Ecology of the Baltic Sea

Characteristics of the Baltic Sea

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STS Fryderyk Chopin 21.5.2013

- young sea (the latest glaciation 10 000 years ago; land uplift)
- epicontinental, shallow (mean 55 m, max 459 Landsort deep, 239 m Gotland deep, Mediterranean mean 1500 m, max 5267 m)
- brackish 2-20 ‰
- low biodiversity
- drainage area 4 x the area of the sea
- positive water balance
- slow water exchange (through the Danish Straits, threshold 17 m, salt water pushes happen seldom)
- no tides
- ice cover in the north (4-6 months in Bothnian Bay)
- stratification of water (salinity, temp) prevents vertical mixing of the water (oxygen depletion areas)
- alien / introduced species (about 120 sp)
- about 85 million people in the drainage area

About the **Garbage Management**

MARPOL Annex V
Regulations for the prevention of pollution by garbage from ships , 1.1.2013 (http://www.imo.org/OurWork/Environment/PollutionPrevention/Garbage/Documents/Annex%20V%20discharge%20requirements%2001-2013.pdf)

”Special Area”
The Baltic Sea
The Mediterranean
The Black Sea
The Red Sea
..

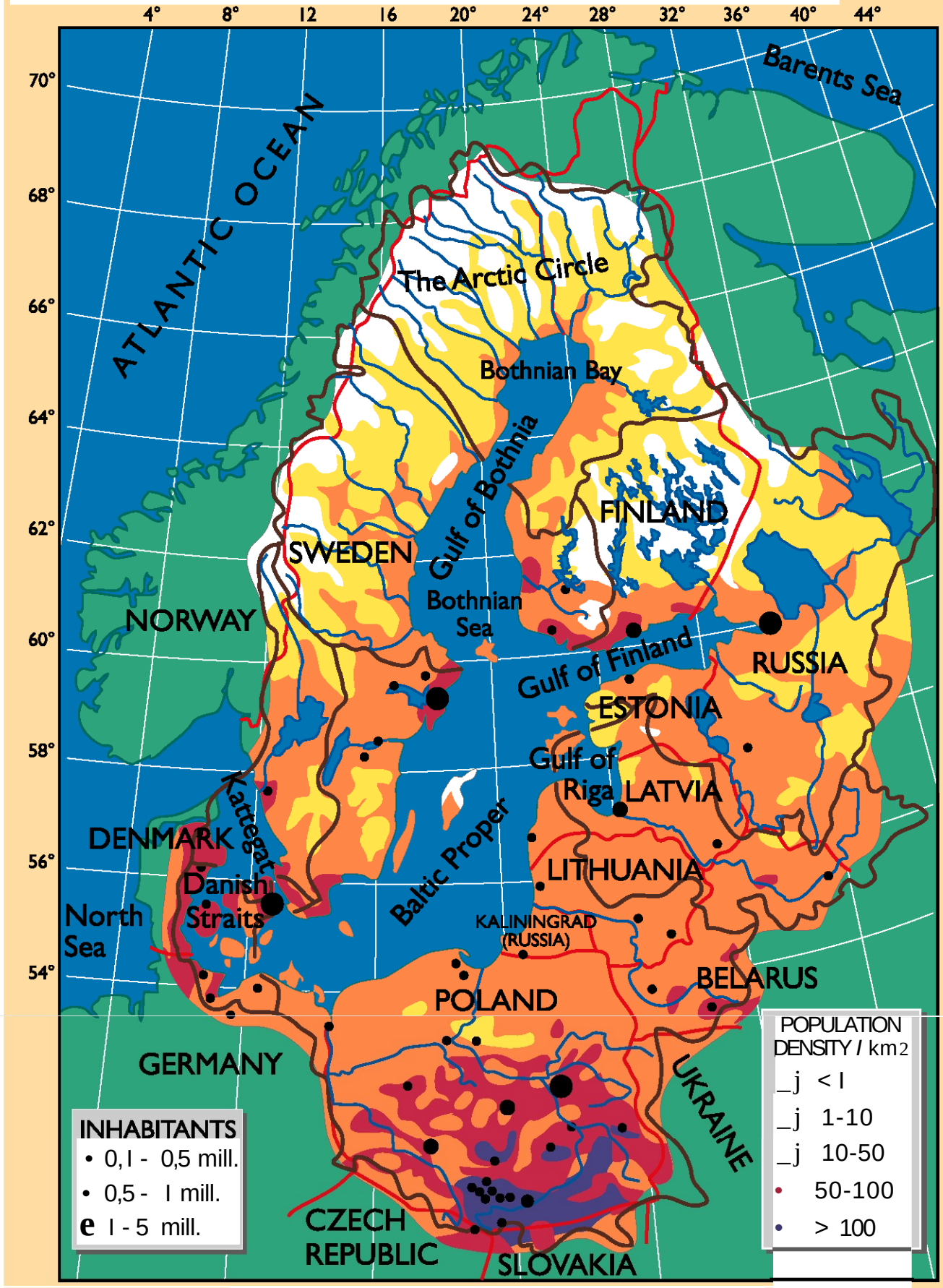
- Food waste comminuted or ground discharge permitted 12 nautical miles from the nearest land

