

Short overview of the Swedish fisheries and climate change challenges

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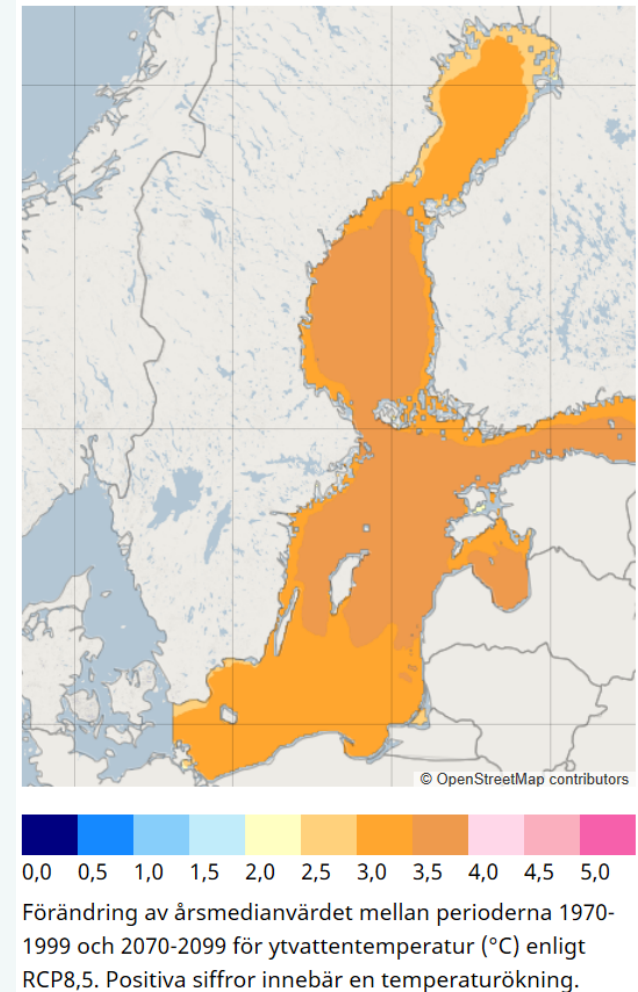
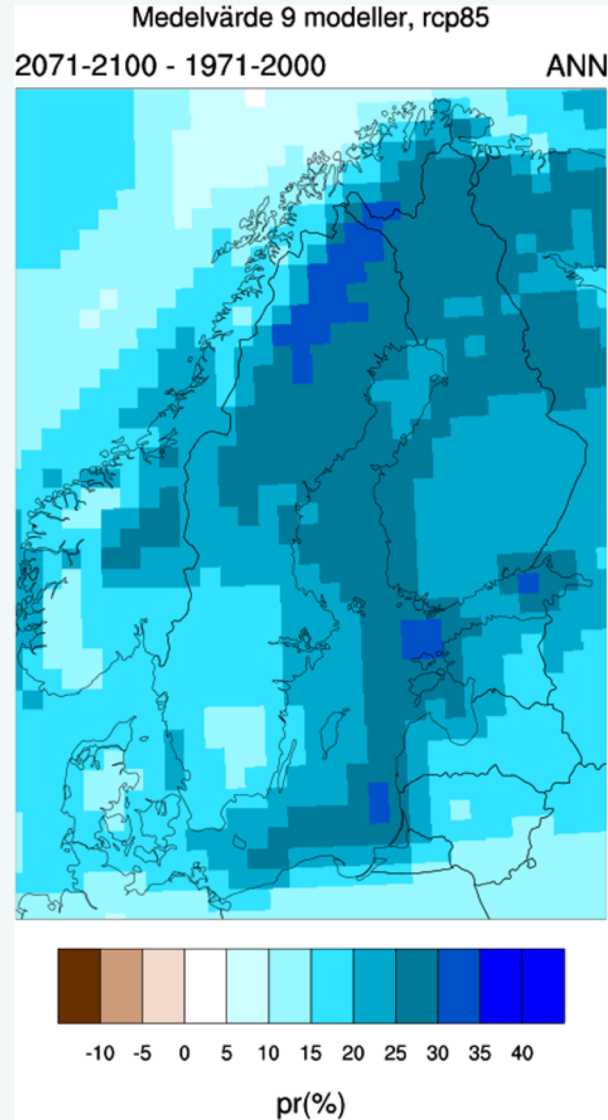
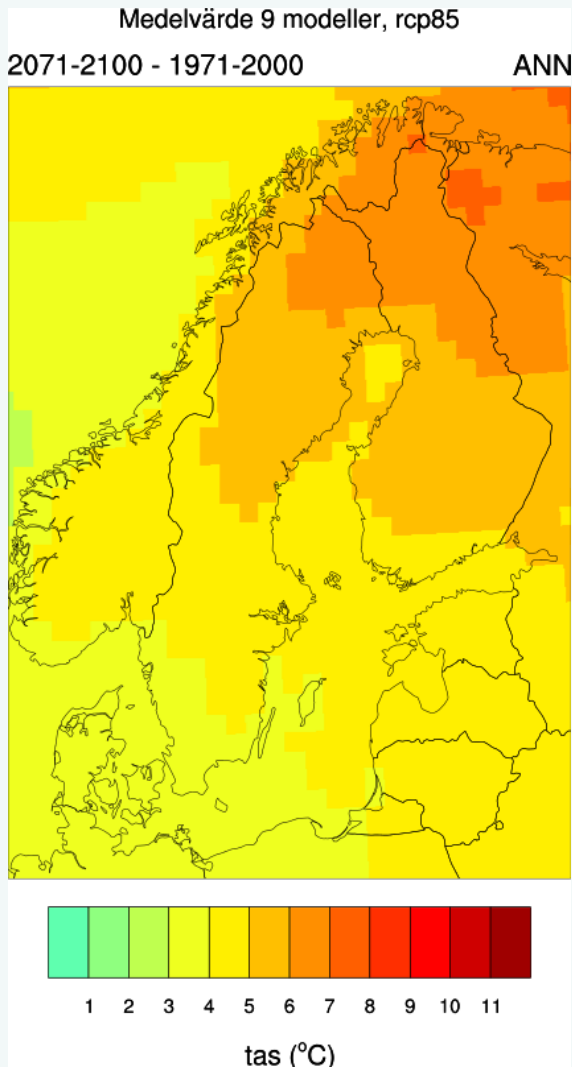
NMTT Workshop 9-10 December 2021

