



ISTF NEWS

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New data shows REDD+ is succeeding*/

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Amid the whirlwind of climate change news before and after the Cancún climate conference, including a landmark agreement on REDD+ (reducing emissions from deforestation, and related pro-forest actions), an important story seems to have passed by with little notice. Over the past two months, several new analyses have given clear evidence that deforestation has gone down over the past several years. In fact, the drop is quite impressive, and shows that of all the approaches to avoiding the worst consequences of global warming, reducing tropical deforestation is the one that has contributed by far the most to date.

The International Society of Tropical Foresters is a non-profit organization formed in the 1950s in response to a world wide concern for the fate of tropical and subtropical forests, ISTF is dedicated to providing a communications network for tropical forestry disciplines.

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**/ Note: This article was originally published on 15 December 2010 on Mongabay.com, one of the world's most popular environmental science and conservation news sites. Mongabay.com is also publisher of Tropical Conservation Science, a peer-reviewed, open-access academic journal that seeks to provide opportunities for scientists in developing countries to publish their research in their native languages.*

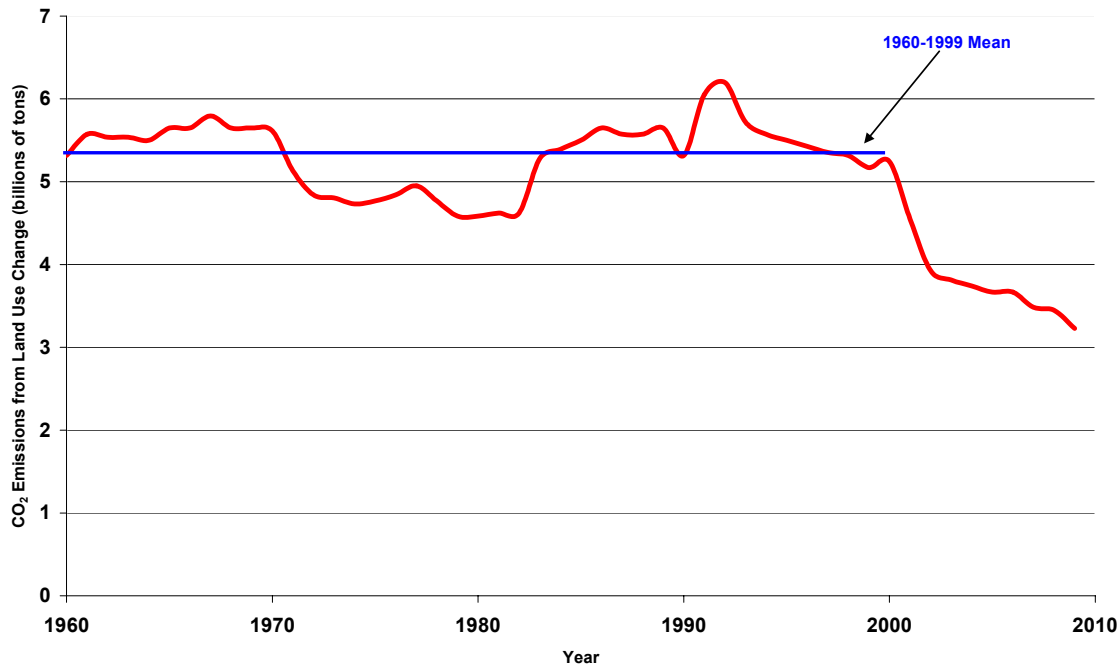
The first analysis to come out, in October, was the Global Forest Resources Assessment (FRA) for 2010 (<http://www.fao.org/forestry/fra/fra2010/en/> and http://news.mongabay.com/2010/1006-fao_forest_cover.html). This compendium of data from all the countries on the planet is released every five years, and provides the broadest look at the state of the world's forests. The new FRA data showed that tropical deforestation in the first decade of the 2000s was down 18% from the level of the 1990s, dropping from 11.33 million hectares per year in the 1990s to 9.34 million hectares per year in the 2000s. Furthermore, the rate dropped from the first 5 years of the decade to the second five years, principally due to a dramatic decline in Brazilian Amazon deforestation. The FRA 2010 data also showed that the rate of primary forest loss, not just total forest loss, has declined.

However, FRA data is self-reported by the individual countries, and scientists such as Alan Grainger and others have raised serious questions about the reliability of past FRA estimates (<http://www.pnas.org/content/105/2/818.short>). Thus, one couldn't be sure of the trend based on FRA data alone. However, in November the annual Global Carbon Budget was released (<http://www.globalcarbonproject.org/carbonbudget/index.htm>), and its results were also published in a peer-reviewed scientific journal. This publication confirmed and reinforced the FRA message (Friedlingstein et al. 2010. Update on CO₂ emissions. *Nature Geoscience*, doi: 10.1038/ngeo_1022. Published online: 21 November 2010. <http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo1022.html>).

The Global Carbon Budget, prepared by an international team of about three dozen scientists coordinated by Corinne Le Quéré at the University of East Anglia, makes annual estimates of all the components of the carbon cycle. These include the emissions due to land-use change, almost all of which come from deforestation, as well as fossil fuel emissions, uptake by land and ocean photosynthesis, and the resulting change in the carbon dioxide concentration of the atmosphere. Since the estimates are annual, it provides a considerably better look at recent trends than the FRA, and incorporates other sources of data as well as more sophisticated analysis. Furthermore, it provides a full fifty years' worth of data, since the first estimates are for the year 1960.

