













# Europe's seas under multiple pressures

- Reversing the current state of affairs

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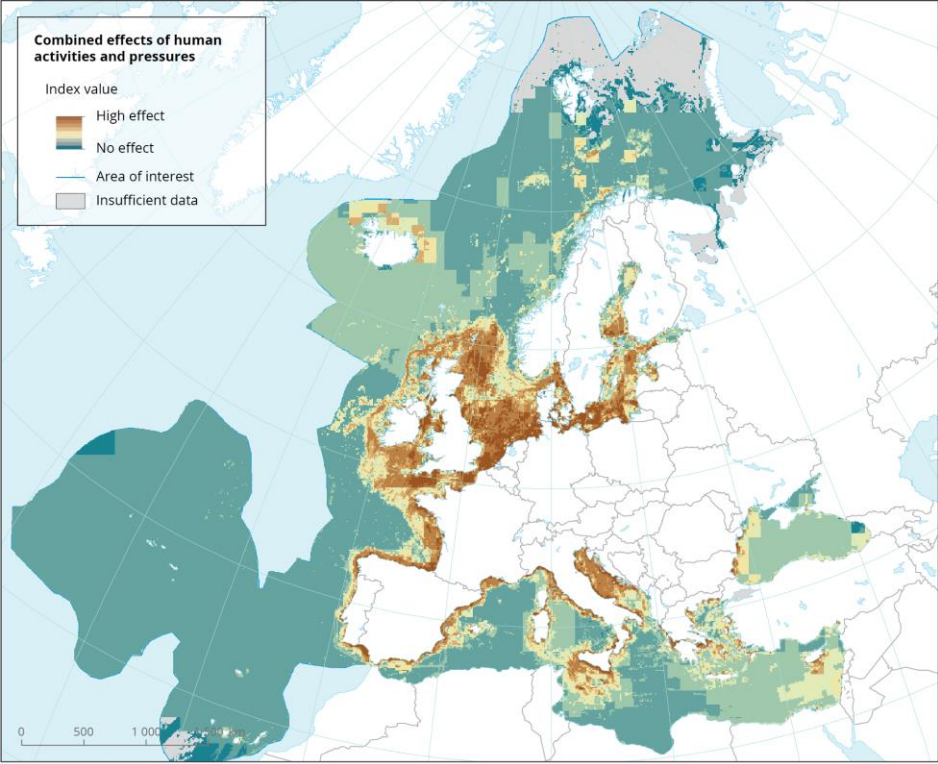
# State of Europe's marine environment

## Thematic summary assessment

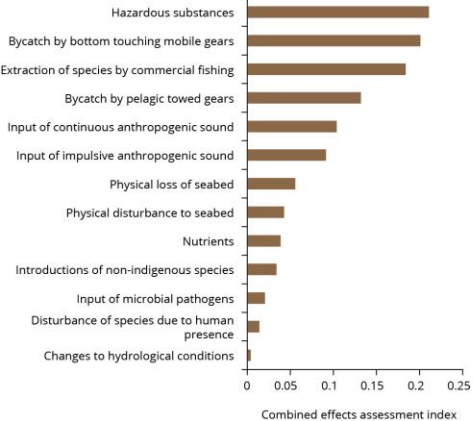
Theme	Past trends and outlook		Prospects of meeting policy objectives/targets
	Past trends (10-15 years)	Outlook to 2030	2020
State of marine ecosystems and biodiversity	 Trends show a mixed picture	 Deteriorating developments dominate	 Largely not on track
Pressures and impacts on marine ecosystems	 Trends show a mixed picture	 Deteriorating developments dominate	 Largely not on track
Sustainable use of the seas	 Trends show a mixed picture	 Developments show a mixed picture	 Partly on track
Marine protected areas	 Improving trends dominate	 Developments show a mixed picture	 Largely on track

**Implementation Gap** ←

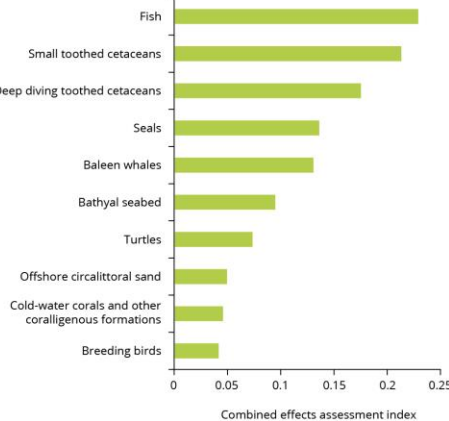
# Multiple pressures & effects on Europe's seas