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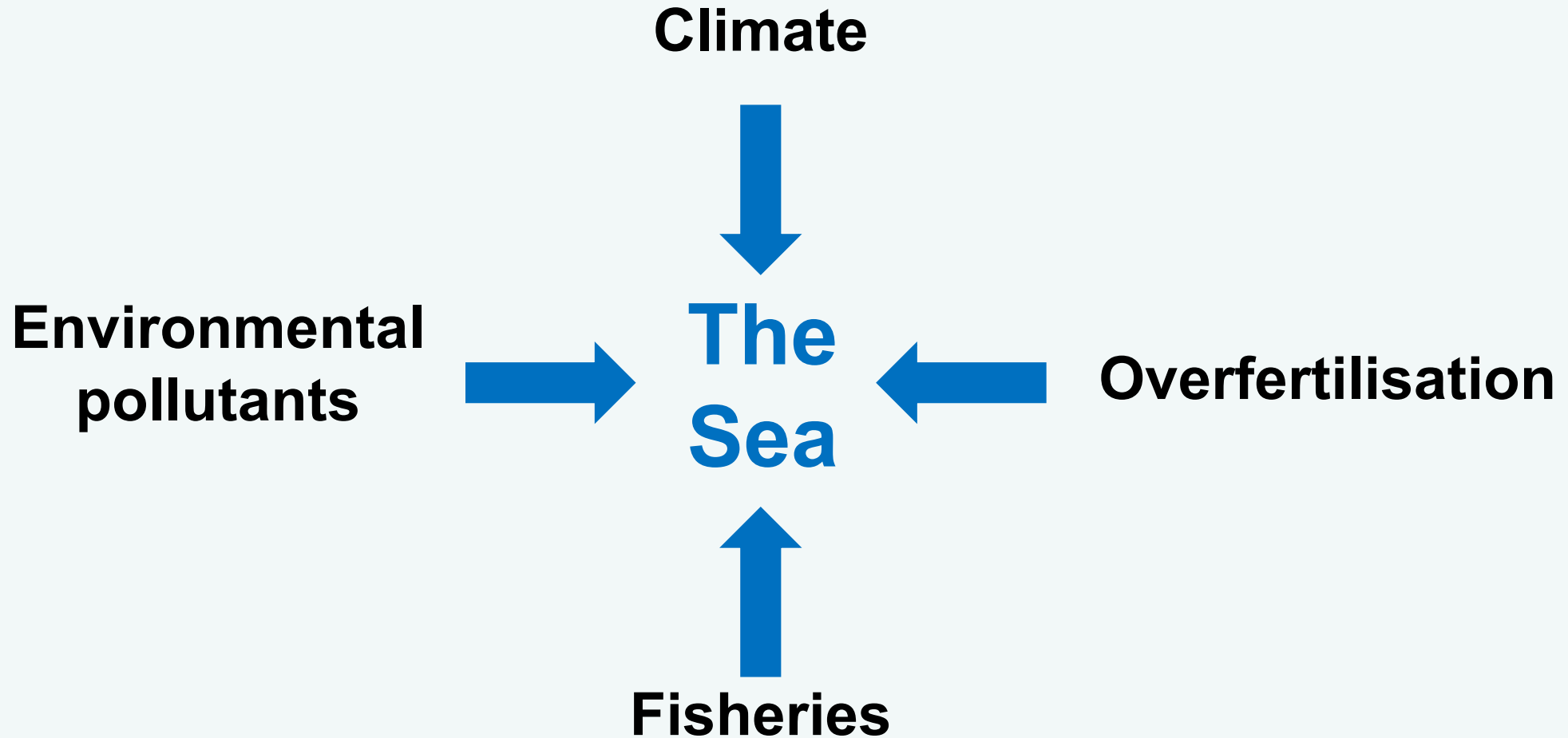
Climate change in Sweden – scenario 8.5

