

Oil dispersants not as harmful to marine life as predicted

December 4 2013, by Rosie Hales

The chemical dispersant used to counteract the Deepwater Horizon oil spill in the Gulf of Mexico in 2010 may not be as harmful to fish as first thought, says new research from Queen's professor Peter Hodson and his team of researchers.

Dispersants are chemicals used to break down oil into smaller droplets that will mix more readily with water when [oil spills](#) into oceans. Dispersant use was heavily criticized as there were fears that interactions between dispersant and oil would increase the toxicity to [marine life](#). However, while the research found the dispersant alone to be toxic, it wasn't toxic when it was mixed with the oil.

"The toxicity of dispersed oil could be attributed entirely to the effects of oil, and not to synergistic interactions between dispersant toxicity and oil toxicity," says Dr. Hodson.

The findings supply a new perspective on the 1.84 million US gallons of dispersant used in the 2010 spill. However, dispersants still need to be used with caution, as they can mean a higher concentration of oil in bodies of water that experience an oil spill.

"While dispersants do not change the toxicity of oil, they can increase the amount of oil mixed into water by 100-fold compared to undispersed [oil](#) floating on the surface," says Dr. Hodson. "The use of [dispersants](#) should be restricted to brief applications in open waters where marine life is less abundant."

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More information: "Oil and oil dispersant do not cause synergistic toxicity to fish embryos." Julie Adams, Michael Swezey, Peter V. Hodson *Environmental Toxicology and Chemistry* Article first published online: 5 NOV 2013. [DOI: 10.1002/etc.2397](https://doi.org/10.1002/etc.2397)

Provided by Queen's University

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