

A Large and Persistent Carbon Sink in the World's Forests

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A Blog About Energy and the Environment

July 15, 2011, 5:15 PM

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

By JOANNA M. FOSTER



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



Abel Montenegro



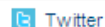
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Forests, oceans acting as huge carbon 'sink' They're sucking up half of our fossil fuel emissions

BY MARGARET MUNRO, POSTMEDIA NEWS JULY 15, 2011

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The world's forests gobble up so much carbon they are protecting the planet from the worst impacts of humans' staggering fossil fuel emissions.

An international study has concluded forests suck up a third of the carbon pumped into the atmosphere each year through the burning of oil, gas and coal: "That one third taken up by the forests would otherwise be in the atmosphere," said Werner Kurz of the Canadian Forest Service, co-author of the report published Thursday in the journal Science.

The oceans suck up another 20 per cent of the emissions, which means "we have basically been getting a 50 per discount on all our fossil fuel emissions," said Kurz.

The report is the most comprehensive assessment yet of the global forest "sink" and shows trees from the tropics to the boreal play a huge role in controlling the global carbon budget by sucking up vast amounts of carbon from the air and locking it away in wood and soil.

It says that the forests have been a major carbon sink since 1990, and shows the changing dynamics of the world's trees.

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The notion that nature itself will act as a check on the atmospheric excesses of humanity has long held a fair amount of appeal, not least because it draws on a nugget of high-school science that most people can quickly comprehend. Plants inhale carbon dioxide, after all -- they need it to grow. Add more CO2 to the air, as human civilization has been doing in copious amounts since the dawn of the

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Forests soak up third of emissions: study

July 15, 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 was shown to emit 2.9 billion tonnes of carbon annually, more

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Forests still sucking it up, when it comes to carbon

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Posted Thu, 14 Jul 2011 18:00:00 GMT by [Martin Leggett](#)



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WOOD PILE

Forests soak up third of fossil [fuel emissions](#): study

by Staff Writers
Paris (AFP) July 14, 2011

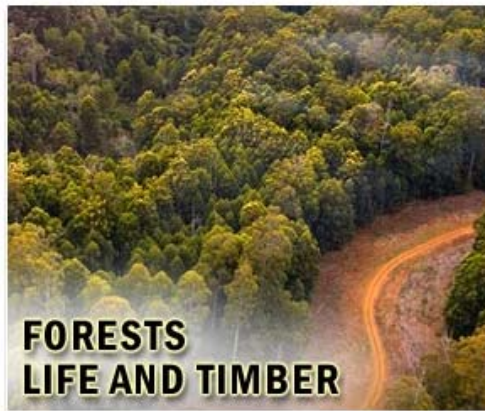
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"If you were to stop deforestation tomorrow, the world's established and regrowing forests would remove half of fossil fuel emissions," he told AFP, describing the findings as both "incredible" and "unexpected".

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.



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Forests absorb a third of fossil fuel carbon emissions: 'Science'

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Updated July 15, 2011 14:40:28

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

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FELICITY 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.

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Study casts doubt on forest carbon capture plans

AM Simon Launder

Updated July 14, 2011 11:09:12

US scientists have found that the more carbon dioxide goes into soil, the more the soil releases other, more potent, greenhouse gases.

This means Australian companies planting trees to soak up CO2 in return for Carbon Credit Units under the carbon tax may not actually be counteracting their emissions.

The study, published in the science journal Nature, found that plants taking up more carbon dioxide resulted in an accelerated production of nitrous oxide and methane.

The study says the value of trees as carbon credits could be written down by a fifth.

The value of the units is expected to be set in law if it is passed by the Senate next month.

Forests and soil are often seen as carbon sink centres, with tree-planting the main method for offsetting carbon emissions.

University of Florida researcher and co-author of the study Professor Craig Osenberg says Australia may need to rethink its emissions strategy.

