

Global Workshop on Source-to-Sea Management

14-16 December, Geneva & online

United Nations Economic Commission
for Europe (UNECE)

Swedish Agency
for Marine and
Water Management



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Director General

National outlook - Sweden

Upstream challenges in the freshwater system connecting the marine system

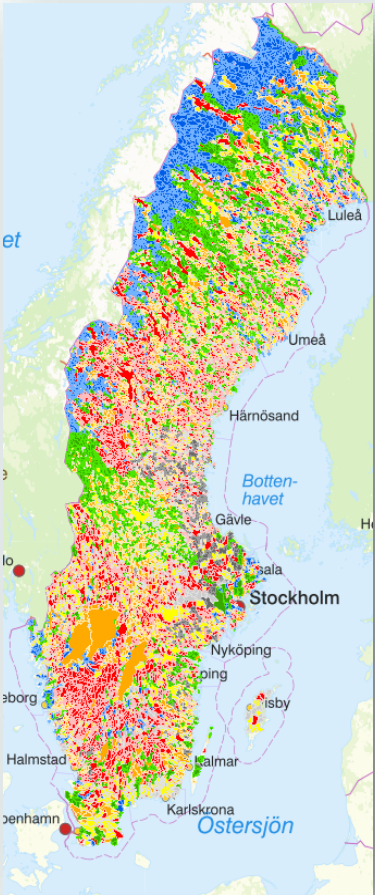
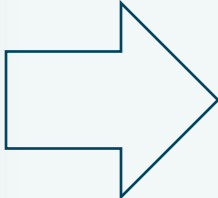
Havs
och Vatten
myndigheten



