



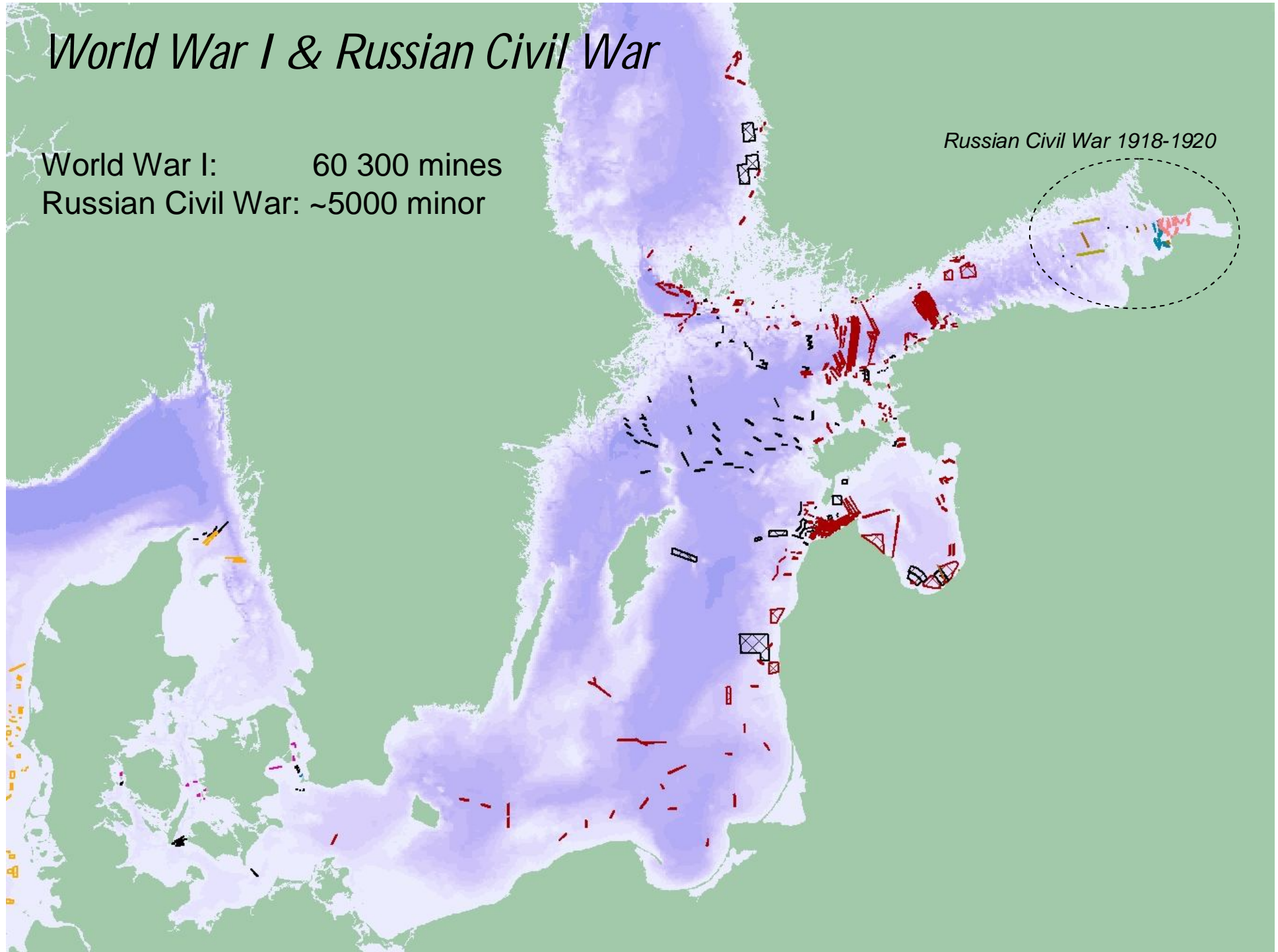
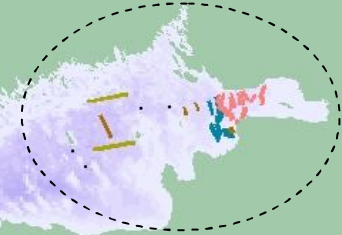
*The Age of Wars  
1914-1945*

*"A sunken mine is a disposed mine"*

# *World War I & Russian Civil War*

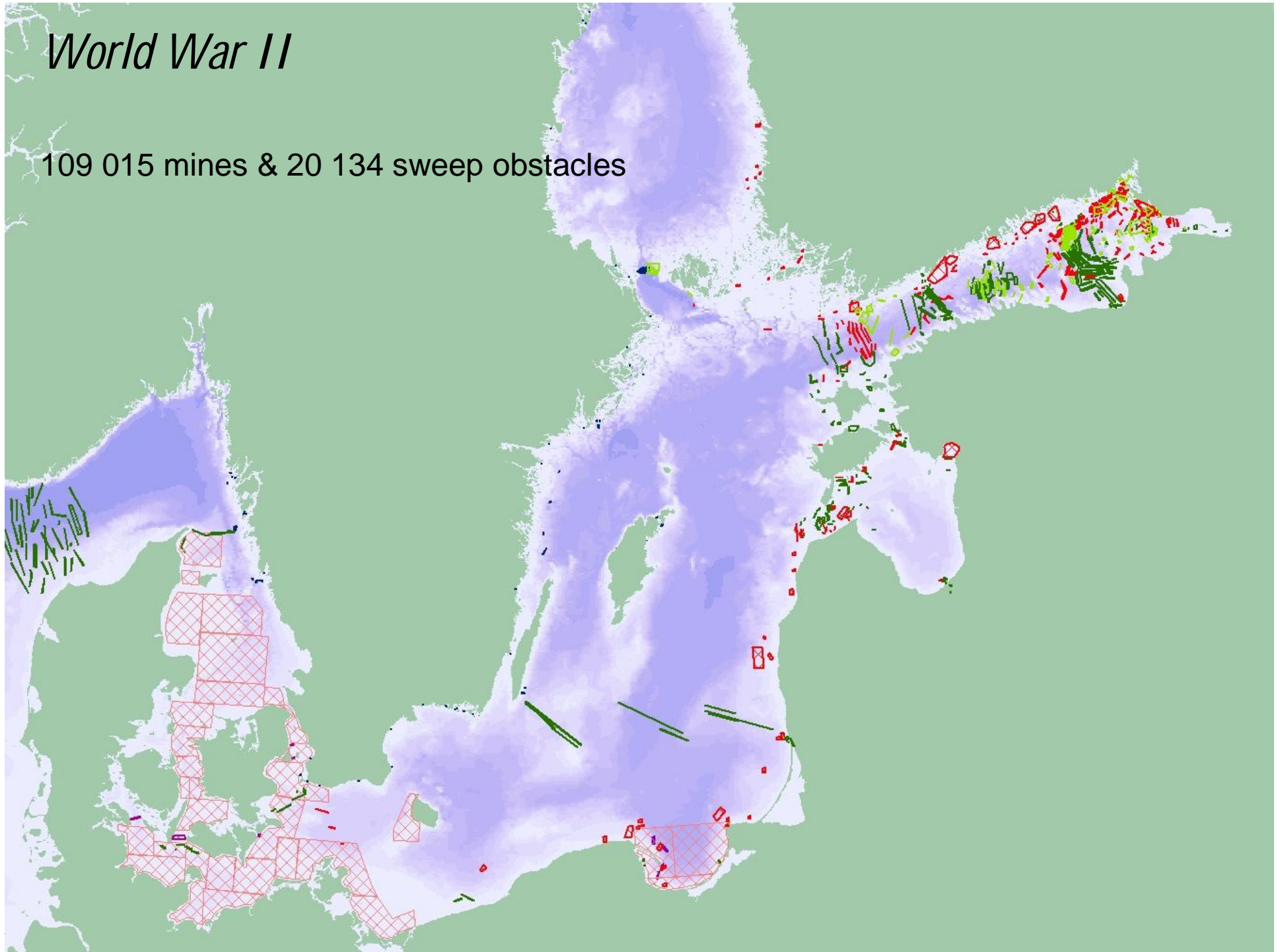
World War I: 60 300 mines  
Russian Civil War: ~5000 minor

*Russian Civil War 1918-1920*



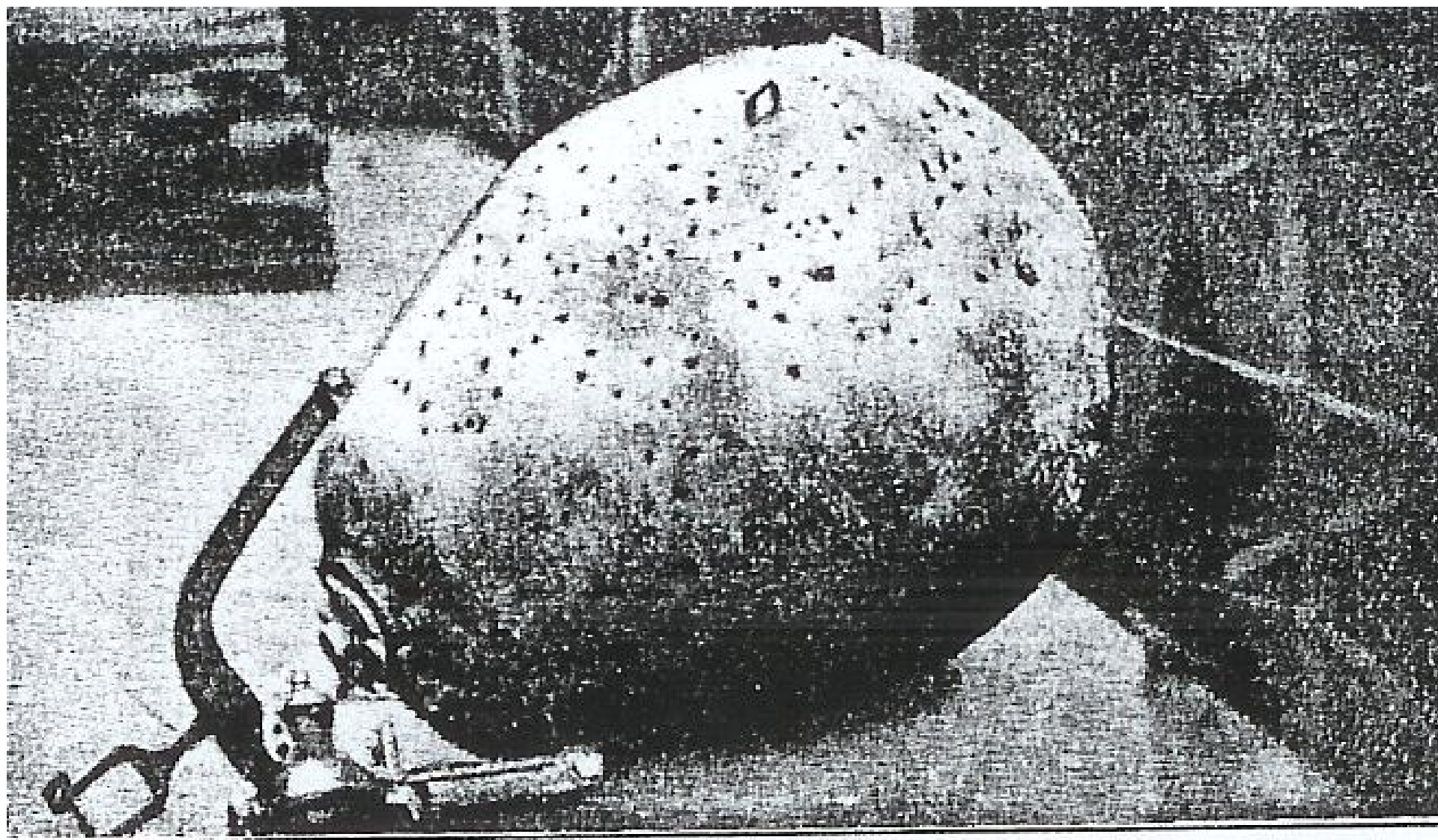
# *World War II*

109 015 mines & 20 134 sweep obstacles





*Mine disposal method 1914-1920*



Tysk mina med hål efter gevärseld.





