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Study Touts Carbon-Absorbing Power Of Forests

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Science (AAAS).

In the study, co-author Dr. Pep Canadell, a scientist at the Commonwealth Scientific and Industrial Research Organization (CSIRO) in Australia and the Executive Director of the Global Carbon Project, and colleagues combined information from "forest inventories, models and satellites to construct a profile of forests as major regulators of atmospheric CO2," according to a CSIRO press release.

They discovered that the world's forests currently remove 2.4 billion metric tons of carbon each year from the Earth's atmosphere, which they believe to be equivalent to one-third of the planet's annual fossil fuel emissions. They also discovered that deforestation for development, to generate fuel, or for other reasons emits roughly 2.9 billion metric tons of the greenhouse gas, or "more than a quarter of all emissions stemming from human activity" each year, according to AFP writer Marlowe Hood.

Previously, there was not enough data available to determine deforestation's contribution to carbon emissions, but according to CSIRO, Dr. Canadell and his associates reported that the percentage of those gases released into the atmosphere as a result of logging and related activities was "much larger" than they had previously thought.

They believe that their discoveries suggest that "the potential benefits of avoiding deforestation through the United Nations-backed Reduced Emissions from Deforestation and Degradation (REDD) scheme, are much larger than previously appreciated."

"This is really a timely breakthrough with which we can now clearly demonstrate how forests and changes in landscape such as wildfire or forest regrowth impact the removal or release of

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THE TIMES

Saturday, July 16, 2011, by Marlowe Hood, AFP

Forests soak up a third of fossil fuel emissions – study



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Forests absorb a third of emissions

Marlowe Hood | 15th July 2011

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FORESTS play a larger role in the Earth's climate system than previously suspected for both the risks from deforestation and the potential gains from regrowth, a benchmark study has shown.

The study, published in Science on Thursday, provides the most accurate measure so far of the amount of greenhouse gases absorbed from the atmosphere by tropical, temperate and boreal forests, researchers said.

"This is the first complete and global evidence of the overwhelming role of forests in removing anthropogenic carbon dioxide," said co-author Josep Canadell, a scientist at CSIRO, Australia's national climate research centre in Canberra.

"If you were to stop deforestation tomorrow, the world's established and regrowing forests would remove half of fossil fuel emissions," he told AFP, describing the findings as both "incredible" and "unexpected".

Wooded areas across the planet soak up fully a third of the fossil fuels released into the atmosphere each year, some 2.4 billion tonnes of carbon, the study found.

At the same time, the ongoing and barely constrained destruction of forests -- mainly in the tropics -- for food, fuel and development



Forests play a larger role in Earth's climate system than previously suspected, a new study shows.

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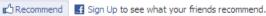
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Forests Soak Up Tons Of Fossil Fuel Emissions, But **Deforestation Releases Even More Than Thought**

by Matthew McDermott, New York, NY on 07.18.11 SCIENCE & TECHNOLOGY







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Another study showing us how valuable forests are (among their myriad other values)

















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Forests absorb one third our fossil fuel emissions

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From the desk of the editor



Welcome to the July 2011 edition of i2P E-Magazine. A range of

strategic issues are looked at this month, primarily in the form of social media and its impact on pharmacy and other health professions. Social media can adversely affect the reputations of pharmacists if forms of personal behaviour are picked up and populate various Facebook or other similar sites.

The facility for correct use to occur is even available on the i2P site when the need to share becomes important. Kay Dunkley explores.

Staff Writer



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Editing and Researching news and stories about global and local Pharmacy Issues

The world's established forests remove 2.4 billion tonnes of carbon per year from the atmosphere - equivalent to one third of current annual fossil fuel emissions - according to new research published today in the journal Science.

This is the first time volumes of the greenhouse gas absorbed from the atmosphere by tropical, temperate and boreal forests have been so clearly identified.

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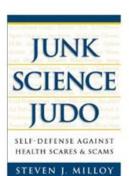


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Earth really is getting greener

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Earth Getting Greener, not Browner

A new study in ScienceExpress (Science magazine's pre-paper-publication outlet) by Yude Pan of the U.S. Forest Service and colleagues finds that the net carbon sink in terrestrial forest systems across the globe has been expanding, taking up ever more carbon dioxide from the earth's atmosphere. (A "sink" is a place where something-carbon dioxide, heat, water, etc...winds up.)