Dams



Transport of timber
in waterways

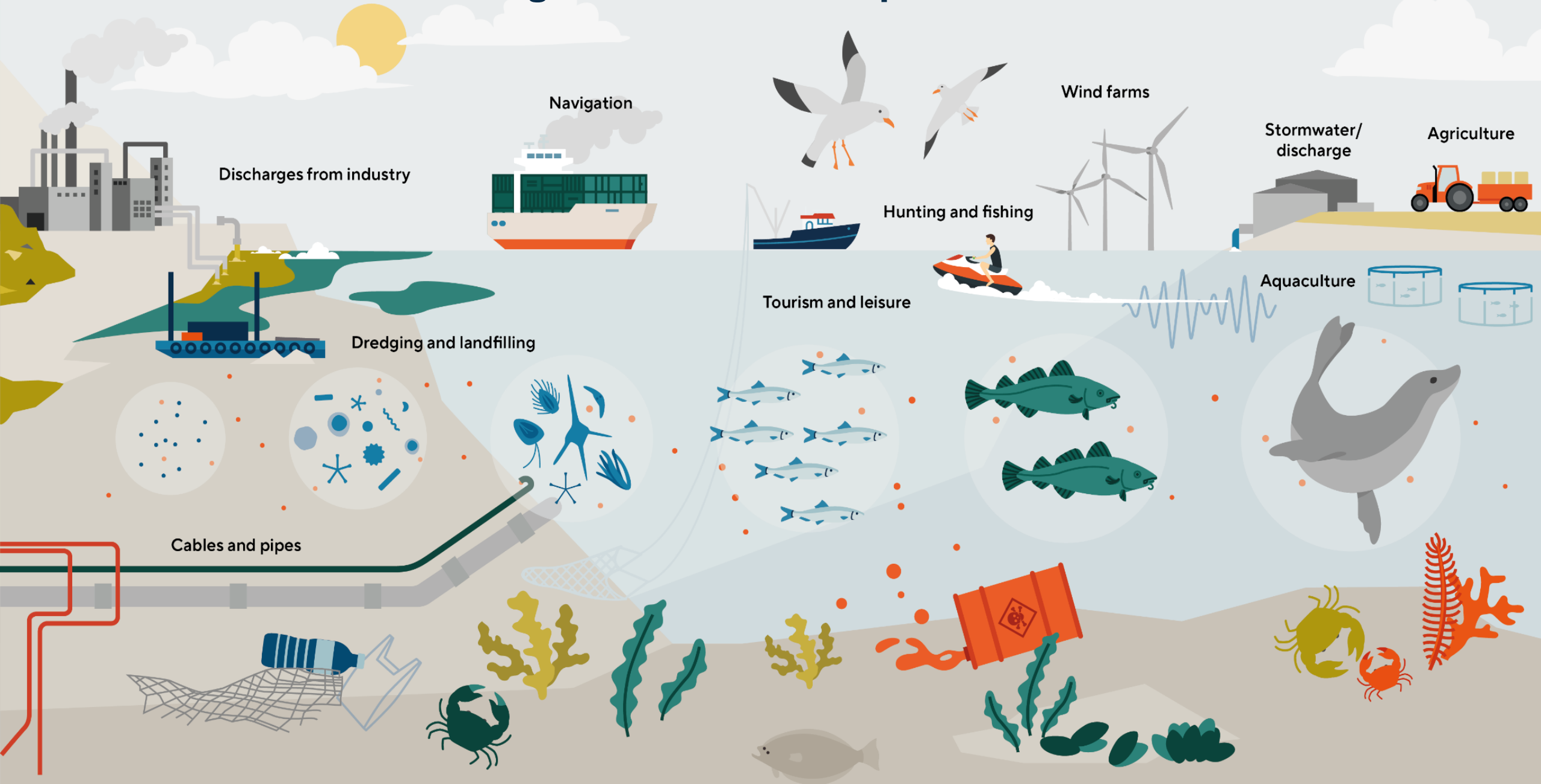


Lack of connectivity

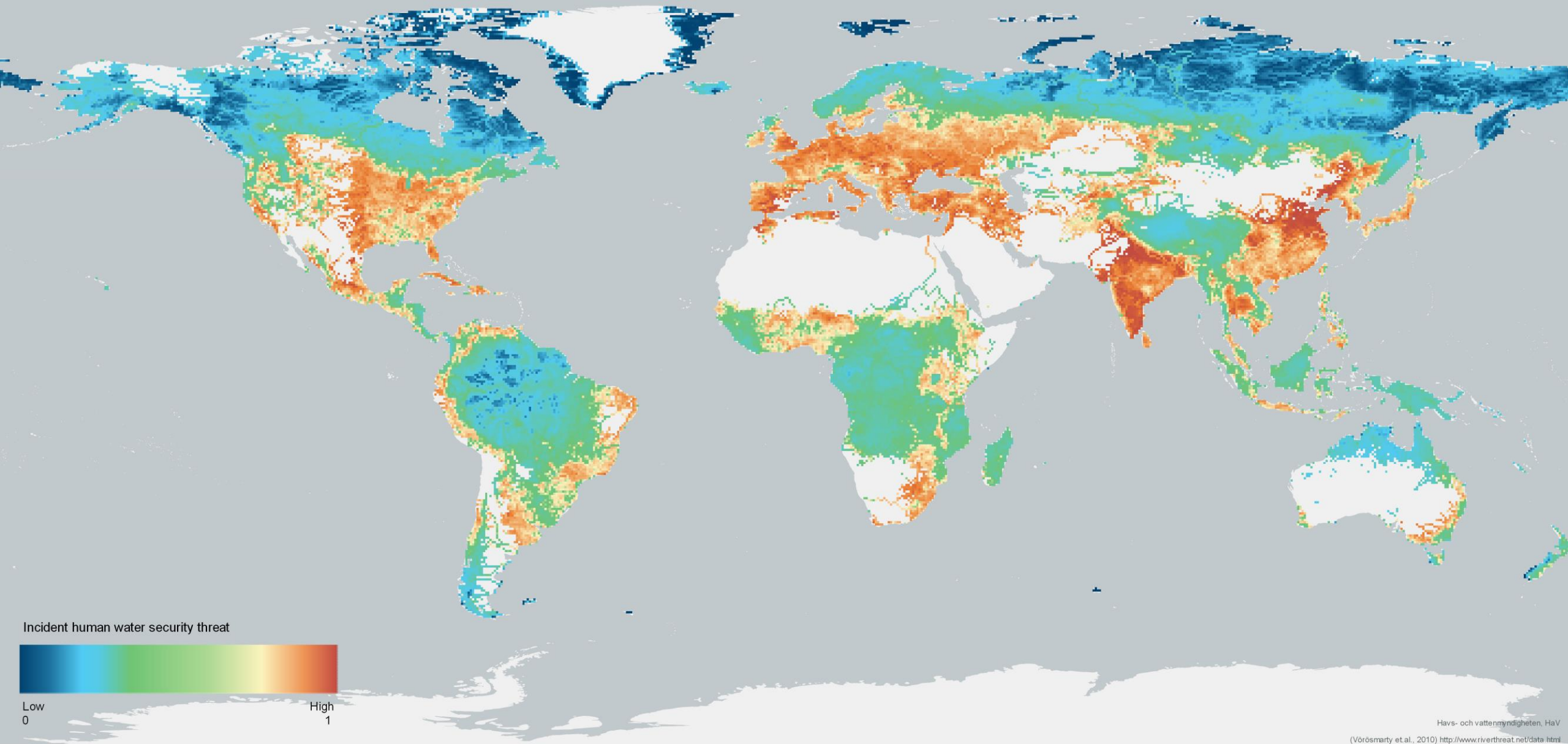


Historic and present
situation of salmon
habitats