Pressures ranking

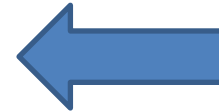
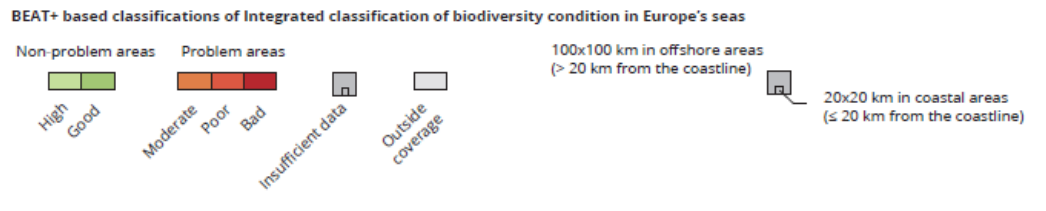
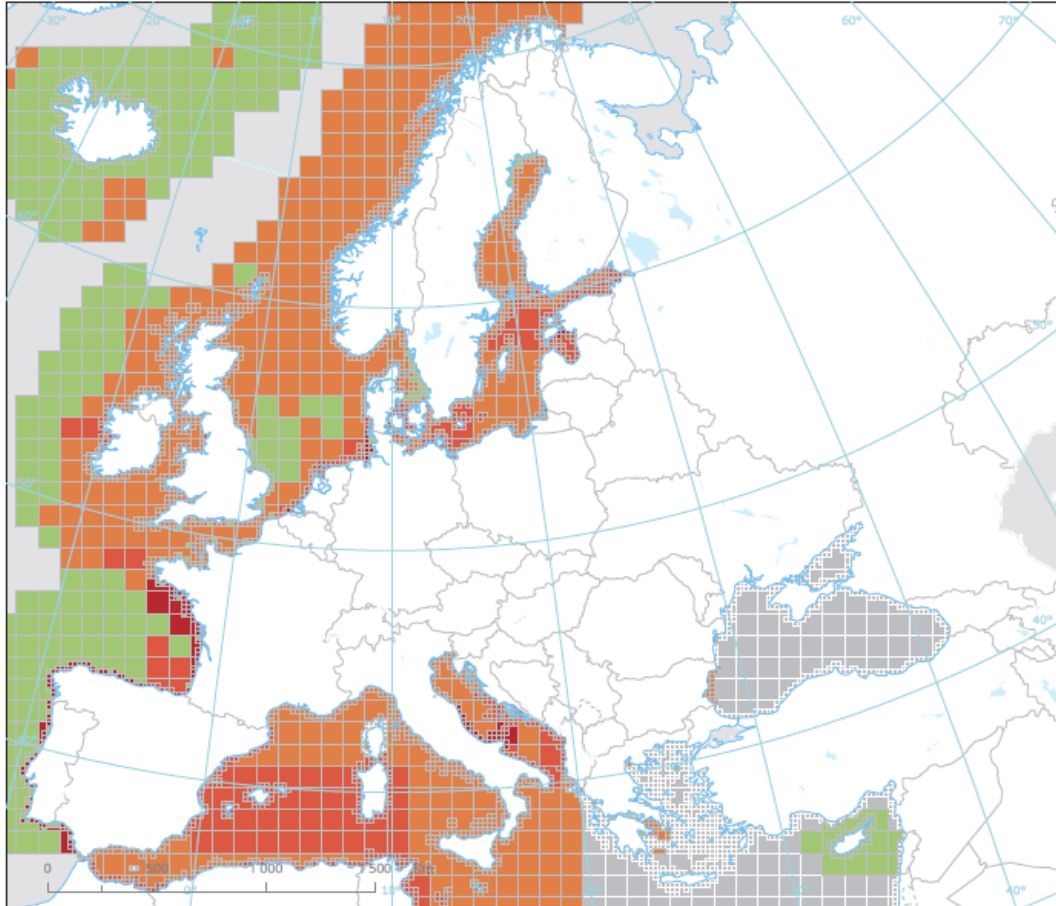


Effects ranking



# The condition of biodiversity in Europe's seas

Figure 3.1 Integrated classification of biodiversity condition in Europe's seas



Where we have data and can assess it, multiple pressures, including climate change, result in the state of biodiversity being 'not good'



