Media release

Embargoed 11:15 BST Friday 31 August 2007

Royal Geographical Society with IBG

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British bogs create climate stink

Bogs and peatlands in northern Britain store over 1.5 billion tonnes of carbon but severe erosion and climate change are in danger of releasing this stored carbon into the atmosphere and contributing to global warming, according to research presented at the annual conference of the Royal Geographical Society with the Institute of British Geographers today (31 August 2007).

Predicted hotter summers and rougher winter storms could ruin peatlands, according to the research. A vicious cycle could ensue where climate change damages peatlands so that they in turn contribute to a warmer world.

Peatlands in the uplands and moors of Britain are already “the most severely eroded in the world” according to author of the study Dr Martin Evans, senior lecturer in geography at the University of Manchester. If the erosion becomes more widespread around 30% of the carbon stored in the UK’s blanket peatlands could be released into the atmosphere further enhancing global warming.

Bogs, fens and mires – called peatlands by geographers - are areas full of rotting plant material accumulated over thousands of years. Carbon is stored in the blanket peatlands of mid Wales, across the Peak District, Yorkshire Dales, North Pennines and on to the moors of Lancashire, the Cumbrian Fells and up to the Cheviot Hills as well as in Scotland.

Through pollution, burning moorland and grazing animals, Britons have pushed bog environments across the country to the brink, according to the study. As UK blanket peatlands in northern latitudes are a major store of carbon containing around 10 times UK annual emissions this could be a major threat to the UK’s efforts to reduce its carbon emissions.

It’s not all bad news, however – Britain’s bogs have the potential to sink our carbon emissions for good. Unlike offsetting schemes such as planting trees, any plants growing on the surface of peaty areas sink into the bog when they die, taking the carbon they hold with them, helping to reduce carbon dioxide levels in the atmosphere. By making sure water levels in Britain’s bogs are topped up, and by growing extra plants in boggy areas, the UK could significantly reduce its carbon emissions, the study adds.

Geographer Dr Martin Evans, of the University of Manchester, said: 'We need to act now to restore our degrading peatlands before our efforts to reduce our carbon emissions get stuck in the mire. By bringing all of Britain's bogs into good condition we can store more carbon and prevent the loss of carbon stored up over thousands of years. Peatlands are an important part of Britain's upland landscape. Careful management of Britain's upland peatlands can preserve them for the future *and* play a part in tackling climate change"

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Notes to editors

1. For further information please contact Henry Rummins at the RGS-IBG press office on 020 7591 3019, or email press@rgs.org. Alternatively contact Jonathan Breckon on 020 7591 3008.

2. '*Peatland degradation, restoration, and carbon storage: understanding the carbon balance of the UK's upland peatlands',* is presented at the Royal Geographical Society with IBG Annual Conference at 11:10 BST on Friday 31st August. Dr Evans is available for interview.

3. Dr Evans, senior lecturer in geography, University of Manchester has research interests in the geomorphology and hydrology of upland landscapes. A key approach is the development of sediment budgets through a mix of field monitoring, stratigraphic reconstruction, and modelling. The role of slope-channel linkage as a control on catchment sediment yields is a theme running through much of his work. A particular focus at present is on the sediment systems of upland peatlands including analysis of flux of carbon and of pollutants from peatland systems. This work also considers implications of natural sediment dynamics for moorland restoration.

4. Further information on this research is available on request.

5. The Royal Geographical Society (with The Institute of British Geographers) is the learned society and professional body representing geography and geographers. It was founded in 1830 and has been one of the most active of the learned societies ever since. It was pivotal in establishing geography as a teaching and research discipline in British universities, and has played a key role in geographical and environmental education from then on. Today the Society is a leading world centre for geographical learning - supporting education, teaching, research and scientific expeditions, as well as promoting public understanding and enjoyment of geography.