

What does the IPCC WGII report say on forests?

Greenpeace briefing

March 31, 2014

“Increased tree death has been observed in many places worldwide, and in some regions has been attributed to climate change (high confidence).”

“Tree mortality and associated forest dieback will become apparent in many regions sooner than previously anticipated (medium confidence).”

“Climate change alone is not projected to lead to abrupt widespread loss of forest cover in the Amazon during this century (medium confidence), but a projected increase in severe drought episodes, together with land-use change and forest fire, would cause much of the Amazon forest to transform to less dense, drought- and fire-adapted ecosystems, and in doing so, put a large stock of biodiversity at elevated risk, while decreasing net carbon uptake from the atmosphere (medium confidence).”

– IPCC WG2 Technical Summary

IPCC WGII key findings on forests

- Deforestation accounts globally for about 12% of total man-made greenhouse gas emissions (GHG). Deforestation causes roughly the same GHG emissions as both transport (13%) and agriculture (12%).
- Forests are crucially important in soaking up humankind’s GHG emissions. Unfortunately, deforestation largely cancels out this effect. While forests have taken up about 45% of the CO₂ emissions to the atmosphere since 1750, this is roughly balanced by emissions from deforestation.
- Climate change is an additional stressor for forest ecosystems. Increased tree mortality has occurred in some regions, notably western and boreal North America – either as a result of high temperatures, drought, and/or changes in the distribution and abundance of insect pests and diseases which have been attributed, at least in part, to warming. In addition, the fire regime in the boreal forests has intensified in recent decades.

What do the findings mean in practice?

- For forests, mitigation and adaptation go together. In order for humans to adapt to climate change, we need forests because they provide essential “services”, such as water, food and raw materials. Maintaining forests as intact, i.e. as unbroken tracts of forest landscape, increases their resilience to climate change. This also enables the species living within them, to adapt to climate change and maintain these services.
- For the Amazon, a combination of deforestation and climate change could lead to a “tipping point”, where the forest cover could change rapidly into savannah. This would cause not only a loss in biodiversity, but release carbon to the atmosphere, leading to additional climate change. However, climate change alone will not cause this tipping point to be reached this century, especially if warming remains below 2°C. Reductions in deforestation rates will also navigate us away from such a tipping point. The massive decline in deforestation rates for the Brazilian Amazon between the years 2005-2012 demonstrates

that policy-led approaches to curb deforestation can work (see IPCC WG2 Ch. 4). However, the reverse is also true as witnessed by last year's increases in deforestation in the Amazon as a result of a severely weakened domestic forest policy.

What Greenpeace says about climate change and forests

Deforestation together with climate change makes for a vicious cocktail. Climate change is expected to increase periods of drought in tropical forests. At the same time, deforestation fragments the remaining forest, making it more vulnerable to drought-induced fires. Fires then release carbon, triggering even faster climate change. Last year's massive forest fires in Indonesia were a stark reminder of what the future might look like if we do not end deforestation by the end of this decade.

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