Carbon-offsetting and conservation can both be winners in rainforest

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Logged rainforests can support as much plant, animal and insect life as virgin forest within 15 years if properly managed, research at the University of Leeds has found.

Because trees in tropical climates soak up large amounts of carbon dioxide, restoring logged forest through planting new trees could also be used in carbon trading, according to Dr David Edwards, from University's Faculty of Biological Sciences.

Dr Edwards is calling for the inclusion of biodiversity-friendly strategies in carbon trading schemes to ensure that carbon off-setting projects support, rather than undermine, rainforest conservation.

Currently, large plantations of one type of tree, such as Eucalpytus, are popular as carbon off-setting or sequestration projects in the tropics because they also provide commercial benefits, but they do not support tropical biodiversity.

But Dr Edwards has shown that managed restoration of logged forest - which can also be used for carbon off-setting - brings biodiversity virtually back to pre-logging levels within 15 years, much quicker than forest left to regenerate naturally.

"Our research shows that it is possible to have both carbon sequestration and biodiversity benefits within the same scheme," he said.

"This could act as a strong incentive to protect logged forests under threat of deforestation for oil palm and other such crops. Selectively logged rainforests are often vulnerable because they're seen as degraded, but we've shown they can support similar levels of biodiversity to unlogged forests."

The research compared biodiversity of birds in three adjoining areas of tropical forest in the north-east of Borneo. One is the oldest and largest area of rehabilitated forest in the tropics, logged around 20 years ago and with over 10,000 ha actively rehabilitated for the past fifteen; another is a naturally regenerating area of forest, logged at the same time; and the third, a conservation area of unlogged forest.

The findings showed that the number and range of species of birds in rehabilitated tropical forest recovered to levels very close to those found in unlogged forest after just 15 years. Forest that was left to regenerate naturally after selective logging showed less diversity.

"There are now suggestions that carbon crediting and 'biodiversity banking' should be combined, enabling extra credits for projects that offer a biodiversity benefit," said Dr Edwards. "We believe this should be introduced as soon as possible, to ensure maximum support for rehabilitation schemes in the tropical rainforest."

More information: The research is published in *Conservation Biology*.

Source: University of Leeds (news : web)