The net carbon sink in the world's forests is made up of carbon uptake less carbon loss. Carbon (C) uptake is expressed as bigger trees and more dense forests, storage in leaf litter, dead wood, wood products, and in the soil. Carbon loss occurs through deforestation and burning. By analyzing "recent inventory data and long-term field observations coupled to statistical or process models" Pan et al. conclude that "the global net forest C sink was 1.0 ± 0.8 and 1.2 ± 0.9 PgC yr-1 for 1990-1999 and 2000-2007"-indicating that the terrestrial forest sink has been at least consistent, if not expanding, over at least the past 18 years (1990-2007). A "Pg" is a Petagram, which is 1 followed by 15 zeroes worth of constant grams. For comparative purposes, our federal deficit is 14 followed by 12 zeroes worth of inflating \$\$\$. (WCR)

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Forests can store more carbon emissions

Foreign 2011-07-15 12:16

VIENNA, July 15 (Bernama) -- A latest study showed that the role of forests as carbon dioxide (CO2) stores was much bigger than previously thought.

The findings were published in the latest issue of the journal "Science" on Thursday.

From 1990 to 2007, 8.8 billion tonnes of carbon dioxide (CO2) were released in the world through the use of fossil fuels, but around one third of them were absorbed by forests, according to the study.

The woods are responsible for the entire terrestrial storage of CO2 while agricultural land, grassland and tundra played no role at the global level as CO2 are absorbed as much as they emit, said one of the authors, Anatoly Shvidenko, from the International Institute for Applied Systems Analysis (IIASA) in Laxenburg near Vienna.

The conclusion was made after analysing the relationship between the area change of the forests and green fields and the content change of carbon dioxide in the atmosphere.

The important role of forests as a global "vacuum cleaner" of climate-damaging greenhouse gas CO2 has long been clear but the new data have proved their higher importance as terrestrial CO2-sink, the IIASA said.

Figures showed that the still not destroyed tropical rain forests are responsible for the inclusion of more than 1 billion tons of carbon per year.

The boreal coniferous forest in northern zones, primarily in Canada and Russia, swallows some 500 million tonnes per year, while the forests in the temperate zones stores annually around 780 million tonnes of carbon.

The study also confirmed that, currently, there are now nearly 4 billion hectares of forest absorbing more than 860 million tonnes of carbon, mainly in forest soils and plants.

However, deforestation releases 2.9 billion tonnes of carbon every year.

It is therefore necessary to prevent the deforestation of rain forests so that the accumulation of CO2 in the atmosphere can be limited, said Yude Pans, the lead author of the study.



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World's forests acting as "carbon sinks" - study

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The world's forests absorb nearly a third of global fossil fuel emissions each year, a new study has found.

The results of the research, which have just been published in American journal Science, reveal that forests remove 2.4bn tonnes of carbon from the atmosphere each year and therefore play a far greater role in removing greenhouse gases than previously thought.

"This is really a timely breakthrough with which we can now clearly demonstrate how forests and changes in landscape such as wildfire or forest re-growth impact the removal or release of atmospheric carbon dioxide," said Dr Pep Canadell, research scientist at Australia's Commonwealth Scientific and Industrial Research

Organisation (CSIRO) and a co-author of the Grainne Rothery paper: 'A Large and Persistent Carbon Sink in the World's Forests'

"What this research tells us is that forests play a much larger role as carbon sinks as



World's forests acting as "carbon sinks" - study

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GardenNews.biz - Jul 15,2011 - US Forest Service Finds Global Forests Absorb One-Third of Carbon Emissions Annually

WASHINGTON, -Forests play a more significant role in removing carbon from the atmosphere than first reported by absorbing one-third of carbon emissions annually, a new U.S. Forest Service study says.

"Forests provide us with abundant clean air." said U.S. Forest Service Chief Tom Tidwell. "This study shows the important role global forests play in keeping the air clean and it also broadens our understanding of how climate change relates to forest management in today's world."

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Forests absorb carbon like a giant sponge into what scientists call a carbon sink. Oceans serve as the only other natural source for absorption of significant amounts of carbon. Until these new findings, many experts said forests played a less important role in removing carbon from the air we breathe. Today's report indicates otherwise.

The study, conducted by the U.S. Forest Service's Northern Research Station and a team of scientists from around the world, was recently published in the journal Science online, at the Science Express website, an online publication of the nonprofit American Association for the Advancement of Science.