# State of commercial fish/shellfish stocks - Overexploitation & lack of knowledge

**Table 4.1** Environmental status of commercially exploited fish and shellfish stocks in relation to meeting two of the primary criteria that define the MSFD's 'good environmental status' objective for descriptor 3 on 'commercially exploited fish and shellfish' (2016- 2018)

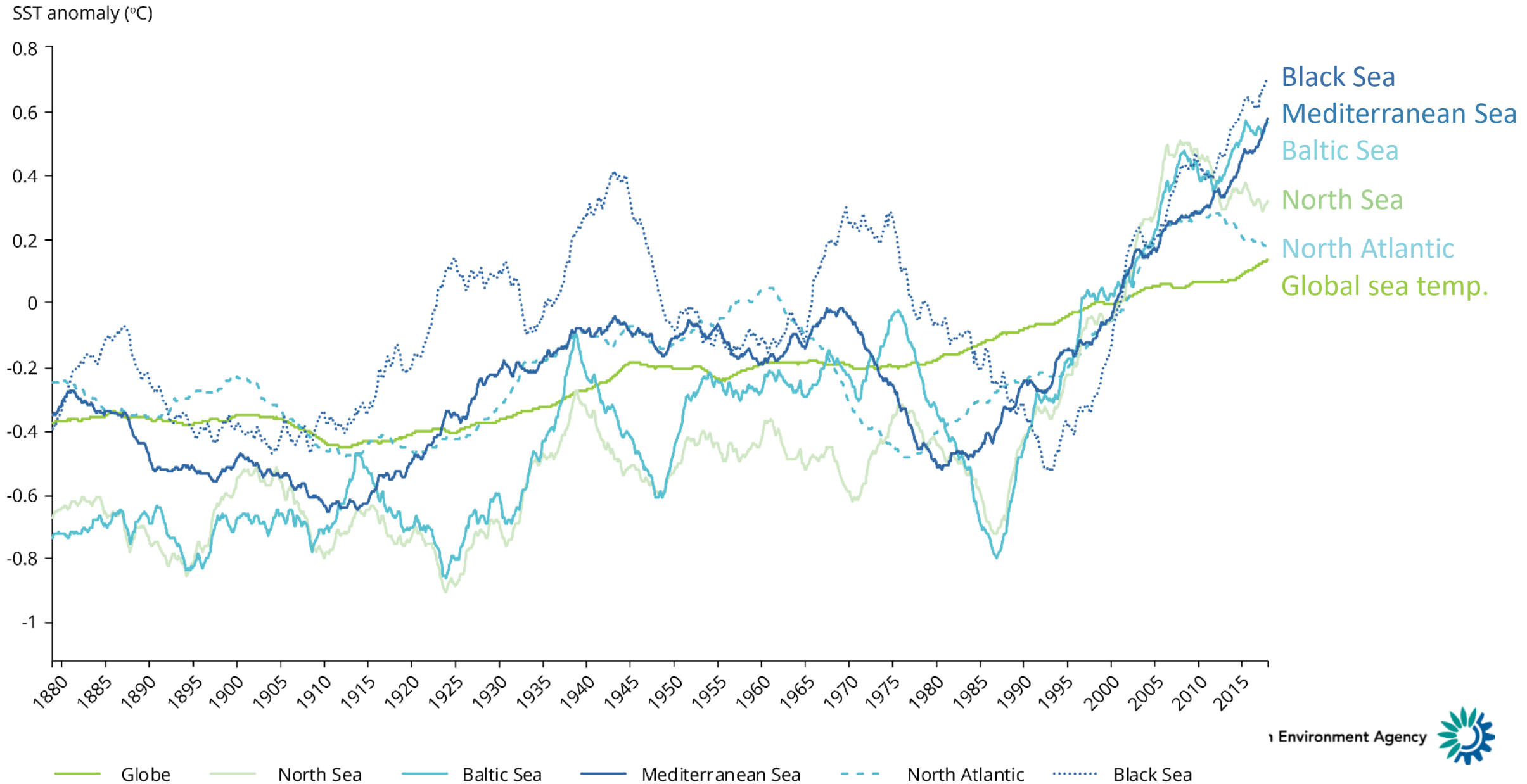
**We cannot manage what we don't know! = We need adequate environmental monitoring and stock assessments of all commercially exploited fish and shellfish species across all Europe's seas**

