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Will either cap and trade or a carbon emissions tax be effective in monetizing carbon as an ecosystem service


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Abstract

Economists argue that if the cost of carbon emissions was bid into markets, consumers would effectively make purchases that would reduce emissions. Life-cycle inventory and assessment studies have identified how to make many environmental improvements such as reducing carbon emissions at every stage of processing. Most importantly, almost every change in building design, product selection alternative or forest management alternative results in changed levels of carbon emissions across many different stages of processing. These studies raise questions about the effectiveness of carbon registries, cap and trade systems or taxes to effectively monetize the reduction of carbon emissions. A three-tier credit system that accounts for carbon sequestration and storage in the forest sector including users of forest products can mimic many of the expected effects of an economy-wide carbon tax. Insight is provided on policies that are more likely to reflect the value of carbon emissions in purchasing and production systems and to avoid counterproductive results. The relationship between carbon emissions and other forest ecosystem services such as habitat is also examined.

Keywords

Carbon emissions; Carbon policy; Cap and trade mechanisms; Carbon taxes; Carbon credits; Ecosystem services