Status of the surrounding Swedish marine space - Baltic and Western seas

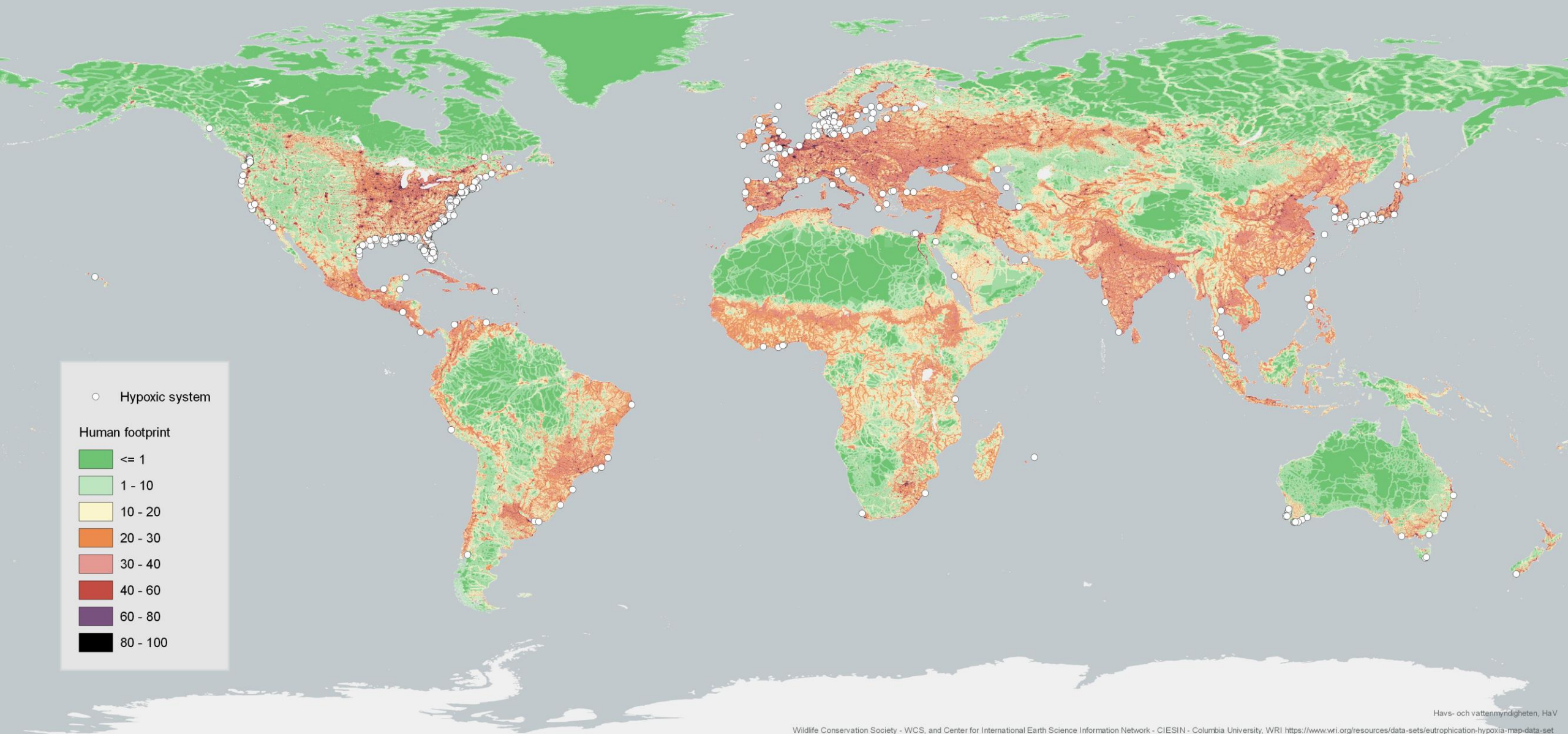


Global outlook

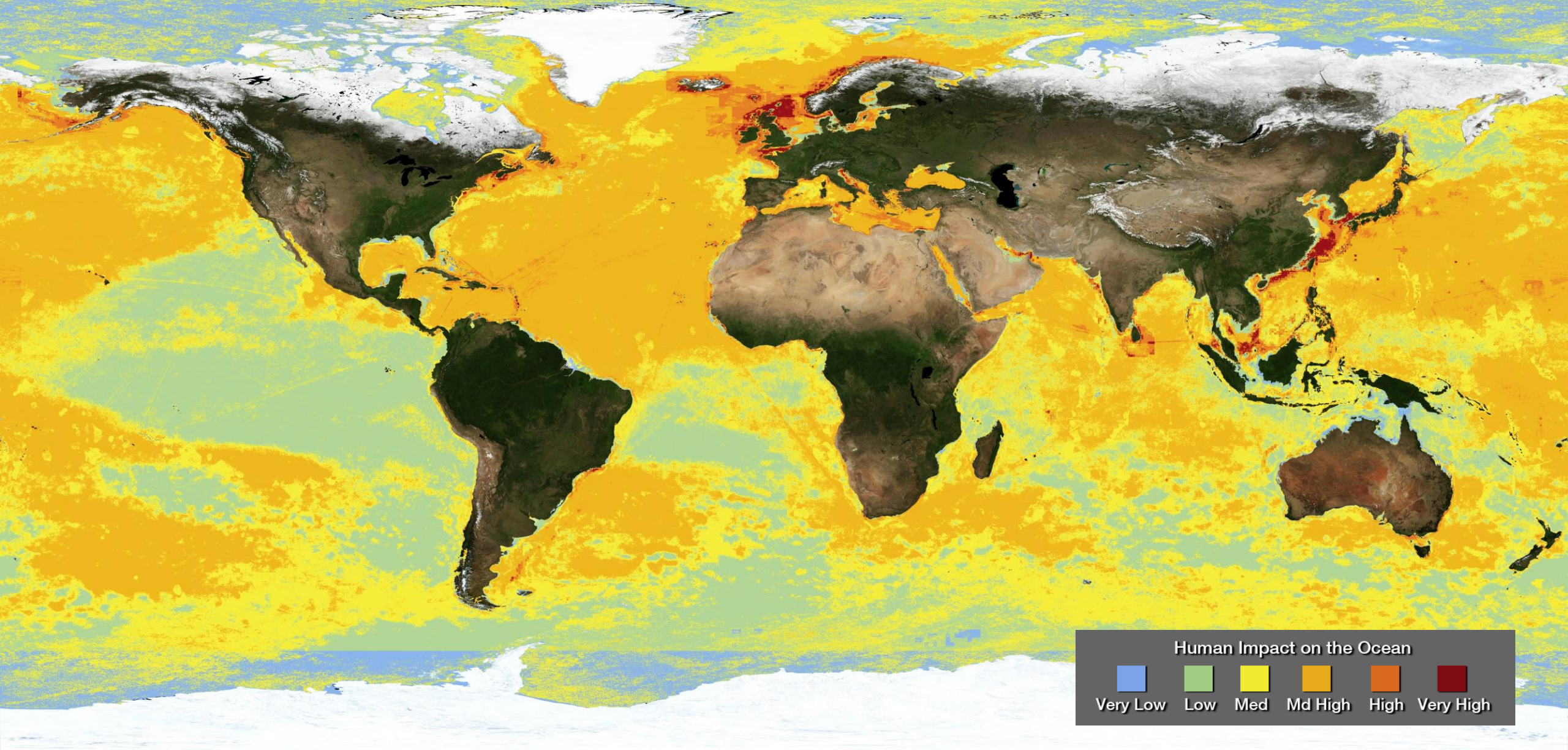


Havs- och vattenmyndigheten, HaV