"Plants are taking up the carbon dioxide but in the



PHOTO: Scientists say the values of trees as carbon credits will be reduced by 20 per cent. (ABC News)

AUDIO: Study cuts value of carbon offsets (AM)

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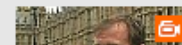
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US Forest Service Finds that Forests Play Huge Role in Reducing Carbon and Higher Global Temps

Posted by [Robert Hudson Westover](#), U.S. Forest Service Office of Communication, on July 14, 2011 at 4:27 PM

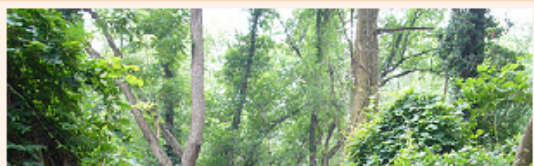
Forests absorb carbon like a giant sponge into what scientists call a carbon sink. This fact is well known throughout the scientific community. However, what scientists weren't sure of until now is the amount of carbon forests can store.

For years scientists knew a large amount of carbon was somehow being stored but could not identify exactly how this was done. This is because less than half of the carbon dioxide released through fossil fuel use remains in the atmosphere. The remaining carbon enters the oceans and other carbon sinks including forests.

Although oceans serve as one of the natural sinks for absorption of significant amounts of carbon, they did not account for all the carbon absorption that occurs. A new report from the U.S. Forest Service has uncovered the mystery. And the missing carbon is standing in front of you — that is if you're in a forest.

The study, conducted in collaboration with the U.S. Forest Service's [Northern Research Station](#) and a team of scientists from around the world, was recently published in *Science Express* and will be published in *Science* magazine later this summer.

One of the key findings in the study is that global forests have annually removed 2.4 billion tons of carbon which absorbs 8.8 billion tons of carbon dioxide from the atmosphere, about one-third of fossil fuel emissions annually for the period of 1990-2007.



"The new information suggests forests alone account for the most significant terrestrial carbon sink, and that non-forest lands such as agriculture, grass, desert and tundra collectively cannot be considered a major carbon absorption sink," said Dr. Yude Pan, a

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US Forest Service Finds Global Forests Absorb 1/3 of Carbon Emissions Annually

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.

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 1990-2007.

"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.

The study reveals the dominant role of tropical forests. Tropical forests that have not suffered from deforestation absorb enormous amounts of carbon, more than all other northern hemisphere forests combined. The analysis also identified an additional large carbon uptake of 1.6 billion tons per year in tropical re-growth forests that are recovering from deforestation and logging, which partially

Forests Absorb One-Third of Fossil Fuel Emissions: Study

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By IBTimes Staff Reporter | July 16, 2011 5:59 PM EDT

Forests soak up one-third of the greenhouse gas carbon dioxide (CO₂) 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](#).



(Photo: Rakesh Agrawal/GIN)
A substantial number of people depend on forest resources for their livelihood in Uttarakhand.

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.

The 17-year study, 1990-2007.

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Forests play a major role as carbon sink say scientists

Sat 16 Jul 2011
By takver

Global/International carbon capture climate change forests Logging



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

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Forests soak up third of fossil fuel emissions: study



By Marlowe Hood | AFP - 6 hrs ago

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"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

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Forests absorb a third of world's CO2 emissions

Other land ecosystems have no effect on CO2, study suggests

CBC News Posted: Jul 14, 2011 2:48 PM ET | Last Updated: Jul 14, 2011 4:40 PM ET 43

The world's forests take up roughly a third of the carbon dioxide emitted from burning fossil fuels each year.

But deforestation in the tropics sends about half that amount — equivalent to a sixth of global fossil fuel emissions — back into the atmosphere, reported a study by an international team of government and university researchers published Wednesday in *Science*.

Emissions of carbon dioxide into the atmosphere are linked to climate change, including an increase in global temperatures. Through the United Nations Framework Agreement on Climate Change and the Kyoto Protocol, many countries committed to trying to reduce emissions and climate change, and the resultant negative impacts, such as extreme weather and rising sea levels.

