INDEPENDENT

# Planting trees in wrong place could increase greenhouse gas emissions, government warned

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*Afforestation of unsuitable areas such as peatlands would be counterproductive, says committee, urging 'right tree in the right place'*

**Figure 1A larch forest in the UK. The government has been warned planting the wrong trees in the wrong places can have adverse impacts on soils, water quality, and biodiversity ( Getty )**

One of the fastest and cheapest ways to counteract the impact of greenhouse gas emissions from human activity on our planet is to plant billions of trees across the world in order to sequester the carbon dioxide in the atmosphere.

Trees absorb carbon dioxide from the air, and forests act as huge stores of carbon.

The UK government's independent advisers, the Natural Capital Committee, recognises that forests may capture "about half of the world's carbon emissions from fossil fuels every year".

The organisation has released a new report, advising Boris Johnson's administration on how using nature based interventions can help the UK reach its target of net zero greenhouse gas emissions by 2050.

One of the key means of doing this will be to plant trees in Britain.




Previous studies have indicated that there are vast areas in the UK suitable for planting millions of trees – not including urban areas or arable farmland.

However, the report cautions against mass tree planting which could cause harm to other critical carbon stores, and instead urges a carefully planned tree planting process, resulting in “the right trees in the right place for the right reason”.

The authors said examples of poor previous decisions in the UK included planting trees into peatlands.

The UK’s soggy peatlands store vast quantities of carbon, but planting trees in these ecosystems dries out the soil and can ultimately mean the trees are responsible for releasing more carbon than they sequester.

NCC member Professor Ian Bateman from the University of Exeter, told *The Independent*: “Planting trees in the right place is an amazing way of storing carbon. If you put the right trees in the right place, it can do a lot of good. But of course the flipside of that is that you can put the wrong trees in the wrong place.

“The capacity of a wetland or peatland to store carbon is limited only by its size and shape. They can store truly tremendous amounts of carbon - far more than you will ever get in a forest.

“The problem is if you take a peatland, where it might look like not an awful lot is going on there - they’re fairly flat, and there’s a bit of green - what’s happening is because of the geology of the place, water just stays there. And if something living falls into water or grows in water then dies

and falls over, it's there forever. It doesn't rot. The carbon just builds up and up. The problem with then planting trees on it, is to make them stand up, you have to virtually drain the peatland.

"The first thing you would do is dig colossal trenches to drain the water off, then plant the trees. But by draining the water off you expose what might be centuries of growth of whatever was there, it quickly dries out and it starts turning into methane (a very potent greenhouse gas).

"So it's one of the few places where planting trees really isn't a good idea."

The report states "tree planting schemes will therefore need to employ rigorous monitoring, verification and spatially aware decision making."

"This will be crucial to avoiding scenarios like the afforestation of peatlands in Scotland in the late 20th century, which was found in places to lead to a net increase in greenhouse gas emissions and the felling and replacement of ancient native woodlands with fast growing productive species."

The authors state: "Increased tree planting without careful planning is likely to lead to the loss of other habitats and land uses, including species rich grasslands, heathlands and peatlands, particularly where these are in a degraded state."

They added: "In addition, the wrong trees in the wrong places can have adverse impacts on soil (including soil carbon), water flows, water quality, recreation, biodiversity and air quality."

In a statement the NCC said: "Unless nature based interventions - including the planned expansion in tree planting - are designed with an eye to the wider effects, they could perversely cause further degradation of our natural assets, or even result in increased greenhouse gas emissions globally."

As well as planting trees, the report says greater effort ought to be put into managing the UK's existing forested areas.

"Bringing the existing tree stock into active sustainable management should be as important as expanding woodland cover," the authors said.

Source:https://www.independent.co.uk/environment/plant-trees-climate-crisis-where-greenhouse-gas-emissions-a9455671.html