(Vörösmarty et al., 2010) <http://www.riverthreat.net/data.html>

Freshwater systems are rapidly degrading at a global scale



Coastal zone water systems are heavily affected world wide

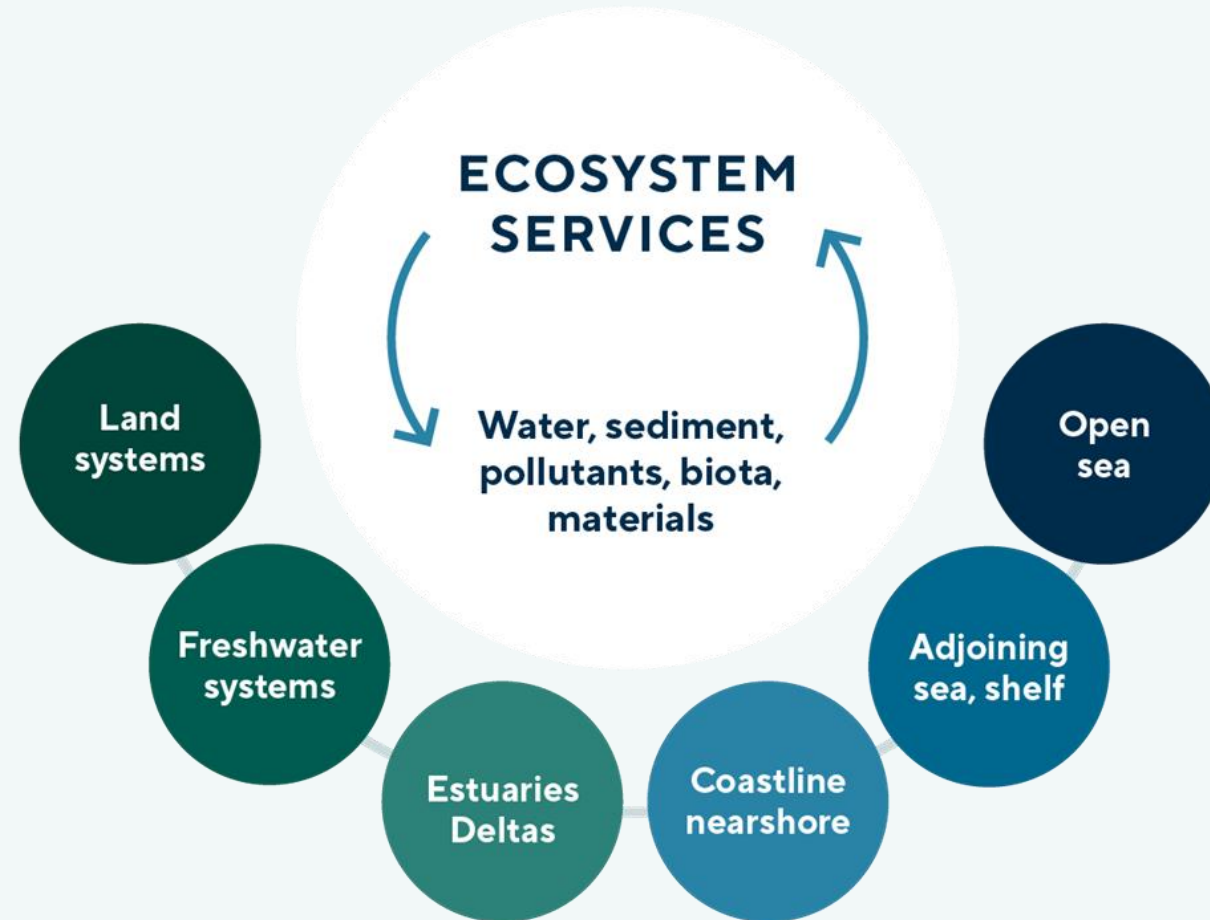


Virtually no marine area globally is unaffected by anthropogenic activities

National response

Swedish government's cohesive Marine Resource and Water Management Policy from source to sea" 2009