6 degrees higher air temperature (more/less in northern/southern Sweden)

3-4 degrees warmer in the Baltic sea (salinity 2 ‰ lower, less sea ice)

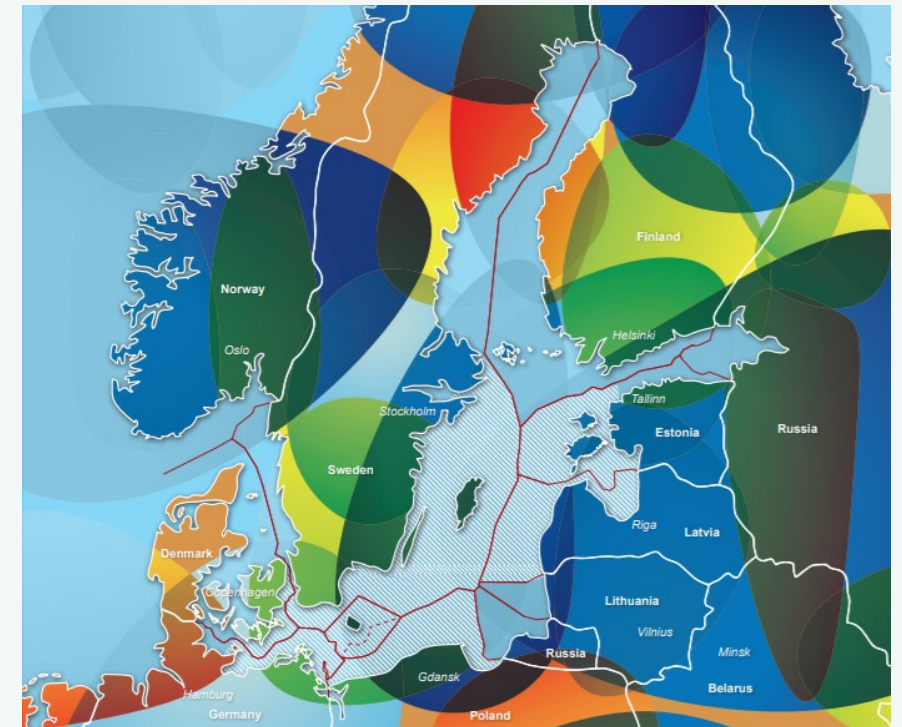


Pressures in the marine environment



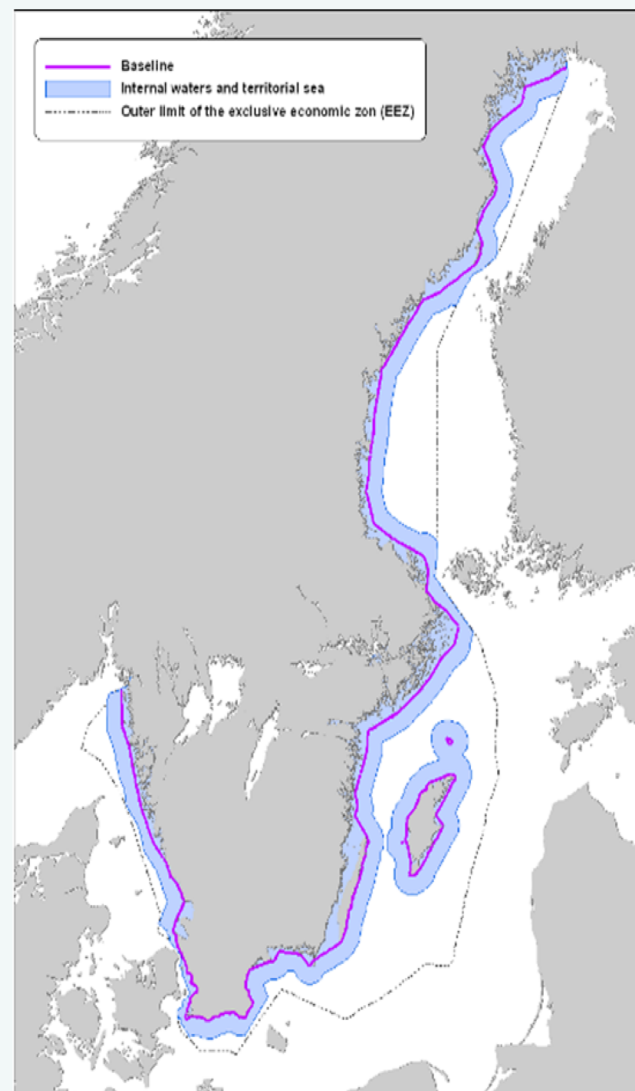
Marine planning

- » Swedish marine plans for West coast, Baltic Sea and Bothnian sea
- » Still not decided by swedish government
- » Include scenarios for the climate future and climate refuges (report 2017: 37) – include Ringed seal, Zostera, Blue mussel, Herring, Cod, Saduria, Fucus
- » New marine plan work will start in 2022
 - Ecosystembased management approach
 - Will include more marine protected areas
 - More areas for wind energy parks

