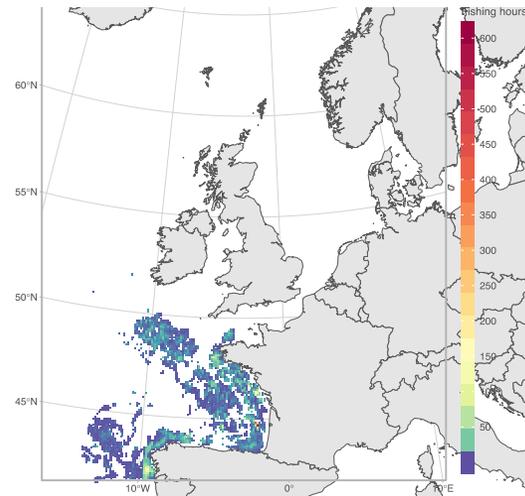
Demersal Seines (SDN, SPR, SSC)



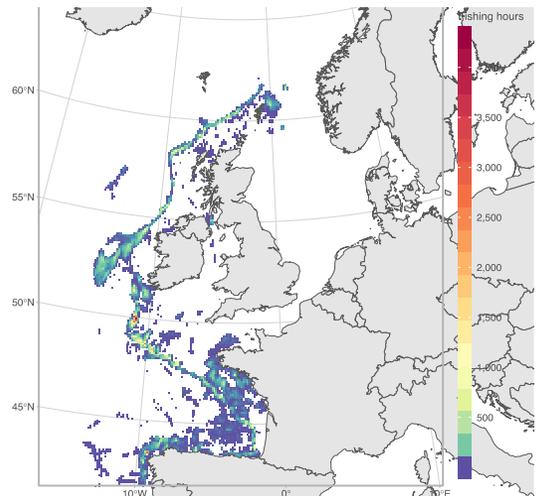
Pelagic Trawls (PTM, OTM) Demersal Trawls (PTB, OTB, OTT)



Drifting Longlines (LLD)



Set Longlines (LLS)



