

# OCEAN FERTILIZATION (TECHNOLOGY BRIEFING)

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## Overview

Ocean fertilization (OF) is a theoretical CO<sub>2</sub> removal technology that refers to dumping large amounts of micro- or macro-nutrients (like iron or urea) into ocean areas with low biological productivity, aiming to stimulate the growth of phytoplankton. The assumption driving ocean fertilization efforts is that new phytoplankton growth will absorb atmospheric CO<sub>2</sub>, and store carbon as it dies and sinks to the ocean floor. Over the last 30 years, there have been at least sixteen open ocean fertilization experiments.

They have failed to prove OF as an effective form of carbon storage. Some scientists warn that OF could create deoxygenated "dead zones", and deplete nutrients that would fuel phytoplankton growth in other areas. These are some of the reasons why the United Nations, the United Nations Convention on Biological Diversity (CBD) and the London Convention on the Prevention of Marine Pollution adopted decisions to strictly regulate ocean fertilization activities, which constitute de facto bans against all forms of commercial deployment.

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