One of the key findings in the study is that global forests have annually removed 2.4 billion tons of carbon and absorbed 8.8 billion tons of carbon dioxide from the atmosphere, or about one-third of fossil fuel emissions annually from the period of If you are a Journalist, Blogger or jus Newsaholic, use the form below to cr customized news alerts.

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Nobel Laureate: It is the People Who Must Stand Up For the Environment, Make Their **Leaders Change**

JULY 22, 2011

by Christine

tags: global warming, good news, deforestation, Wangari Maathai, Green Belt Movement, rupert murdoch, news international, scandal, reforestation, carbon dioxide emissions

Fridays are the days I usually focus on good news. I think the best news around these days is that Rupert Murdoch and his right-wing, democracy-corrupting News International is finally being subjected to the harsh light of public and criminal investigation. Apparently last week, Murdoch's media empire lost seven billion dollars worth of value in one day. Now that's good news!

In another good news story, it turns out that forests play an even larger role in the Earth's climate system than previously suspected. According to a new study published in Science last week, this raises more concern about the risks from deforestation but also holds out hope for the potential gains from regrowth.

Werner Kurz, a scientist with Natural Resources Canada's Canadian Forest Service who coauthored the paper, said the amount of carbon dioxide being absorbed by forests is "good news" and reinforces what scientists had previously estimated — that forests are the

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Tuesday, 26 July 2011

Who's involved

New measures of the amount of carbon absorbed from the atmosphere by the world's forests show the critical role they play in tackling climate change, and the vital contribution of a global REDD+ mechanism to preserve them.

A study by Australia's national science agency CSIRO estimates that the world's existing tropical, temperate and boreal forests absorb 2.4 billion tonnes of carbon dioxide through their natural growth and expansion. This is equivalent to 30 per cent of all the emissions from fossil fuel use each year. At the same time, the loss of native forest area at the margins, estimated by the UN Food and Agriculture Organisation (FAO) to be 13 million hectares annually, contributes 2.9 billion tonnes of CO2 to the atmosphere.

Co-author Dr Pep Canadell says the study, "A Large and Persistent Carbon Sink in the World's Forests", shows forests to make a larger carbon sequestration contribution than previously thought and that likewise, deforestation involves a larger carbon release than previously understood.

The CSIRO study underscores the double-whammy adverse climatic impact of deforestation. Not only does the loss of forest area add substantially to global greenhouse emissions as their destruction releases carbon back to the atmosphere, the loss of that forest also deprives the planet of significant carbonabsorbing land area. The study also adds to a growing understanding that forests can continue to store significant amounts of carbon even after they reach maturity.

Currently the UN, World Bank and others are attempting to establish a global mechanism to pay forest nations, largely tropical developing countries, to halt deforestation and enhance their carbon storing potential. Called REDD+, the plan is currently uncertain as developed countries are yet to agree on the required financing over the long term to establish it, or how the private sector can be brought to the task.

But the CSIRO study highlights the imperative of its success. Canadell says the initiative offers greater benefits for tackling climate change than first thought. "We



Discuss this article Share your views with other visitors, and read what they have to say

The world's forests absorb much more carbon dioxide than previously thought, a study released by the American journal Science reported last week. According to the study, forests can absorb up to 2.2 billion tonnes of carbon dioxide (CO2) each year - about one-third of the carbon dioxide released through the burning of fossil fuels or almost 10 per cent of the world's total CO2 emissions.

According to the International Energy Agency, total global CO2 emissions reached a record high in 2010 at 27.8 billion tonnes.

The article provides an in-depth analysis of the distinct roles of boreal, temperate, and tropical forests in capturing CO2 - the first of its kind. Tropical forests have the highest dynamic in absorbing greenhouse gas from the atmosphere - slightly more than temperate forests and more than twice as much as boreal forests.

"This analysis puts forests at even a higher level of importance in regulating atmospheric CO2," said Pep Canadell, co-author of the paper: A Large and Persistent Carbon Sink in the World's Forests. A particularly remarkable finding is the large capacity of tropical forest regrowth which annually absorbs about 1.5 billion tonnes of carbon, however, is partially offset by shifts in tropical land use, such as clearing land for agriculture, causing emissions of 1.2 billion tonnes annually.

As stated by the study, overall emissions arising from deforestation are also much larger than assumed. On a more positive note this suggests that potential benefits from the UN's Reducing Emissions from





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Forests absorb a third of fossil fuel carbon emissions

Radio Australia: July 15 2011

Scientists have long known that trees take up carbon dioxide from the atmosphere, now for the first time a group of researchers have worked out exactly how much carbon is being absorbed by the world's forests.