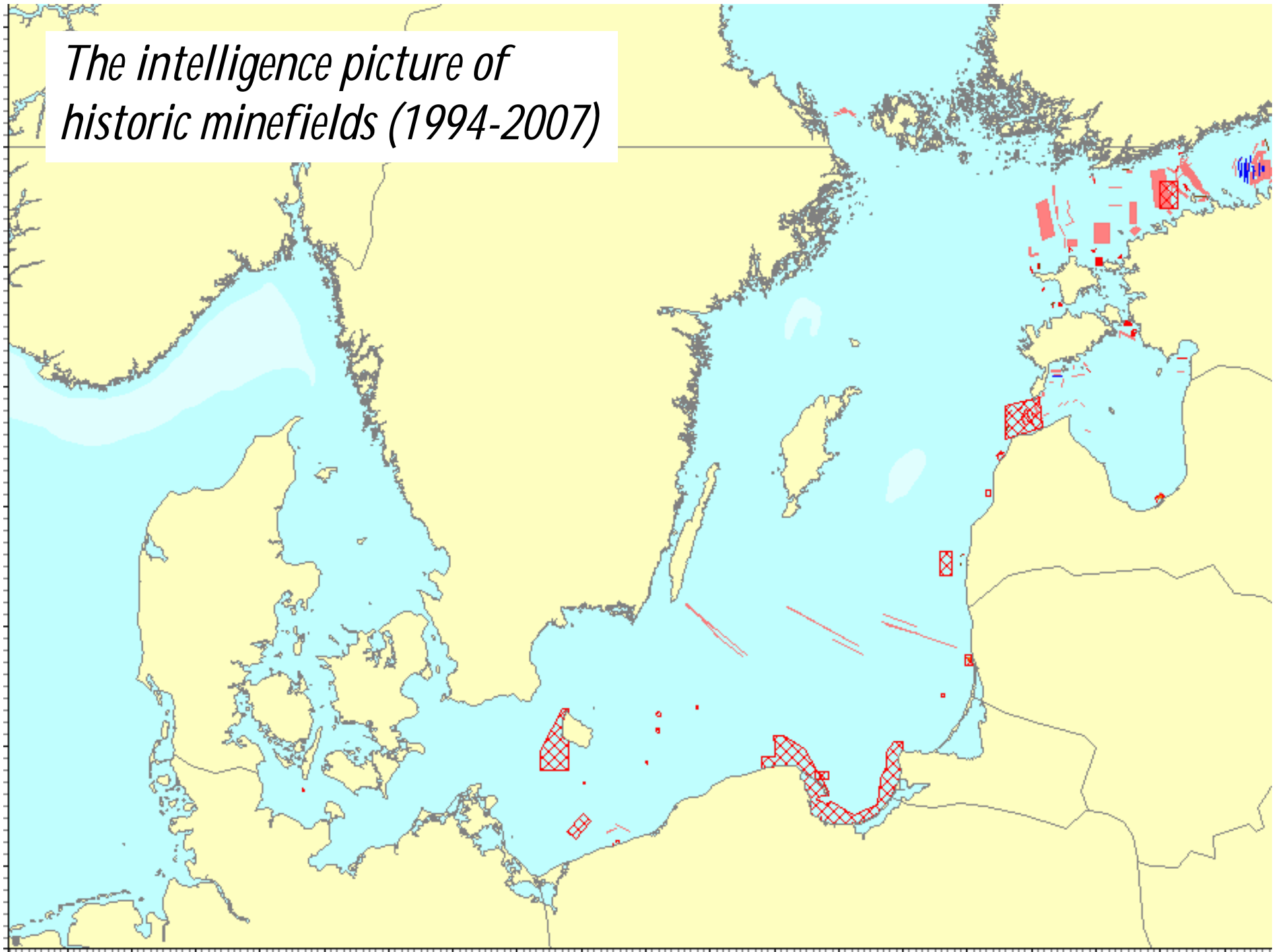
*The Age of Unawareness*  
*1994-2003*

*"The less you know, the more simple it is"*

*(Some nations opinion about the UXO-problems)*



*The intelligence picture of  
historic minefields (1994-2007)*



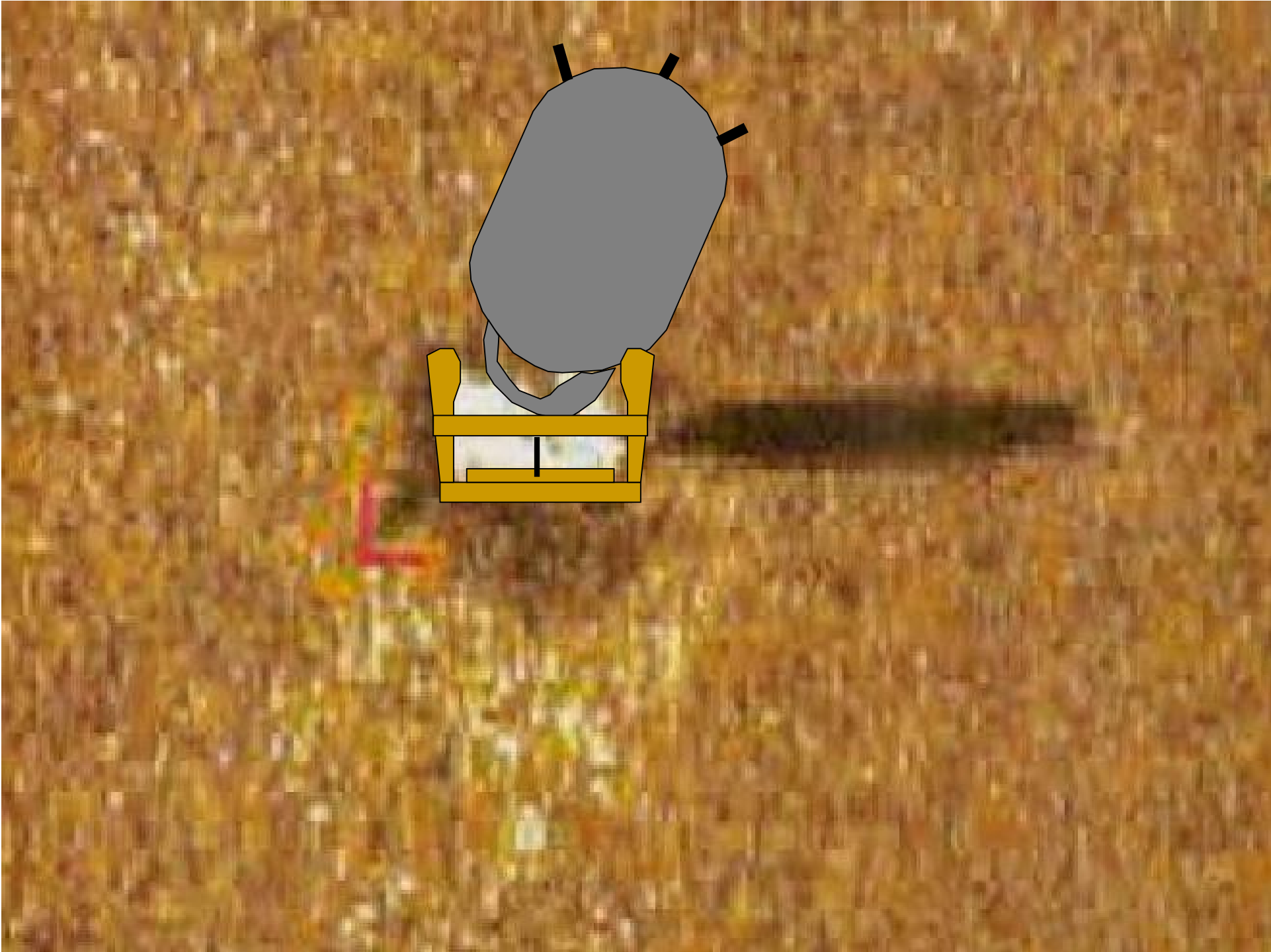


*The Age of Enlightenment  
2003-2006*

*"If we know and don't do anything  
and something happens – then we are smoked.."*

*(Expressed in 2004 by a Captain when the research result  
were presented for the RSwN CINC for first time)*







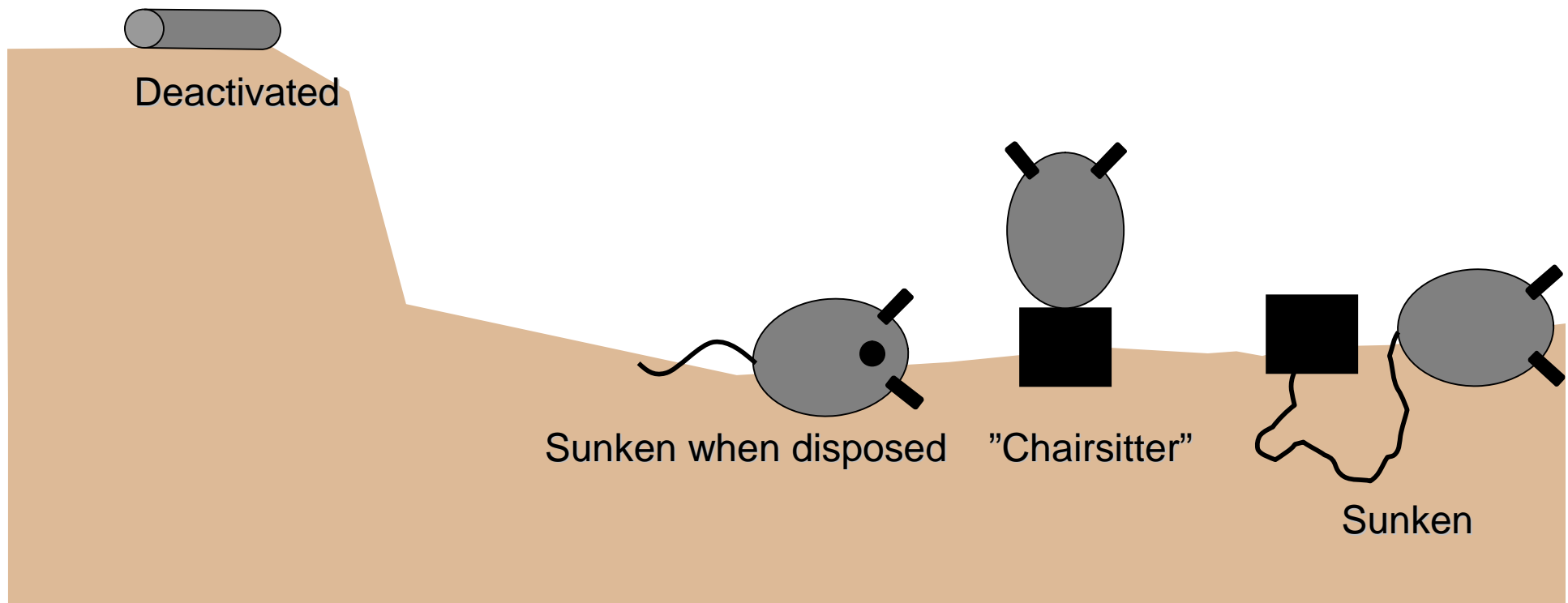
A detailed nautical chart of the Baltic Sea region, showing various islands, soundings, and navigational markers. The chart includes labels for locations such as Svenska Björn, Köpmansön, Svenska Rogarne, Grönskär, Almagrundet, Demban, Storsic, Gotska Sandön, Hallshuk, Kappels, Fårö, Salvorev, Färö, B.15, Hallshuk, Kappels, Gotska Sandön, Bx.4 (ata 18), Bx.2 (ata), Bx.1, Bx.3, Bx.5, Bx.6, Bx.7, Bx.8, Bx.9, Bx.10, Bx.11, Bx.12, Bx.13, Bx.14, Bx.15, Bx.16, Bx.17, Bx.18, Bx.19, Bx.20, Bx.21, Bx.22, Bx.23, Bx.24, Bx.25, Bx.26, Bx.27, Bx.28, Bx.29, Bx.30, Bx.31, Bx.32, Bx.33, Bx.34, Bx.35, Bx.36, Bx.37, Bx.38, Bx.39, Bx.40, Bx.41, Bx.42, Bx.43, Bx.44, Bx.45, Bx.46, Bx.47, Bx.48, Bx.49, Bx.50, Bx.51, Bx.52, Bx.53, Bx.54, Bx.55, Bx.56, Bx.57, Bx.58, Bx.59, Bx.60, Bx.61, Bx.62, Bx.63, Bx.64, Bx.65, Bx.66, Bx.67, Bx.68, Bx.69, Bx.70, Bx.71, Bx.72, Bx.73, Bx.74, Bx.75, Bx.76, Bx.77, Bx.78, Bx.79, Bx.80, Bx.81, Bx.82, Bx.83, Bx.84, Bx.85, Bx.86, Bx.87, Bx.88, Bx.89, Bx.90, Bx.91, Bx.92, Bx.93, Bx.94, Bx.95, Bx.96, Bx.97, Bx.98, Bx.99, Bx.100. The chart also features depth soundings, compass roses, and various navigational symbols. The text "COMSwMCC mission" is prominently displayed in the upper center, and a large quote is centered over the lower half of the chart.

# COMSwMCC mission

**”Analyse if the remaining mines still can be a security threat to shipping, fishery, sea research, exploration of the sea resources and military activities.”**

# *Predictable Remaining Mines*

---



ROLL TRIM DJUP KURS TEMP 06 10 04  
-04 -15 050.4 294 62 20:52:17

*In all areas where mines  
have been laid, in general,  
mines still remains*

LANCAH451 STU EKO 05 x:6388728  
y:1570803





*The Age of Change  
2006-2010*

*"Avoid they who can be avoided –  
Dispose only they who is essential to be disposed"*

*(The modern opinion)*

An aerial photograph of a large fleet of ships, likely a naval exercise, on the Baltic Sea. The ships are arranged in a loose formation, and the water is dark with white wakes. The sky is filled with large, white, fluffy clouds, and the sun is visible, creating a bright reflection on the water's surface. The overall scene is expansive and dramatic.

# Baltic Ordnance Safety Board

**SWEDEN, GERMANY, DENMARK, POLAND, LITHUANIA, LATVIA,  
ESTONIA, FINLAND and NATO**

# The purpose of BOSB

Baltic Ordnance Safety Board (BOSB) is an initiative of nations in the surroundings of the Baltic Sea with the aim to make a joint effort to gather and share information about Historic Ordnance and prioritize areas of interest in the Baltic Sea area in order to enhance maritime safety. If requested BOSB will provide guidelines and recommendations for Mine Counter Measures (MCM) and Historic Ordnance Disposal activities in the Baltic Sea area.