**Out of the assessed stocks, those in the NE Atlantic Ocean and Baltic Sea have started doing better in recent years because of strong, long-term efforts to decrease fishing pressure there; while those in the Mediterranean and Black seas are very overfished**

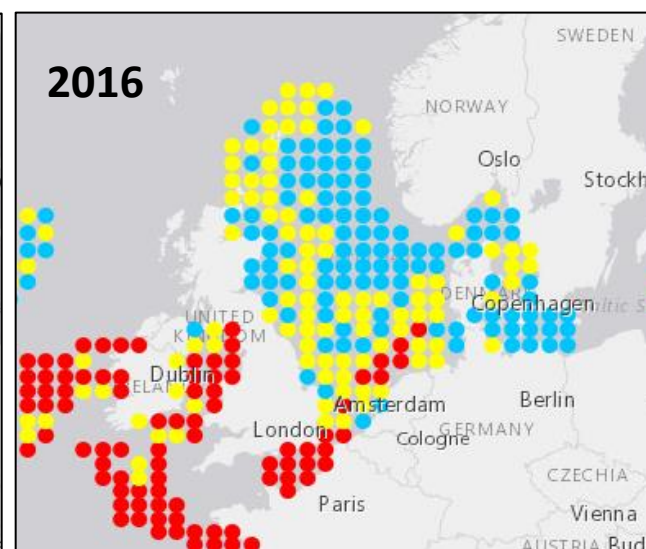
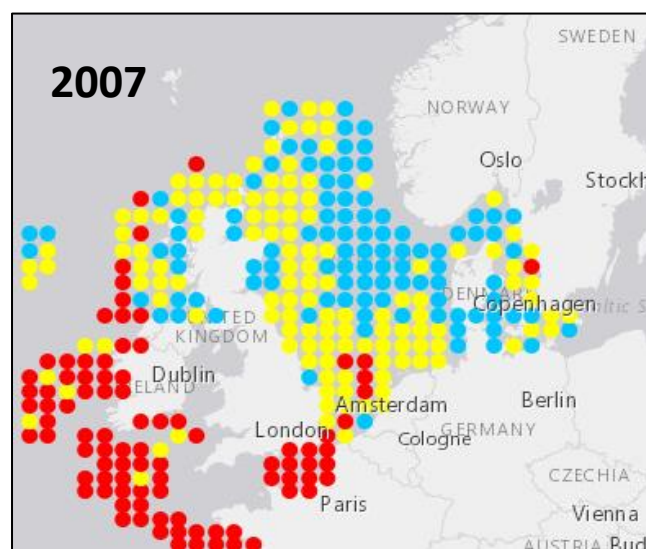
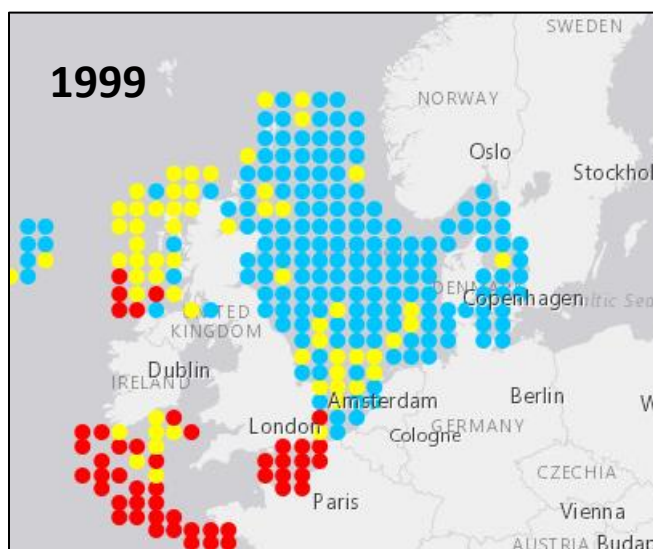