Cetaceans in the ASCOBANS Area

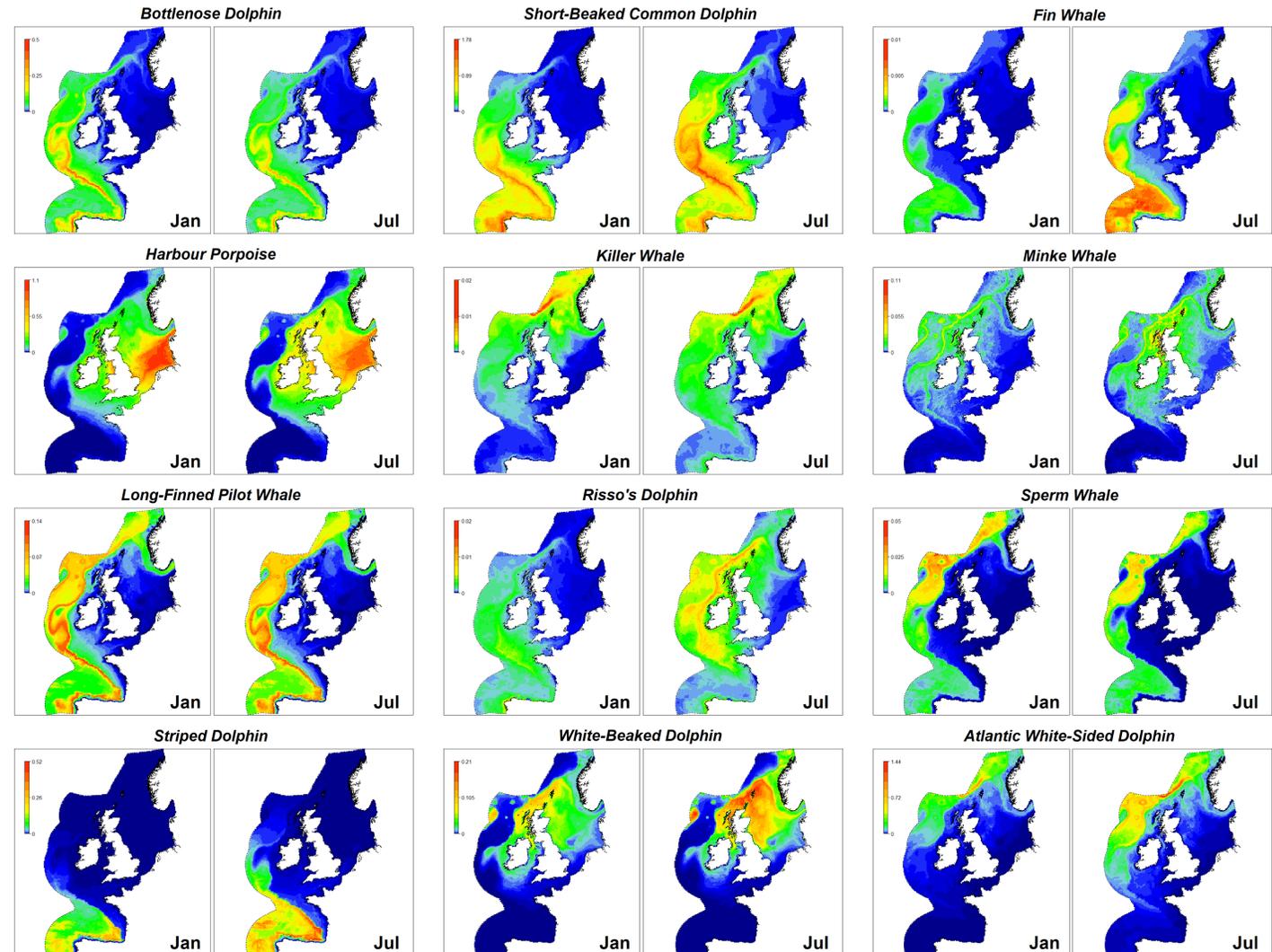
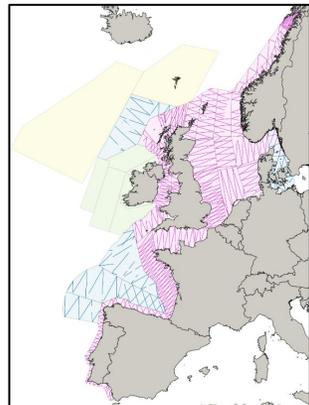


Species Abundance, Summer 2016

- Harbour Porpoise: 493,200
- Bottlenose Dolphin: 115,000
- Common Dolphin: 481,300
- Striped Dolphin: 372,300
- Common/Striped Dolphin: 177,800
- White-beaked Dolphin: 43,400
- White-sided Dolphin: 17,400
- Pilot Whale: 33,200
- Sperm Whale: 13,500
- Beaked Whales: 14,500
- Minke Whale 21,200
- Fin Whale: 18,200

Total: c. 1.8 million

Source: Hammond et al., 2017,
Rogan et al., 2017

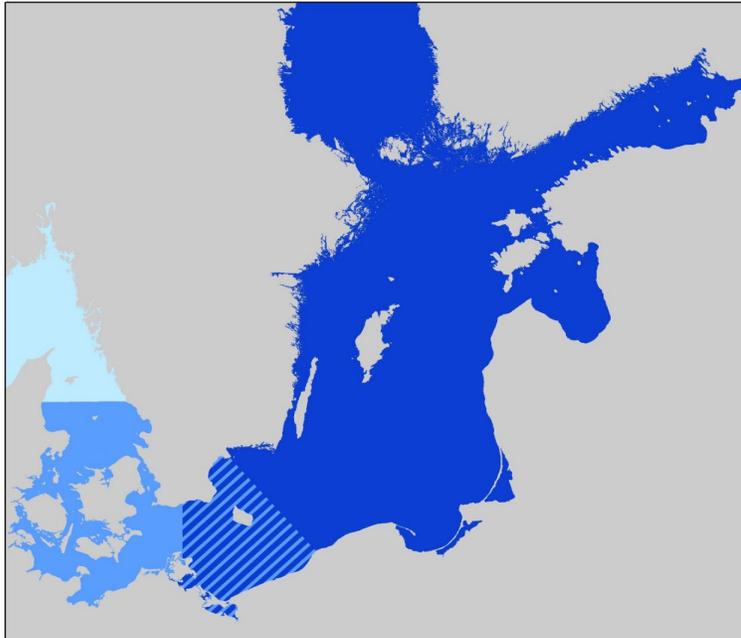


Source: Waggitt et al. (2020)

