

Oceans could slurp up carbon dioxide to fight global warming

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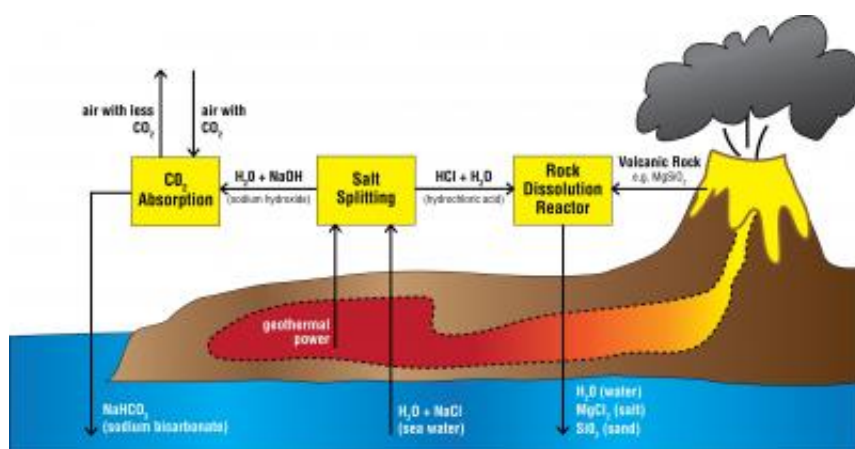


Illustration depicts how the oceans could be used as a giant carbon dioxide collector to fight global warming. Credit: Courtesy of Kurt House, Harvard University

Researchers in Massachusetts and Pennsylvania are proposing a new method for reducing global warming that involves building a series of water treatment plants that enhance the ability of the ocean to absorb carbon dioxide from the atmosphere. About 100 such plants — which essentially use the ocean as “a giant carbon dioxide collector” — could cause a 15 percent reduction in emissions over many years, they say. About 700 plants could offset all CO₂ emissions. Their study is scheduled to appear in the Dec. 15 issue of ACS’ *Environmental Science & Technology*.

Scientists believe that excessive build-up of carbon dioxide in the air contributes to global warming. In addition to cutting down on carbon dioxide emissions by reducing the use of fossil fuels, researchers have focused on new technologies that remove the gas directly from the atmosphere.

In the new study, Kurt Zenz House and colleagues propose building hundreds of special water treatment facilities worldwide that would remove hydrochloric acid from the ocean by electrolysis and neutralize the acid through reactions with silicate minerals or rocks.

The reaction increases the alkalinity of the ocean and its ability to absorb carbon dioxide from the atmosphere. The process is similar to the natural weathering reactions that occur among silicate rocks but works at a much faster rate, the researchers say.

Source: American Chemical Society

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