Swedish Agency
for Marine and
Water Management



Global response

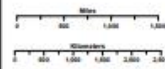
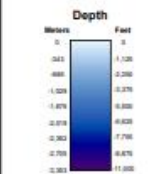
Large Marine Ecosystems of the World and Linked Watersheds

MAP KEY:

LME Numbers:

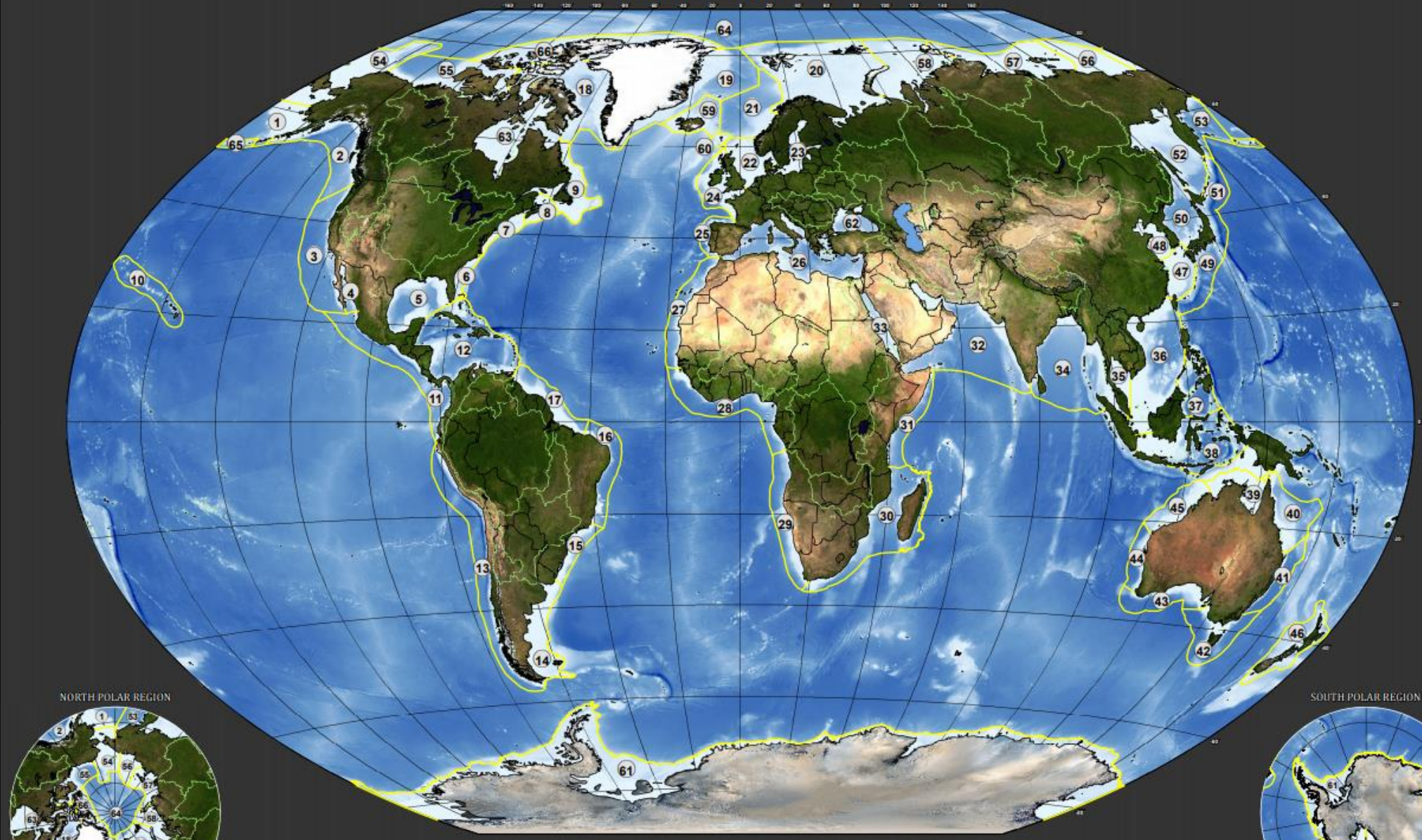
- 1 East Bering Sea
- 2 Gulf of Alaska
- 3 California Current
- 4 Gulf of California
- 5 Gulf of Mexico
- 6 Southwest U.S. Continental Shelf
- 7 Northwest U.S. Continental Shelf
- 8 Scotian Shelf
- 9 Newfoundland-Labrador Shelf
- 10 Insular Pacific-Hawaiian
- 11 Pacific Central American Coastal
- 12 Caribbean Sea
- 13 Humboldt Current
- 14 Patagonian Shelf
- 15 South Brazil Shelf
- 16 East Brazil Shelf
- 17 North Brazil Shelf
- 18 Canadian Eastern Arctic - West Greenland
- 19 Greenland Sea
- 20 Barents Sea
- 21 Norwegian Sea
- 22 North Sea
- 23 Baltic Sea
- 24 Celtic-Biscay Shelf
- 25 Iberian Coastal
- 26 Mediterranean Sea
- 27 Canary Current
- 28 Guinea Current
- 29 Benguela Current
- 30 Agulhas Current
- 31 Somali Coastal Current
- 32 Arabian Sea
- 33 Red Sea
- 34 Bay of Bengal
- 35 Gulf of Thailand
- 36 South China Sea
- 37 Sulu-Celebes Sea
- 38 Indonesian Sea
- 39 North Australian Shelf
- 40 Northwest Australian Shelf - Great Barrier Reef
- 41 East-Central Australian Shelf
- 42 Southeast Australian Shelf
- 43 Southwest Australian Shelf
- 44 West-Central Australian Shelf
- 45 Northwest Australian Shelf
- 46 New Zealand Shelf
- 47 East China Sea
- 48 Yellow Sea
- 49 Kuroshio Current
- 50 Sea of Japan - East Sea
- 51 Oyashio Current
- 52 Sea of Okhotsk