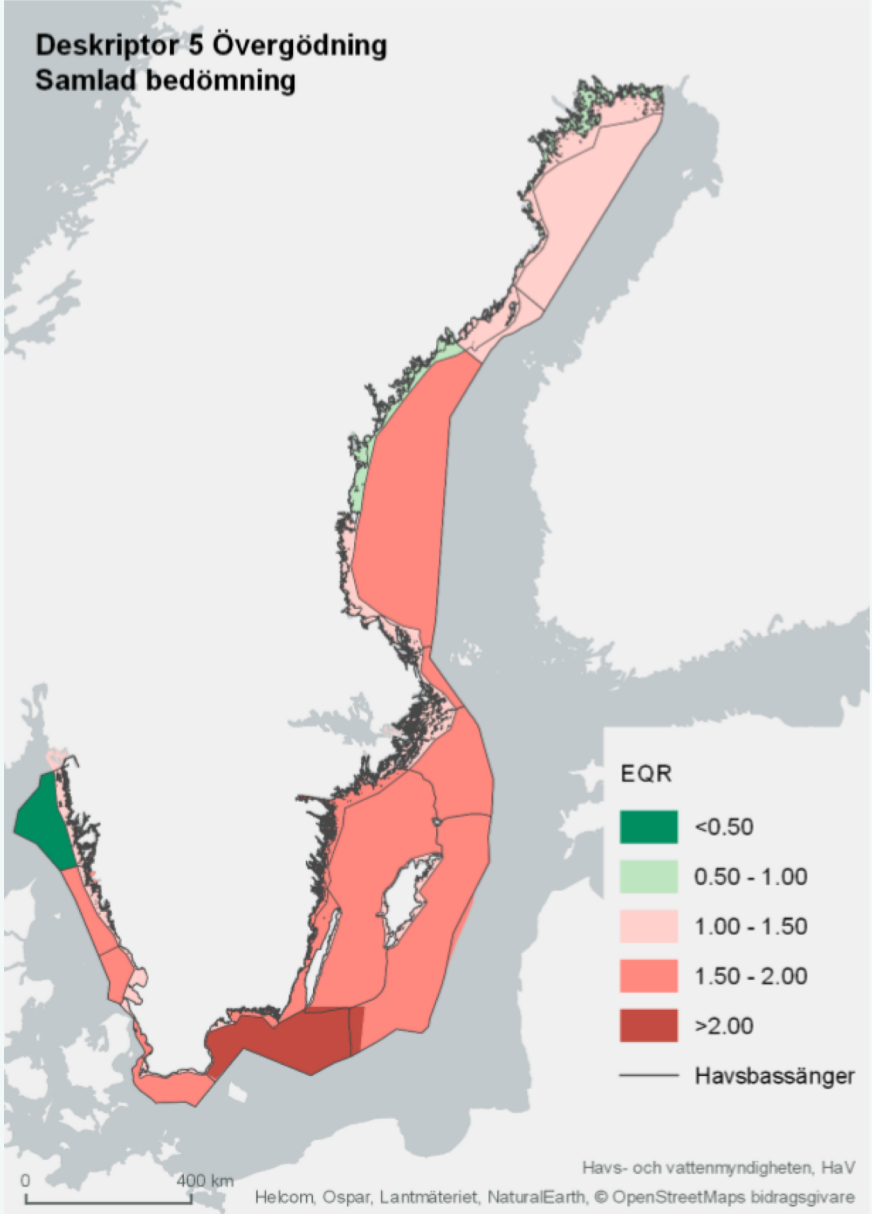


National fish management

- » 2400 km coastline, five interior lakes and 1000 waterways up to first definitive migration barrier
- » 100 fish species
- » 1.6 million fishers (professional and recreational)
- » Swedish fisheries:
 - The North sea and the Swedish west coast, including Kattegatt and Skagerack
 - The Baltic sea, including the Öresund strait
 - Interior waters: Lake Vänern, Vättern, Hjälmaren and Mälaren

