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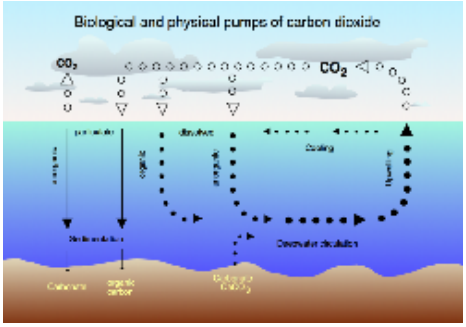
OCB Ocean Fertilization: Home

WELCOME TO THE OCB OCEAN FERTILIZATION WEBSITE

The Ocean Carbon and Biogeochemistry (OCB) program is a scientific community-driven coordinating body that promotes U.S. research and international cooperation to investigate the ocean's role in the global Earth system. Projected increases in atmospheric CO_2 levels and potential associated changes in the earth's climate have prompted scientists and engineers to devise strategies for removing some of this CO_2 from the atmosphere. Strategies involve the addition of micronutrients (e.g., iron) and/or macronutrients (e.g., urea) to the ocean surface or via artificial upwelling technologies (e.g., floating tubes, wave pumping) to stimulate phytoplankton activity, thus increasing photosynthesis and subsequent removal of atmospheric CO_2. Understanding the importance of keeping the OCB community connected to ocean fertilization science and policy activities, the OCB Scientific Steering Committee (SSC) recently identified the need for an ocean fertilization subcommittee. With oversight from this subcommittee, the OCB Project Office has developed this website as a clearinghouse of ocean fertilization news and informational resources to support the OCB community.



Enlarge Image

There is still great uncertainty surrounding ocean fertilization, or the addition of nutrients to the surface ocean to stimulate phytoplankton activity, thus increasing ocean CO_2 uptake. Much more research is needed to understand the implications of ocean fertilization for marine ecosystems.

OCEAN FERTILIZATION NEWS

July 15, 2014: The Haida Salmon Restoration Corporation (HSRC) conducted a small scale Ocean Iron Fertilization (OIF) experiment in the North Pacific in 2012. 120 tons of iron compound were deposited in the migration routes of pink and sockeye salmon in the Pacific ocean West of Haida Gwaii over a period of 30 days. The project resulted in a 35,000 km^2 plankton bloom that lasted for several months. The HSRC scientific team collected a significant amount of oceanographic data using autonomous underwater vehicles (Slocum Gliders), Argos Drifter, Multi-Spectral Sonar, Surface Seawater samples, Phytoplankton Tows and other methods. The full open data set can be downloaded for free under the Open Database License:

- http://72.2.5.11/instrumentation.zip
- http://72.2.5.11/wet_lab_data.zip
- http://72.2.5.11/equipment_operation_manuals.zip
- http://72.2.5.11/static_chloro_imgs.zip
- http://72.2.5.11/sonar.zip
- http://72.2.5.11/sea_height.zip
- http://72.2.5.11/glider_data.zip
- http://72.2.5.11/google_earth.zip

April 20, 2013: Second round of iron dumping off coast of Haida Gwaii?

February 21, 2013: New study addresses geoengineering impact of open ocean dissolution of olivine on atmospheric CO_2

October 23, 2012: SCOR Working Group 131 'The Legacy of in situ Iron Enrichment: Data Compilation and Modeling' makes data from iron enrichment experiments available - The data of nine experiments (IronEx I and II, SOIREE, SOFeX North and South, SERIES, SEEDS I and II and SAGE) are directly available from BCO-DMO. Data from three further studies (EisenEx, EIFEX and soon LOHAFEX) can be accessed via links to PANGAEA. Data from FeeP will be archived at the British Oceanographic Data Centre.

November 2, 2012: OCB releases statement on recent iron dumping off west coast of Canada

INFORMATION RESOURCES ON SUMMER 2012 HAIDA GWAII IRON DUMPING

- Dr. Peter Strutton (Univ. of Tasmania) - preliminary calculations and perspectives on the Haida Gwaii iron dumping (Nov. 5)
- Contracting parties to London Convention and London Protocol issue statement regarding the summer 2012 iron dumping (Nov. 2, Vancouver Sun)
- "Haida Gwaii iron dumping hot topic as nations negotiate international geoengineering treaty" (Vancouver Sun, Oct. 28)
- *ScienceInsider* article on the legality of the Haida iron dumping (Oct. 23)

- Viewpoint and information resources on the iron dumping from Haida Salmon Restoration Corporation (Oct. 19)
- "Satellite imagery of the rogue Canadian iron dumping experiment" (Deep Sea News blog, Oct. 19)
- "The First Geo-Vigilante" (The New Yorker, Oct. 18)
- "Iron Dumping In The Pacific Ocean Stirs Controversy Over Geoengineering" (Huffington Post, Oct. 19)
- "A Rogue Climate Experiment Outrages Scientists" (NY Times, Oct. 18)
- ISIS Consortium response to Guardian article (Oct. 16)
- Guardian article (Oct. 15)
- Environment Canada ocean fertilization fact sheet

Disclaimer

The material posted on this website is for informational purposes only, and does not necessarily reflect the views of the Ocean Carbon & Biogeochemistry (OCB) program, its federal agency sponsors, or the OCB Subcommittee on ocean fertilization.

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