

Old Trees Are Important in Fighting Climate Change

The latest research study using lasers and 3D scanning showed that old trees in particular are crucial in fighting climate change. Before 3D scanning techniques were available, weighing a tree would mean cutting it down.

Wytham Wood is a deciduous woodland forests in UK. It is one of the most scientifically studied forest in the world, meaning the area weighed by scientists affords an accurate estimate of the carbon value of forests across the UK.

Along with being important ecosystems, healthy forests are helpful to remove planet-warming carbon dioxide from the atmosphere.

The research mapped almost 1,000 trees in Wytham Wood in Oxfordshire. Dr Kim Calders, from Ghent University said that they found significantly more carbon stored in them. An accurate calculation of the amount of carbon trapped in UK woodland could help in gathering information and calculating the cost to the environment of losing that woodland.

The latest research, [published in the journal Ecological Solutions and Evidence](#), produced laser-scanned maps of each tree and converted those into a model. That gave a measure of each tree's volume which the scientists used to calculate the amount of carbon captured in each tree's trunk and branches. It showed that a patch of UK forest weighs about twice as much as previous calculations suggested.

Prof Mat Disney, from University College London explained that if the density of the wood is known, then it can be used to convert volume into mass. Accordingly, about half of that mass will be carbon and half will be water.

Prof Disney said that the new findings showed, for every square kilometre of woodland lost, potentially almost twice the carbon sink capacity is lost.

Prof Robert MacKenzie from the Birmingham Institute of Forest Research said emission of fossil carbon needs to be stopped. The Carbon need to be capture and locked away for centuries. A large amount of it can be stored forests

Prof Disney said that this research has serious implications for our understanding of the benefits of protecting trees, in terms of climate change. And the complex structure of mature trees in particular means they play a role that is very difficult to replace by simply planting more trees.

The value of large and mature trees is almost incalculable, and one should avoid losing that at any cost - regardless of thinking about planting many trees.

"Those large trees are incredibly important."