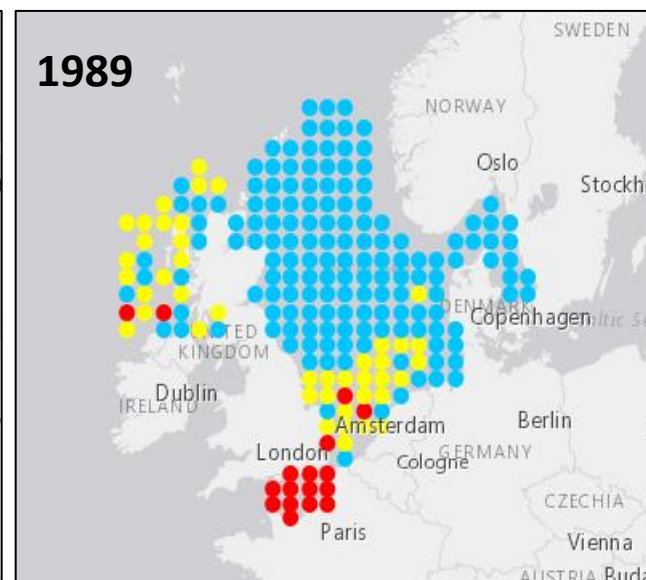
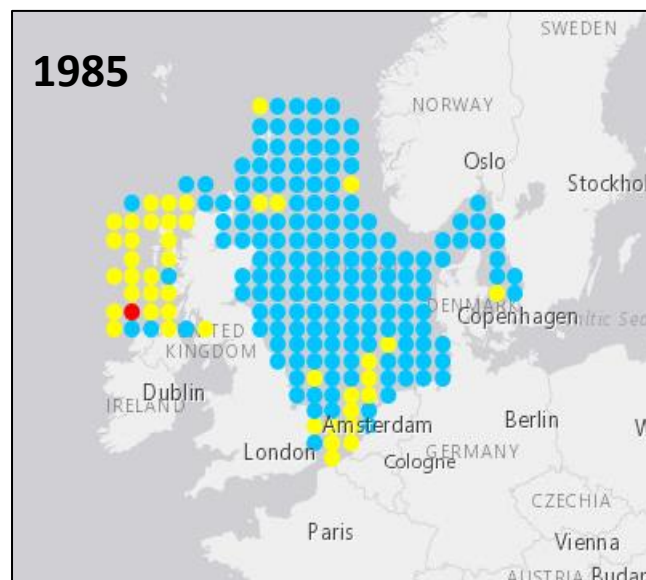
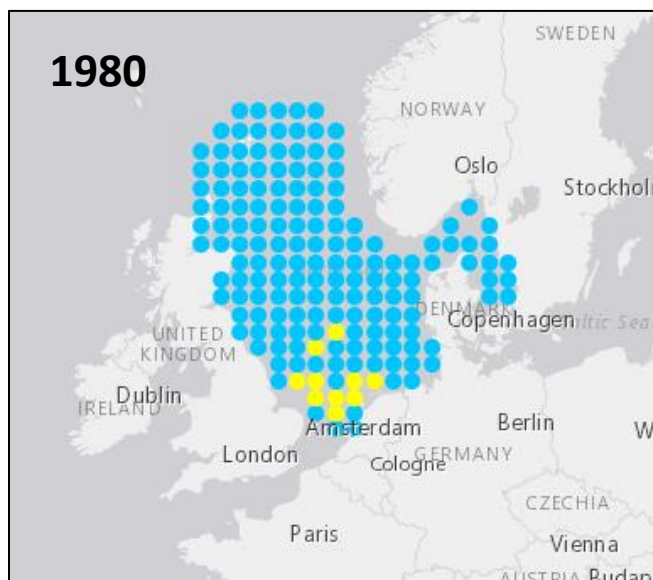
**For the fish stocks managed exclusively by the EU, approximately one third of the total allowable catches set in 2021 are above the sustainable limits provided by ICES => This is not aligned to the EGD and is in contradiction with a sustainable Blue economy.**




