



Marine Climate Change Impacts Partnership

Dear MCCIP news subscriber,

MCCIP website has recently been updated with new marine climate change news and events. Below is a brief summary of the new items that have been added. For more details on all of the items listed below, simply go to www.mccip.org.uk and go to the relevant links in the 'news and events' box on our homepage. Please note that the material presented in MCCIP news does not necessarily reflect the views of MCCIP.

- [Global warming likely to breach 2C threshold, conclude IPCC scientists](#)

Global warming is likely to surpass the previously recognised danger threshold of a 2C average increase in temperature, according to the world-leading climate scientists meeting in Sweden this week. By 2100, the average projection for how much warming will occur is expected to be slightly above the 2C threshold, considered to be the temperature above which it is considered that climate change will damage the global environment. This paper reviews current literature on the projected effects of climate change on marine fish and shellfish, their fisheries, and fishery-dependent communities throughout the northern hemisphere.

- [Climate change exacerbates extreme weather events](#)

Researchers have found that climate change has contributed to some of 2012's most extreme weather, including the low summer sea-ice extent. The study, which was edited by scientists from the Met Office, includes research from 18 different teams from around the world. It examined 12 extreme weather events from last year and found that human-caused global warming increased the likelihood of half of the incidents, while the others were dictated by natural weather variability.

- [Arctic sea ice minimum in 2013 is sixth lowest on record](#)

After an unusually cold summer in the northernmost latitudes, Arctic sea ice appears to have reached its annual minimum summer extent for 2013 on Sept. 13, scientists have reported. Analysis of satellite data by NSIDC and NASA showed that the sea ice extent shrunk to 1.97 million square miles (5.10 million square kilometers).

- [Arctic shipping access likely to vary for much of the 21st century](#)

A recent study has considered 21st century changes in shipping access through the Arctic Ocean along three potential new routes linking the Atlantic and Pacific Oceans. As the sea ice melts, it is possible that high-strength vessels will be able to sail directly through the North Pole by the end of the century, its results indicate. ([Stephenson, S.R. et al. Climatic Change, 118: 885–899. DOI: 10.1007/s10584-012-0685-0](#))

- [Movement of marine life follows speed and direction of climate change](#)
Scientists expect climate change and warmer oceans to push the fish that people rely on for food and income into new territory. Predictions of where and when species will relocate, however, are based on broad expectations about how animals will move and have often not played out in nature. New research based at Princeton University shows that the trick to more precise forecasts is to follow local temperature changes. ([Pinsky, M.L. et al. Science, 341\(6151\):1239-42. DOI: 10.1126/science.1239352](#))
- [Plankton will suffer as oceans warm](#)
Plankton plays an important role in the ocean's carbon cycle by removing half of all CO₂ from the atmosphere during photosynthesis and storing it deep under the sea – isolated from the atmosphere for centuries. Findings published in the journal Nature Climate Change reveal that water temperature has a direct impact on maintaining the delicate plankton ecosystem of our oceans. The new research means that ocean warming will impact plankton, and in turn drive a vicious cycle of climate change. ([Toseland, A., et al, Nature Climate Change DOI: 10.1038/nclimate1989](#))
- [Seabirds 'face extinction' from food shortages and climate change](#)
Some of Scotland's important seabird colonies could become extinct unless urgent action is taken to protect them, a conservation charity has warned. Recent counts have revealed a severe decline in the number of common guillemots at RSPB Scotland's coastal reserves. Species such as razorbills and puffins are also struggling to cope with challenges including food shortages and the effects of climate change. Guillemot numbers at Dunnet Head on the Caithness coast have dropped by around 45% since the last seabird census in 2000, falling from 8,980 to 4,880.

News stories: If there are any relevant news items or events that you would like to highlight on the MCCIP website please contact Georgia Bayliss-Brown at office@mccip.org.uk. New items will be added to the website next month.

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