

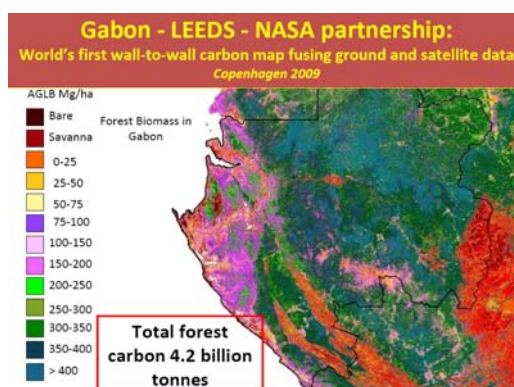
● Forestry and climate change

International politicians and decision makers are gaining an improved understanding of the ways in which managing the Amazon rainforest can help alleviate climate change, thanks to research showing it is an even bigger 'store' for carbon than previously thought

Key words: Biodiversity and Conservation; Climate Change; Land Use; International Development

The Amazon rainforest is at least fifty five million years old and covers an area of five and a half million square kilometres in South America: over half of the world's remaining rainforest. Since the 1960s, the region has experienced significant deforestation, with land largely converted to pasture for cattle.

In recent years, international politicians and decision makers have been provided with a much clearer understanding of the potential role of the Amazon rainforest in developing climate change mitigation strategies.



There has been increasing concern over the environmental consequences of deforestation, from the loss of biodiversity and ecological disruption caused by the removal of the forests, to the possible impacts of carbon dioxide emissions released from the burning of forests whilst being destroyed. These emissions have been identified as a large contributor to an increased concentration of greenhouse gases in the atmosphere.

Over recent decades there has also been growing understanding from researchers, including the global FLUXNET network, of the fact that rainforests 'store' carbon, with trees 'absorbing' large quantities of carbon dioxide each year. Professor Oliver Phillips from the School of Geography at the University of Leeds was part of the international team who showed that older, undisturbed forests rather than merely static stores of carbon as had been assumed, were continuing to take in (sequester) carbon each year (around 0.5 bn tonnes/year of carbon).

With researchers, including Professor Yadvinder Malhi of the geography department at Oxford, the Amazon Forest Inventory Network (RAINFOR) was established to connect further data from a tropic-wide network. This work has influenced a number of important reports both internationally and in the UK.

The work has helped to strengthen the case for making the 'avoidance of deforestation' a significant part of any climate change mitigation strategies, specifically including conservation of undisturbed forests in future inter-governmental strategies to combat climate change, as some carbon-offset schemes and other private-sector initiatives already do.

Both the the Department for Environment, Food and Rural Affairs (Defra)'s *Climate Change Strategic Framework*, and HM Treasury's *Stern Review on the economics of climate change* (2006), have been influenced by the team's findings, with Lord Stern's report concluding that: "curbing deforestation is a highly cost-effective way of reducing greenhouse gas emissions".

- [Professor Oliver Phillips](#), University of Leeds
- [Professor Yadvinder Malhi](#), University of Oxford
- [Further information](#) on RAINFOR