	NE Atlantic Ocean	Baltic Sea	Mediterranean and Black Sea	EU
Percentage of assessed stocks meeting	44.1	12.5	0	26.7
Percentage of assessed stocks with biomass levels above those capable of producing MSY	10.5	39.3	28.5	55.2
				44.8

# Global and European marine warming



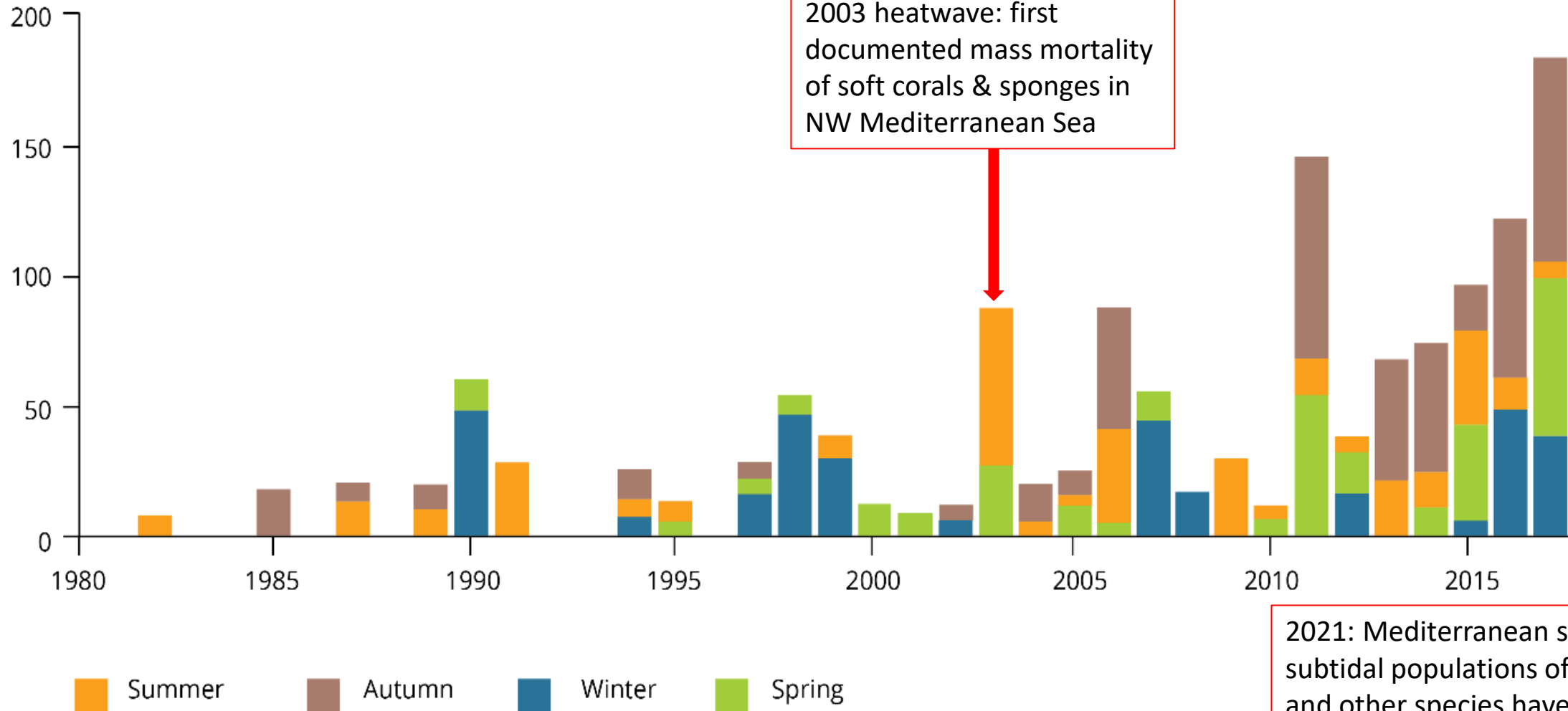
# Chronic climate change effects – species move northwards due to high SST



-  Dominance of Boreal species
-  Dominance of Lusitanian species
-  High dominance of Lusitanian species

# Acute climate change effects – marine heatwaves kill sea life

Marine heat waves (days)