Werner Kurz, a scientist with Natural



The amount of carbon taken in by the forests, 2.4 billion tonnes a year, is almost identical to the amount that scientists had previously estimated are taken up by all land ecosystems. (Jeff Barnard/Associated Press)



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World's forests protecting humanity from climate disaster: Study

BY MARGARET MUNRO, POSTMEDIA NEWS JULY 14, 2011 6:02 PM

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Forests soak up third of fossil fuel emissions: study

AFP

Sunday, 17 July 2011

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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.

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

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Forests sucking up planet's fuel emissions

Posted by admin in [News](#) on July 17th, 2011 | [no responses](#)

By Margaret Munro, Vancouver Sun

The world's forests gobble up so much carbon they are protecting the planet from the worst impacts of humans' staggering fossil fuel emissions.

An international study has concluded forests suck up a third of the carbon pumped into the atmosphere each year through the burning of oil, gas and coal. "That one third taken up by the forests would otherwise be in the atmosphere," said Werner Kurz of the Canadian Forest Service, co-author of the report published Thursday in the journal Science.

The oceans suck up another 20 percent of the emissions, which means "we have basically been getting a 50 per discount on all our fossil fuel emissions," said Kurz.

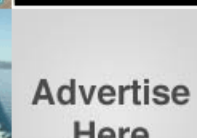
The report is the most comprehensive assessment yet of the global forest "sink" and shows trees from the tropics to the boreal play a huge role in controlling the global carbon budget by sucking up vast amounts of carbon from the air and locking it away in wood and soil.

It says that the forests have been a major carbon sink since 1990, and shows the changing dynamics of the world's trees.

It says fire and insects hit this country's forests so hard between 1990 and 2007 that the carbon sink in Canada's managed forest was "reduced by half". On the other side of the Atlantic, the carbon sinks grew in fast-growing new forests in Russia and northern Europe.

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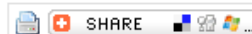


Forests soak up third of fossil fuel emissions: study

14/07/2011, by AFP



Article read 10 times



An Indian couple take an evening walk in the Sanjay Van forest reserve in New Delhi in June 2011. 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.

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



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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. Up to now, scientists have estimated that deforestation accounted for 12 to 20 per cent of total greenhouse gas output. The big surprise, said Dr 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 e-mail 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

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Role of forests in Earth's climate

PARIS, July 14, 2011 (AFP) - 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.

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
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
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
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Forests reduce 10pc of carbon pollution

Fri, 15 July 2011

SINGAPORE — 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 UN-backed programme that aims to generate 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 to be released today in the US 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 per cent 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. — Reuters

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Forests soak up third of emissions: study

July 15, 2011

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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

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Forests absorb a third of emissions

Marlowe Hood | 15th July 2011

Tags carbon emissions, forests

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

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Forests revealed as climate giants

AFP | July 15, 2011 7:19AM

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A new study has credited forests with a greater role in the climate system than commonly thought. *Source: The Daily Telegraph*

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Forests soak up third of fossil fuel emissions: study

By Marlowe Hood (AFP) – 3 days ago

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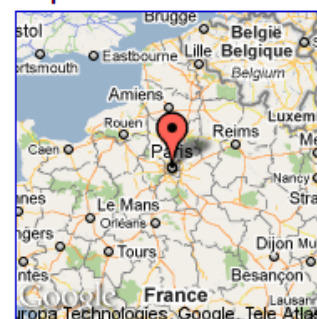
Adding up the new figures reveals that all the world's forests combined are a net "sink", or sponge, for 1.1 billion tonnes of carbon, the equivalent of 13 percent of all the coal, oil and gas burned across the planet annually.

"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,"



Wooded areas across the planet soak up fully a third of the fossil fuels released into the atmosphere each year

Map



News

Study shows forests have bigger role in slowing climate change

Published : Thursday, July 14th, 2011

By : Reuters

Category : Carbon & Climate

Region : Global

Tags : carbon credits, CDM, climate science, deforestation, emissions, forests, REDD, research, UNFCCC



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.

