

University of Leicester professor adds new perspective to rainforest debate

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The Head of Geography at the University of Leicester has addressed an international conference in Brazil on the use of modern radar technology for monitoring the rainforests.

Professor Heiko Balzter told 200 scientists and foresters in Brazil "We need advanced radar satellites for monitoring tropical deforestation and forest biomass".

The researchers from South America, the US, Canada and Europe had come together for the 8th Seminar on Remote Sensing and Geographical Information Systems Applications in Forest Engineering in the city of Curitiba, Brazil.

Professor Balzter, who is Professor of Physical Geography at the University of Leicester, had been invited by the Brazilian Space Research Institute (INPE) to speak at the conference about his work on monitoring forest biomass using remote sensing.

According to a recent FAO report (the Forest Resources Assessment 2005), Brazil had the world's largest deforested area between 1990 and 2005. The country lost over 42 million hectares of forest, which is more than one and a half times the size of the United Kingdom.

"With modern radar technology and knowledge of tree structures we can produce spatial carbon maps", said Professor Balzter, whose research has been published in the journal *Remote Sensing of Environment* in 2007.

Trees take up carbon from the air when they grow. This helps slow down the greenhouse effect and global warming. When the trees are felled, this important function is lost.

"Radar uses microwaves to penetrate through the forest canopy. They measure how much wet plant matter and indirectly how much carbon is there in the forest.

"Our case studies in the UK have shown that using two radar antennas with different wavelengths can provide maps of the top of the forest canopy and the forest floor. The managed forests in Britain and the rainforest of Brazil are of course very different. Nevertheless, similar results were found by scientists in Brazil".

Conference participants came from Brazil, Chile, Argentina, Paraguay, Bolivia, Canada, the US, Finland and other countries.

The European Space Agency, NASA and the Brazilian Space Research Institute are currently studying possible new radar satellites.

The Eliasch review report to the prime minister Gordon Brown recently set out a British-led plan to set up a revolutionary multibillion pound to pay the owners of the world's rainforests for stopping deforestation. This fund is hoped to make a contribution to slowing down global warming. Reducing fossil fuel emissions is not enough to combat global warming. At the moment people emit more greenhouse gases than every before in the planet's history. Professor Balzter was one of only two scientists to be invited by the Office of Climate Change to be involved in the Eliasch review round table. More info at:

<http://www.guardian.co.uk/politics/2008/oct/14/greenpolitics-climatechange>

Source: University of Leicester

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