- 53 West Bering Sea
- 54 Northern Bering - Chukchi Seas
- 55 Barents Sea
- 56 East Siberian Sea
- 57 Laptev Sea
- 58 Kara Sea
- 59 Iceland Shelf and Sea
- 60 Farnes Plateau
- 61 Antarctic
- 62 Black Sea
- 63 Hudson Bay Complex
- 64 Central Arctic Ocean
- 65 Aleutian Islands
- 66 Canadian High Arctic - North Greenland

-  LME Boundary
-  Watershed Boundary
-  Political Boundary



Watershed Topographic
Scale = 1 : 64,000,000
1 cm = 1,260 miles 1 cm = 800 km

Data Sources:
Bathymetry (2 mires): Smith and Sandwell, 1997
Bathymetry (30 mires): IBC/GEBCO, 2003
Watersheds: HYDRO-1K, USGS EROS Data Center
Topographic Image: Political Boundaries: © 2008



LARGE MARINE ECOSYSTEMS are areas of the ocean characterized by distinct bathymetry, hydrography, productivity, and trophic interactions. They annually produce 80 percent of the world's fish catch. They are national and regional local areas of a global effort to reduce the degradation of linked watersheds, marine resources, and coastal environments from pollution, habitat loss, and over-fishing. For More Information Visit: <http://www.lme.noaa.gov>

Opportunities in source-to-sea management

- » Identify green & blue economic opportunities
- » Identify clear management objectives for connected flows
 - Water resources management
 - Coastal zone management
 - Marine Spatial Planning
- » Coordinate across sectors, stakeholders & geographic segments
 - Make use of spatial planning frameworks



Swedish Agency for Marine and Water Management



<https://www.havochvatten.se/en>