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Forests absorb much more carbon dioxide than previously known

Mark Clayton | The Christian Science Monitor | Jul 19, 2011



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New study of Alaska's shifting forests

'Mummified forest' above Arctic may hold climate change clues

Want to save the planet? Plant a tree.

Or maybe a lot of them. Or maybe don't cut down so many.

These are the implications of a new study, which found that the world's forests play an unexpectedly large role in climate change, vacuuming up the greenhouse gas carbon dioxide (CO₂) and storing the carbon in wood, according to research published online Thursday by the journal Science.

That, in turn, helps regulate CO₂ concentrations in the atmosphere – and keeps the planet from overheating.

About one-quarter of the earth's land surface is covered by forest. But while scientists and schoolchildren have long known that trees absorb carbon dioxide, no one was sure how significant their role was, overall. Oceans, the atmosphere, and other terrestrial ecosystems also absorb carbon.

So how much is due to forests? Forests are incredibly diverse across different regions – tropical, boreal, temperate – and different conditions: growing fast, being cut back, dying off, or being replanted. Researchers have struggled to get a complete picture of how much impact forests alone had on climate. Until now.

Earth's forests, it turns out, play a dominant role in absorbing greenhouse gases in the atmosphere, acting like a giant sponge and soaking up on average about 8.8 billion tons of carbon dioxide each year, the new study led by the US Forest Service shows – or about one-third of fossil fuel emissions annually during the 1990-2007 study period. In the end, about 2.4 billion tons of solid carbon were locked away in wood fiber each year over that period – a surprise to scientists.

"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 Yude Pan, a US Forest Service scientist and a lead author of the study, in a statement. That finding could have big implications for national forest policies worldwide, implying that as forests go, so too does the planet.



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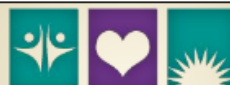
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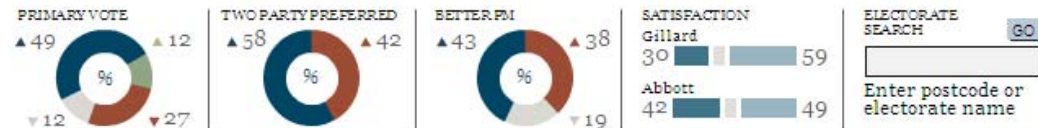
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Forests 'the key to reducing carbon emissions'

Graham Lloyd, Environment Editor | The Australian | July 15, 2011 12:00AM

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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 tonnes 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.

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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 state forests.

CSIRO scientist and co-author of the paper, "A Large and

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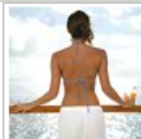
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Judge blocks class action suit against Dow Chemical



By [Eartha Jane Melzer](#) | 07.21.11
A Saginaw County judge ruled this week that a recent U.S. Supreme Court decision means that property owners in the dioxin-contaminated Tittabawsee floodplain cannot sue Dow Chemical for damages in a class action.

Heavy metals detected in Kalamazoo river oil spill area



By [Todd A. Heywood](#) | 07.20.11
Levels of heavy metals have increased in water samples being conducted along the Kalamazoo River and Talmadge Creek nearly a year after an oil pipeline ruptured in the area spewing an estimated one million gallons of oil into the waterways.

Michigan sees more openly gay politicians



By [Todd A. Heywood](#) | 07.19.11
Though Michigan continues to lack many legislative victories that are seen as important by lesbian, gay, bisexual and transgender residents, the state is also seeing the rise of more openly gay elected officials on the local levels.

Study: After 30 years, Americans still lack HIV understanding



By [Todd A. Heywood](#) | 07.18.11
In a newly released study of public opinion from the Kaiser Family Foundation about HIV, researchers have found both hope and disappointment in the public's understanding of HIV and

AIDS.