Educational material: Slides (Figs in this presentation) and text material about the Baltic Sea environment and ecology are available on Helcoms website (www.helcom.fi): The Baltic Sea, Environment & Ecology. 2004. Furman E, Salemaa H, Välipakka P & Munsterhjelm R. Baltic Sea transparencies

-In English and Russian
http://www.helcom.fi/press_office/news_baltic/2004/en_GB/balticnews11062004/

- In Swedish
  http://www.ymparisto.fi/download.asp?contentid=11092
- In Finnish
  http://www.ymparisto.fi/download.asp?contentid=11089

• I.THE BALTIC SEA REGION: THE SUBREGIONS AND CATCHMENT AREA



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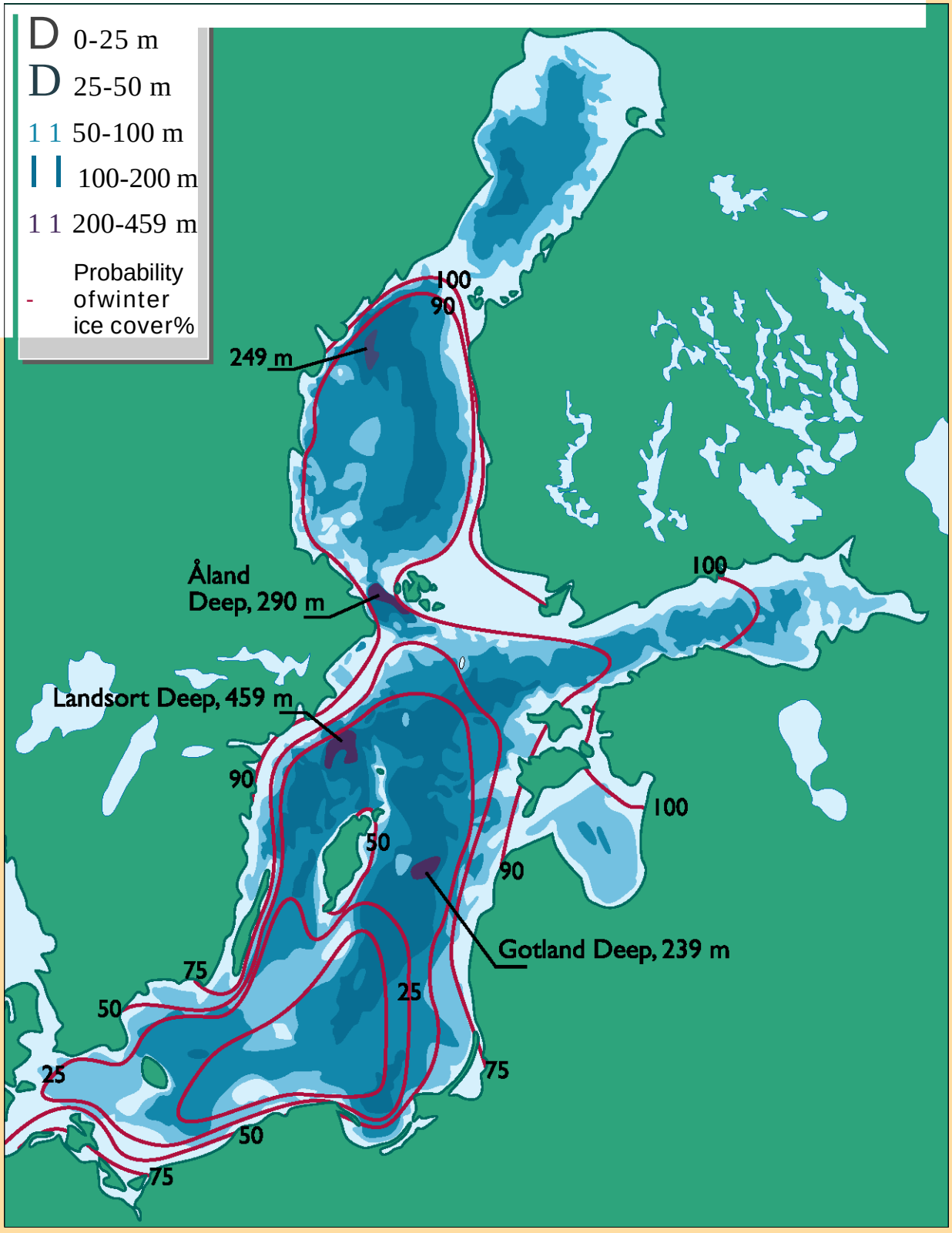
Source: The Baltic Sea, Environment & Ecology. 2004. Furman E, Salemaa H, Välipakka P & Munsterhjelm R. Baltic Sea transparencies http://www.helcom.fi/press_office/news_baltic/2004/en_GB/balticnews11062004/