The study, published in the journal Science, has found that forests remove one third of all the world's fossil fuel emissions.

Presenter: Felicity Ogilvie

Speaker: Pep Canadell, from the Australian research body, the CSIRO; Werner Kurz from the Canadian Forest Service

ELICITY OGILVIE: It's a study that scientists expect will shape the global climate change debate. One of the study's authors is Werner Kurz from the Canadian Forest Service.

He says they've found that the world's forests absorb one third of all fossil fuel emissions.

WERNER KURZ: What we found is that between 1990 and 2007 forests around the world took up about 2.4 billion tonnes of carbon per year. Some of that uptake was offset by deforestation emissions so forests have taken up about one third of the carbon that was emitted by humans.

FELICITY OGILVIE: They have found that tropical forests in places like Indonesia and Brazil are taking up the most carbon, but deforestation in those same countries is releasing vast amounts of carbon.

Dr Kurz says the study shows the importance of protecting forests.

WERNER KURZ: The fact that we have gotten this 30 per cent discount on our fossil fuel emissions with regard to increases in the atmosphere - if that sink does not continue to operate in the future, then the rate of increase of CO2 in the atmosphere will go up considerably.

FELICITY OGILVIE: Another one of the authors is Pep Canadell from the CSIRO.

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World forests can remove significant carbon from atmosphere, according to a new CSIRO paper

Posted by: GreenCollar on Friday, 22 July 2011

The world's forests remove 2.4 billion tons of carbon dioxide per year from the atmosphere - equivalent to one third of current annual fossil fuel emissions - according to new research published in the journal Science.

The article quotes Dr Pep Canadell, Executive Director of the Global Carbon Project at CSIRO, who coauthor of the paper as saying: "This is really a timely breakthrough with which we can now clearly demonstrate how forests and changes in landscape such as wildfire or forest regrowth impact the removal or release of atmospheric carbon dioxide (CO2) ... what this research tells us is that forests play a much larger role as carbon sinks as a result of tree growth and forest expansion.*

Dr Canadell also told Science that the international research team combined data from forest inventories, models and satellites to construct a profile of forests as major regulators of atmospheric CO2. He added that scientists now know that deforestation is responsible for emitting 2.9 billion tons of carbon per year - an exchange that had not been known in the past because of a lack of data. That compares to eight billion tons of carbon per year from fossil fuel emissions.

This all adds up to mean that emissions from deforestation are much larger than previously thought, according to the CSIRO paper, titled A Large and Persistent Carbon Sink in the World's Forests, Click here for more information from the CSIRO website.









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Carbon pricing looks sound: Robert Jeremenko, senior tay councel for the Tay Institute writes in The





Study shows forests have bigger role in slowing climate change

Reuters

By David Fogarty, Climate Change Correspondent, Asia

SINGAPORE (Reuters) - The world's forests can play an even greater role in fighting climate change than previously thought, scientists say in the most comprehensive study yet on how much carbon dioxide forests absorb from the air.

Published 4:36 AM, 15 Jul 2011 Updated 12:21 PM, 16 Jul 2011

The study may also boost a U.N.-backed program that aims to create a global market in carbon credits from projects that protect tropical forests. If these forests are locking away more carbon than thought, such projects could become more valuable.

Trees need large amounts of planet-warming carbon dioxide (CO2) to grow, locking away the carbon in the trunks and roots.

But scientists have struggled to figure out exactly how much CO2 forests soak up in different parts of the world and a global total for how much is released when forests are cut down and burned.

The study released on Friday in the latest issue of the U.S. journal Science details for the first time the volumes of CO2 absorbed from the atmosphere by tropical, temperate and boreal forests. The researchers found that forests soak up more than 10 percent of carbon dioxide from human activities such as burning coal, even after taking into account all of the global emissions from deforestation.

"This analysis puts forests at even a higher level of importance in regulating atmospheric CO2," said Pep Canadell, one of the authors and head of the Global Carbon Project based at the Commonwealth Scientific and Industrial Research Organization in Australia.

"If you shut them down, you're not only losing the carbon stock into the atmosphere, you're losing a very active sink which removes the carbon dioxide," he told Reuters from Canberra.

Canadell and an international research team combined data from forest inventories, models and satellites to construct a profile of forests as major regulators of atmospheric CO2.

Greenhouse gas emissions from burning fossil fuels and deforestation are rising rapidly, with growth being largely driven by surging coal, oil and gas consumption in big developing nations.