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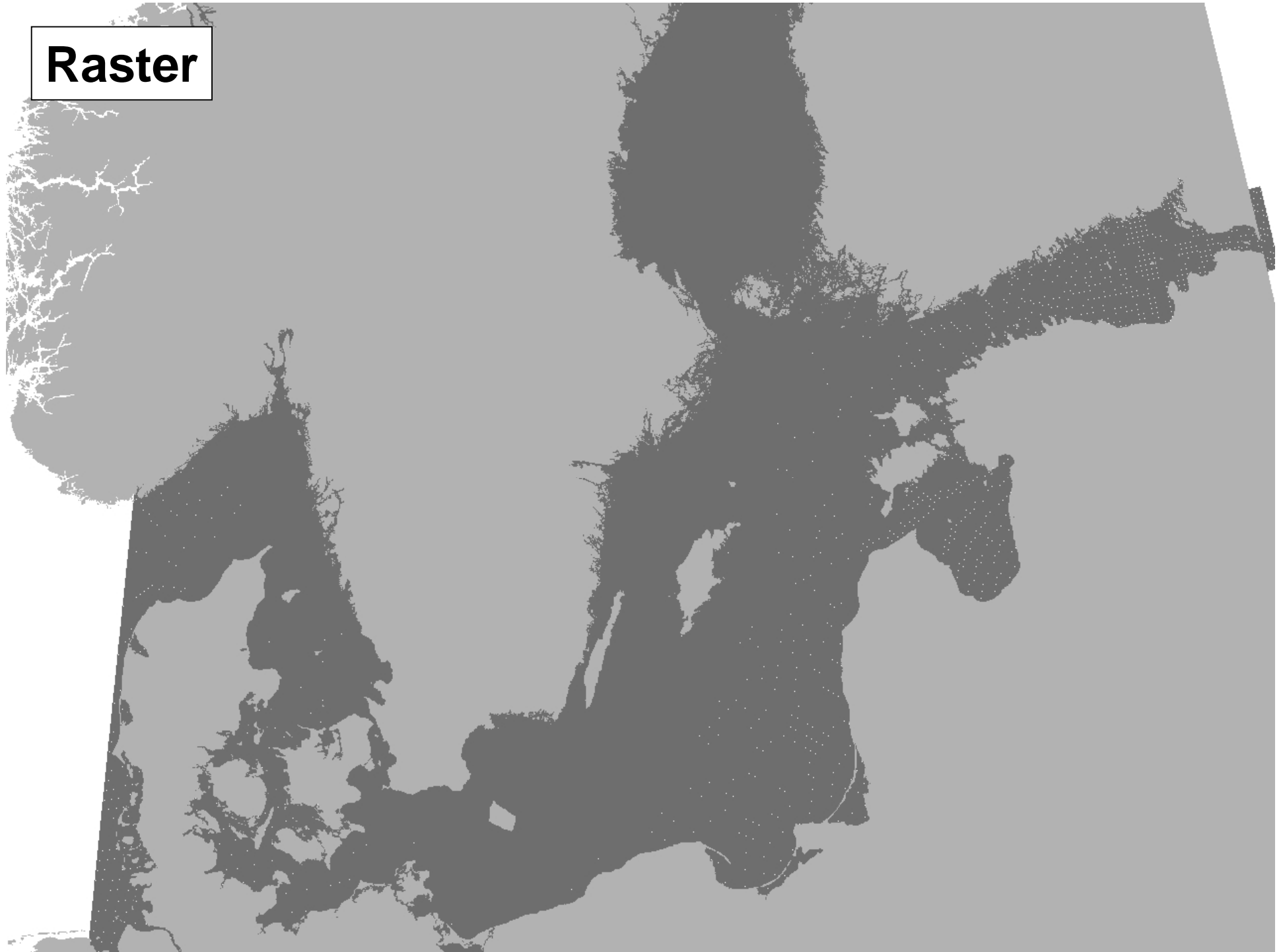
A large, powerful explosion or fireball is shown over a body of water. The explosion is a massive, billowing cloud of white and grey smoke and debris, rising high into the sky. The water below is dark blue with some whitecaps. The sky is a clear, pale blue. The text "Baltic Ordnance Safety Board priority system" is overlaid in white, bold, sans-serif font across the center of the explosion.

# Baltic Ordnance Safety Board priority system

# Criteria for prioritizing MCM-operation areas

- **Activities** (1-7p)
  - *Shipping*
  - *Fishery* (not implemented yet)
- **Depth (<60 m)** (1-7p)
- **Intelligence** (1-5p)
- **Mine density** (1-7p)
- **Clearance** (-1- -7p & -26p)
- **Seabed conditions** (Yes/No)