• 2. THE BALTIC SEA: BATHYMETRIC MAP AND PROBABILITY OF WINTER ICE COVER



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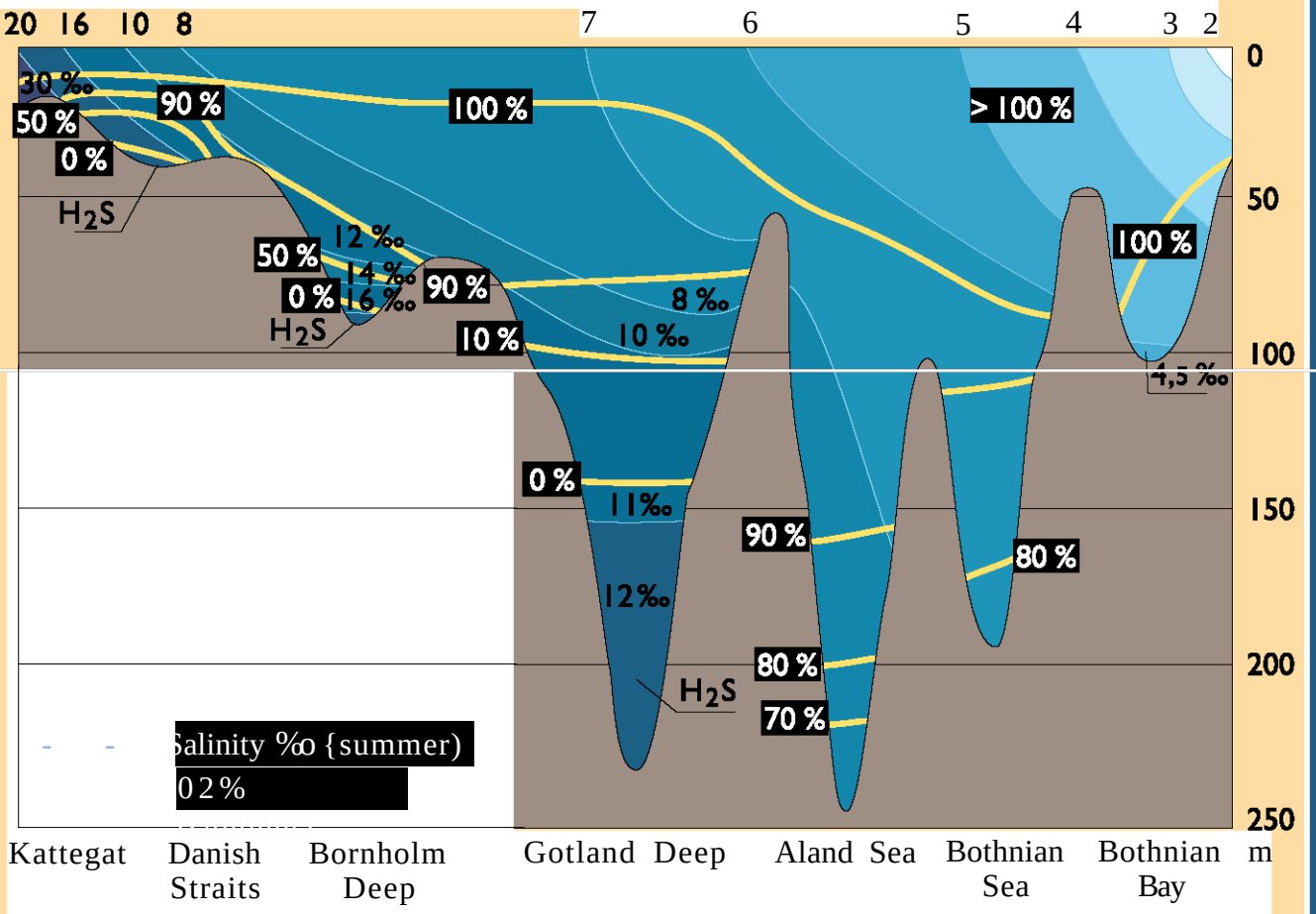
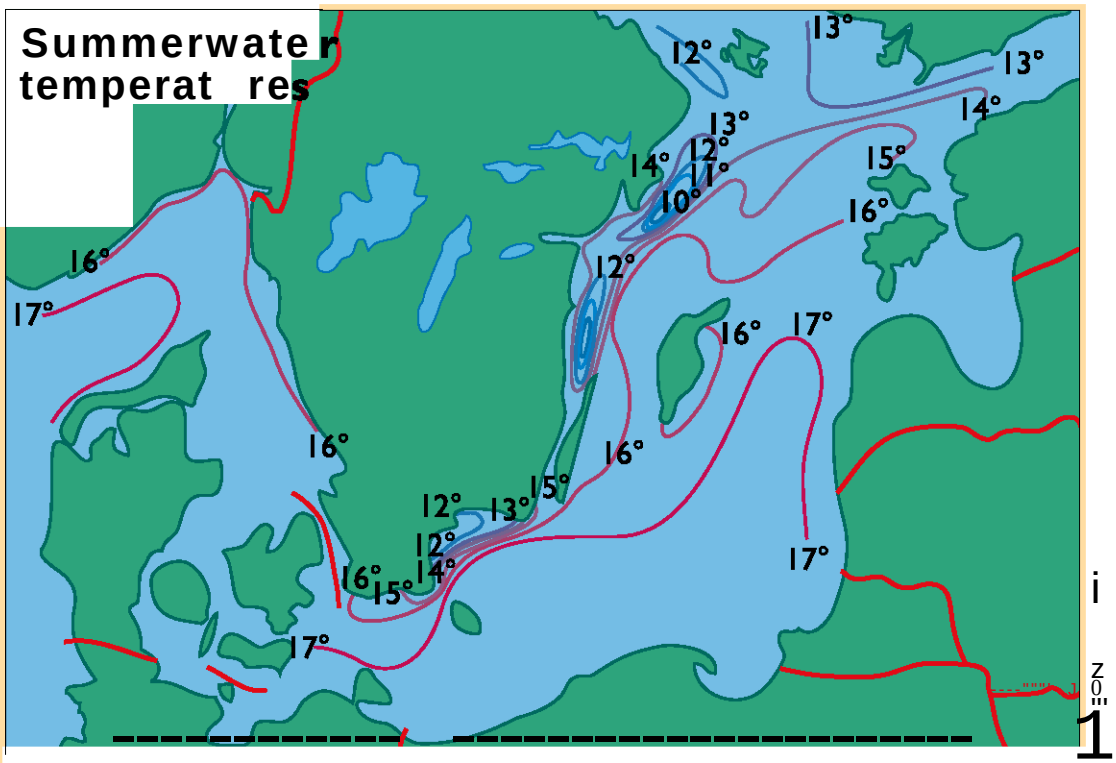
• 3. BALTIC SEA HYDROGRAPHY: A HORIZONTAL PROFILE