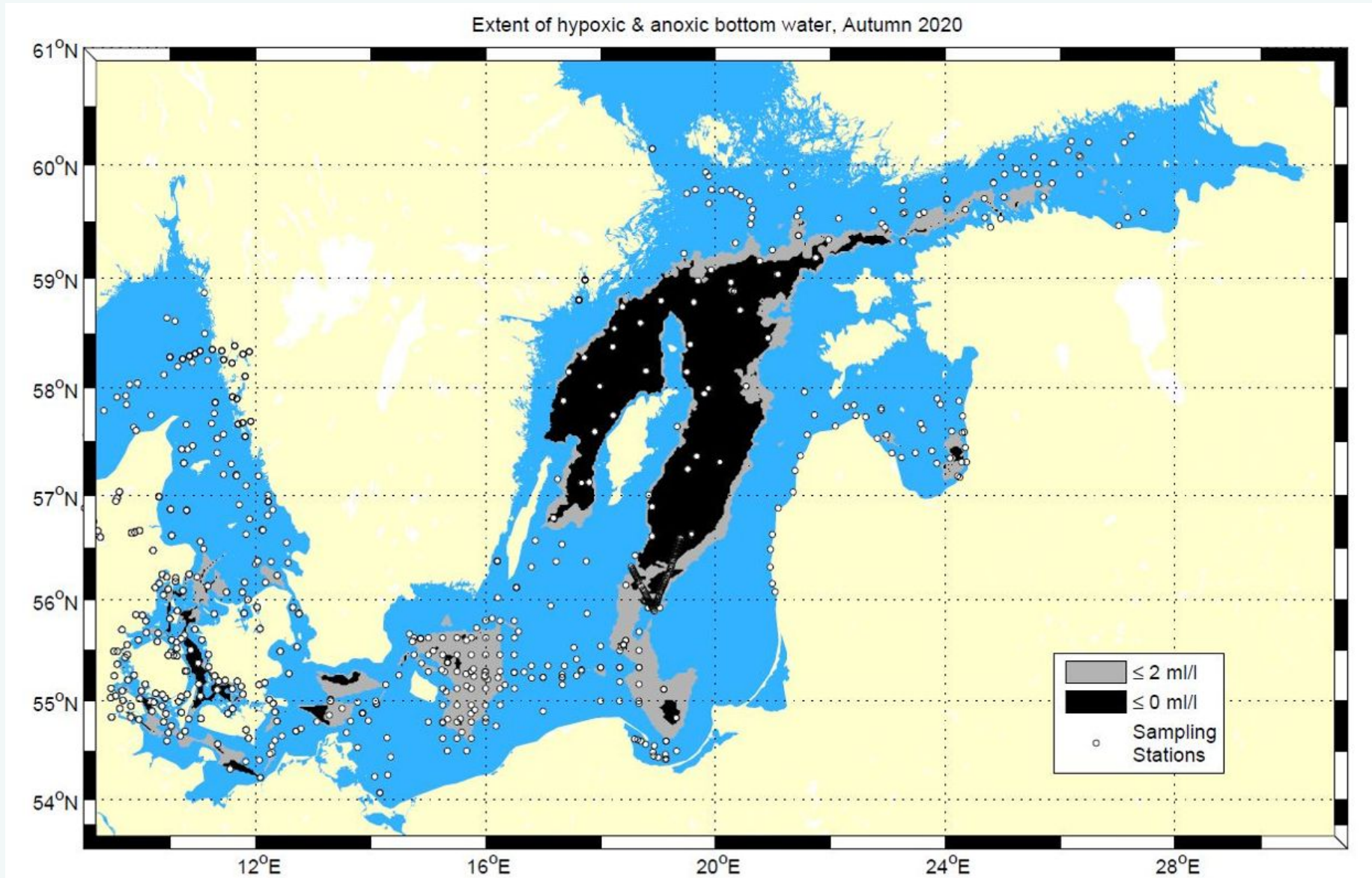


MFSD Descriptor 5 – overfertilisation in marine waters



Hypoxic and anoxic bottom water in the Baltic sea

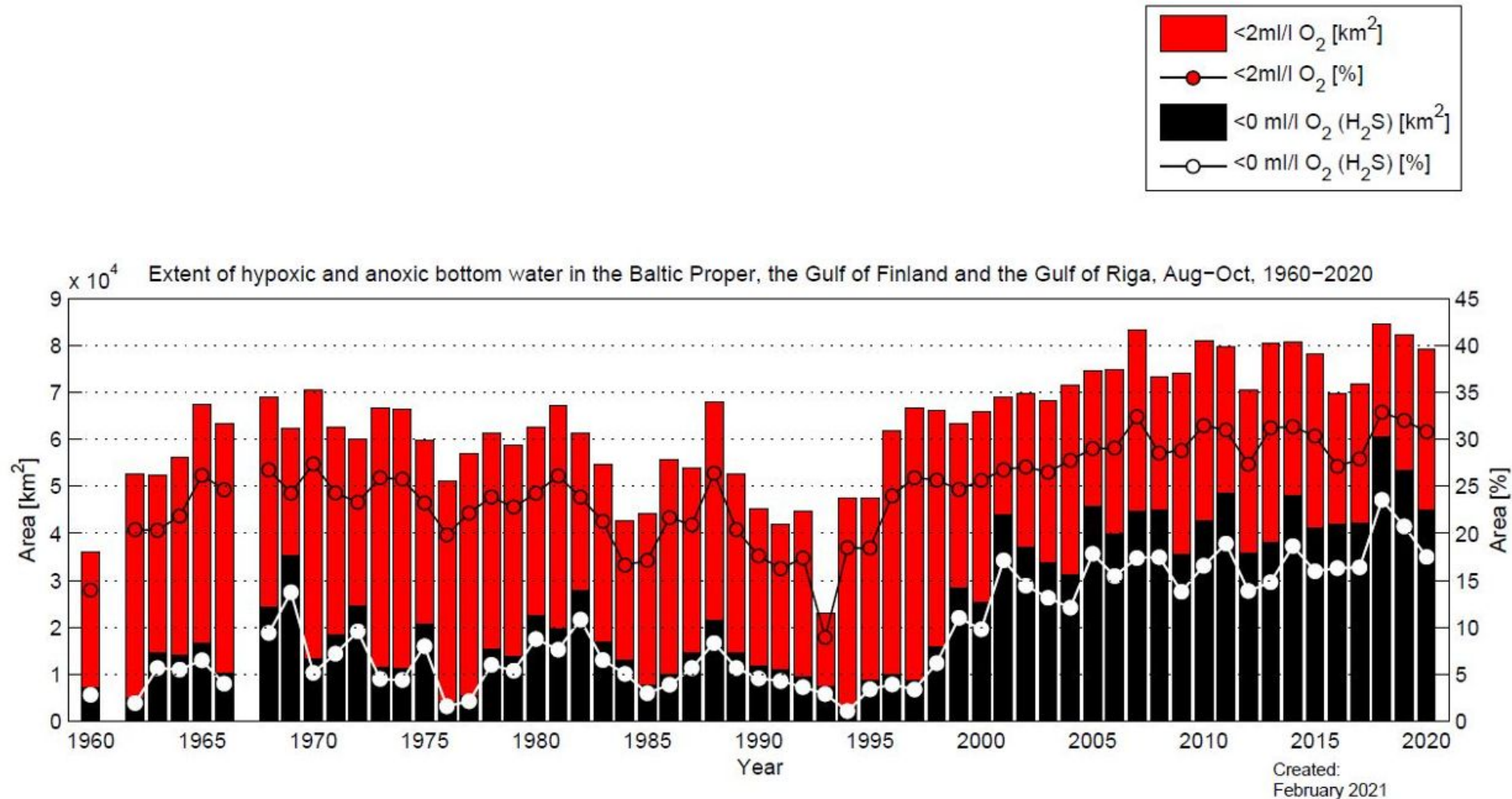
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Source: SMHI 2021

Development of hypoxic and anoxic bottom water in the Baltic sea 1960-2020



Major swedish fisheries in North sea and West coast

- » Cod
 - » Herring
 - » Sprat
 - » Shrimp
 - » Nephrops
 - » Mackerell
- » Only adaptation measures.
 - » However, major changes taking place in the Cod and Herring populations throughout the North sea – climate effects or normal dynamics or both?
 - » Expect more southern species to migrate in; anchovy, tuna etc
 - » Coastal fisheries very reduced already
 - » Expect more overfertilisation measures
 - » River restorations

Major fisheries in the Baltic sea including Öresund

- » Cod
- » Herring
- » Sprat
- » Flounder/Plaice
- » Salmon
- » **Only adaptive measures:** overfertilisation, fishing pressures, environmental pollutants, better knowledge
- » Major shifts in the Baltic sea already in plankton communities
- » Cod fisheries stopped since 2019
- » Herring in Western and Eastern Baltic decreasing
- » Sprat
- » Salmon – national/regional/local management of rivers – expect more complicated dynamics
- » Gear development. Politics want more fisheries for consumption



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