Here's the graph of the Global Carbon Budget estimates for land-use change emissions, converted from billions of tons of carbon to billions of tons of carbon dioxide (one simply multiplies by 3.67):

Global Emissions from Land Use Change over the past Half-Century



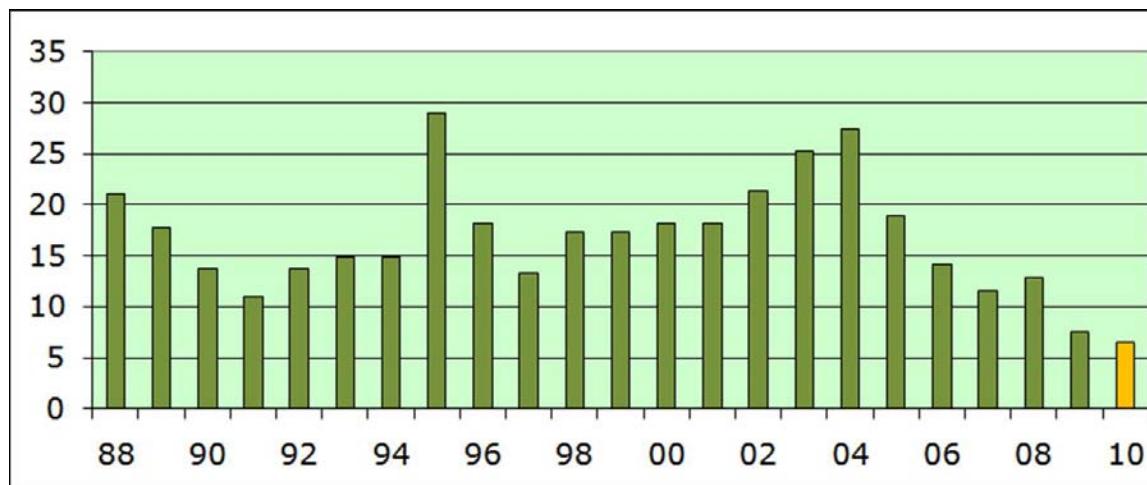
The change over the past decade is dramatic: emissions have fallen from an average of 5.32 billion tons CO₂/year in the twentieth century (1960-1999), to just 3.23 billion tons in 2009. This is a decrease of 39% in just a decade, after four decades in which there was essentially no decrease at all (blue line; in 1960 emissions were 5.32 billion tons, and in 1999 they were 5.17 billion tons). Furthermore, unlike the case for the previous four decades, the twenty-first century trend has been consistently downward; every single year since 2000 had the same or lower land use change emissions than the previous year.

Global figures like these have both a virtue and a vice. On the one hand, they show the overall effect on the atmosphere, which is ultimately what really matters for global warming. On the other hand, they hide the important differences from country to country, with some making important progress in reducing deforestation and others actually showing increases. So, what has been happening in the big tropical forest countries --particularly the two biggest, Brazil and Indonesia?

The Global Carbon Budget paper by Friedlingstein et al. pointed out that data based on satellite observations report a downward trend in both these countries. And just a few weeks later, Brazil provided further evidence that its decrease is continuing, and it has brought deforestation to record low levels.

In December the annual summary of data from the Brazilian National Space Institute, INPE, showed another annual decrease of 14% from 2009, cutting deforestation to 6,451 km² compared to an average of 19,508 km² during the baseline period from 1996 through 2005 (http://news.mongabay.com/2010/1201-brazil_deforestation_2010.html. This is a 67% decrease in just half a decade, a truly remarkable achievement.

Here's the trend for Brazil's deforestation (from INPE: http://www.dpi.inpe.br/gilberto/present/prodes_taxa2010.ppt; Y-axis is thousands of square kilometers deforested)



According to our estimates here at the Union of Concerned Scientists, Brazil's reduction from its baseline amounts to 870 million tons of CO₂ annually. How big is that? Well, the E.U.'s pledge of a 20% reduction in emissions by 2020 corresponds to slightly below 850 million tons, and the U.S. pledge of a 17% reduction (below 2005, not 1990) is about 1200 million tons. Thus, Brazil – a tropical developing country – has already done something to counter climate change that is comparable to what the biggest industrial powers in the world have simply promised to do a decade from now.

While the global decrease in deforestation in the early 2000s is due to a combination of factors, Brazil's achievement in the second half of the decade is clear evidence that REDD+ can be highly successful. And this success is fully compatible with strong economic growth and progress on social justice, as shown by the country's continued high rates of GDP growth and substantial reductions in poverty and hunger through social support programs. It shows some of the elements that can contribute to that success: strengthening the rights and land tenure of indigenous peoples, greatly expanding protected areas, civil society pressure on the businesses that are now the principle drivers of deforestation, cracking down on illegal logging, and state support for the sustainable development of forest communities that act to reduce deforestation.

Furthermore, despite the common habit of discussing REDD+ in terms of projects and carbon market offset credits – a habit of both its supporters and its opponents – Brazil's program is neither

project-level nor offset-financed. On the contrary, its approach to REDD+, generously funded with up to \$1 billion in results-based compensation from Norway, is a national one, and the financing has nothing to do with the carbon market. Norway is paying Brazil \$5 for each ton of CO₂ that it reduces its deforestation emissions, but this payment comes from public funds and doesn't buy Norway the right to emit a single ton more.

For years now, almost all the discussion about REDD+ has had to use words like “could”, “might”, “possibly”, “potentially” and “risks.” Now, at the end of 2010, things have changed. We now have real data, based on sophisticated satellite and ground observations and complex analysis, which show us the reality of REDD+. We can see what it's doing – and that it works.