# Raster



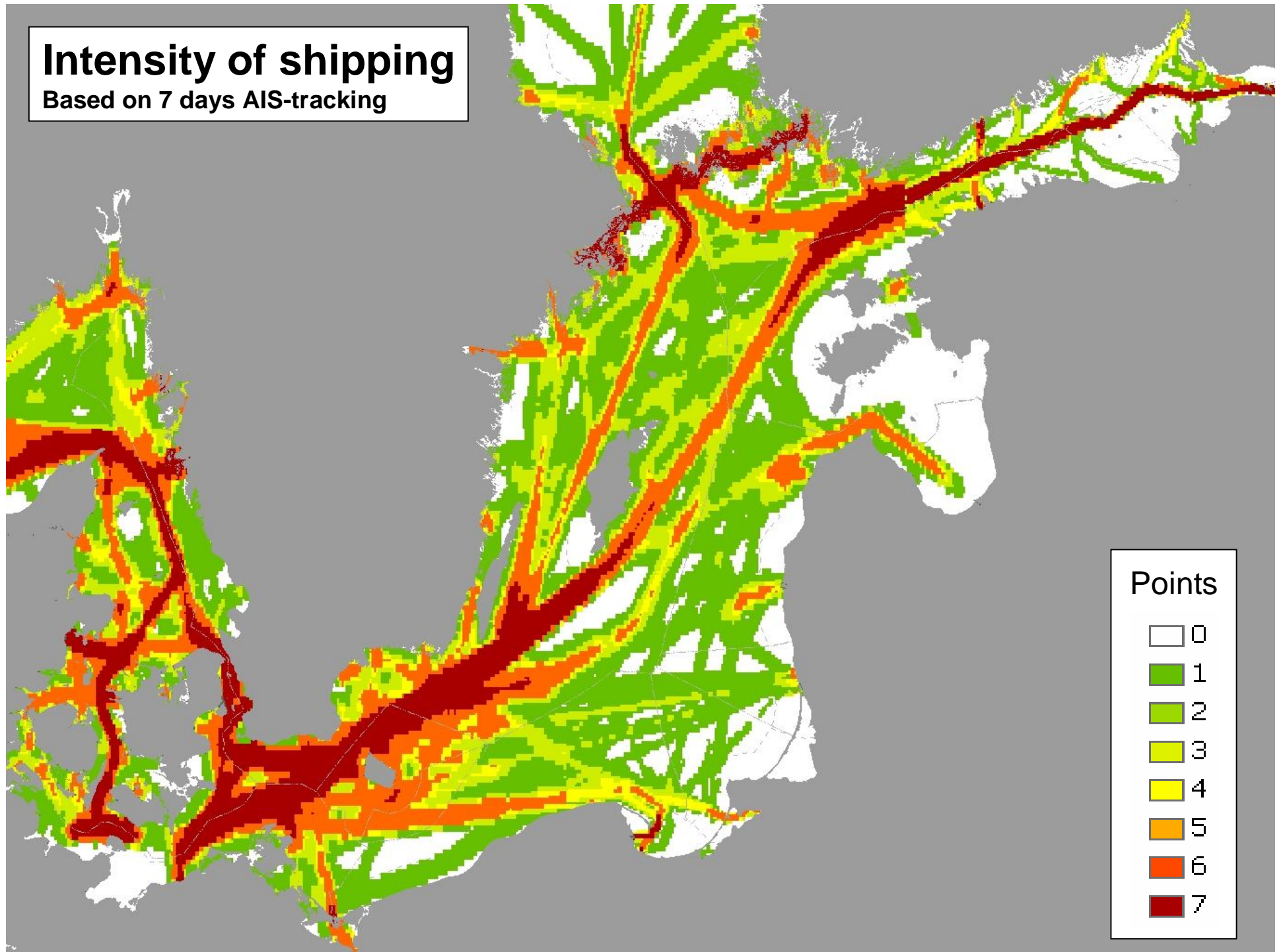
**”Size of a pixel” = 0,5 x 1 Nm**

 **Baltic Grid**



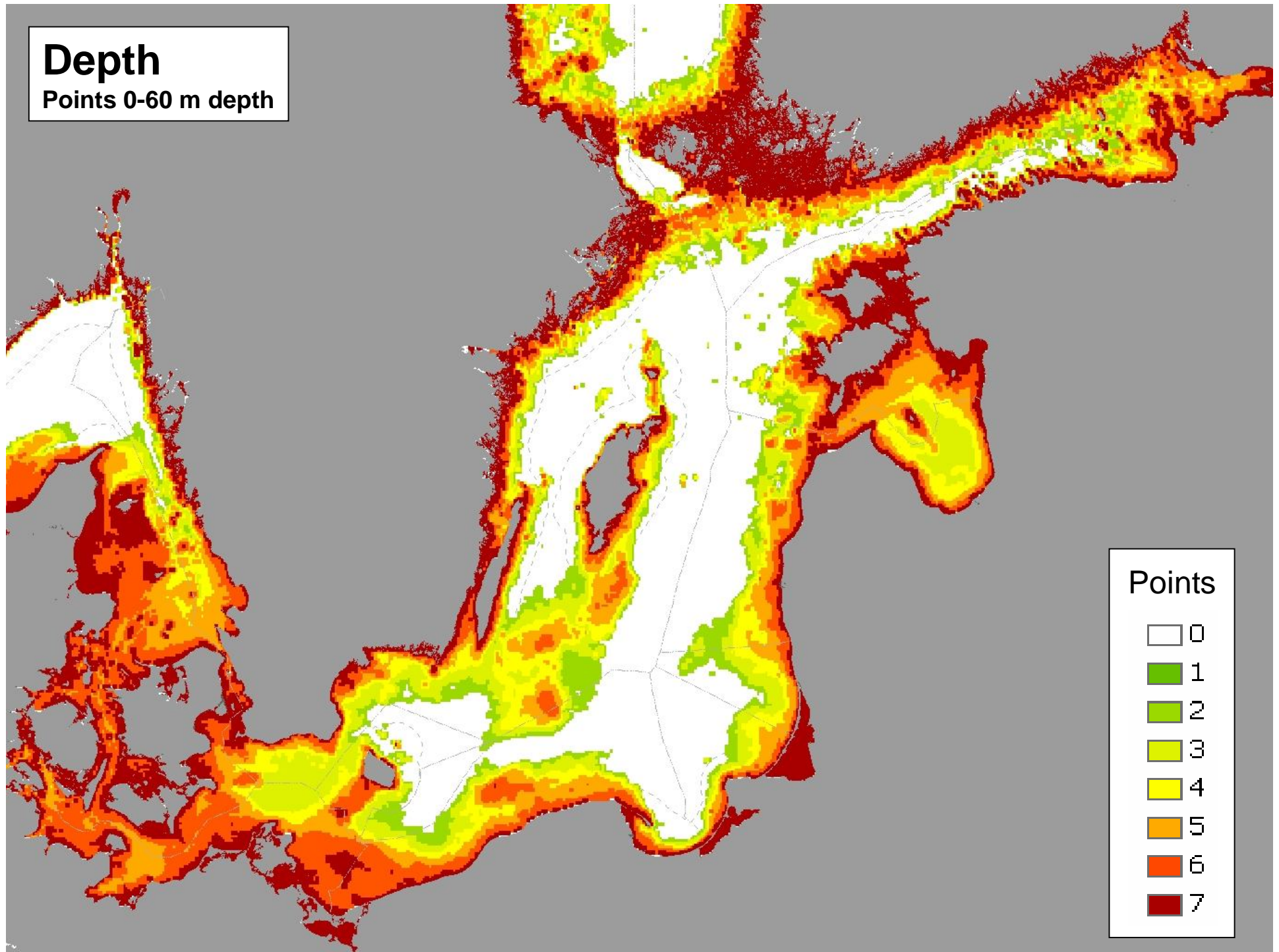
# Intensity of shipping

Based on 7 days AIS-tracking



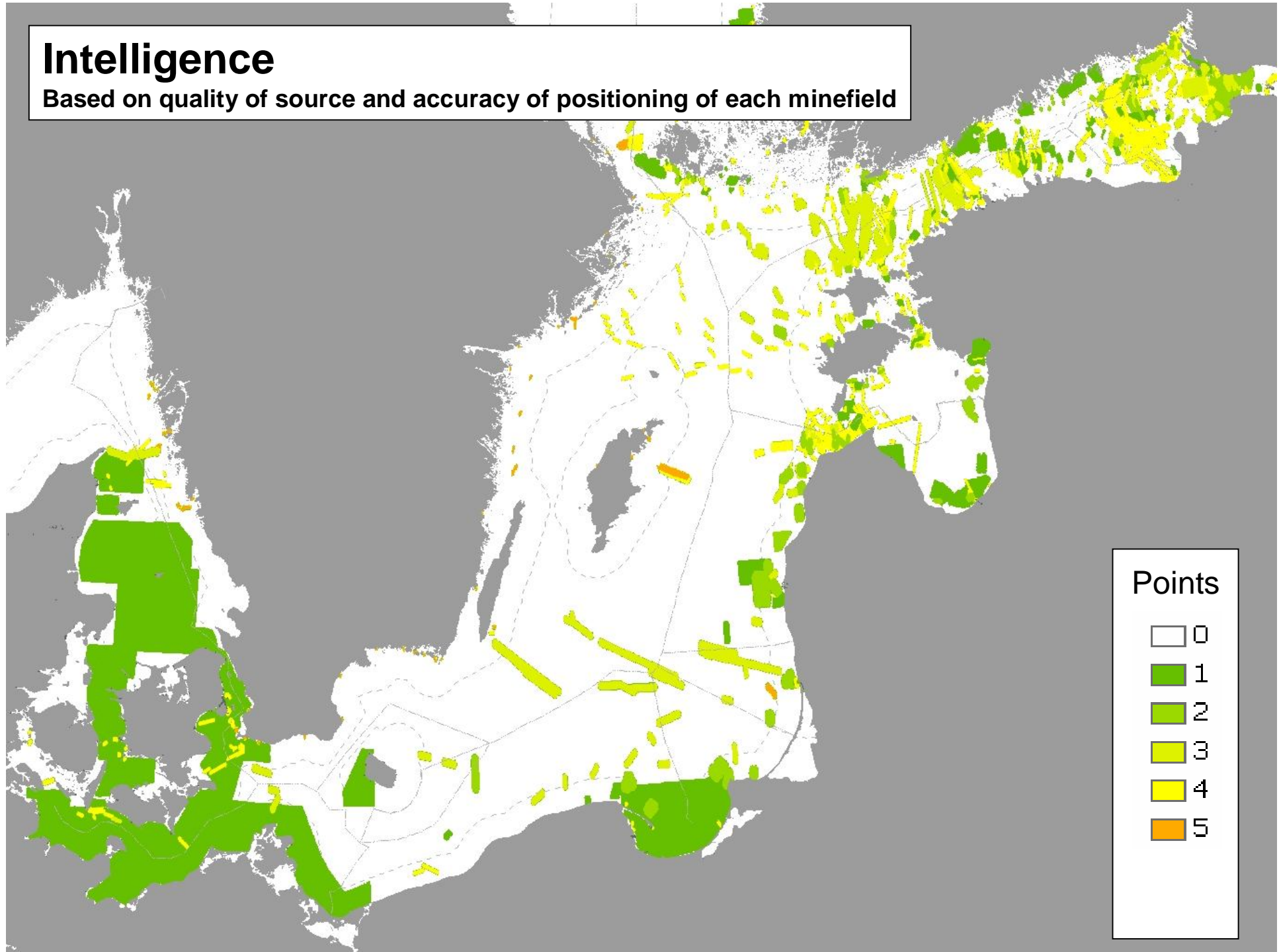
# Depth

Points 0-60 m depth



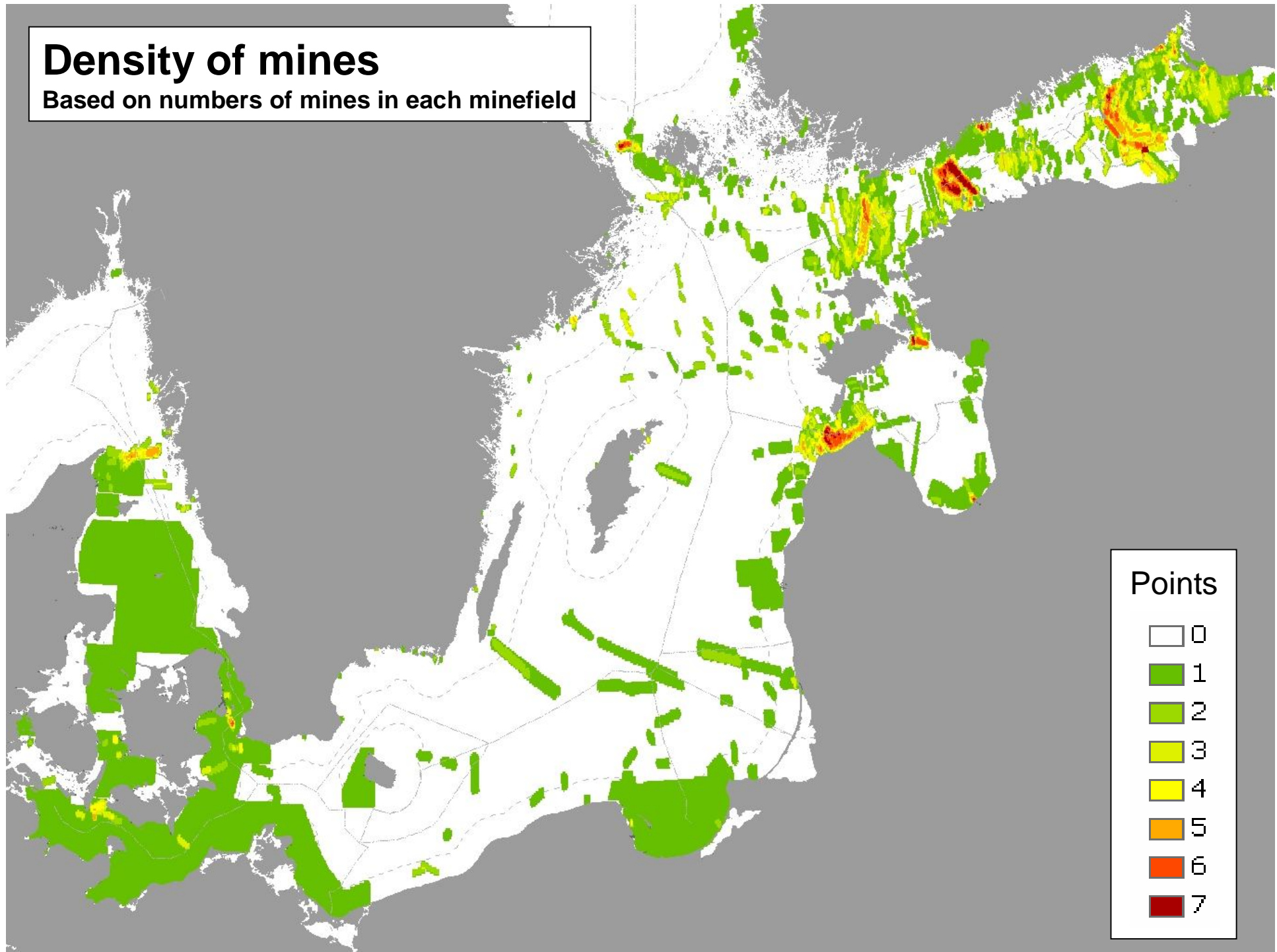
# Intelligence

Based on quality of source and accuracy of positioning of each minefield



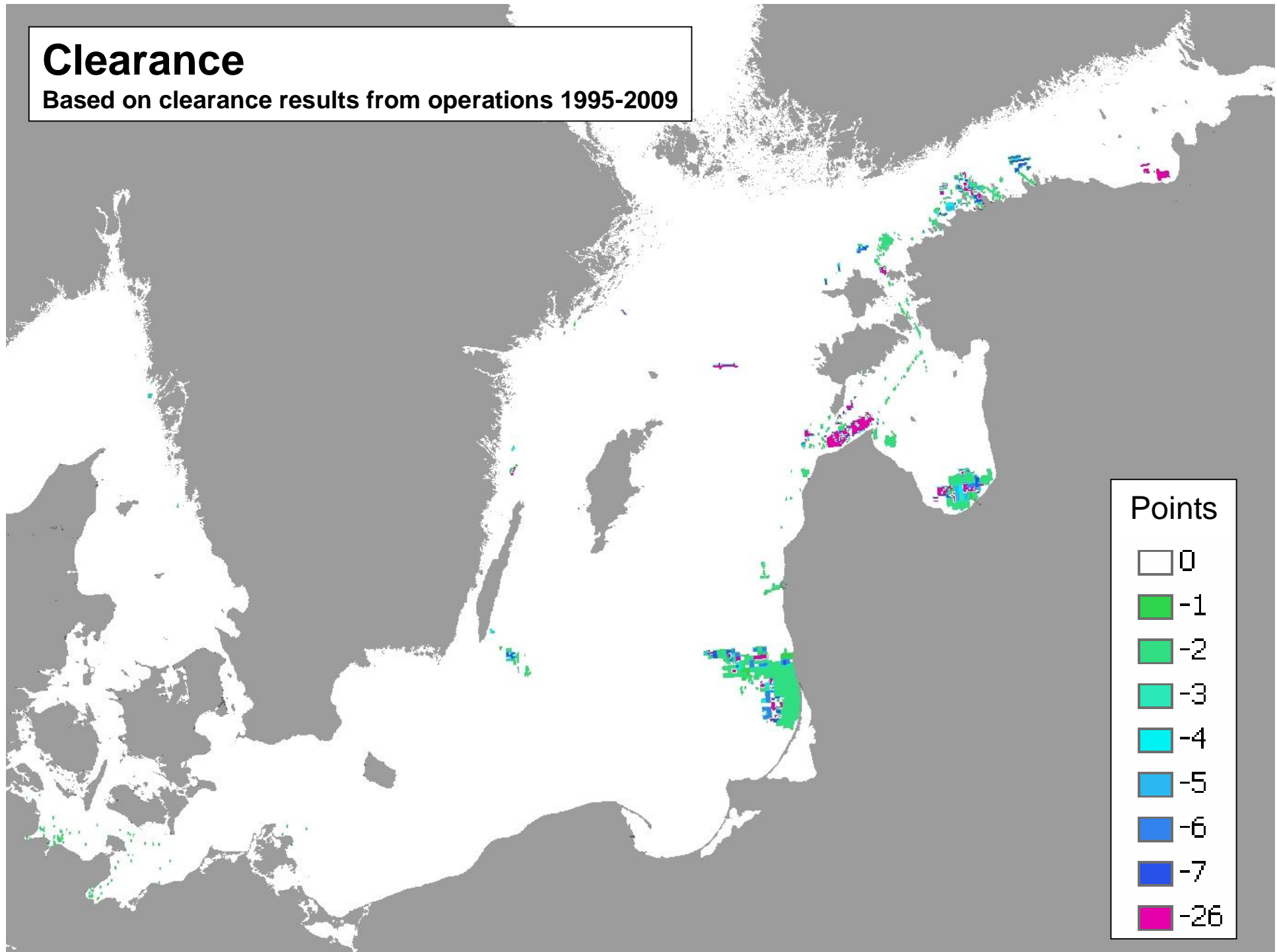
# Density of mines

Based on numbers of mines in each minefield

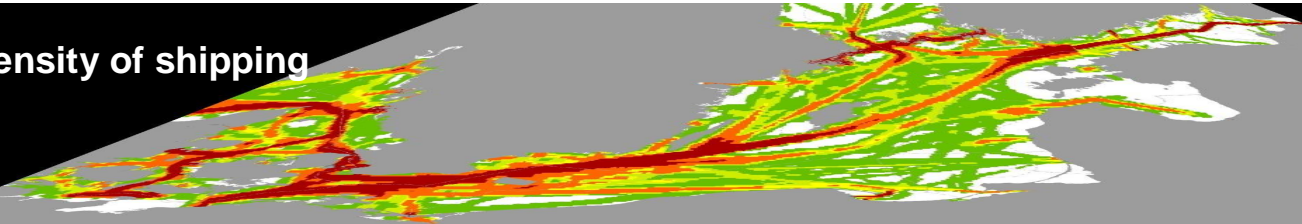


# Clearance

Based on clearance results from operations 1995-2009