Source: Copernicus



# Environmental impacts of maritime sectors and transition to sustainability

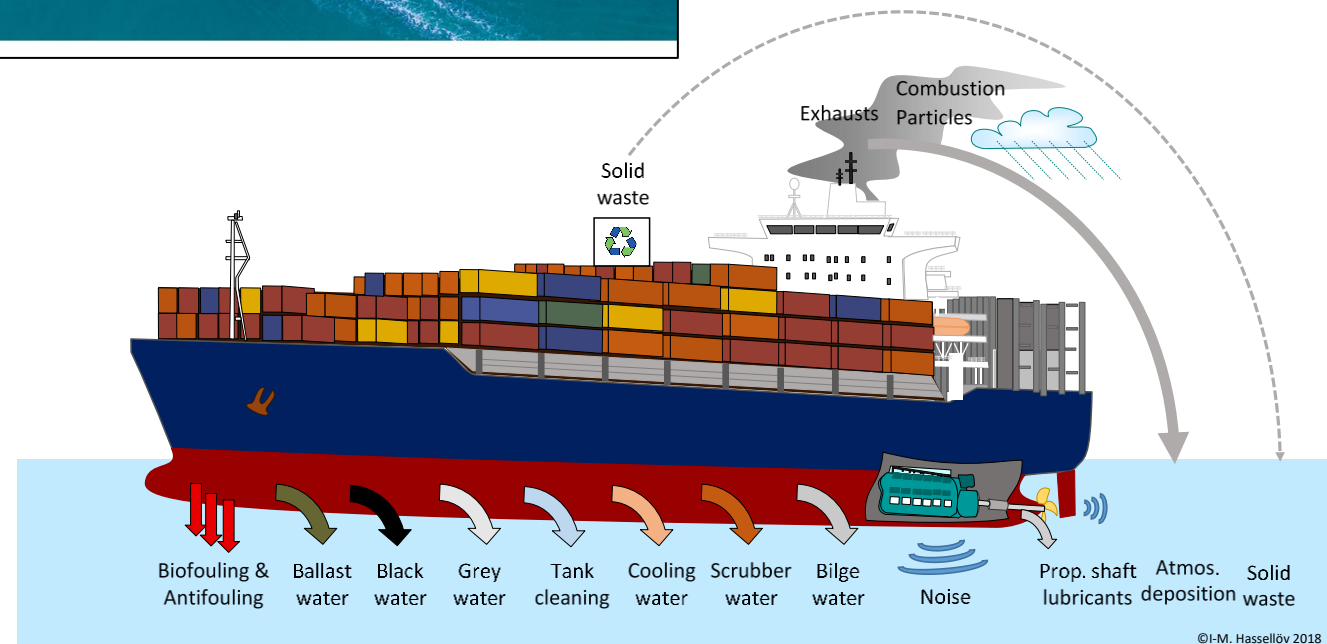
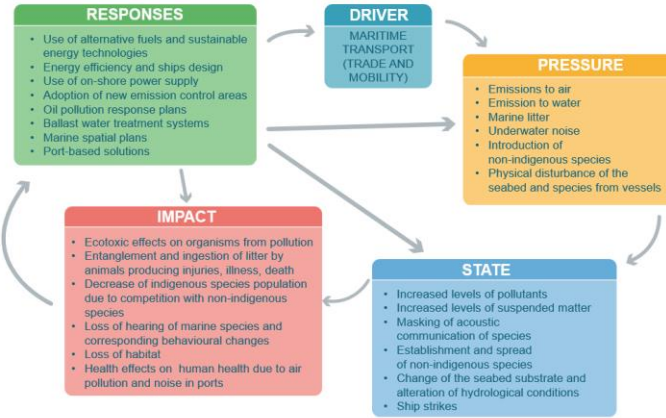
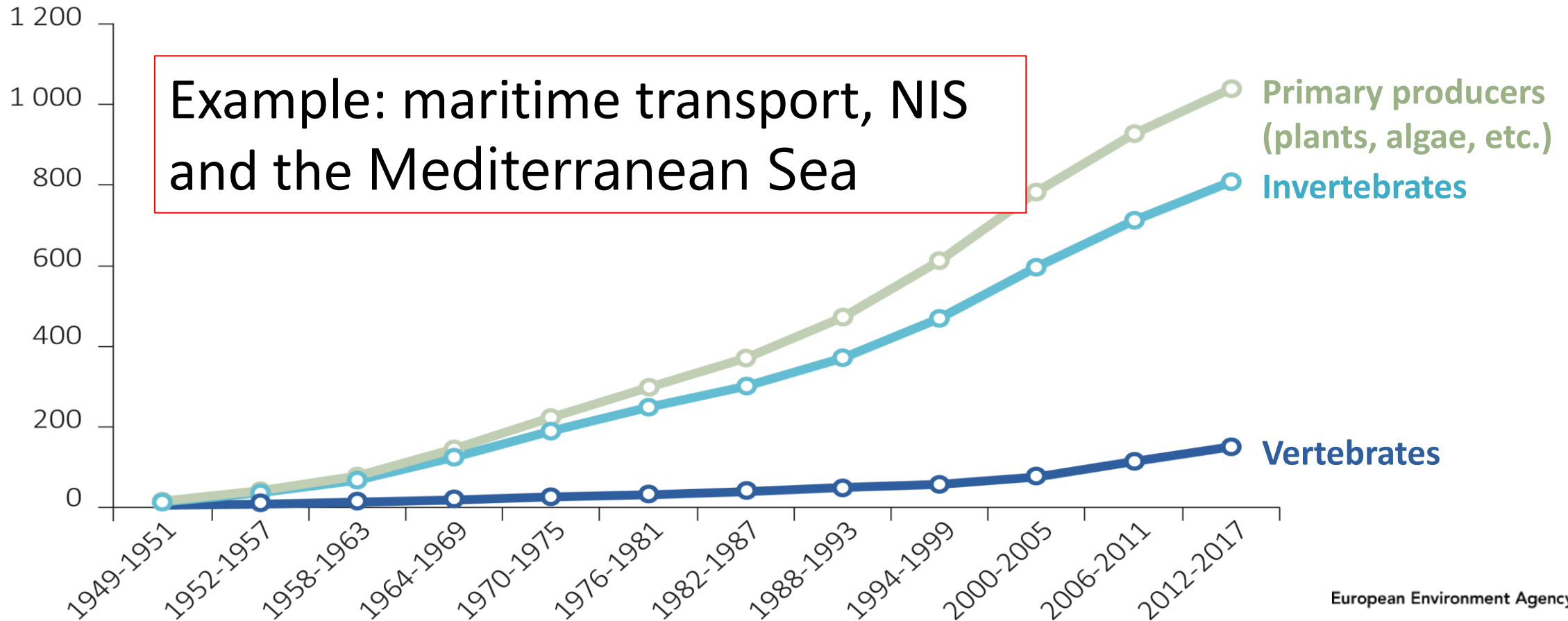