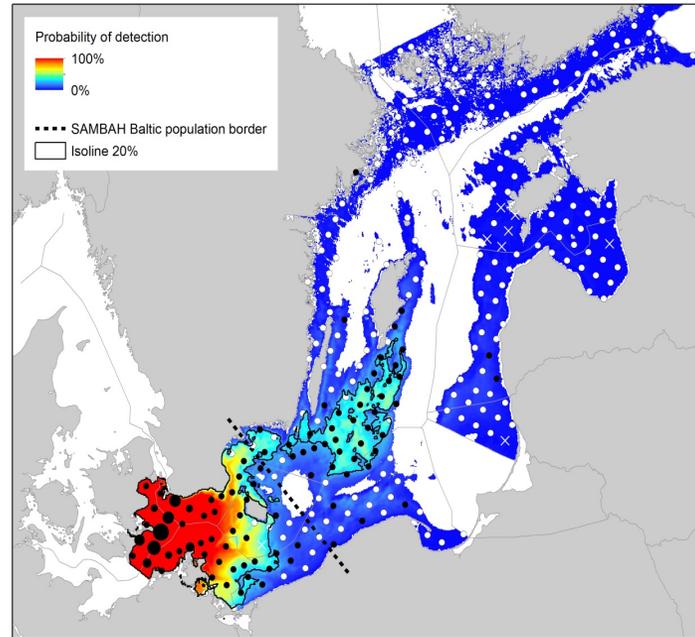
Harbour Porpoises in the Baltic



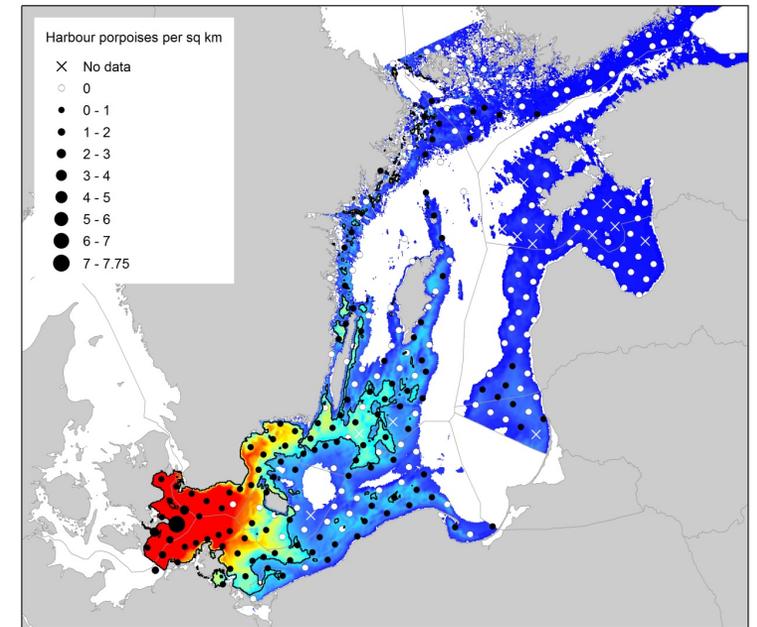
Population Structure



Summer



Winter



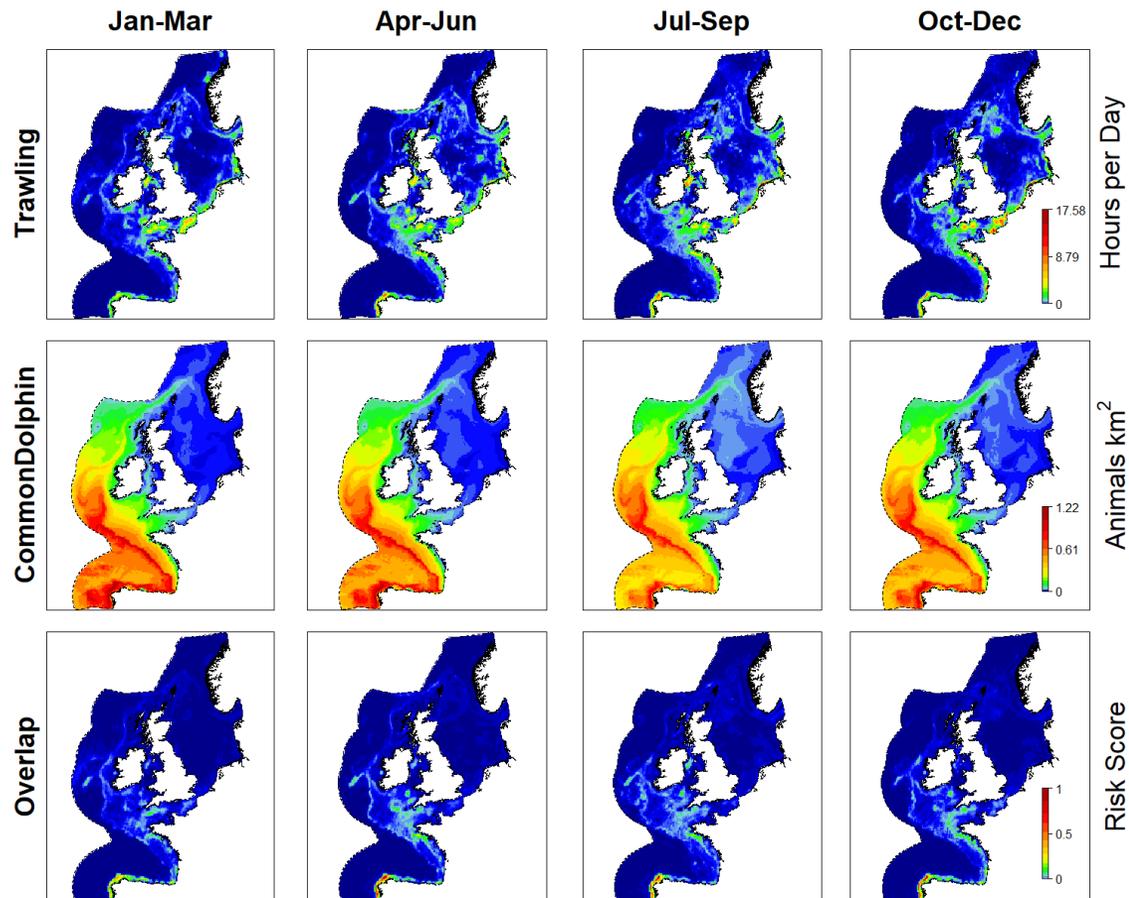
- Baltic population genetically distinct from those in Inner Danish Waters
- Population estimated at c. 500 individuals
- Main anthropogenic threat is bycatch from set gillnets (incl. semi-driftnets)

