



Marine Climate Change Impacts Partnership

Dear MCCIP news subscriber,

The 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.

- **[Climate influence on Vibrio and associated human diseases during the past half-century in the coastal North Atlantic](#)**

Climate change is having a dramatic impact on marine animal and plant communities but little is known of its influence on marine prokaryotes. This study provides experimental evidence on the link between multidecadal climatic variability in the temperate North Atlantic and the presence and spread of vibrios, which are responsible for several infections in both humans and animals. Results revealed that long-term increase in Vibrio abundance is promoted by increasing sea surface temperatures. Such increases are associated with an unprecedented occurrence of environmentally acquired Vibrio infections in the human population of Northern Europe and the Atlantic coast of the United States in recent years.

- **['The blob': how marine heatwaves are causing unprecedented climate chaos](#)**

Seabirds started falling out of the sky, washing up on beaches from California to Canada; emaciated sea lion pups began showing up; a surge in dead whales was followed by the largest toxic algal bloom in history seen along the Californian coast; unusual population booms of several marine species that normally do not co-exist... This chaos swept the northern Pacific Ocean between 2014 and 2015 and was caused by a single massive heatwave in the ocean. Nicknamed "the blob", it was arguably the biggest marine heatwave ever seen.

- **[Sea ice strongly linked to climate change in past 90,000 years](#)**

Sea ice amplifies the climate changes that are occurring at any given time. Its

growth and melting has profound effects on climate, the marine environment and ocean circulation. Ulrike Hoff, a researcher at Centre for Arctic Gas Hydrate, Environment and Climate and colleagues studied the past distribution of sea ice, in the so far longest existing sea ice record in a marine sediment core. The core, retrieved from 1200m water depth from the Nordic Seas, represents 90,000 years of sediment layers. By studying those layers scientist can reveal the changes in sea ice and past climate [click [here](#) to read the Nature Communications paper by Hoff *et al.*].

- **[Climate change alters the rules of sperm competition in the sea](#)**

Researchers from the University of Exeter have shown that increasing ocean acidification reduces sperm performance in a species of sea urchin, slowing down sperm in future ocean conditions. Interestingly, they found that different males were affected to different extents and that this could change the outcome when rival male compete to fertilize a batch of eggs in the sea. The results of this study indicate the fundamental impact climate change could have on reproduction in the sea [click [here](#) to read the Nature Scientific Report by Campbell *et al.*].

- **[CoastAdapt](#)**

This is an information delivery and decision support tool developed by the Australian National Climate Change Adaptation Research Facility (NCCARF) with funding from the Australian government through the Department of the Environment. It is designed to support coastal decision makers adapting to climate change and sea-level rise in Australia. The latest, improved beta version is now available.

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

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