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The Other CO₂ Problem: The Evolving Regulatory Structure for Addressing Ocean Acidification



Scientists have long understood that, by absorbing carbon dioxide (CO₂), the oceans of the world act as a large sink for carbon, reducing the amount of warming those emissions would otherwise cause. This CO₂ absorption, however, presents other problems. As CO₂ dissolves in the ocean, it reacts with seawater to form carbonic acid—the same acid that makes sodas and sparkling wines bubbly. Scientists have observed that, while the potential hydrogen (pH) of an ocean can be subject to natural variations, acidification can lower the pH of the water beyond those levels. These effects are still being studied and remain, in many ways, poorly understood. Ocean acidification (OA) is often called the "other CO₂ problem," because it receives far less attention than carbon emissions themselves. Whereas the magnitude of pH change from carbon emissions is predictable, the effects of increased acidity remain uncertain, and OA does not fit neatly within existing environmental laws. Carbon emissions occur all over the world, and many sources of OA are beyond the reach of U.S. environmental laws. Even within the United States, regulation of greenhouse gases (GHGs) remains controversial.

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