Study: Forests fight climate change better than expected

By [Eartha Jane Melzer](#) | 07.15.11 | 11:29 am

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In a study that could cause the U.S. to rethink its designation of biomass as green energy, Australian scientists have found that living forests soak up far more carbon dioxide than previously thought.

Researchers at the Global Carbon Project based at the Commonwealth Scientific and Industrial Research Organization in Australia detailed the volume of CO2 absorbed by the world's forests and found that they soak up 10 percent of the emissions caused by human activities.

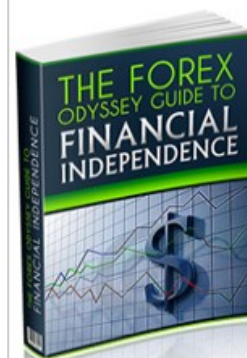
Reuters reports:

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

But the scientists calculated that deforestation emissions totaled 10.7 billion tonnes, underscoring that the more forests are preserved the more they can slow the pace of climate change.

A major surprise was the finding that young regrowth forests in the tropics were far better at soaking up carbon than thought, absorbing nearly 6 billion tonnes of CO2 — about the annual greenhouse gas emissions of the United States.

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July 22, 2011 | By Sandy Bauers, Inquirer Staff Writer

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Taken together, the world's forests - the humid tropical realms, the productive trees of the temperate zones, and the boreal expanses of the north - make up a third of the landmass of the planet.

As such, they command a great deal of respect among scientists and others.

But a paper recently published by two Newtown Square foresters and an international cadre of colleagues has upped the cache of forests considerably.

The group found that the forests sock away far more of the greenhouse gas, carbon dioxide, than anyone thought.

They absorb about a third of all carbon dioxide emitted by fossil-fuel burning, or about 8.8 billion tons a year. The amount dwarfs that taken up by other land uses, such as grasslands or pastures or suburban shrubs.

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Yude Pan, a scientist for the U.S. Forest Services research Station in Newtown Square,...

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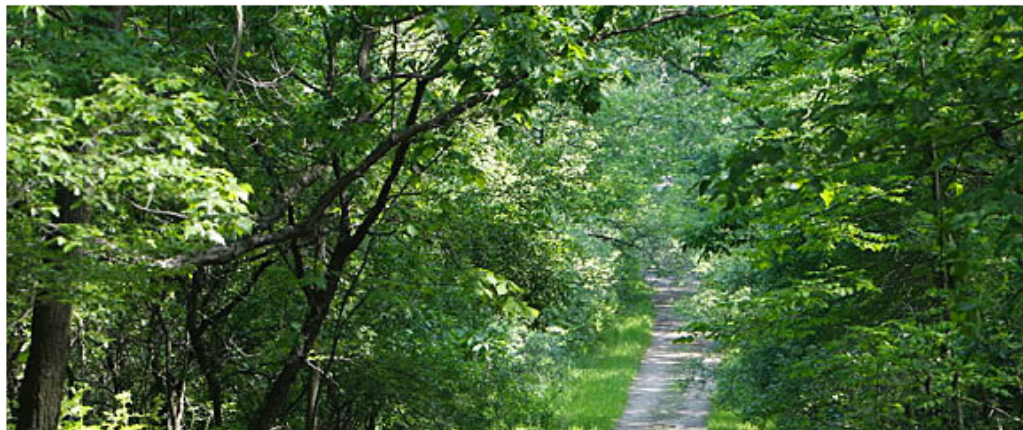


Universal pulls plug on Stephen King's 'The Dark Tower'

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Study: Forests have bigger role in slowing climate change

Researchers found that forests soak up more than 10 percent of carbon dioxide from human activities



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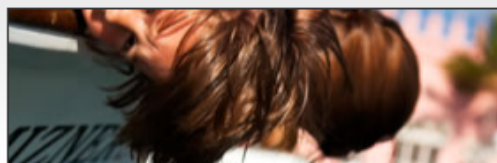
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