

Switch from cattle fields to 'carbon farms' could tackle climate change, save endangered animals cheaply

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(Phys.org) —Changing cattle fields to forests is a cheap way of tackling climate change and saving species threatened with extinction, a new study has found.

Researchers from leading universities, including the University of Sheffield, carried out a survey of [carbon stocks](#), biodiversity and economic values from one of the world's most threatened ecosystems, the western Andes of Colombia.

The main use of land in communities is cattle farming, but the study found farmers could make the same or more money by allowing their land to naturally regenerate.

Under [carbon](#) markets designed to stop global warming, they could get paid to change the use of their land from growing cows to 'growing carbon' – receiving around US\$1.99 per tonne of carbon dioxide the trees remove from the atmosphere.

The move would also help boost the populations of many [critically endangered species](#).

There are limited financial resources available to tackle [climate change](#) and [biodiversity loss](#), so there is an urgent need to simultaneously address both issues.

"This would cost very little money," said senior scientist, Dr David Edwards, of the University of Sheffield's Department of Animal and Plant Sciences.

"Providing people are willing to spend the money, this could be a critical mechanism for stopping climate change and protecting some of the world's most [endangered species](#).

"The economic benefits of cattle farming are minimal, so this is a way farmers could make the same, if not more money. The land would be rented off farmers for 30 years and they would be paid for the carbon grown.

"We studied older forests that are around 20-30 years old and found they had recovered around half of the carbon of a really mature forest. More carbon comes back every single year, and as it does so, large numbers of highly threatened species return.

"The impact on reducing the biodiversity extinction crisis and climate change could be huge."

The study also found that letting forests regenerate had a massive impact on the populations of threatened species.

In secondary forests in the region, researchers found 33 of 40 red-listed bird species that are threatened with extinction. However, in cattle pastures there were only 11.

Lead researcher Dr James Gilroy from the University of East Anglia's school of Environmental Sciences carried out the research while at the Norwegian University of Life Sciences.

He said: "This research shows that there are great environmental and

ecological benefits to changing land use from cattle farming to forest, and there may even be financial benefits too.

"If these areas were instead allowed to regenerate to forest, then significant amounts of [carbon dioxide](#) would be captured from the atmosphere. Biodiversity would also be restored, improving habitats for many species at risk of extinction – all at minimal cost.

"It's a win-win situation."

Provided by University of Sheffield

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