Independent Forestry Panel

Public submission

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Organisation:	*N/A*
Location:	*New South Wales*
Supporting materials uploaded:	*N/A*

Submission date: 10/1/2024 8:41:44 PM

Topic 1. Sustainability of current and future forestry operations in NSW

I have great concern for the species of animals and plants caught up in the unrelenting clearance of native forests and the lack of new areas of forest to replace the habitat lost to wild creatures and to human enjoyment.
I can do no better than to furnish an extensive but significant article from Chelsea Harvey and Climatewise which appeared in E&E News and Scientific American around June 9 of this year.
In case you missed it, the article in transcript runs as follows, and I would be loath to attempt to present a better case to illustrate the reasons why atmospheric carbon dioxide must be contained and reversed, and the failure of forest policies to redress the growing gap between carbon emissions and carbon containment serve only to highlight the deficiency of current forest policies.
Meanwhile the imbalance between atmospheric carbon and carbon fixation remains:
Scientific American, June 9, 2024
"Carbon Removal Is Catching On, but It Needs to Go Faster"
World leaders must make plans to remove more carbon dioxide from the atmosphere, a new report says
By Chelsea Harvey & E&E News
Industrial equipment in an inactive volcanic hilly landscape.
Mammoth carbon removal plant in Reykjavik, Iceland.

John Moore/Getty Images
Climate Change
CLIMATEWIRE | The world still isn't sucking enough carbon dioxide out of the atmosphere to meet the Paris climate targets, scientists said Tuesday. And the gap grows wider every year that humanity delays meaningful cuts to global greenhouse gas emissions.
That's the punchline of a new report on the state of global carbon dioxide removal, the practice of drawing CO2 out of the air to help tackle climate change. It's an update to the report's first edition, which was published in January 2023.
Nations worldwide are scrubbing about 2 billion metric tons of carbon dioxide each year, mainly by planting trees, the report says. But experts estimate they'll need to remove at least 7 billion tons annually by midcentury.
Meanwhile, global emissions must fall rapidly to stay on the Paris track. Humanity spews nearly 40 billion metric tons of carbon dioxide each year through the burning of fossil fuels.
Scientists agree the primary strategy for tackling climate change is through a reduction of greenhouse gas emissions, mainly by phasing out fossil fuels and halting deforestation. But they also agree at least some carbon removal is necessary to keep global warming below 1.5 or 2 degrees Celsius, the major goals of the Paris Agreement.
That's because global emissions must reach net zero within a few decades to meet the Paris timeline, meaning any remaining carbon going into the atmosphere must be counterbalanced by an equal amount coming out.

Carbon dioxide removal, or CDR, is the "only way really to provide a balance of net zero if we still have residual emissions in the system,. said Steve Smith, a climate science and policy expert at the University of Oxford and a lead author of the new report, at a press conference Tuesday.

The simplest way to hit net zero is to stop pouring carbon dioxide into the air. But some sectors of the economy likely cannot be fully decarbonized within the next few decades, either because the technology doesn't exist yet or it can't be scaled up quickly enough.

That means some residual emissions will be leftover by midcentury, and world leaders will need to offset them with carbon removal.

There are a variety of ways that can be done. Planting forests is the most popular strategy today, accounting for nearly all the carbon removal happening around the world. But researchers are working on a range of novel techniques on the side, from giant carbon-guzzling machines to special minerals that help the land or the ocean absorb more CO2.

Global interest and investment in carbon removal has risen in recent years, the report notes. While novel CDR strategies account for less than 0.1 percent of global carbon removal capacity, they're expanding faster than conventional methods, the new report finds. Grant funding for carbon removal research projects has steadily increased.

And there's been a major jump in demonstration programs for new kinds of carbon removal techniques, particularly in the United States. The country's first commercial direct air capture plant, built by Heirloom Carbon Technologies, opened in California last November.

Yet there's still room for expansion. After a period of rapid growth in prior decades, new carbon removal patents have slowed since 2010. And while investment in carbon removal startups has generally increased over the past decade, it's also declined after peaking in 2022.

There's also a dearth of global policies that could incentivize companies to swiftly scale up their carbon removal capacity, the report notes.

For now, the voluntary carbon market " which allows companies and other carbon emitters to buy and sell carbon credits " is a small but growing source of demand for carbon removal projects.

Yet the market has attracted widespread criticism from experts who point out that carbon offsets are often less effective at reducing or removing emissions than the public is led to believe. And as of 2023, carbon removal credits accounted for less than 10 percent of the total credits sold on the voluntary carbon market.

That means there's still a need for governments to implement policies that will spur more carbon removal innovation and expansion, the report suggests.

We don't see that policy signal yet,. said Greg Nemet, an environmental policy expert at the University of Wisconsin and another lead report author. And we think that's a really important lacking area that needs to be changed from a policy perspective..

Mind the gap

Meanwhile, the report notes, countries must flesh out their long-term plans around emissions reductions and carbon removal. Recent studies have warned that most nations have not yet assembled comprehensive strategies for how they will achieve net zero in the coming decades.

Based on the long-term carbon removal plans that national governments have proposed, the new report estimates there's still a significant gap between the amount of CDR expected by the year 2050 and the amount the world needs to keep temperatures below 1.5 degrees.

The size of the gap depends strongly on the strategies that world leaders use to reduce emissions and draw down carbon in the coming decades. The most sustainable pathways to meeting the Paris target generally suggest the world will need between 7 billion and 9 billion metric tons of carbon removal by the year 2050.

But it could be done with less. One of the most ambitious future scenarios that experts have modeled suggests the world could achieve 1.5C with only about 4.8 billion metric tons of annual carbon removal by the year 2050.

Based on countries' current pledges, world leaders might get close. One of the best-case scenarios estimates the planet could be on track for about 4.4 billion tons of carbon removal by midcentury. That's still a gap, but a relatively small one.

But that scenario comes with an important caveat. The analysis assumes that global greenhouse emissions are swiftly falling. They haven't " in fact, they're still rising.

That means the carbon removal gap likely is larger than the report suggests.

Even as experts say that global carbon removal is falling short, some scientists are worried more investment could backfire. They argue that a focus on carbon removal could detract from global efforts to reduce emissions " potentially lulling world leaders into the belief they can clean up their excess emissions with technology in the future.

But proponents of increased carbon removal say the practice is essential to achieving the Paris targets " and that world leaders should strive to reduce global emissions as quickly as possible.

Meeting the Paris Agreement's long-term temperature goals requires rapid greenhouse gas emissions reduction and near-term scale up of CDR,. said Smith, the University of Oxford scientist. It's not really an either-or situation..

Chelsea Harvey covers climate science for Climatewire. She tracks the big questions being asked by researchers and explains what's known, and what needs to be, about global temperatures. Chelsea began writing about climate science in 2014. Her work has appeared in The Washington Post, Popular Science, Men's Journal and others.

Topic 6. Opportunities to realise carbon and biodiversity benefits and support carbon and biodiversity markets, and mitigate and adapt to climate change risks, including the greenhouse gas emission impacts of different uses of forests and assessment of climate change risks to forests

see #1 (above)