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Forests soak up third of fossil fuel emissions: study

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ARIS — Forests play a larger role in Earth's climate system than previously suspected for both the risks from deforestation and the potential gains from regrowth, a benchmark study released Thursday has shown.

The study, published in Science, provides the most accurate measure so far of the amount of greenhouse gases absorbed from the atmosphere by tropical, temperate and boreal forests, researchers said.

"This is the first complete and global evidence of the overwhelming role of forests in removing anthropogenic carbon dioxide," said co-author Josep Canadell, a scientist at CSIRO, Australia's national climate research centre in Canberra.

"If you were to stop deforestation tomorrow, the world's established and regrowing forests would remove half of fossil fuel emissions," he told AFP, describing the findings as both "incredible" and "unexpected".

Wooded areas across the planet soak up fully a third of the fossil fuels released into the atmosphere each year, some 2.4 billion tonnes of carbon, the study found.

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Forests soak up third of emissions: study

July 15, 2011

Forests play a larger role in the earth's climate system than previously suspected for both the risks from deforestation and the potential gains from regrowth, a benchmark study has shown.

The study, published in *Science* on Thursday, provides the most accurate measure so far of the amount of greenhouse gases absorbed from the atmosphere by tropical, temperate and boreal forests, researchers said.

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"If you were to stop deforestation tomorrow, the world's established and regrowing forests would remove half of fossil fuel emissions," he told AFP, describing the findings as both "incredible" and "unexpected".

Wooded areas across the planet soak up fully a third of the fossil fuels released into the atmosphere each year, some 2.4 billion tonnes of carbon, the study found.

At the same time, the ongoing and barely constrained destruction of forests - mainly in the tropics - for food, fuel and development was shown to emit 2.9 billion tonnes of carbon annually, more than a quarter of all emissions stemming from human activity.

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Up to now, scientists have estimated that deforestation accounted for 12 to 20 per cent of total greenhouse gas output.

The big surprise, said Canadell, was the huge capacity of tropical forests that have regenerated after logging or slash-and-burn land clearance to purge carbon dioxide from the atmosphere.

"We estimate that tropical forest regrowth is removing an average of 1.6 billion tonnes of carbon each year," he said in an email exchange.

Adding up the new figures reveals that all the world's forests combined are a net "sink", or sponge, for 1.1 billion tonnes of carbon, the equivalent of 13 per cent of all the coal, oil land gas burned across the planet annually.

"That's huge. These are 'savings' worth billions of euros a year if that quantity had to be paid out by current mitigation (CO2 reduction) strategies or the price of carbon in the European market," Canadell said.

The international team of climate scientists combined data - covering the period 1990 through 2007 - from forests inventories, climate models and satellites to construct a profile of the role global forests have played as regulators of the atmosphere.

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In terms of climate change policy, the study has two critically important implications, said Canadell.

The fact that previous science underestimated both the capacity of woodlands to remove CO2, and the emissions caused

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Forests are the key to reducing carbon emissions'

Posted on July 15, 2011 by jboydedu

LONG understood to be the lungs of the earth, the world's great forests are much more important in the carbon cycle than was previously believed, soaking up one-third of all fossil fuel emissions, according to new research.

Standing forests remove 2.4 billion tonnes of carbon a year from the atmosphere, almost five times Australia's total emissions.

On the other side of the carbon ledger, forest logging releases about 10 billion tones of CO2 into the atmosphere each year.

The research, published today in the leading journal, Science, estimates that reducing logging, most notably in Indonesia and Brazil, could yield up to 2.9 billion tonnes of CO2 a year to be traded as carbon permits to offset emissions in developed countries.

The findings underpin global efforts to establish an avoided deforestation scheme, known as Reduced Emissions from Deforestation and Degradation, in the developing world.

They also underpin demands in Australia that some of the \$1 billion biodiversity fund established as part of the federal government's carbon tax plan be used to stop logging in

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Emissions Study Shows Forests Have Bigger Role In Slowing Climate Change

Planetark.org, July 15, 2011

The world's forests can play an even greater role in fighting climate change than previously thought, scientists say in the most comprehensive study yet on how much carbon dioxide forests absorb from the air.

The study may also boost a U.N.-backed program that aims to create a global market in carbon credits from projects that protect tropical forests. If these forests are locking away more carbon than thought, such projects could become more valuable.

Trees need large amounts of planet-warming carbon dioxide (CO2) to grow, locking away the carbon in the trunks and roots.