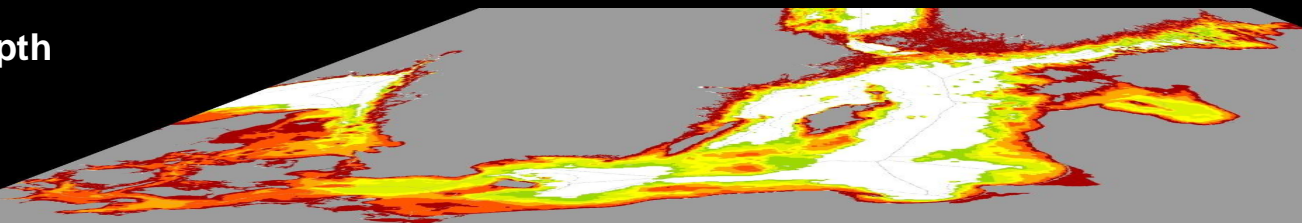


Intensity of shipping



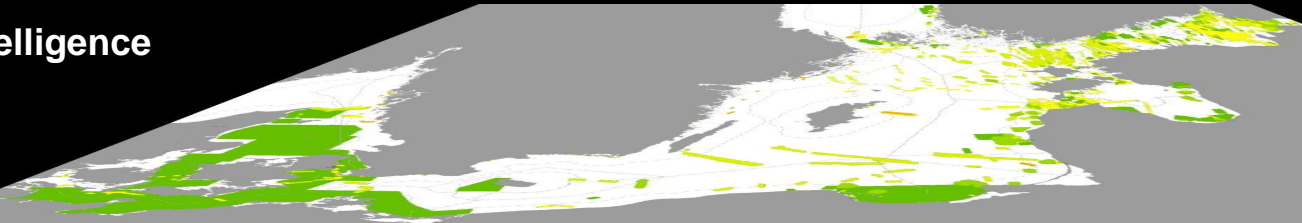
+

Depth



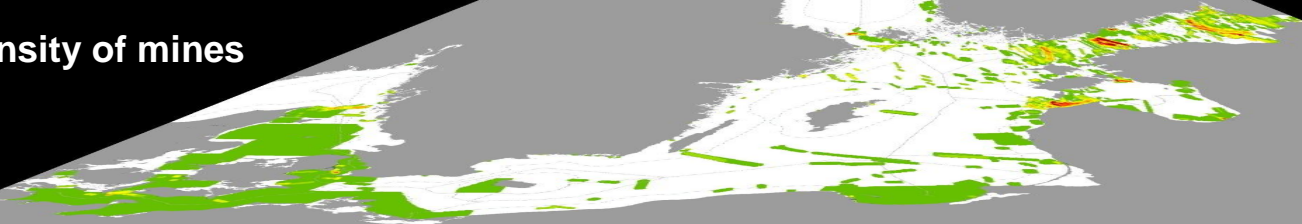
+

Intelligence



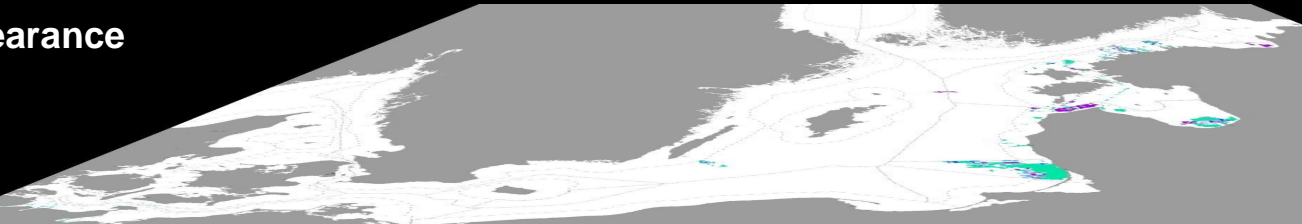
+

Density of mines

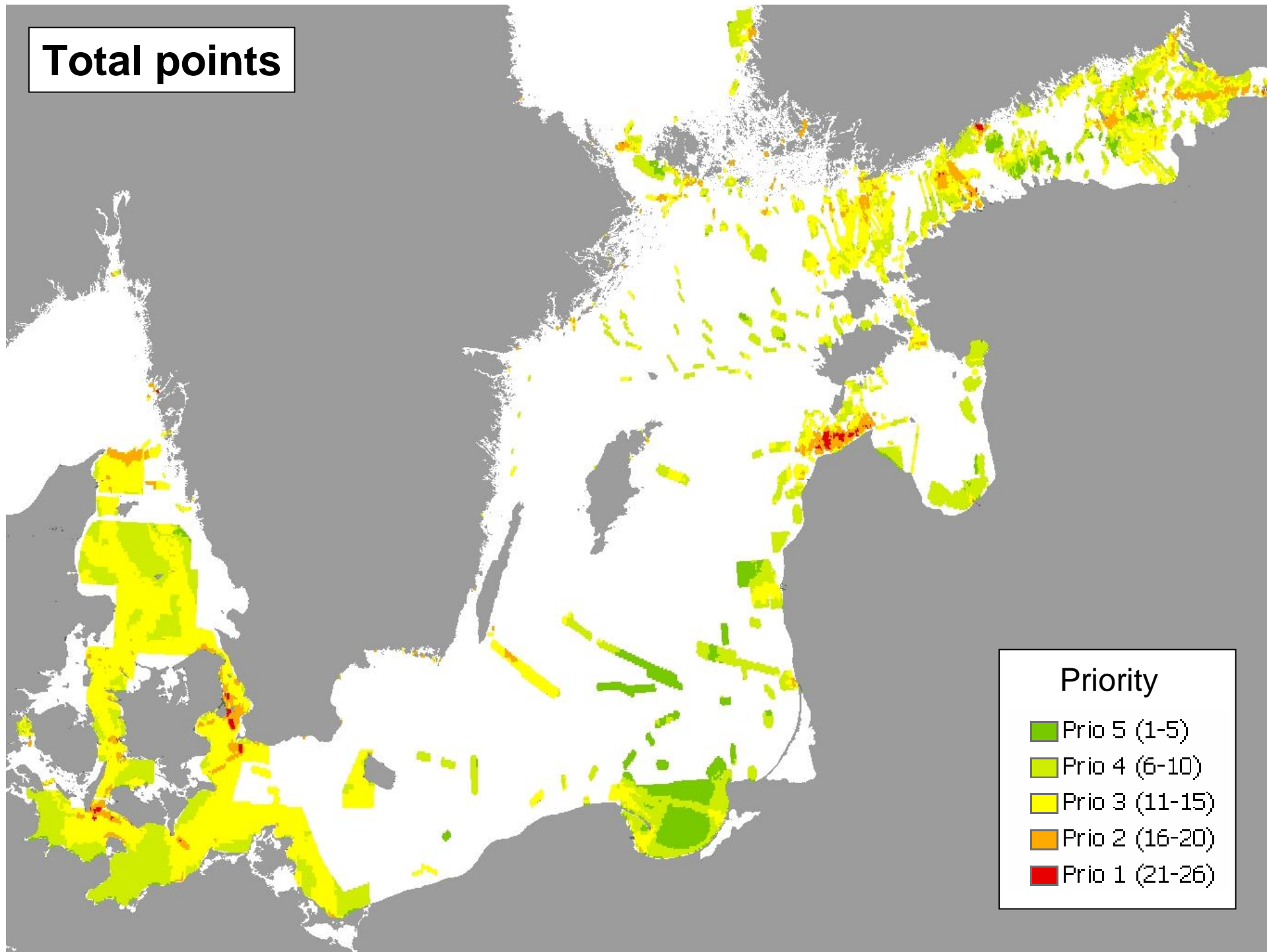


-

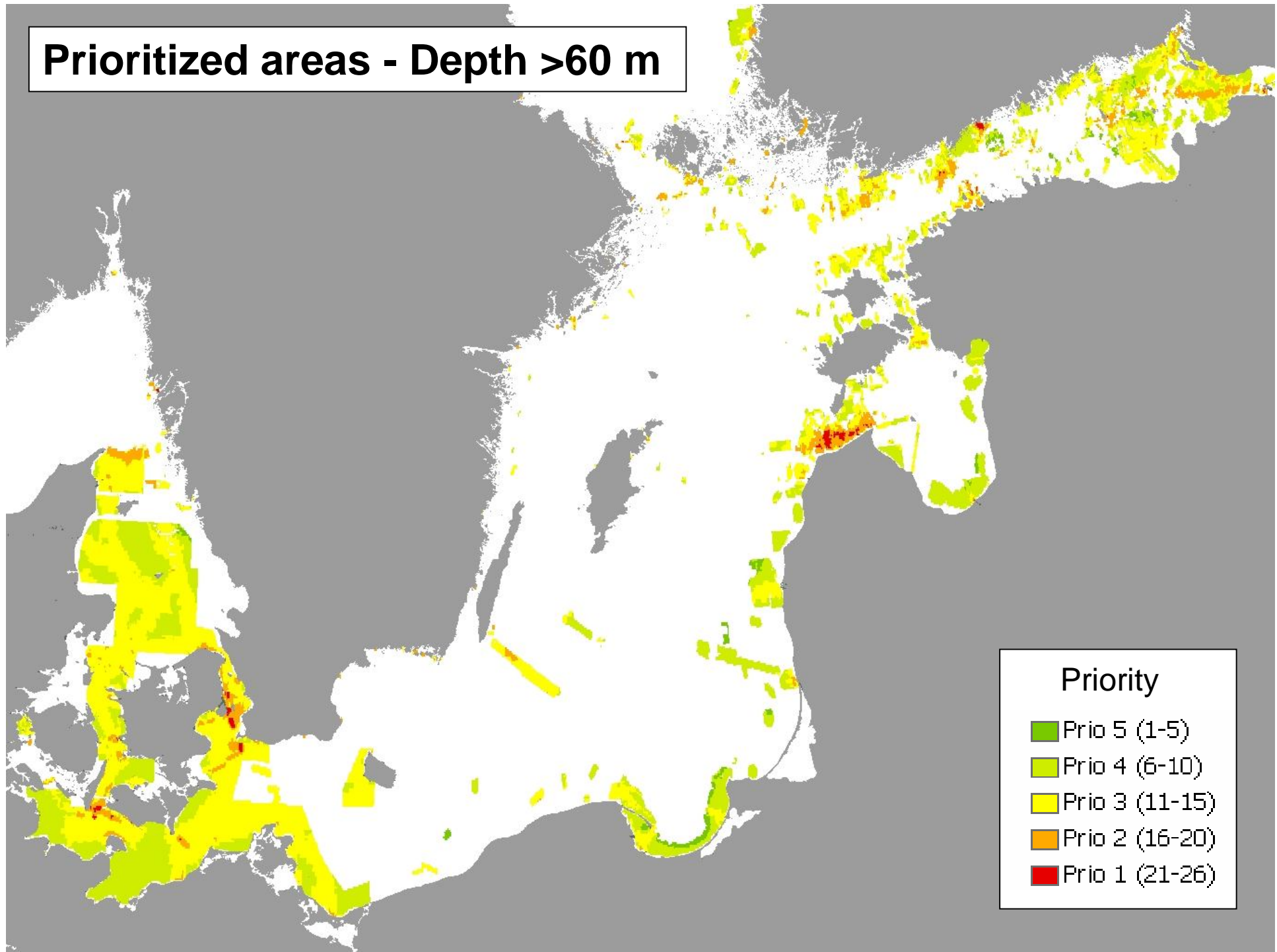
Clearance



# Total points

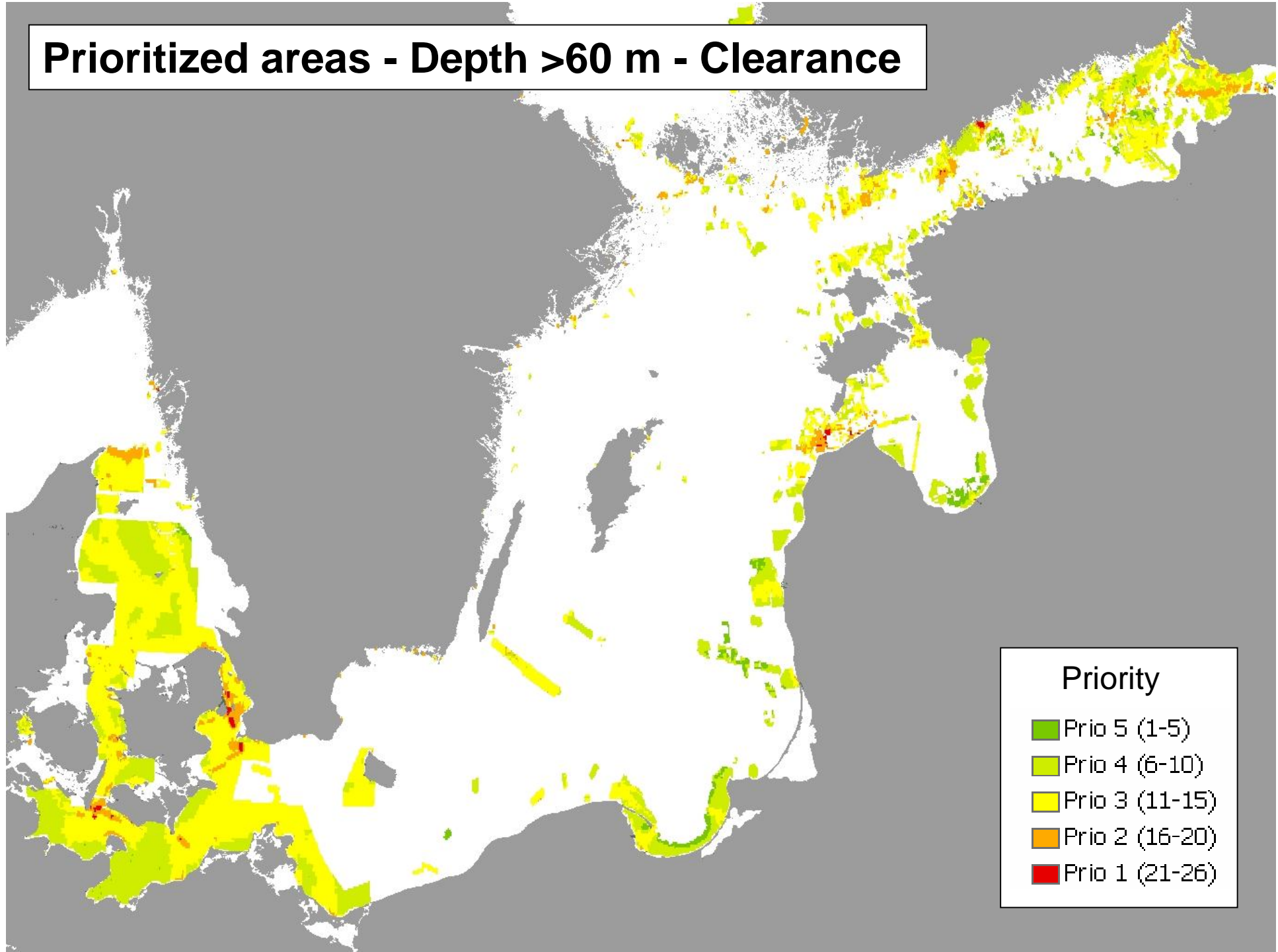


## Prioritized areas - Depth >60 m

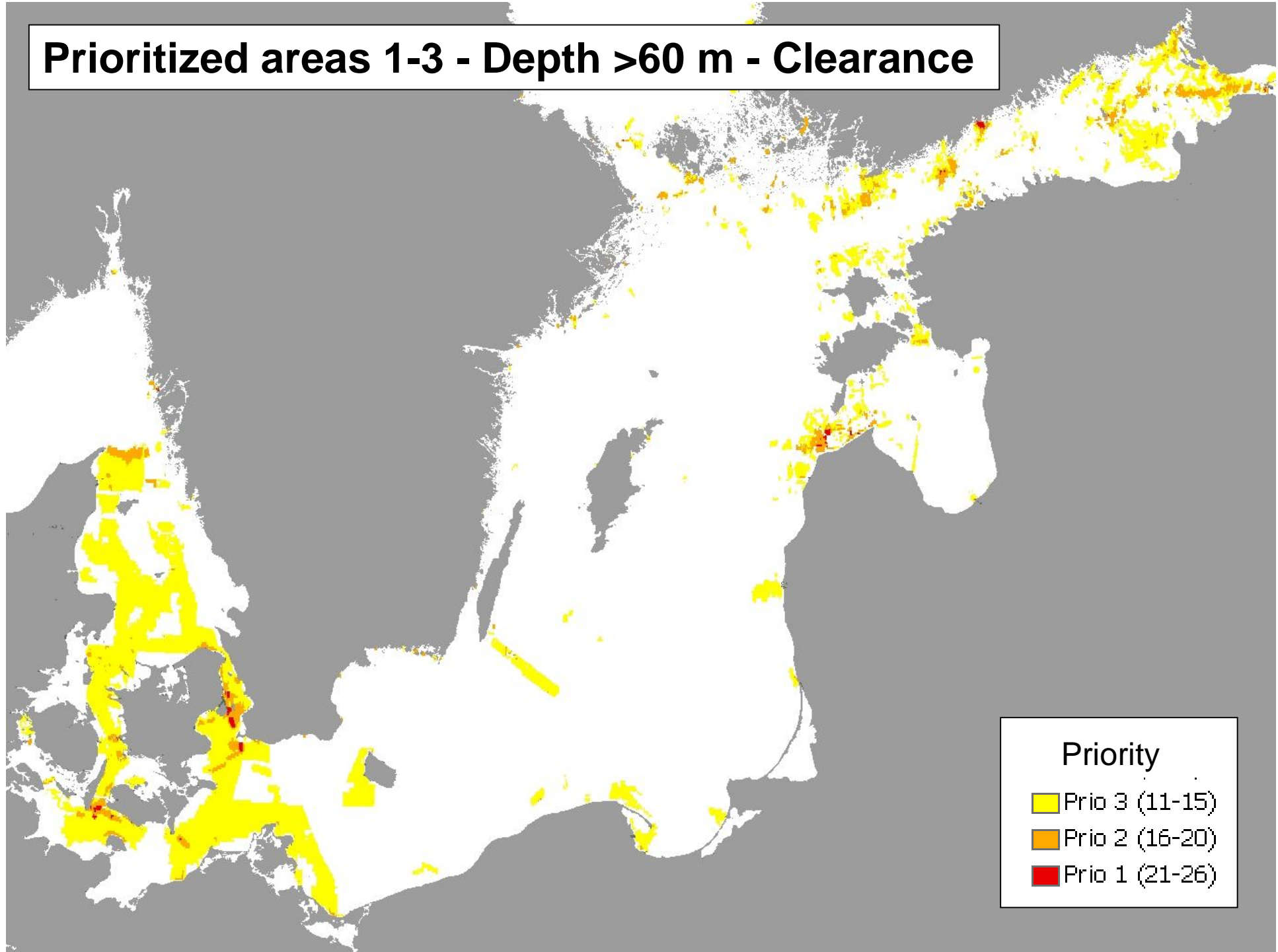




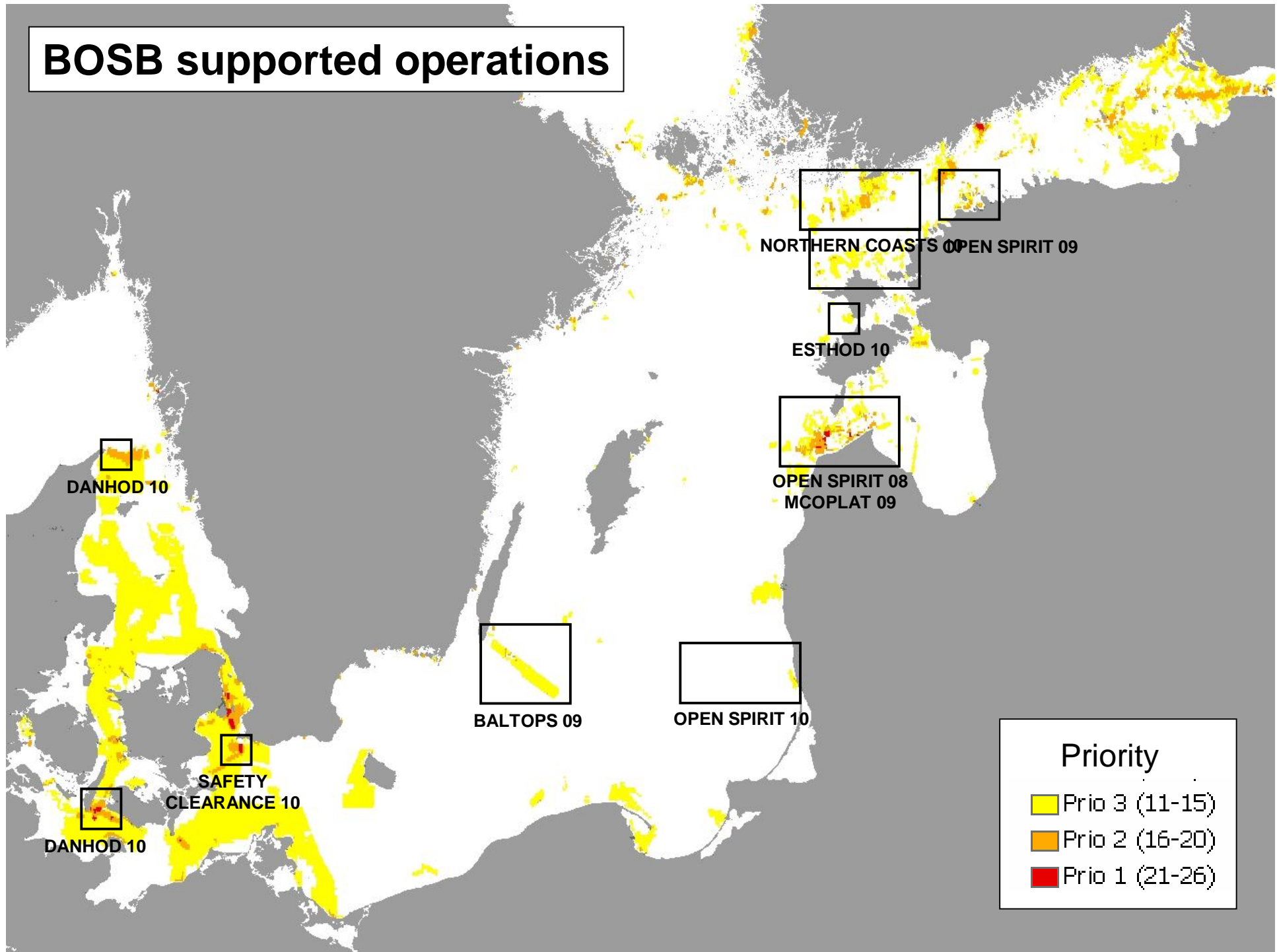
# Prioritized areas - Depth >60 m - Clearance



# Prioritized areas 1-3 - Depth >60 m - Clearance



# BOSB supported operations



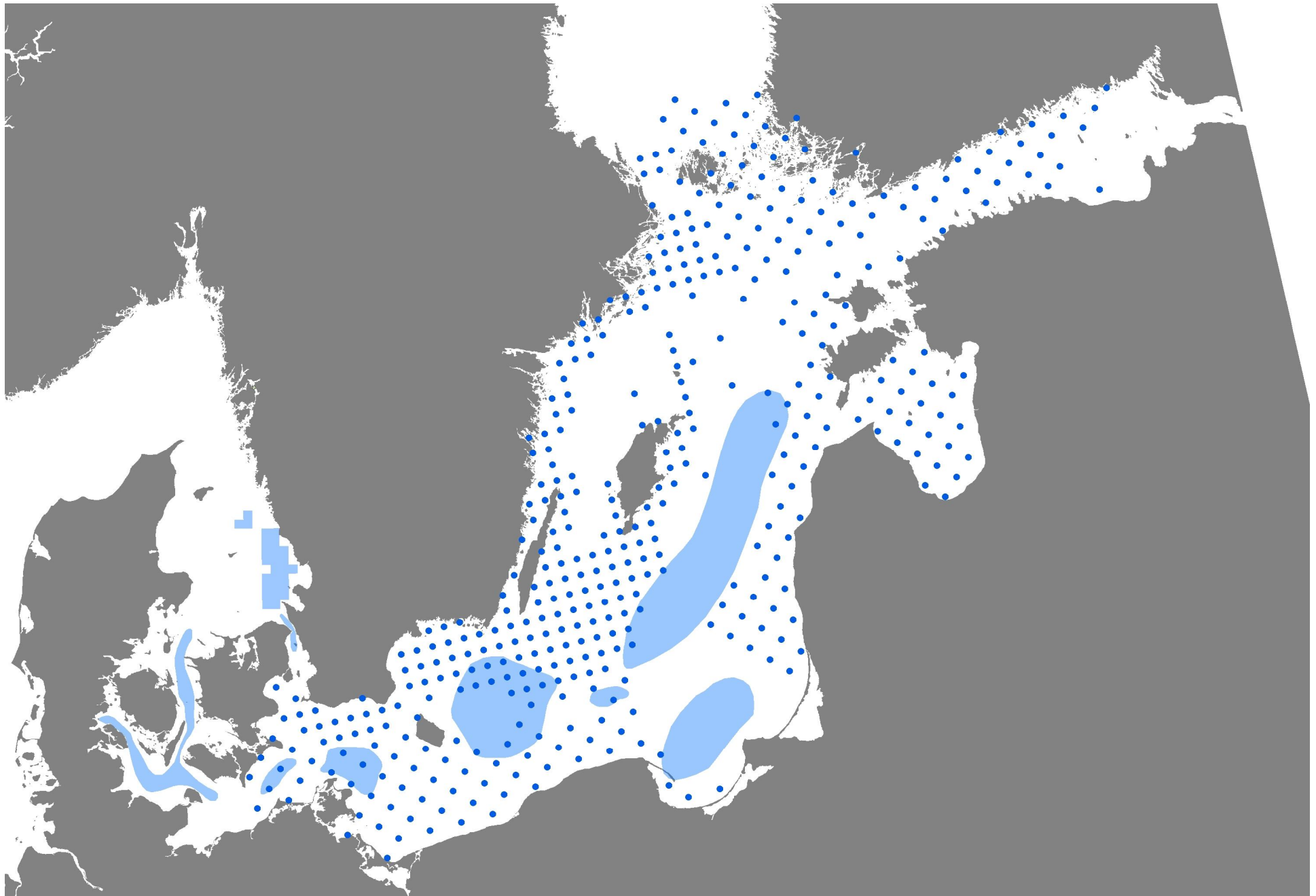