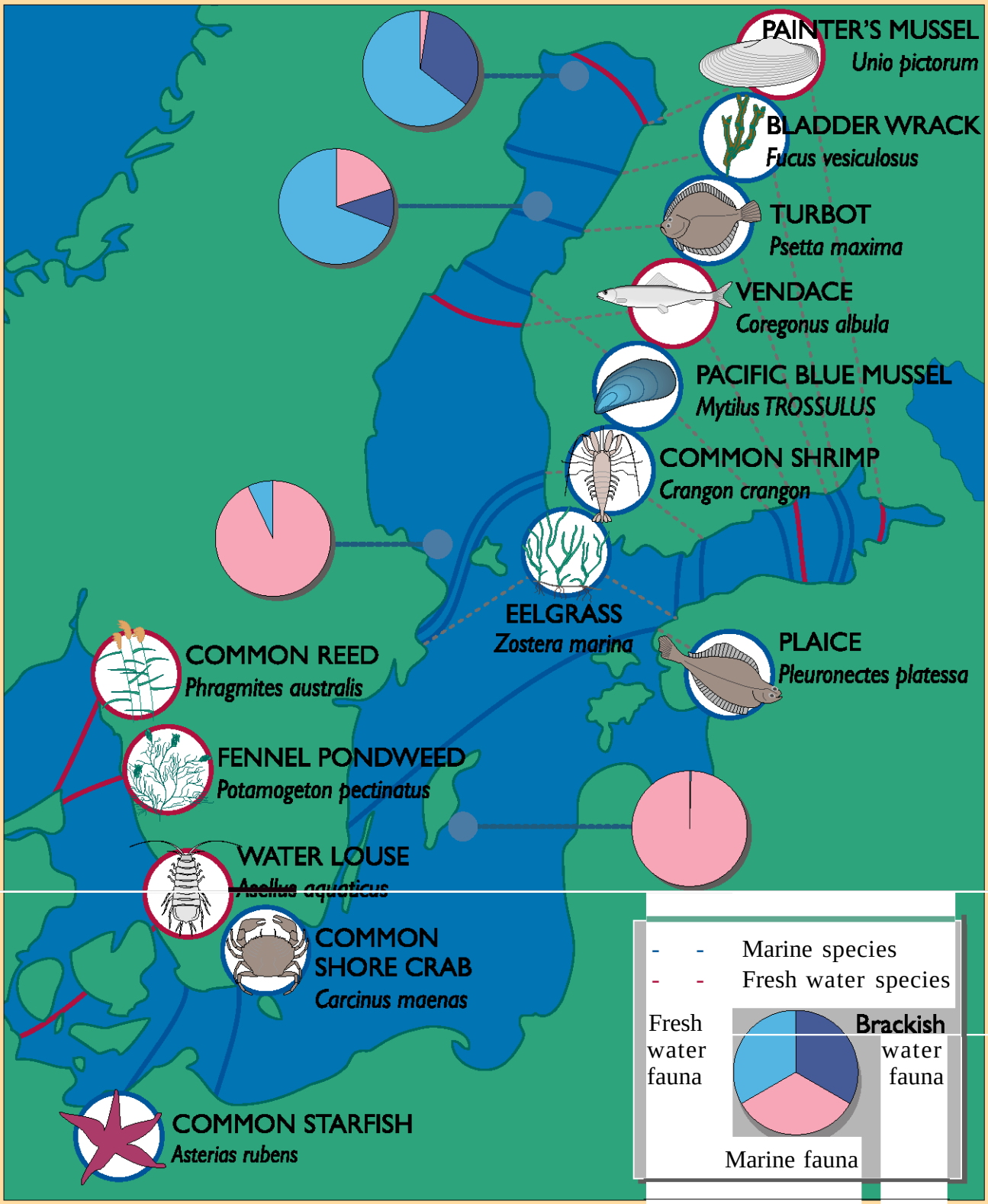


THE BALTIC SEA 3

►TEXT ►INDEX

Source:
The Baltic Sea, Environment & Ecology. 2004. Furman E, Salemaa H, Välipakka P & Munsterhjelm R. Baltic Sea transparencies http://www.helcom.fi/press_office/news_baltic/2004/en_GB/balticnews11062004/