Source: Sambah Project, 2016; Carlén et al., 2018

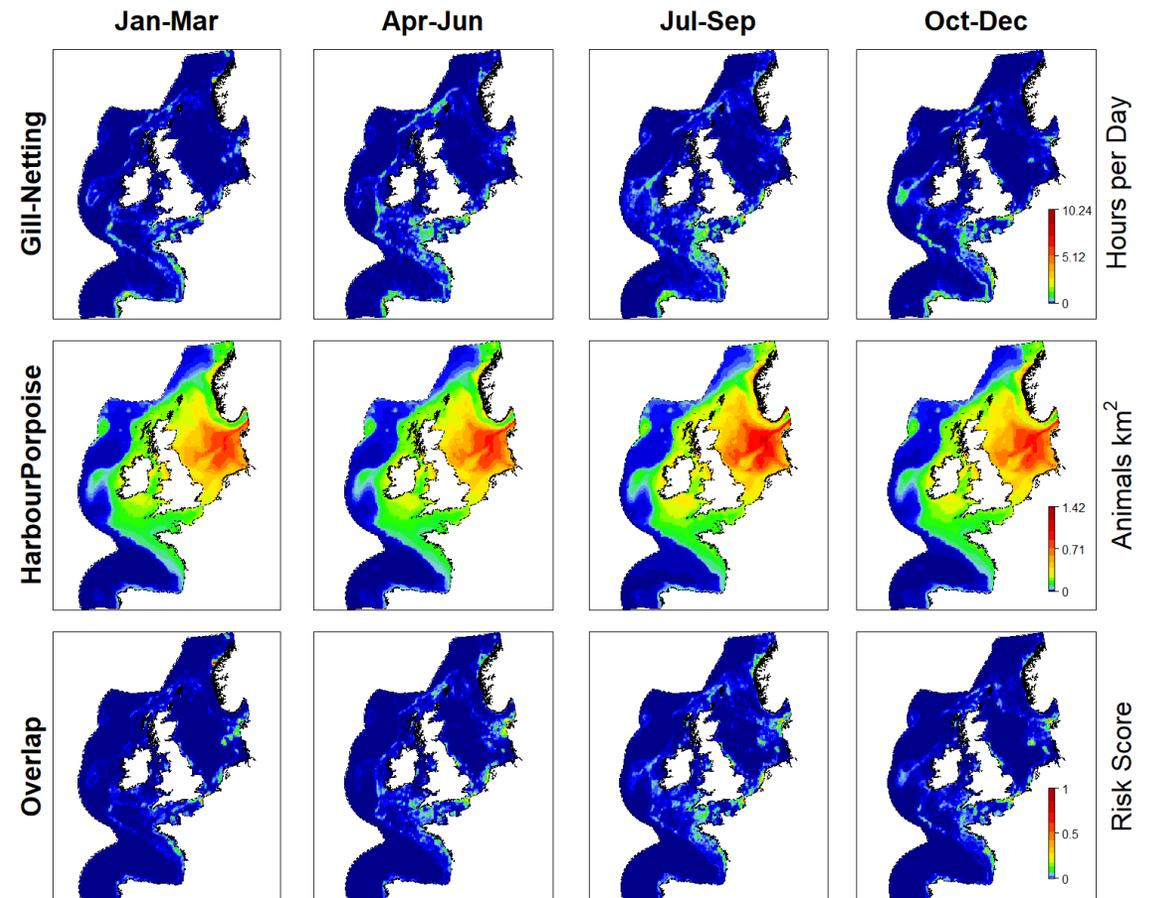
Bycatch Risk Mapping



Common Dolphins & Trawls



Harbour Porpoises & Static Gear



The Bycatch Problem

Bottom set gill nets & tangle nets

- Harbour porpoise & Common dolphin

Pelagic trawls

- Common and striped dolphins

Semi-Driftnets

- Harbour porpoise

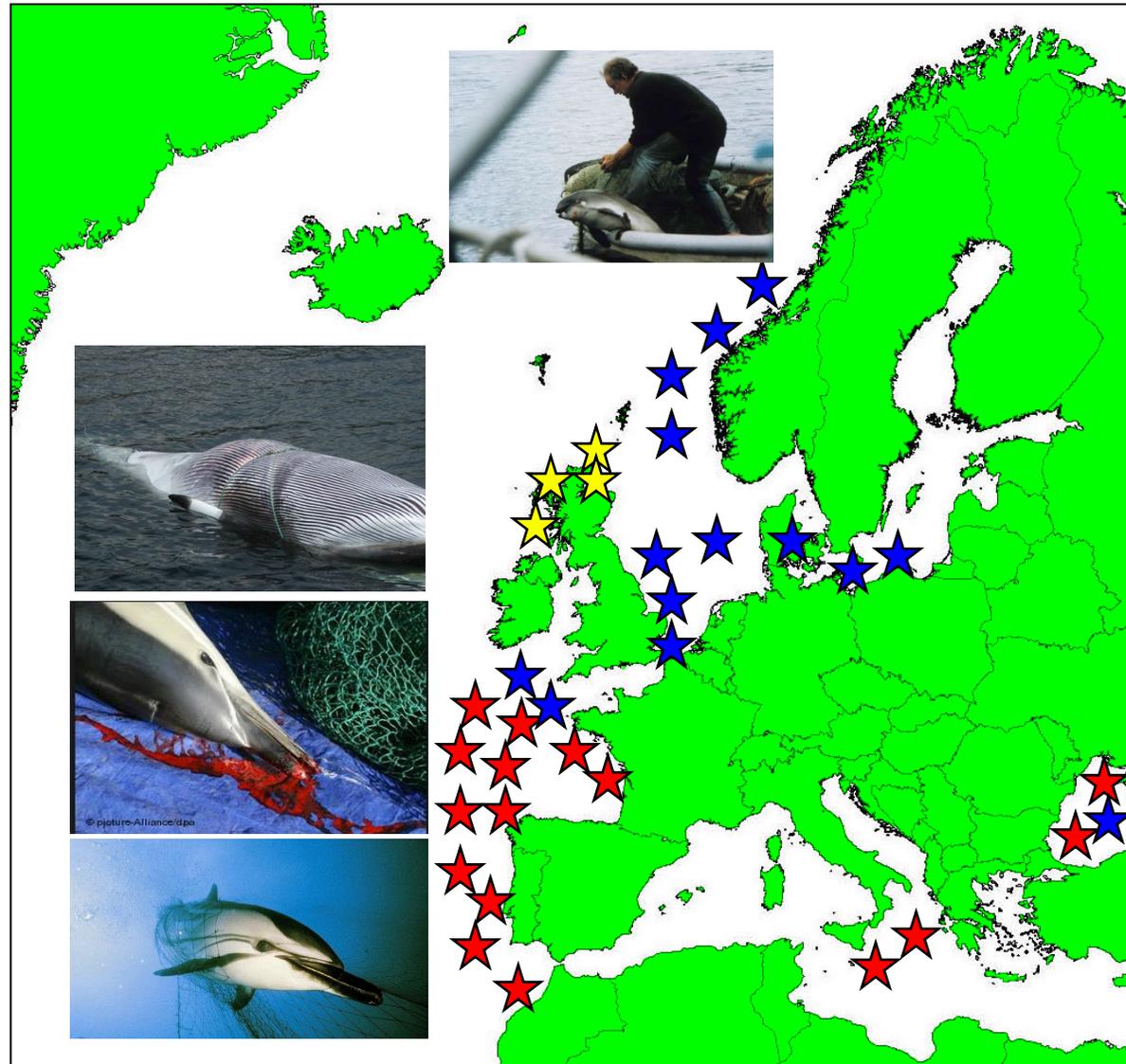
Creel lines, ghost netting

- Minke & humpback whales

★ Harbour Porpoise

★ Common / Striped Dolphin

★ Minke / Humpback Whale



Bycatch Monitoring



Methods used:

Independent observers (fisheries and marine mammal observers), remote electronic monitoring, logbooks, questionnaires, strandings

Deficiencies:

- insufficient sampling (small vessels, reluctance by fishers to report bycatch, take onboard observers or REM without incentives, lack of funding, differences in methods & reporting formats (need for standardisation))
- Measures of fishing effort inadequate (need for net lengths, soak times, areas swept **rather than** days at sea)
- Inappropriate spatial and temporal scales
- Inaccurate species identifications
- Need to link DCF with non-EU fishing fleets in European waters with common logbook format & data standards



Bycatch Mitigation



- **Acoustic Deterrent Devices (ADDs)** Pingers in gillnet fisheries (Reg. 812/2004: wreck net & tangle net fisheries; potential interactive ADDs in pelagic trawls)

Problems: operational failure, durability, cost, practicality, health & safety issues, enforcement, habituation vs habitat exclusion, not mandatory for small vessel (12m or less) fisheries

- **Excluder Devices** -Separation grids (rigid grids, rope & tunnel barriers, guiding panels, escape panels) in pair trawl fisheries

Problems: most devices ineffective (20% reduction at best), positioning is critical, catch reductions, handling difficulties in big pelagic trawls

- **Gear Modification** - Changes in net type, acoustically reflective nets, floating head ropes, weak links, ropeless gears

- **Effort Management:** Fishery closures, “No Take” zones, quotas