# Upcoming criteria for prioritizing MCM-operation areas

- **Activities** (1-7p)
  - *Shipping & anchorage areas ?*
  - *Fishery* (not implemented yet)
- **Depth (<60 m)** (1-7p)
- **Intelligence** (1-5p)
- **Mine density** (1-7p)
- **Clearance** (-1- -7p & -26p)
- **Seabed conditions** (Yes/No)
- **Biology ?**
- **Chemical ?**

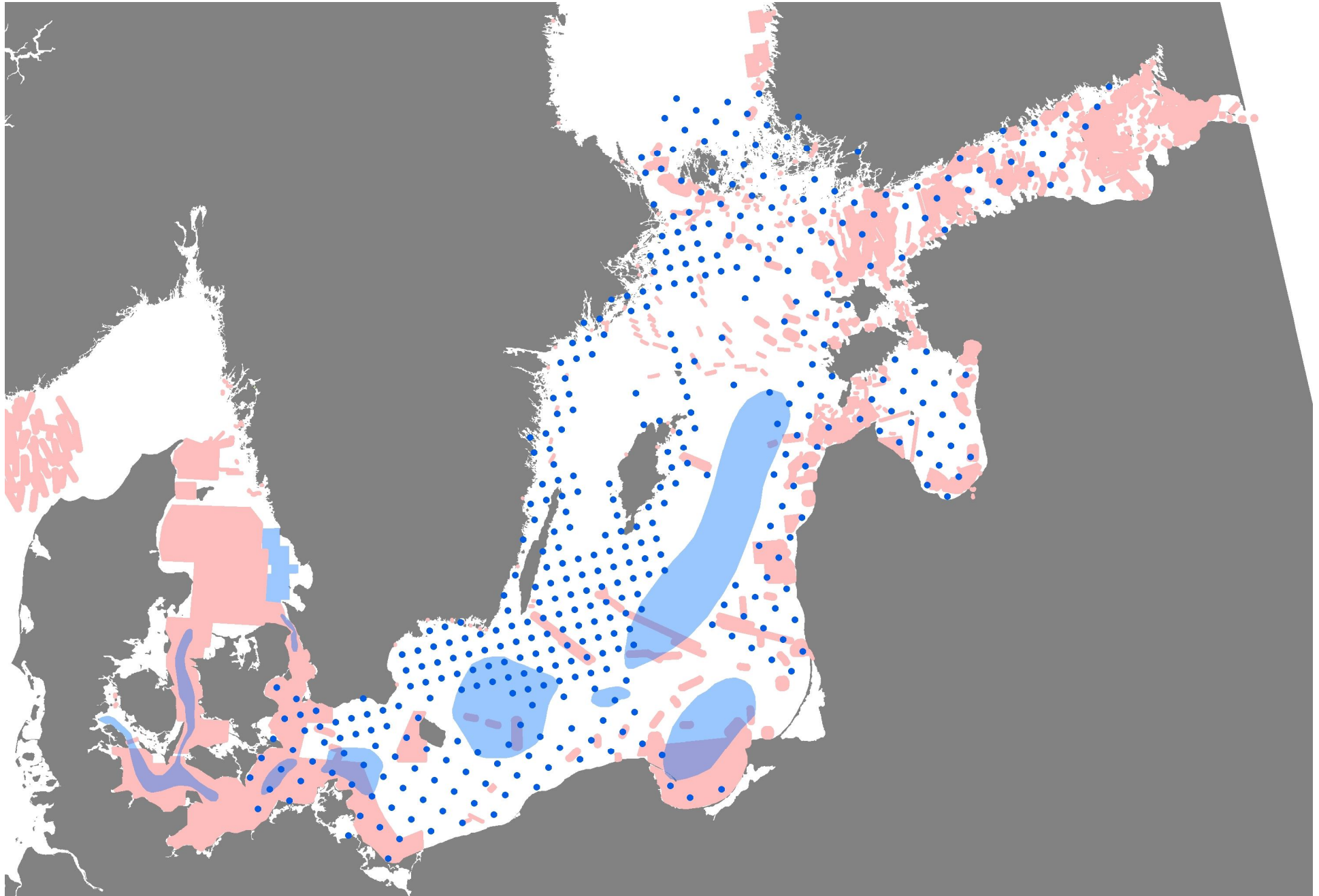
## Cod Spawn Areas




## Cod Spawn Areas + "SAMBAH"-sonars



# Cod Spawn Areas + "SAMBAH"-sonars + Mine Danger Areas





*The Age of Knowledge*  
*20??- ∞*

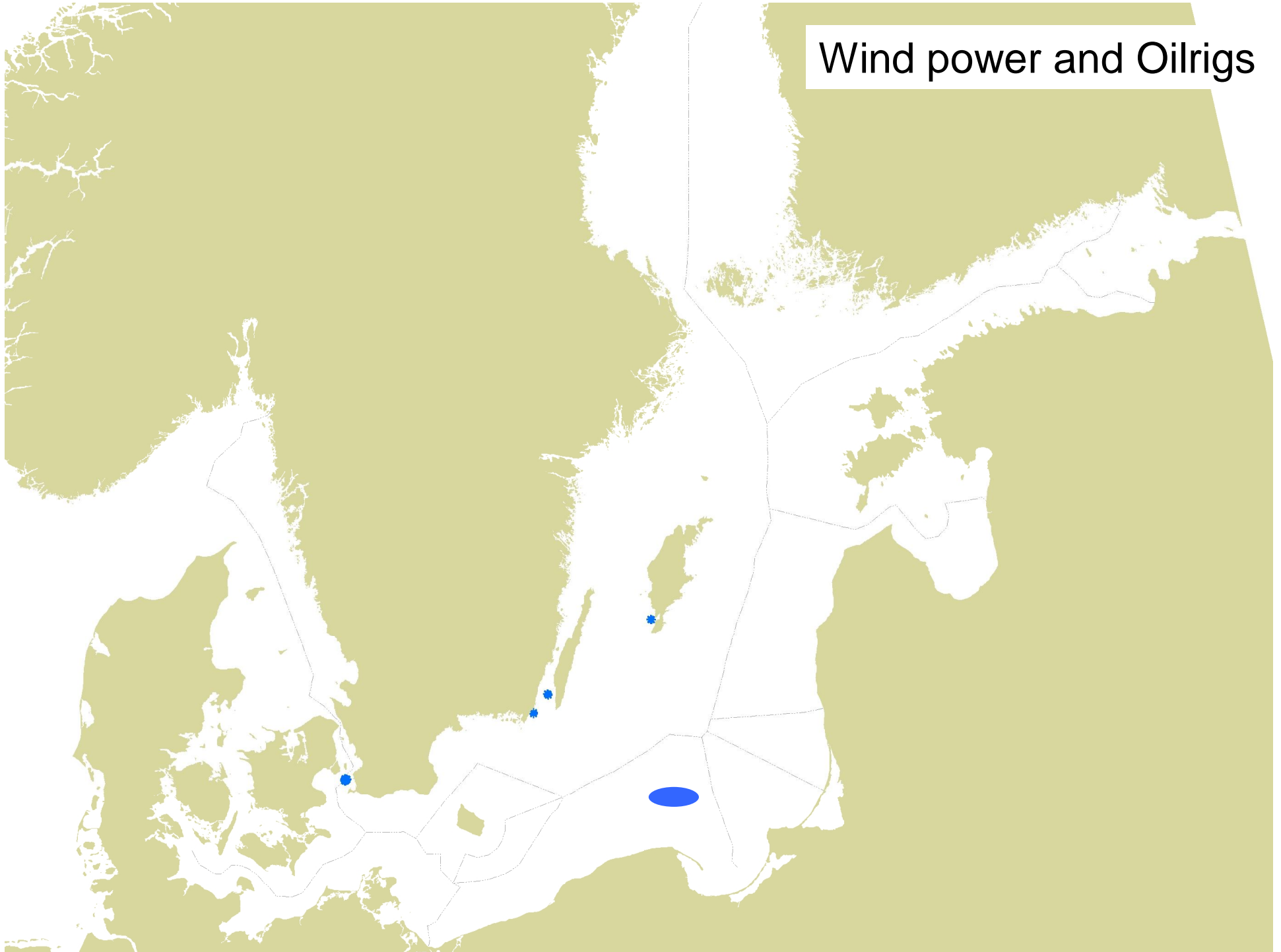
*"The more we know – the worse it gets..."*



