

# Dispersants no cure for oil disaster

Dan Brennan  
11 May 2010

As the volume of chemical dispersants used to treat the Gulf oil spill continues to grow, concerns are mounting that the practice will merely shift the environmental impacts from coastal to marine ecosystems.

BP, the oil giant responsible for the thousands of gallons of oil gushing into the Gulf of Mexico daily, has thus far applied over 300,000 gallons of dispersant, approximately one third of the world supply. While dispersants have been used before, the immense scale of their deployment is unprecedented and their ultimate impact is unknown.

According to the US Environmental Protection Agency, “dispersants have not been used extensively in the United States because of possible long term environmental effects, difficulties with timely and effective application, disagreement among scientists and research data about their environmental effects, effectiveness, and toxicity concerns.”

“It’s basically a giant experiment,” Richard Charter, of the environmental group Defenders of Wildlife, told the *Associated Press*. “I’m not saying we shouldn’t do it; we have no good options.”

Dispersants work by breaking up the oil slick into small droplets, mixing the oil throughout the water column rather than leaving it to float at the surface. To some extent this dispersion happens naturally through wave action, though the chemicals greatly enhance and accelerate the process. The formation of oil droplets makes it more likely that microbes will be able to decompose the oil. Furthermore, displacing the oil from the surface reduces the threat of a slick washing up on shore and destroying the habitat of birds and other coastal dwellers.

Yet the use of chemical dispersants effectively increases the exposure of marine organisms to toxic contamination. The result, according to Frederic Hauge, president of the Norwegian NGO Bellona, “is good for

the shores, the birds and ecosystems along the shore, but bad for fisheries and fisherman.” The economy of the Gulf region relies heavily on the fishing industry, which provides for one in 17 jobs.

There is also particular concern with respect to coral reefs. Numerous studies have suggested the impact of oil spills on corals is enhanced by the use of chemical dispersants. The National Oceanic and Atmospheric Administration (NOAA) states that dispersant use in the vicinity of coral reefs is usually restricted.

Several vulnerable coral ecosystems lie within reach of the oil spill. Flower Bank Gardens, for example, which lies 70 to 115 miles off the coast of Louisiana and Texas, contains coral reef communities that probably began developing 10,000 to 15,000 years ago, according to NOAA. It was designated as a marine sanctuary in 1992. Florida Middle Grounds, located off the coast of the Florida panhandle, hosts a huge diversity of marine life, including 23 species of stony corals, 103 species of algae, about 40 sponges, 75 mollusks, and 170 species of fish.

The dispersants may also have a huge impact on ecosystems near the sea floor. While most of the dispersant has been applied to the surface, BP piped a smaller amount deep underwater to the stream of oil emanating from the well. Louisiana State University professor of environmental sciences Ralph Portier told the *Times-Picayune* that the cold temperatures and high pressure deep below the surface could prevent the oil from breaking down.

Fellow environmental science professor at LSU, Ed Overton, remarked, “In this spill, the decision was made to ignore the potential impacts offshore to try and keep the oil from coming onshore, and so I hold my nose and support it.” He continued, “But in my opinion, it was prudent to stop deepwater dispersement because we know almost nothing about what happens down in that area of the environment.” BP stopped the

injections last week, pending an evaluation of the impacts from the dispersed oil on deepwater ecosystems.

For the fish, shrimp, oysters, as well as their eggs and larvae, all at risk from the dispersed oil, it is very difficult to pinpoint how high that risk is given the current state of knowledge. Carys Mitchelmore, an assistant professor at the University of Maryland's Chesapeake Biological Laboratory, told *McClatchy*, "There's research out there that shows that dispersed oil is more toxic than the oil itself, and then there are studies that say it's the same. The big questions are what are the long-term or delayed effects, and how will the different routes of oil exposure due to dispersant use affect exposed organisms?"

Mitchelmore helped produce a 2005 National Research Council assessment of oil spill dispersants. The report noted the limited funds available to support oil spill research in general and dispersant use in particular, and was tasked with identifying some of the most critical knowledge gaps. Most of the gaps they identified, e.g., toxicity to key organisms from exposure to dispersed oil, the final fate of chemically dispersed oil, and the effectiveness of dispersants for different oil types and environmental conditions, remain wide open.

The insufficient financial support available to preparing for and assessing the impacts of oil spills is striking when one considers that approximately 3 million gallons of oil or oil derivatives are spilled into US waters each year, and that BP and other oil companies are among the largest and most profitable corporations in the world. BP alone pulled in nearly \$6 billion in profit last quarter.

The manufacturer of the dispersants, Nalco Company, has published some information about the toxicity of its product, Corexit (though not all of its chemical components were disclosed). Nalco characterizes the potential environmental hazards as low or moderate, according to the Material Safety Data Sheet. The human hazards, on the other hand, are listed as moderate or high. While chemical manufacturers are required to publish these Data Sheets, there is no official oversight of their accuracy.

With all this uncertainty, Rick Steiner, a former professor of Marine Conservation at the

University of Alaska, suggested another reason why

BP might favour the use of dispersants.

"The companies love the idea of using a chemical to spray on an oil slick to sink it," Steiner told the WSWS. "It's 'out of sight out of mind' as far as the public is concerned because TV cameras can't see it. This is the big oil company playbook: public relations, litigation protection, and image."

Paul Orr, of the environmental group Lower Mississippi River Keeper, voiced similar concerns in an interview with the *New York Times*. "We're concerned that they'll get rid of as much of the visible oil as possible and say it was a great success when there may be lasting consequences," he said.



To contact the WSWS and the  
Socialist Equality Party visit:

**[wsws.org/contact](http://wsws.org/contact)**