

Will climate change kill the Amazon?

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The leakage of fires from deforested areas. Credit: Liana Anderson.

One of the most profound predicted impacts of climate change was discussed in a landmark conference at Oriel College by scientists, conservationists and policymakers from Europe and North and South America.

They discussed some key research showing that although intact forests are fairly resistant to climate change, with partial deforestation the entire landscape could become drier and a domino effect could occur producing a 'tipping point' affecting the whole forest. Scientists were unwilling to quantify the risk of this happening, but talked about 'corridors of probability' with models predicting the risk at between 10 to 40 per cent over the next few decades.

In 2005 a very large spread of forest fires was recorded for the first time

in the south-western Amazon region. New research by Dr Luiz Aragao, from the Environmental Change Institute, tracked the full extent of those fires in the most affected region – Acre State in Brazil. He said: ‘An area of 2,800 sq km (1,081 sq miles) was burned due to an extensive leakage of fires into newly-flammable forest.’ He also revealed that the fires occurred mainly where there was human activity.

The interdisciplinary conference examined how conservation and sustainable development strategies could buffer the region against climate change, and how a new international market in carbon-trading could finance such a plan.

An early wake-up call on the potential die-back of the Amazon rainforest due to a drying climate emerged from the Met Office Hadley Centre climate model five years ago. The issue of Amazonian die-back then leapt from scientists’ computer predictions to global environmental concern with the unexpected Amazonian drought of 2005, and questions were then asked about whether this should be viewed as a harbinger of things to come.

Conference organiser, Dr Yadvinder Malhi, from the Environmental Change Institute and Oriel College, said: ‘The 2005 Amazon drought took much of the scientific community by surprise, but also provided a window of opportunity to understand how climate change may drive drought, and how humans and ecosystems respond to such drought stress. We need to learn from this quickly, to plan a future for an Amazonian where such droughts may become commonplace.’

Source: University of Oxford

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