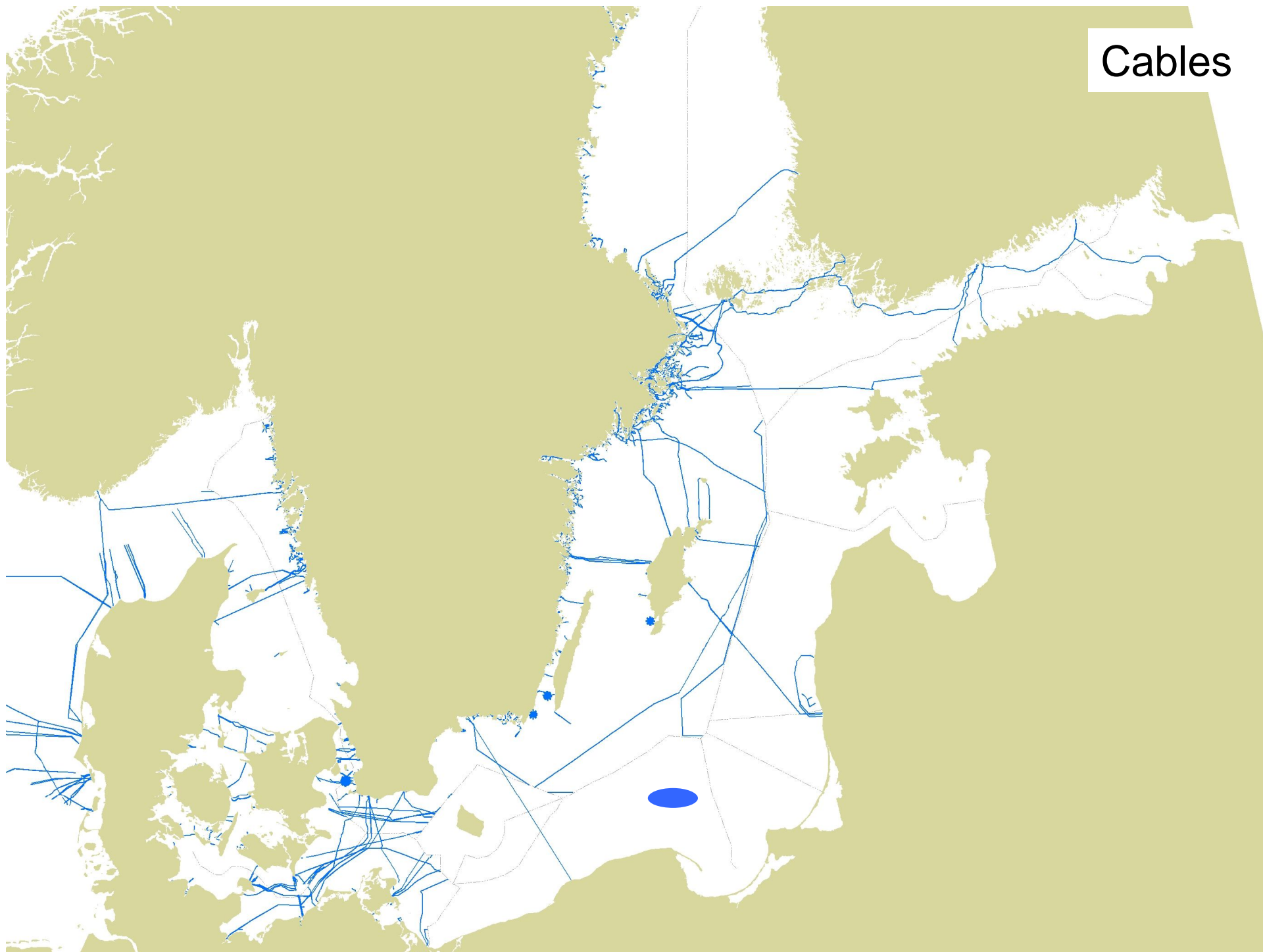
An aerial photograph of an offshore wind farm. The image shows a long line of white wind turbines extending across a dark blue sea towards a horizon under a twilight sky. The text "Exploration of the Seabed" is overlaid in the center in a white, italicized serif font.

