

Transform land use to hit 1.5C target: experts

October 21 2019, by Patrick Galey

Better management of the world's farms and forests could contribute up to a third of the emissions cuts needed to stave off devastating climate change, an international team of scientists said Monday.

They said that countries such as Brazil, China and Indonesia had immense potential to lower [greenhouse gas emissions](#) if their governments committed to ending deforestation and environmentally damaging farming practices.

The team also said that the world's chances of avoiding the worst effects of [climate](#) change would be significantly boosted if one in five people in developed countries switched to plant-based diets by 2030.

The land sector currently contributes around a quarter of all manmade emissions, which need slashing globally in order to limit [temperature rises](#) to 1.5 Celsius (2.6 Fahrenheit)—the most ambitious target of the Paris deal on climate change.

At the same time, trees, plants and soil suck in vast amounts of carbon dioxide through photosynthesis—if given the chance.

Authors of a comprehensive study on how to use land to tackle [climate change](#) said they had a plan to make the land sector carbon neutral by 2040.

"We developed a roadmap that cuts land sector emissions by about 50

percent per decade, and increases the carbon sequestered in land about ten-fold between 2030-2050," Stephanie Roe, an environmental scientist at the University of Virginia, told AFP.

The team examined [climate models](#) and assessed two dozen land management practices known to reduce emissions while providing other social and environmental benefits.

They then mapped out how countries could make the most of the practices to draw down emissions globally.

They found that deforestation, especially in Brazil, Indonesia and in Africa's Congo Basin, needed to be slashed 70 percent by 2030 to limit warming.

Countries also need to improve forest management by planting trees on croplands to capture and store the equivalent of the European Union's total annual emissions, every year, by the same date.

Food waste and loss also need to be cut 30 percent by 2030, the experts said.

All told, total emissions from land must fall 85 percent and the amount of carbon stored by land must increase 10-fold by mid-century.

"The task ahead is daunting, but we have all the tools and knowledge we need to start implementing now," said Roe, lead author of the study printed in *Nature Climate Change*.

'Worrisome gap'

The work builds on a groundbreaking report from the Intergovernmental Panel on Climate Change, released in August, outlining how the world

can limit warming while feeding 10 billion people by 2050.

It highlighted a number of tough choices, including reducing pasture land to accommodate vast carbon capture and bioenergy schemes.

"What's worrisome is the large gap between where we are and where we need to go to avoid climate chaos," said Charlotte Streck, director of the think tank Climate Focus, and co-author of the study.

With the rate of global forest loss increasing 40 percent since 2014, Streck said restoration had showed "only moderate progress".

"We need to step up action on land now. This roadmap shows us how," she said.

More information: Stephanie Roe et al. Contribution of the land sector to a 1.5 °C world, *Nature Climate Change* (2019). [DOI: 10.1038/s41558-019-0591-9](https://doi.org/10.1038/s41558-019-0591-9)

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