

## Science in the Gulf: The Arctic Sunrise Tour

“Several teams of independent scientists are joining the Greenpeace ship Arctic Sunrise to investigate the aftermath of the Gulf of Mexico oil spill, to conduct a series of scientific research programs that will further understanding of the impacts of both oil and chemical dispersants on the Gulf ecosystem”.

Although BP’s Macondo wellhead has been capped, the effects of the disaster are expected to persist far into the future. The scientists on board the Arctic Sunrise will be monitoring impacts to plankton at the Gulf’s surface, the underwater plumes of oil and dispersants, and the health of deep sea corals.

In mid-August, the Arctic Sunrise will visit Dry Tortugas National Park, as well as the coral reefs near Key West in the Florida Keys. Nova University scientists Chuck Messing and Jose Lopez will join a Greenpeace dive team to take samples of sponges, which filter huge amounts of water per day. Dr. Lopez is interested in studying the sponges as bioindicators to assess the impacts of both the Deepwater Horizon oil and Corexit, the dispersant used to break up the oil spill. The Tortugas National Park is home to the most pristine coral reefs in the continental US, as well as one of the best documented marine reserve success stories in the world. As the closest significant tropical coral reef to the spill site, the Tortugas are a potential victim but do not appear to have been hit yet. By visiting the area at the beginning and end of the expedition, we may well be able to document and study the “before and after” if the oil and dispersant arrives in the area in substantial concentrations.

For the latter part of August the Arctic Sunrise will head northwest towards the Deepwater Horizon disaster site, with Tulane University researchers Caz Taylor and Erin Grey on board. They will conduct plankton tows in order to focus on the state of blue crab larvae, while also gathering data to enable other researchers to look at impacts on larval bluefin tuna, red snapper, and other species of ecological or economic importance. Impacts of the spill on commercial and recreational fisheries are a significant concern.

Also on board during this period will be Regina Asmutis-Silvia of the Whale and Dolphin Conservation Society, who will be working with Greenpeace Oceans Director John Hocesvar and the crew of the Arctic Sunrise to monitor marine mammals and sea turtles in the vicinity of the Deepwater Horizon Disaster site to document their behavior and distribution, and compare findings with prior research.

In September, Rainer Amon will lead a team of scientists on board the Arctic Sunrise to study the scope, composition and impacts of the oil that is still below the Gulf’s surface. Dr. Amon will also be looking at the Gulf’s deoxygenated “dead zone” which is now the worst in history - and trying to figure out how much worse it’s going to get. As the report released in early August by the National Incident Command reveals that between three and four million gallons of oil remain in the waters and on the shorelines of the Gulf, this research will make an important contribution to increasing our understanding of “what happened to the oil.”

The expedition will culminate with a project led by Steve Ross of North Carolina State and Sandra Brooke of the Oregon Institute of Marine Biology using submarines to assess the health of deep sea coral reefs in the vicinity of the BP Deepwater Horizon site. The status of these corals and surrounding invertebrate communities will be compared to similar areas outside the spill zone.

### What you can do

Help prevent another disaster by learning more about clean energy solutions and by taking action at [www.greenpeace.org/usa/oilspilltruth](http://www.greenpeace.org/usa/oilspilltruth)