# *Exploration of the Seabed*

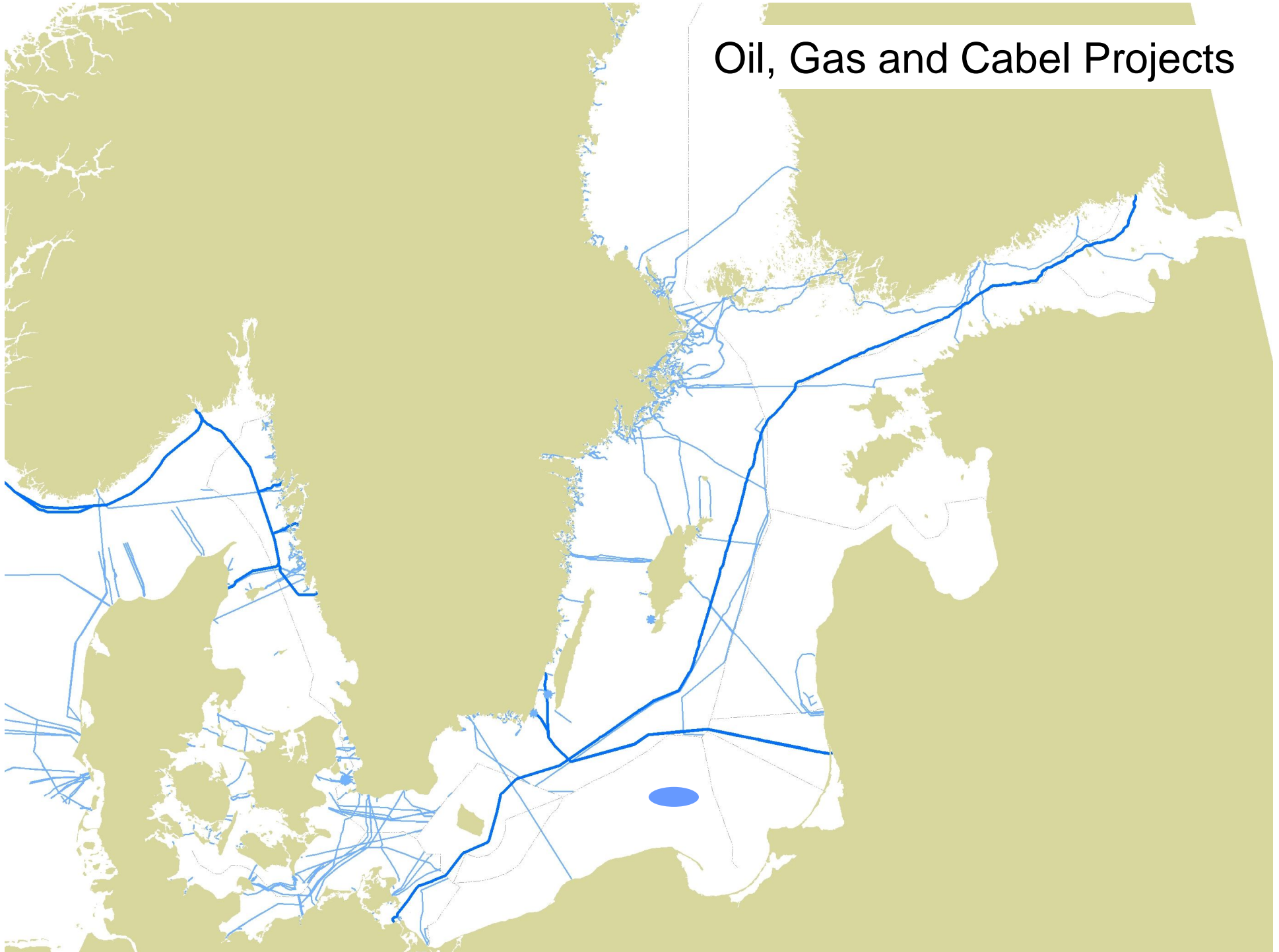
# Wind power and Oilrigs



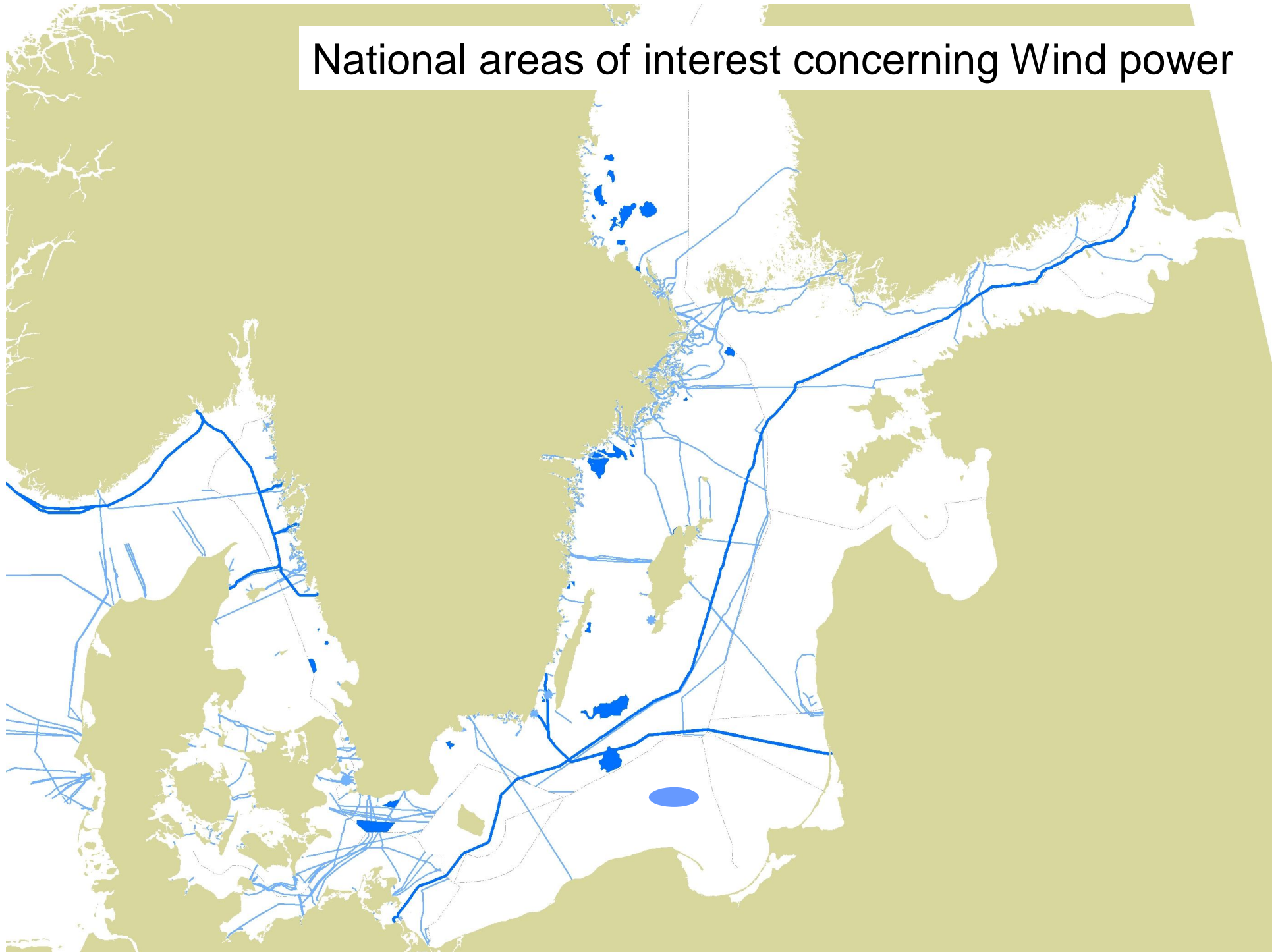
# Cables



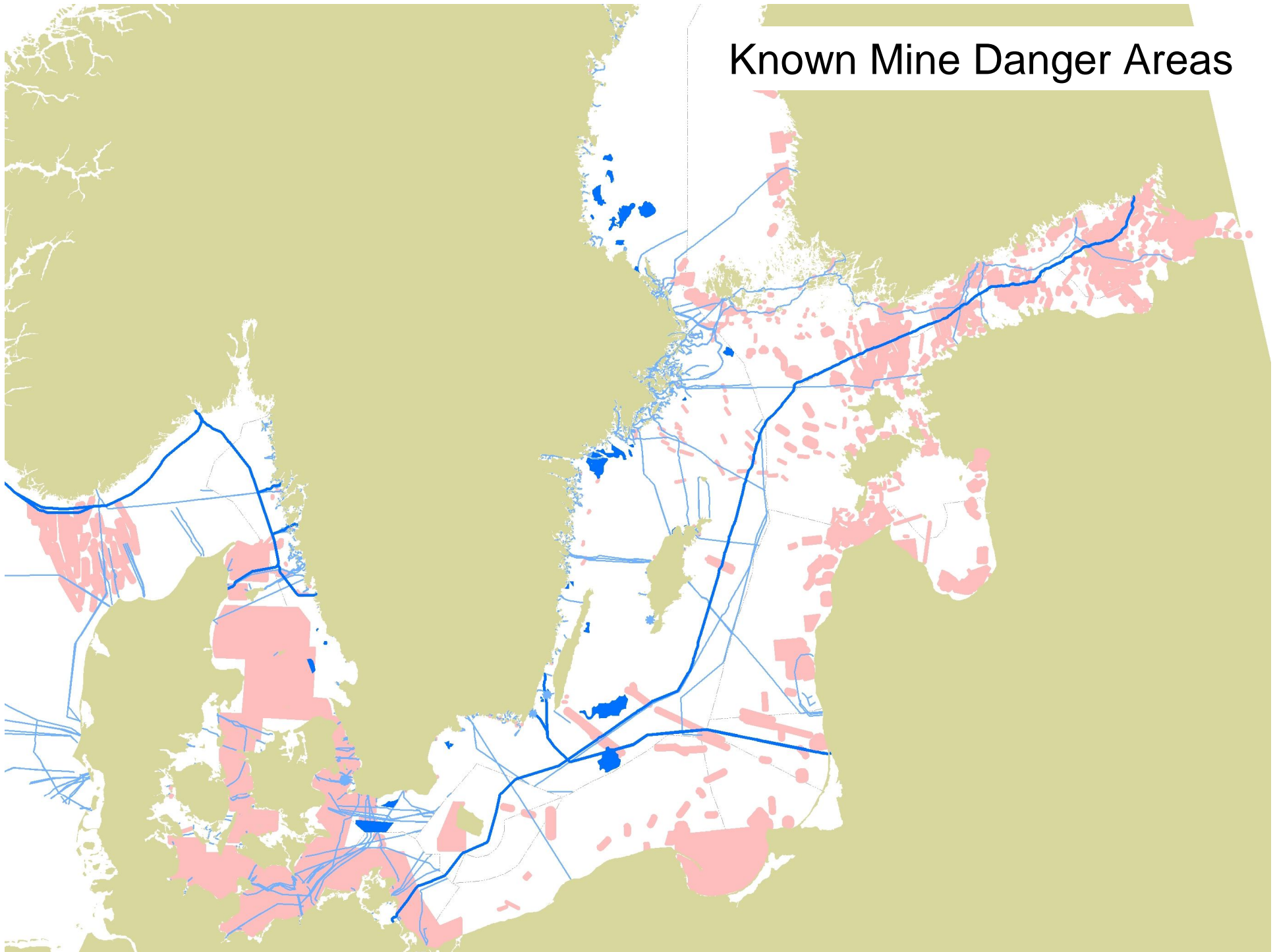
# Oil, Gas and Cabel Projects



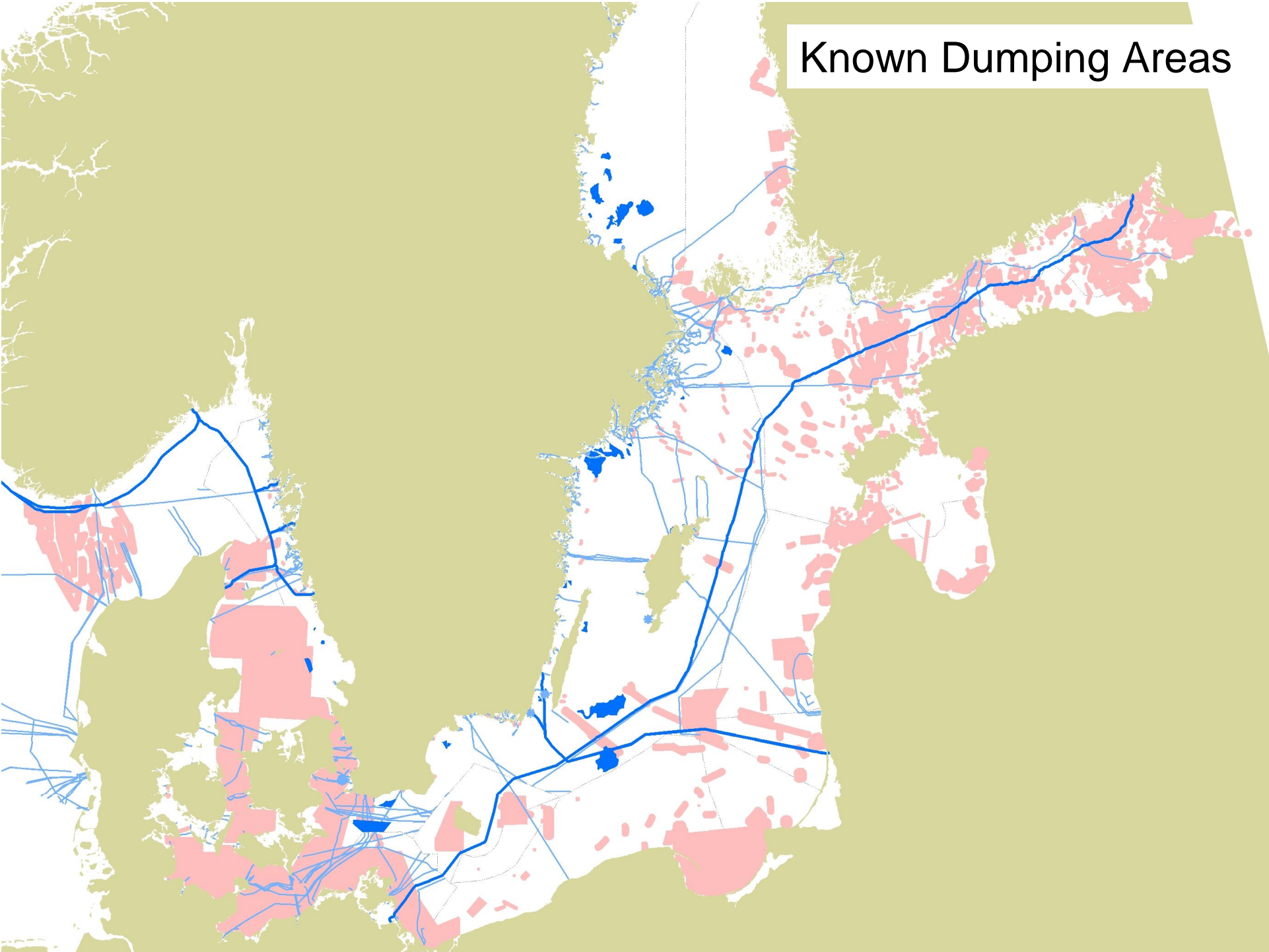
# National areas of interest concerning Wind power



# Known Mine Danger Areas



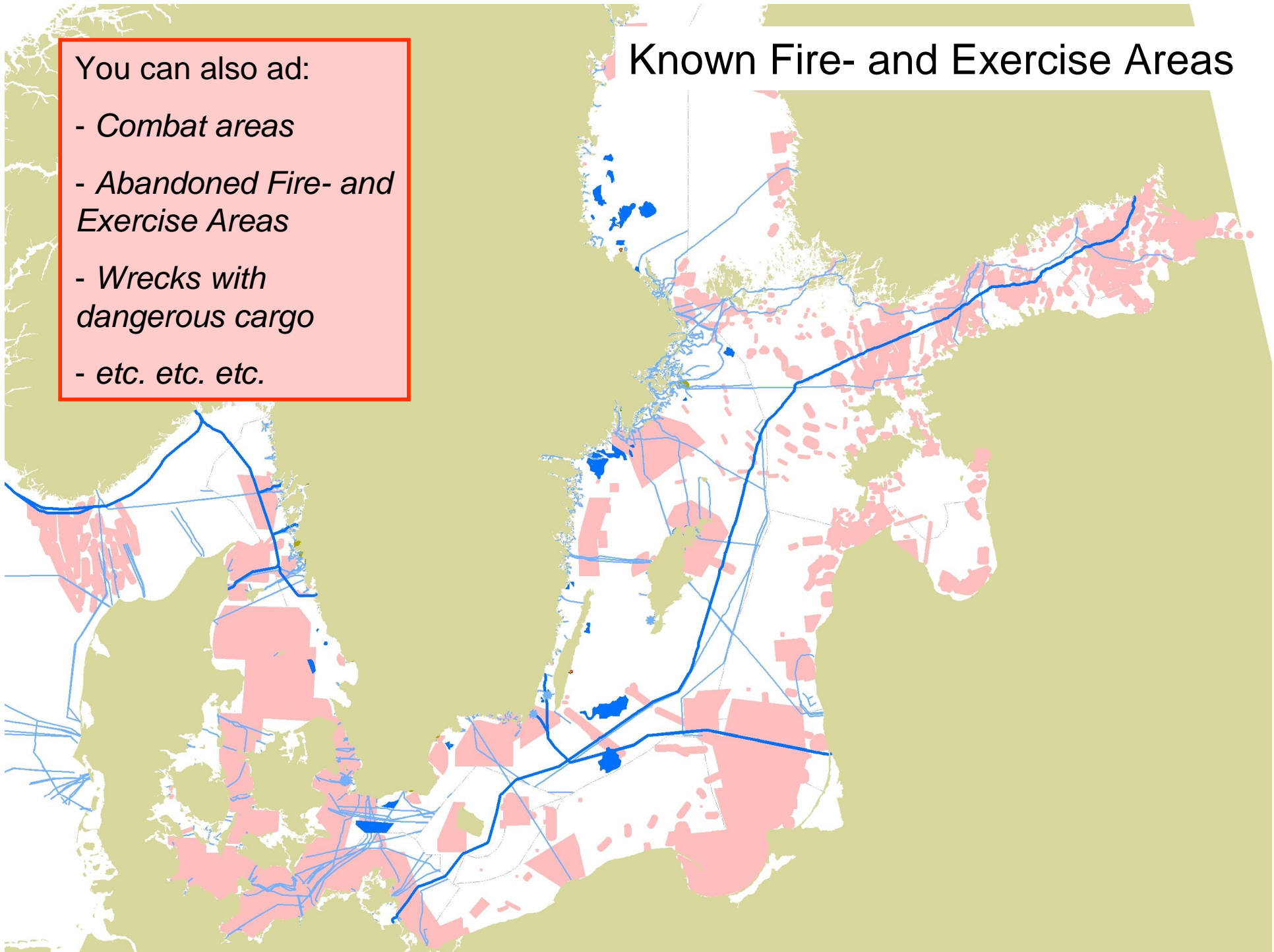
# Known Dumping Areas



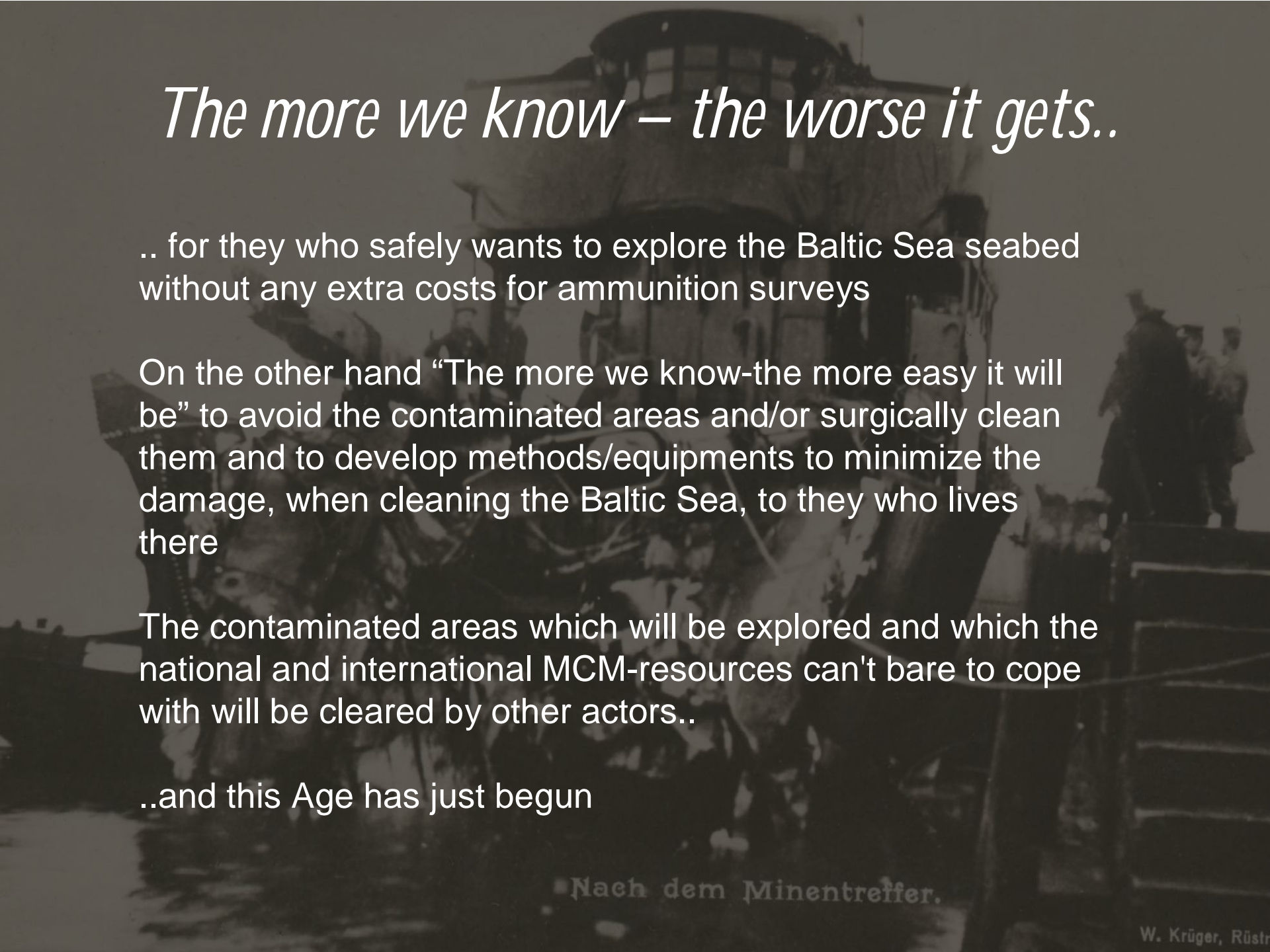
## Known Fire- and Exercise Areas

You can also add:

- *Combat areas*
- *Abandoned Fire- and Exercise Areas*
- *Wrecks with dangerous cargo*
- *etc. etc. etc.*







*The more we know – the worse it gets..*

.. for they who safely wants to explore the Baltic Sea seabed without any extra costs for ammunition surveys

On the other hand “The more we know-the more easy it will be” to avoid the contaminated areas and/or surgically clean them and to develop methods/equipments to minimize the damage, when cleaning the Baltic Sea, to they who lives there

The contaminated areas which will be explored and which the national and international MCM-resources can't bare to cope with will be cleared by other actors..

..and this Age has just begun

„Nach dem Minentreffer.“

W. Krüger, Rüst

*Thank you for your attention*