• 6 .THE DISTRIBUTION AND ABUNDANCE OF FAUNA AND FLORA IN THE BALTIC SEA



THE BALTIC SEA 6

►TEXT ►INDEX

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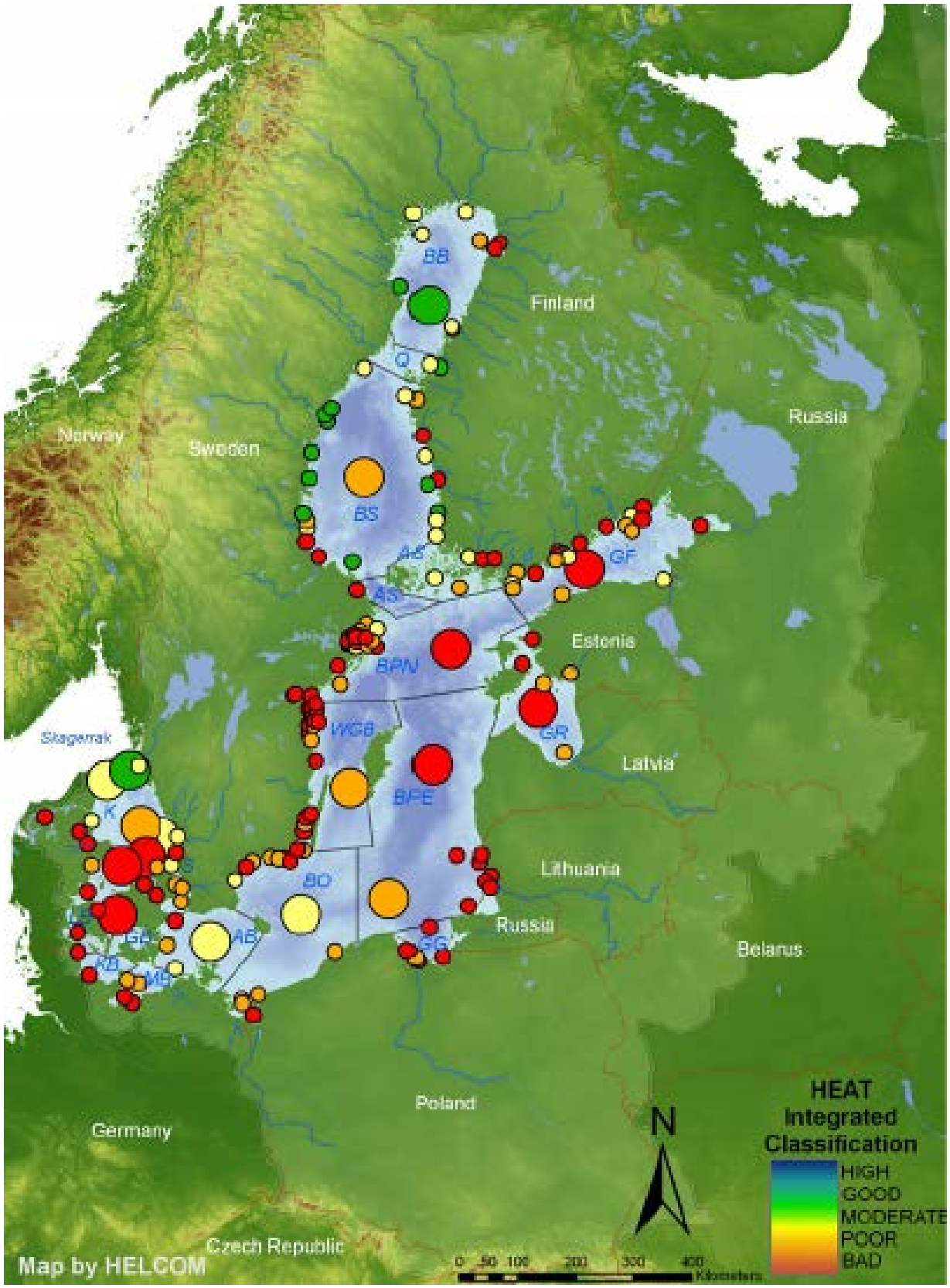
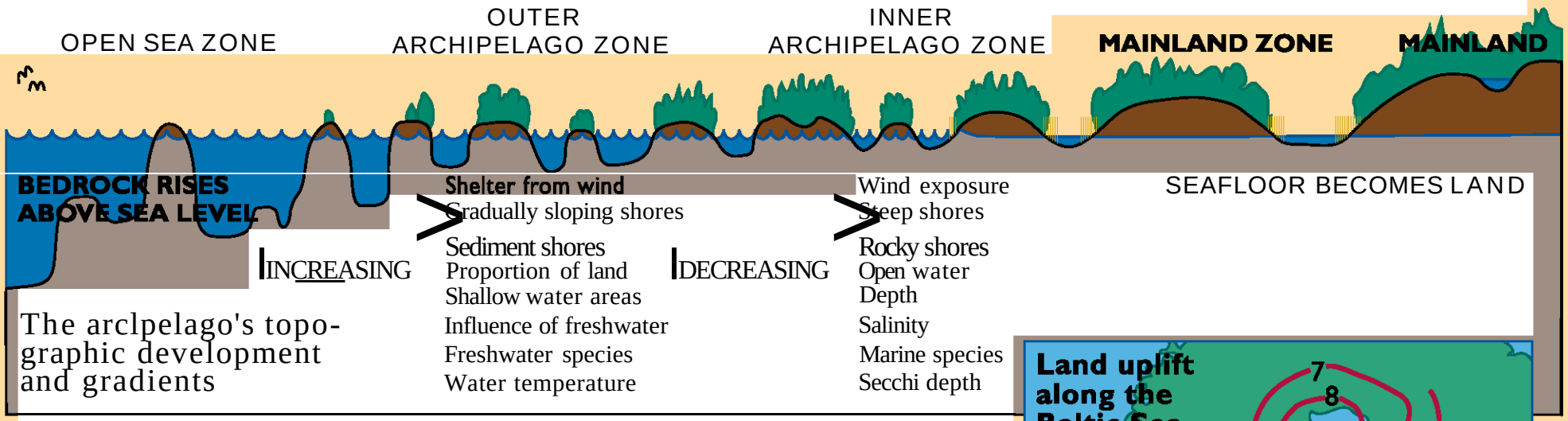
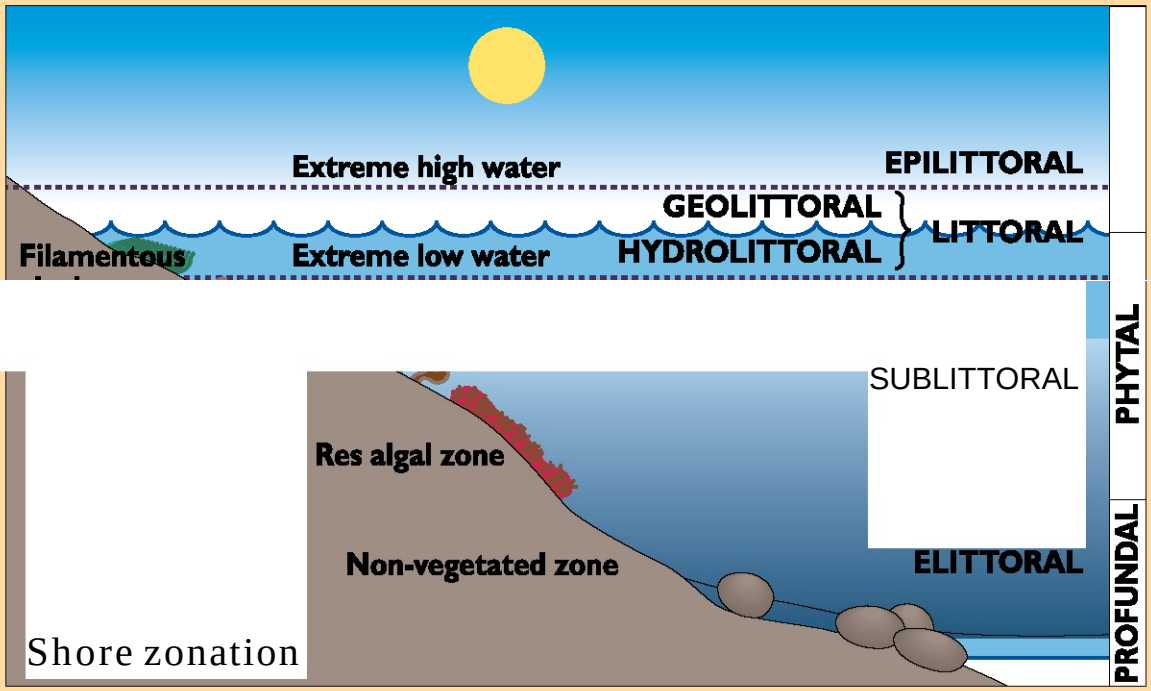
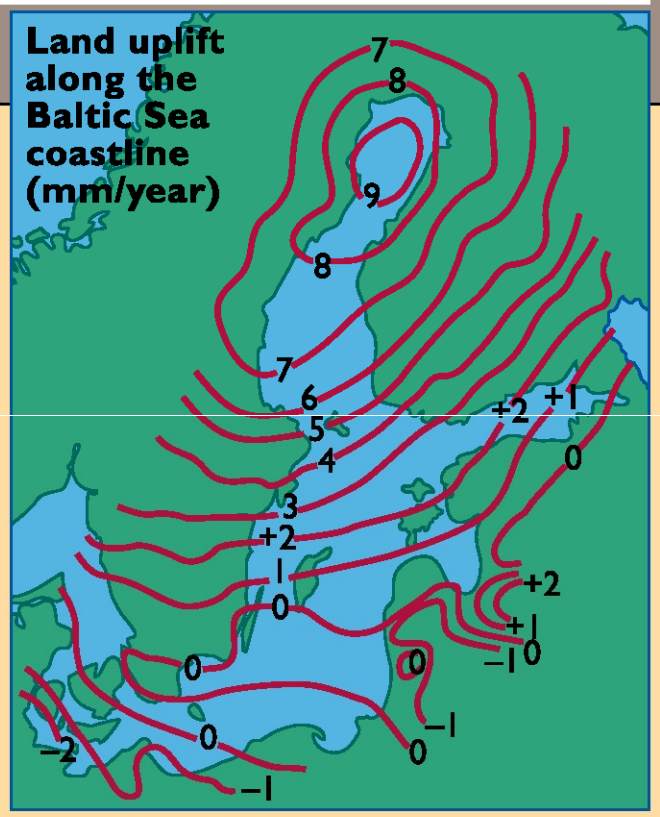


Figure 1. Integrated classifi cation of **eutrophication** status based on 189 areas. Good status is equivalent to 'areas not affected by eutrophication', while moderate, poor and bad are equivalent to 'areas affected by eutrophication'. Large circles represent open basins, while small circles represent coastal areas or stations. HEAT = HELCOM Eutrophication Assessment Tool (Annex 1). Abbreviations: BB=Bothnian Bay, Q=The Quark, BS=Bothnian Sea, AS=Archipelago Sea, ÅS=Åland Sea, BPN= Northern Baltic Proper, GF=Gulf of Finland, BPE= Baltic Proper, Eastern Gotland Basin, GR=Gulf of Riga, WGB=Western Gotland Basin, GG=Gulf of Gdansk, BO=Bornholm Basin, AB=Arkona Basin, MB=Mecklenburg Bight, KB=Kiel Bight, GB=Great Belt, LB=Little Belt, S=The Sound, K=Kattegat.http://meeting.helcom.fi/c/document_library/get_file?p_l_id=79889&folderId=377779&name=DLFE-36817.pdf. Source: Baltic Sea Env Proceedings No 115A.Helcom

8. THE ARCHIPELAGOS, LAND UPLIFT AND THE ZONATION OF SHORES







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