Figure 4.1 Pollutant emissions to the atmosphere and water body from a generic ship. Source: (EMSA)

# Regional sea characteristics, impacts and economic activities

Climate change-stressed ecosystems are more sensitive to other pressures e.g. non-indigenous species can become invasive after marine heatwaves.

Number of new NIS introduced



# Why is the state generally poor?

1. Insufficient implementation of relevant legislation. Example: MPAs are designated (legal requirement) but not or not adequately managed (legal requirement).
2. EU policy objectives not always fully integrated, where objectives for 'exploitation' are not always in accordance with objectives for 'protection/conservation'. Example: The state of Europe's seas is generally poor but the maritime economy, several sectors, keeps on growing and is forecasted by the EC to double by 2030
3. A lot of these sectors depend on the state of the marine environment (e.g. fisheries) and/or can damage it (e.g. mining) making it difficult for other sectors to operate, in addition to affecting the sea and people.
4. No or poor ecosystem-based management (EBM), despite it is being enshrined in the IMP (and the MSPD & MSFD). We can no longer just manage each sector but need to focus on the sum of activities at the whole ecosystem level.
5. Climate change makes everything worse and has implications for the management of activities at sea, such as fisheries, not just towards the atmosphere.
6. Even if we have evidence to act, we are still missing important data/information to improve our management of human activities in Europe's seas. When we have enough evidence, we do not always act accordingly, e.g. setting quotas for exploiting fish stocks above scientific advice.

# Looking ahead to reverse the current state of affairs

1. Implement existing legislation and fully consider scientific advice
2. Integrate management regimes dealing with single pressures (e.g. fisheries) with actions to halt biodiversity loss and combat climate change, they cannot stand alone any longer. This is the vision of the EGD and the Roadmap for the sustainable blue economy
3. Make EBM a reality on the ground (using the MSP directive in combination with the MSFD)
4. Address climate change effectively and asap, including preventing measures to reduce GHG concentrations in the atmosphere to impact further the marine environment.
5. Increase the temporal and spatial coverage of and make monitoring consistent to inform on long-term trends in the state of the sea, and on marine policy and management implementation progress

## **For the Blue Economy to achieve sustainability it would, inter alia, require that:**

- Maritime sectors contribute to halt the degradation of marine ecosystems and help their recovery.
- The maintenance and expansion of those sectors using marine ecosystem services needs to be commensurate with an understanding of the sustainability of the ecosystem capacity to supply them.
- Those sectors using marine abiotic resources and other abiotic marine outputs should not operate in a way that impairs marine ecosystem capacity for service supply



Thank you

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## 13. Environmental pressures

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