But scientists have struggled to figure out exactly how much CO2 forests soak up in different parts of the world and a global total for how much is released when forests are cut down and burned.

The study released on Friday in the latest issue of the U.S. journal Science details for the first time the volumes of CO2 absorbed from the atmosphere by tropical, temperate and boreal forests. The researchers found that forests soak up more than 10 percent of carbon dioxide from human activities such as burning coal, even after taking into account all of the global emissions from deforestation.

"This analysis puts forests at even a higher level of importance in regulating atmospheric CO2," said Pep Canadell, one of the authors and head of the Global Carbon Project based at the Commonwealth Scientific and Industrial Research Organization in Australia.

"If you shut them down, you're not only losing the carbon stock into the atmosphere, you're losing a very active sink which removes the carbon dioxide," he told Reuters from Canberra.

Canadell and an international research team combined data from forest inventories, models and satellites to construct a profile of forests as major regulators of atmospheric CO2.

Greenhouse gas emissions from burning fossil fuels and deforestation are rising rapidly, with growth being largely driven by surging coal, oil and gas consumption in big developing nations.

Emissions grew 5.8 percent last year to 33.16 billion tonnes, as countries rebounded from economic recession, a BP report said in June. China's emissions totaled 8.33 billion tonnes, up 10 percent from the year before.

MAJOR SURPRISE

The researchers found that in total, established forests and young regrowth forests in the tropics soaked up nearly 15 tappag of CO2 or roughly half the emissions from industry transport and other co



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Forests play a major role as carbon sink say scientists

Posted by Takver on July 16, 2011 at 5:30pm

Takver's blog

The world's forests remove over one quarter of current annual human carbon emissions from the atmosphere each year, the equivalent of about 2.4 billion tonnes of carbon according to the latest published scientific research. An international team of scientists, including from the US Forests Service and the Australian CSIRO, have quantified the greenhouse gas carbon sink provided by the world's tropical, temperate and boreal forests.

"This is really a timely breakthrough with which we can now clearly demonstrate how forests and changes in landscape such as wildfire or forest regrowth impact the removal or release of atmospheric carbon dioxide (CO2)," says Dr Pep Canadell, CSIRO co-author of the paper: A Large and Persistent Carbon Sink in the World's Forests, "What this research tells us is that forests play a much larger role as carbon sinks as a result of tree growth and forest expansion."

*The new information suggests forests alone account for the most significant terrestrial carbon sink, and that non-forest lands collectively cannot be considered a major carbon absorption sink," said Dr. Yude Pan, a U.S. Forest Service scientist and a lead author of the study.

In 2009 a total of 8.4 billion tonnes of carbon was emitted by humans to the atmosphere about 30.8 tonnes CO2. (1 tonne of carbon is equivalent to 3.67 tonnes of CO2). Each year about 26 percent of CO2 emissions are absorbed by the world's oceans making them progressively more acidic (See Ocean acidification); 47 percent accumulate in the atmosphere; and 27 percent are absorbed in the

world's forests and to a much lesser extent agricultural land.

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US Forest Service Finds Global Forests Absorb One-Third of Carbon Emissions Annually



Note: And yet, the US
Department of Agriculture (of
which the US Forest Service is
a part), is considering
permitting GE tree company
ArborGen to replace millions
of acres of biodiverse and
carbon-rich forests in the

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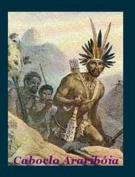














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As 'Sinks' for Carbon, Forests Are Even Mightier Than Assumed

Posted by Sydni Moser on July 18, 2011 at 8:35am in Green Atheists Pack to Green Atheists

Discussions

By Joanna M. Foster July 15, 2011 New York Times

The world's forests are magnificent palaces of biodiversity, teeming with wacky and wonderful creatures and plants that seem otherworldly. But they're also something far more mundane although useful: they're giant sponges, soaking up vast amounts of carbon dioxide.

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15 Forests Absorb One-Third of Fossil Fuel Emissions: Study

JUL Posted by Xavier Kopsen as Daily Business

Forests soak up one-third of the greenhouse gas carbon dioxide released into the atmosphere each year via burning fossil fuels - roughly 2.4 billion tons of carbon dioxide, a benchmark study has found, AFP reported.



What's more, if deforestation stopped, established forests and forest regrowth could potentially capture one-half — 50 percent — of the carbon dioxide emitted from burning fossil fuels.

