

Saving Europe's Seas - why we need a strong Marine Strategy Directive

scientific evidence of the crises in Europe's seas and oceans is mounting as the debate on the EU Marine Strategy Directive continues

Since October 2005, when the Commission published its proposal for a Marine Strategy Directive, scientific evidence of and concern over the deterioration of our seas have increased. It is now time to act to save our seas from an irreversible decline. The Marine Strategy Directive must provide crucial legal protection to help Europe's seas recover.

As the European Parliament prepares for its 2nd reading, this joint NGO briefing summarises key scientific findings and warnings about the state of our seas made public over the past 1 1/2 years.

++ July 2005

The UK's Royal Society for Environmental Protection has warned that within this century the average pH of the oceans could fall to the lowest levels seen for hundreds of millennia, if global emissions of CO₂ continue to rise. "It is not certain whether marine species, communities and ecosystems will be able to acclimate or evolve in response to changes in ocean chemistry, or whether ultimately the services that the ocean's ecosystems provide will be affected".¹

Also in 2005, a group of scientists published data in the science journal *Nature* that indicates a possible 30% weakening of parts of the Gulf Stream since 1957.²

++ March 2006

A study by US and Canadian researchers analysed two decades of wildlife observations and tied them to climate records, stating that the Arctic is warming at twice the global average rate, with ice retreating further than ever before in 25 years of satellite monitoring.³ Changes were described as "profound" and "perhaps irreversible, even if cold weather eventually returns".⁴

++ May 2006

The German Advisory Council on Global Change warned that our marine environments are 'Warming Up, Rising High and Turning Sour'. They recommend: "To preserve marine biodiversity and strengthen the resilience of marine ecosystems, at least 20-30% of the area of marine ecosystems should be included in an ecologically representative and effectively managed system of protected areas. There is a particular need to enhance marine conservation significantly for coral reefs and areas that are nursery grounds for fish populations."⁵

++ Summer of 2006

Bathing was banned along the coast of Genoa, after holidaymakers were taken ill as a result of coming into contact with toxic algae.⁶ Tests confirmed the same type of algae that caused the hospitalisation of 200 people from Genoa in 2005.

+++ October 2006

The United Nations Environment Program (UNEP) warned of an increased number of dead zones in the world's oceans. "Dead zones" are de-oxygenated areas where algae blooms, triggered by nutrients from fertiliser run off and sewage, remove oxygen from the water choking all sea life.⁷ Some of the earliest recorded dead zones are in the Baltic Sea, the Black Sea and the northern Adriatic Sea.

Jeremy Jackson, a reputable marine ecologist explains: "we are witnessing the rise of slime. [...] Off the coast of Sweden each summer, blooms of cyanobacteria turn the Baltic Sea into a stinking, yellow-brown slush. Dead fish bob in the surf. If people get too close, their eyes burn and they have trouble breathing."⁸

+++ November 2006

An international group of experts sent one of the starkest warnings yet on the state of marine life. In the journal *Science*, the scientists warned that the loss of biodiversity is dramatically reducing the ocean's ability to produce seafood, resist diseases, filter pollutants, and rebound from stresses such as overfishing and climate change.⁹ Prof. Worm said: "If the long-term trend continues, all fish and seafood species are projected to collapse within my lifetime, by 2048."¹⁰

+++ December 2006

Reports indicate that some ocean regions have seen a 50% drop in phytoplankton production as a result of changing sea-water temperatures.¹¹ Reviewing NASA satellite data, scientists concluded that the critical base of the ocean food web is shrinking as the world's seas warm up.

+++ March 2007

The FAO reported that 77% of all fish stocks are fully or overexploited. Of these, only 1% are thought to be recovering.¹² Large predatory species, such as tuna, are particularly affected, with a decline of over 90%.¹³ By severely depleting dominant predator species, like tuna, the fishing industry creates conditions that stimulate an abundance of species lower in the food web. The scientists who have documented this phenomenon refer to it as the ultimate "end point" of fishing down the food web. Headlines in 2006 claimed that jellyfish swarmed so thick along Spanish coasts that nets were strung to protect swimmers.¹⁴

The European Parliament has a responsibility to ensure its key amendments to the Directive are accepted by the Council of Ministers at 2nd reading.

The NGO Coalition calls on you to ensure that the Marine Strategy Directive provides effectively for the protection and recovery of the marine environment, its biodiversity and vital functions.

The Royal Society (2005), Ocean acidification due to increasing atmospheric carbon dioxide <http://www.royalsoc.ac.uk/displaypagedoc.asp?id=13539>

² Bryden, H.L.; et. Al (2005) Slowing of the Atlantic meridional overturning circulation at 258N. *Nature* Vol. 438 (1). pp. 655-657

³ Crucial Marine Food Chain Link Withers, *Environment News Networks* December 7 (2006) <http://www.enn.com/today.html?id=11800>

⁴ Bering Sea Climate Is Changing. *Los Angeles Times*; 10 March; 2006 http://www.stopglobalwarming.org/sgw_read.asp?id=1045193102006

⁵ The Future Oceans - Warming Up, Rising High, Turning Sour WBGU (2006) http://www.wbgu.de/wbgu_sn2006_en.html

⁶ La Repubblica, August, (2006) <http://www.repubblica.it/2006/08/sezioni/cronaca/genova-alga/genova-alga/genova-alga.html>

⁷ Global Programme Action Global (GPA) for the Protection of the Marine Environment from Land-Based Sources-2nd Intergovernmental Review <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=486&ArticleID=5393&=en>

⁸ Jeremy Jackson. La 'estrella de rock' de los mares *El País Semanal*

http://www.elpais.com/articulo/paginas/Jeremy/Jackson/estrella/rock/mares/elppor/20070429elpepspag_5/Tes

⁹ Worm B, et. al (2006) Impacts of biodiversity loss on ocean ecosystem services. *Science* (314) p. 787-790 http://myweb.dal.ca/bworm/Worm_etal_2006Science.pdf

¹⁰ All wild seafood will disappear in 50 years, says ecologists' study November 3 (2006) *The Independent* <http://news.independent.co.uk/environment/article1951279.ece>

¹¹ Warming reshapes Arctic ecosystem. *Los Angeles Times*, March (2006)

¹² FAO (2006) The State of World Fisheries and Aquaculture <http://www.fao.org/docrep/009/A0699e/A0699e00.htm>

¹³ Myers, Ransom A. & Worm, Boris (2003) Rapid world-wide depletion of predatory fish communities, *Nature*, May 15.

¹⁴ A Primeval Tide of Toxins, *Los Angeles Times*, July (2006) <http://www.latimes.com/news/local/oceans/la-me-ocean30jul30.0.952130.story?page=2>