



Ocean Biogeochemistry: The Role of the Ocean Carbon Cycle in Global Change

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Oceans account for 50% of the anthropogenic CO₂ released into the atmosphere. During the past 15 years an international project, the Joint Global Ocean Flux Study (JGOFS), has been studying the ocean carbon cycle to quantify and model the biological and physical processes whereby CO₂ is pumped from the ocean's surface to the depths of the ocean, where it can remain for hundreds of years. This project is one of the largest multi-disciplinary studies of the oceans ever

carried out and this book synthesises the results. It covers all aspects of the topic ranging from air-sea exchange with CO₂, the role of physical mixing, the uptake of CO₂ by marine algae, the fluxes of carbon and nitrogen through the marine food chain to the subsequent export of carbon to the depths of the ocean. Special emphasis is laid on predicting future climatic change.

Keywords: Biogeochemical Cycles, Carbon dioxide, Climate change, Global change, IGBP, Joint Global Ocean Flux Study (JGOFS), Ocean biogeochemistry, Ocean carbon cycle, Ocean Food Webs

Ocean Biogeochemistry - The Role of the Ocean Carbon Cycle in Global Change

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