The study, published in the journal Science, indicates that forests are much better at absorbing and processing carbon dioxide than originally thought, The New York Times reported.

The study's lead author, Yude Pam, a research forester at the Forest Service, says tropical forests alone captured about 1.2 billion tons of carbon dioxide a year, or about 55 percent of the amount carbon dioxide absorbed.

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Forests Absorb One-Third of Fossil Fuel Emissions

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The study, published in Science, provides the most accurate measure so far of the amount of greenhouse gases absorbed from the atmosphere by tropical, temperate and boreal forests, researchers said.

"This is the first complete and global evidence of the overwhelming role of forests in removing anthropogenic carbon dioxide," said co-author Josep Canadell, a scientist at CSIRO, Australia's national climate research centre in Canberra.

"If you were to stop deforestation tomorrow, the world's established and regrowing forests would remove half of fossil fuel emissions," he told AFP, describing the findings as both "incredible" and "unexpected".

Forests act as 'sponges'

Wooded areas across the planet soak up fully a third of the fossil fuels released into the atmosphere each year, some 2.4 billion tonnes of carbon, the study found.

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Study shows forests have bigger role in slowing climate change

Posted under News by B4E Summit Admin on Mon, 18 Jul 2011









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Forests absorb one-third of global fossil fuel emissions

18th Jul 2011

The world's established forests remove 8.8bn tonnes of CO2 per year from the atmosphere - equivalent to nearly a third of annual fossil fuel emissions - according to new research published in Science.

In addition, regrowth of trees on previously deforested lands in the tropics mopped up a further 6 billion tonnes of CO2 annually between 1990 and 2007(1). However, deforestation across the tropics released a huge 10.8 billion tonnes of CO2 annually during this period, off-setting much of the uptake of CO2 by the world's forests. For comparison, global fossil fuel emissions average 28 billion tonnes of CO2 annually.

The findings suggest that the world's tropical, temperate and boreal(2) forests play a much larger role in the global cycling of carbon than previously thought, and that protecting them is vital in limiting the severity of future climate change.

Dr Simon Lewis, a tropical ecologist from the University of Leeds and co-author of the study, said: "Humans are altering the world's forests in a number of ways, from their outright destruction to the much more subtle impacts on even the most remote forests caused by global changes to the environment.

"Our research shows these changes are having globally important impacts, which highlights the critical role forests play in the global cycling of carbon and therefore the speed and severity of future climate change.

"The practical importance of this new information is that if schemes to reduce deforestation are successful they would have significant positive global impacts, as would similar efforts promoting forest restoration."

The international team of researchers, led by Dr Yude Pan from the United States Forest Service, used on-the-ground measurements of trees worldwide and statistical models to provide an updated picture of atmospheric carbon uptake and loss by boreal, temperate and tropical forests spanning a total of 3.9 billion hectares.

Dr Pan said. "By breaking the large-scale carbon dynamics of forests into their many components, we were able to separately analyse the large magnitudes of carbon fluxes, both sinks and sources, and gain an idea of the potential capacity for carbon sequestration by the world's forests."

After adding together all the sources and sinks, the researchers found that there was a net climate benefit of 4 billion tonnes of carbon dioxide each year absorbed by forests, as uptake out-stripped releases.

The study also provided two further new insights.









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Earth Getting Greener, Not Browner

Tuesday, 19 July 2011 21:44 | World Climate Report



A new study in Scienceexpress (Science magazine's pre-paper-publication outlet) by Yude Pan of the U.S. Forest Service and colleagues finds that the net carbon sink in terrestrial forest systems across the globe has been expanding, taking up ever more carbon dioxide from the earth's atmosphere. (A "sink" is a place where something—carbon dioxide, heat, water, etc...winds up.)

The net carbon sink in the world's forests is made up of carbon uptake less carbon loss. Carbon (C) uptake is expressed as bigger trees and more dense forests, storage in leaf litter, dead wood, wood products, and in the soil. Carbon loss occurs through deforestation and burning. By analyzing "recent inventory data and long-term field observations coupled to statistical or process models" Pan et al. conclude that "the global net forest C sink was 1.0 \pm 0.8 and 1.2 \pm 0.9 PgC yr⁻¹ for 1990-1999 and 2000-2007"—indicating that the terrestrial forest sink has been at least consistent, if not expanding, over at least the past 18 years (1990-2007). A "Pg" is a Petagram, which is 1 followed by 15 zeroes worth of constant grams. For comparative purposes, our federal deficit is 14 followed by 12 zeroes worth of inflating \$\$\$.

