# Volcano fuels massive phytoplankton bloom

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Advocates for seeding regions of the ocean with iron to combat global warming should be interested in a new study published today in *Geophysical Research Letters*.

A Canada-US team led by University of Victoria oceanographer Dr. Roberta Hamme describes how the 2008 eruption of the Kasatochi volcano in the Aleutian Islands spewed iron-laden ash over a large swath of the North Pacific. The result, says Hamme, was an "ocean productivity event of unprecedented magnitude"—the largest phytoplankton bloom detected in the region since ocean surface measurements by satellite began in 1997.

Phytoplankton are free-floating, single-celled plants that form the base of the marine food chain. They take up carbon dioxide ($CO_2$) to grow, which is why seeding key regions of the ocean with iron has been proposed as one way to offset increasing atmospheric $CO_2$ concentrations.

But although the volcanic ash fueled such a massive phytoplankton bloom, it resulted in only a "modest" uptake of atmospheric $CO_2$, says Hamme. "The event acts as an example of the necessary scale that purposeful iron fertilizations would need to be to have an impact on global atmospheric $CO_2$ levels."

Provided by University of Victoria