

Large plastic bags in unique experiment to study ocean acidification

March 14 2013



Mesocosms are used in unique study on ocean acidification in the Gullmar Fjord in Sweden. Photo: Gertje König

To study the effects of ocean acidification, ten huge plastic containers called mesocosms are placed in the Gullmar Fjord in Sweden. The project is unique: mesocosms of this size have never been used for such

a long period of time. The experiment is part of a worldwide research project, and includes researchers from the University of Gothenburg, Sweden.

This is the largest and longest experiment on the impact of climate change on [marine ecosystems](#) that have been carried out to this date. A team of sixty international researchers are for five months now based at the Sven Lovén Centre for Marine Sciences, University of Gothenburg, Sweden. The research project in the Gullmar Fjord will run from January to June, under the leadership of top German researcher Ulf Riebesell.

The mesocosms has been lowered into the fjord with the help of divers from the research vessel Alkor. Each mesocosm will now enclose 55,000 litres of seawater, containing organisms from the winter waters of the Gullmar Fjord.

Carbon dioxide is added to half of the mesocosms and the researchers are going to observe the effect of different [acidity levels](#) on [marine plants](#) and animal plankton by monitoring the plankton over many generations and measuring the chemistry of the water every day. They will also going to add herring and cod larvae to see how they develop in the enclosed seawater.

Similar studies have been carried out previously on a smaller scale in Polar environments, off the coast of Hawaii and off the Finnish and Norwegian coasts. However, mesocosms of this size have never been used for such a long period of time.

More information: Watch a film about the mesocosms here:
www.geomar.de/en/discover/film...-facing-dissolution/

Provided by University of Gothenburg

Citation: Large plastic bags in unique experiment to study ocean acidification (2013, March 14)
retrieved 9 May 2024 from <https://phys.org/news/2013-03-large-plastic-bags-unique-ocean.html>

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