In fact, if it were not for tropical deforestation, the world's forests would be taking up a huge percentage of the carbon dioxide emitted from anthropogenic activities. Pan et al explain:

Notably, the total gross C uptake by the world's established and tropical regrowth forests is 4.0 PgC y⁻¹, equivalent to half of the fossil fuel C emissions in 2009 [emphasis added]. Over the period studied (1990-2007), the cumulative C sink into the world's established forests was ~43 PgC, and for the established plus regrowing forests was 73 PgC; the latter equivalent

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Forests absorb one-third of global fossil fuel emissions

Published Friday 15th July 11

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Greening the earth...increase CO2

Posted on July 20, 2011 by Tom Harley

Jul 19, 2011 From Icecap Earth Getting Greener, not Browner

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Forests Absorb Even More Carbon Than Assumed

By Joanna M. Foster, New York Times, 15 July 2011 | The world's forests are magnificent palaces of biodiversity, teeming with wacky and wonderful creatures and plants that seem otherworldly. But they're also something far more mundane although useful: they're giant sponges, soaking up vast amounts of carbon dioxide. According to a study published online on Thursday by the journal Science, the world's forests absorb 2.4 billion tons of carbon dioxide each year, or about one-third of the carbon dioxide released through the burning of fossil fuels. The lead author, Yude Pam, a research forester at the Forest Service, describes the study as the most comprehensive analysis of the global carbon budget to date. It shows that forests are a far more significant carbon sink than previously thought. At the same time, the report emphasizes the devastating effects of tropical deforestation and the need to protect trees that perform an enormous global service.

Study shows forests have bigger role in slowing climate change

World Bulletin, 15 July 2011 | The world's forests can play an even greater role in fighting climate change than previously thought, scientists say in the most comprehensive study yet on how much carbon dioxide forests absorb from the air. The study may also boost a U.N.backed programme that aims to create a global market in carbon credits from projects that protect tropical forests. If these forests are locking away more carbon than thought, such projects could become more valuable. Trees need large amounts of planet-warming carbon dioxide (CO2) to grow, locking away the carbon in the trunks and roots. But scientists have struggled to figure out exactly how much CO2 forests soak up in different parts of the world and a global total for how much is released when forests are cut down and burned.

Forest carbon rights for poor at risk – study

By Sounya Karlamangla, AlertNet, 15 July 2011 | The process of creating "carbon rights" – ownership of carbon stored in tropical forests – risks excluding the poor and landless who depend on forests if it is not done properly, a new briefing warns. "We've got this very narrow definition of carbon rights," said Essam Mohammed, a co-author of the paper by the International Institute for Environment and Development, and a sustainable markets researcher at the institute. "It's very timely now, I think, to recognize the importance of this, of having a better look at carbon rights and having more focus on a pro-poor nature of the scheme."

[Indonesia] Cutting through the REDD tape of our first forest audit

By Zoe Ryan, Flora and Fauna International, 15 July 2011 | Understandably, I was feeling a little anxious upon commencement of field verification of the Danau Siawan peat swamp forest REDD project. This is Fauna & Flora International's (FFI) first project to undergo





World Climate Report

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July 19, 2011

Earth Getting Greener, not Browner

Filed under: Adaptation, Plants -

A new study in Scienceexpress (Science magazine's pre-paper-publication outlet) by Yude Pan of the U.S. Forest Service and colleagues finds that the net carbon sink in terrestrial forest systems across the globe has been expanding, taking up ever more carbon dioxide from the earth's atmosphere. (A "sink" is a place where something—carbon dioxide, heat, water, etc...winds up.)

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July 18, 2011

US Forest Service Finds Global Forests Absorb One-Third of Carbon Emissions Annually

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WASHINGTON, July 14, 2011—Forests play a more significant role in removing carbon from the atmosphere than first reported by absorbing one-third of carbon emissions annually, a new U.S. Forest Service study says.

"Forests provide us with abundant clean air," said U.S. Forest Service Chief Tom Tidwell. "This study shows the important role global forests play in keeping the air clean and it also broadens our understanding of how climate change relates to forest management in today's world."

Forests absorb carbon like a giant sponge into what scientists call a carbon sink. Oceans serve as the only other natural source for absorption of significant amounts of carbon. Until these new findings, many experts said forests played a less important role in removing carbon from the air we breathe. Today's report indicates otherwise.



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