

The Plus Side

Promoting Sustainable Carbon Sequestration in Tropical Forests

Deforestation and forest degradation in tropical countries account for about 15 percent of total global warming pollution each year. Tropical forests are emitting heat-trapping carbon dioxide faster than they can sequester (absorb) it from the atmosphere because vast areas are being cleared for agriculture, releasing the carbon these trees have stored for decades.

To help mitigate the consequences of climate change, all nations should work together to reduce global warming emissions from tropical forests 50 percent by 2020, and bring them to zero net emissions by 2030. However, in many countries a rapid reduction in deforestation and forest degradation will not be enough to achieve these goals—developed nations should compensate developing nations to expand forest conservation activities and increase carbon sequestration in tropical forests.

To help mitigate the consequences of climate change, the world should work to reduce global warming emissions from tropical forests 50 percent by 2020, and bring them to zero net emissions by 2030.

A set of policies known as REDD+ aims to do just that by conserving existing tropical forests, restoring degraded forests, and managing them sustainably. The Intergovernmental Panel on Climate Change reports that putting a price on carbon—as recommended under REDD+—could spur tropical nations to sequester 1 gigaton of carbon each year through reforestation.

The Plus Side, a new report by the UCS Tropical Forest & Climate Initiative, explains how a variety of forestry practices can be used to achieve REDD+ policies while meeting strict standards for protecting the environment and local communities. If applied effectively, the full range of REDD+ activities can return forests to their natural state of storing more carbon than they release.

Strategies for Sequestering Carbon

Some 2.3 million hectares of tropical forest are degraded every year. The total now amounts to some 850 million hectares, including 335 million in South America, 270 million in Asia, and 245 million in Africa.



A multistoried plantation in Belize features coffee, yellow ginger, and mango.

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In these areas, management techniques that simulate natural regeneration can promote the growth of diverse secondary forests, increasing the rate of carbon sequestration while also conserving soil nutrients. These cost-effective techniques include reducing threats from fire and grazing, and planting small islands of mixed tree species—or even larger areas of mixed-species plantations.

In secondary forests that are being managed to produce timber, specific forestry practices can simultaneously reduce global warming emissions and increase carbon sequestration rates. Examples include reduced-impact



Doug Boulder

Second growth (foreground) and the Palo de Mayo forest (background), southeastern Nicaragua

logging and increased rotation lengths (the intervals at which trees are cut). In these areas, adaptive management, by which land managers continually adjust their approach based on how well a forest is reaching prescribed goals, is especially important in ensuring the environmental integrity of these forests.

Community forestry is another important tool for reducing carbon emissions and sequestering carbon. By balancing local economic benefits with sustainability, community forestry serves as an example of how reforestation, forest restoration, and sustainable management activities can be implemented in a way that serves the needs of local communities.

Making Changes That Count

Developing nations that wish to receive the REDD+ payments offered by developed nations (in exchange for emissions reductions or carbon sequestration) must calculate a national baseline—i.e., the changes in emissions and sequestration that would have occurred under business as usual, without REDD+ mechanisms in place. Any cuts in emissions or increases in sequestration above the baseline would be considered “additional,” benefiting the atmosphere and qualifying for payment.

Such national-level accounting would enable developing countries to monitor their forestry activities transparently.

Policy Recommendations

In tropical countries:

- Incentives that create value for carbon sequestration will be necessary.
- Reference levels and baselines set at a national level would a) reduce the threat that the businesses causing deforestation would simply move to another non-protected area, and b) allow countries to determine where different forestry activities are most appropriate.
- National policies may be needed to develop community forestry and provide local and indigenous peoples with the right to manage forests.

At the international level:

- Incentives for the full range of REDD+ activities will be necessary at this level as well.
- Phased implementation of REDD+ would allow for near-term emissions reductions from deforestation and degradation while forestry activities that sequester carbon are implemented over the coming decades.
- For REDD+ to reach its fullest potential, the international community should commit to a target of zero net emissions from tropical forests by 2030.

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The Plus Side of the Equation

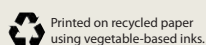
REDD+ mechanisms should not only reduce net global warming emissions but also promote biodiversity, clean air, fertile soil, sustainable water supplies, and thriving local communities (through sustainable development). To do so, policy makers must ensure effective accounting of emissions and create environmental and social criteria for REDD+ activities. Our report suggests how this can be done.

The full text of this report is available on the UCS website at www.ucsusa.org/plus-side.



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National Headquarters
Two Brattle Square
Cambridge, MA 02138-3780
Phone: (617) 547-5552
Fax: (617) 864-9405

Washington, DC, Office
1825 K St. NW, Suite 800
Washington, DC 20006-1232
Phone: (202) 223-6133
Fax: (202) 223-6162

West Coast Office
2397 Shattuck Ave., Suite 203
Berkeley, CA 94704-1567
Phone: (510) 843-1872
Fax: (510) 843-3785

Midwest Office
One N. LaSalle St., Suite 1904
Chicago, IL 60602-4064
Phone: (312) 578-1750
Fax: (312) 578-1751