

political climate, scientific statements about the behavior of the terrestrial carbon cycle must be made with care, especially extrapolations from stand-level experiments or observations.

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Response

NPP is the difference between total, annually integrated photosynthesis (gross primary production) and plant respiration and therefore represents the rate of carbon uptake from the atmosphere by ecosystems (1). By assuming that all forests of the world are similar to our young, fast-growing stand of loblolly pine, we attempted to constrain an estimate of the maximum net increment of NPP when the atmosphere contains 560 parts per million of CO₂. Our value for forest uptake, 50% of the anticipated CO₂ emissions from fossil fuels in the year 2050, indicates that forests will not solve the global warming problem for us. And, as Bolin *et al.* indicate, actual long-term carbon storage will be much less than NPP, owing to the activity of soil microbes, fires, human land-use changes, and so forth, which act to return CO₂ to the atmosphere.

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Schlesinger's observation that treaty negotiators for the Kyoto Protocol need to keep in mind the complexities of a full accounting of carbon emissions when calculating mitigation credits is spot-on. Negotiators need additionally to be mindful of the effects of CO₂ mitigation on other greenhouse gases, such as N₂O and CH₄. Carbon sequestration in soils can lead to concomitant changes in microbial habitats and populations that could offset or perhaps accentuate any credit provided by carbon sequestration per se. Research that simultaneously assesses the effects of mitigation strategies on all relevant trace gases is required.

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CORRECTIONS AND CLARIFICATIONS

In the report "An infrared spectral match between GEMS and interstellar grains" by J. P. Bradley *et al.* (10 Sept., p. 1716), two authors' affiliations were inadvertently interchanged. The correct affiliations are George J. Flynn, State University of New York, Plattsburgh, NY 12901, USA, and Donald E. Brownlee, Department of Astronomy, University of Washington, Seattle, WA 98195, USA.

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