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The cost of breathing? - about £65 each year

Posted on Friday 2nd September 2011

The whole atmosphere is effectively worth more than 100 times the value of the world economy (Gross World Product – GWP), according to research being presented to the annual International Conference of the Royal Geographical Society (with IBG) today by Professor John Thornes of the University of Birmingham's School of Geography.

This work is the first attempt in the world to place an economic value on our global atmosphere.

Professor Thornes has developed a conservative estimate for the 'value of air' at one pence per cubic metre (m3) using the current price for carbon dioxide within the EU emissions trading scheme as a basis.

With each person in the UK breathing around fifteen cubic metres of air per day this equates to a potential 'cost' of £65 per year per person for our share of the global atmosphere for breathing alone. This is around a seventh of what the average person spends each year on gas and electricity.

Professor Thornes said: "The atmosphere is the most precious and valuable of all natural resources - yet all too often we take it for granted. The earth's atmosphere brings an intrinsic set of natural goods and services to life on Earth. Twelve basic atmospheric 'services' have been identified, ranging from the air that we breathe, to the provision of natural global warming, and from the transmission of sound, to its support of air transport.

"The atmosphere is fragile and it requires very careful management and protection. Responsibility for its sustainable management should be shared equally amongst all of society for which the United Nations should establish a new 'Law of the Atmosphere' similar to the 'Law of the Sea' which has been in force since 1994. This may be especially important at a time when there is rising interest in the possible role of geo-engineering the climate on a global scale."

For more information, please contact Kate Chapple, University of Birmingham Press Office via 0121 414 2772 or **k.h.chapple@bham.ac.uk (mailto:k.h.chapple@bham.ac.uk)** .

Notes to Editors

1. Professor Thornes is making his presentation 'Atmospheric services – a new framework for the management of climate change' in the Atmospheric Services session on Friday 2 September at the annual International Conference of the Royal Geographical Society (with IBG) (Aug 31-Sep 2).

2. For further details contact the media and communications office on 020 7591 3019, 07719 712 978, or email **press@rgs.org (mailto:press@rgs.org)**

3. The annual International Conference is the largest gathering of academic geographers in Europe, with more than 350 sessions, featuring more than 1,300 speakers from more than 35 countries. Delivered over three days, almost 1,500 delegates will attend sessions on topics as diverse as localism and big society, health and quality of life, energy management and low-carbon initiatives while artistic performances and plenary speakers will explore the conference theme 'The Geographical Imagination.'

Chaired by Professor Stephen Daniels from the University of Nottingham, the conference is 15% bigger than 2010 in terms of sessions, papers and attendance. Delegates and speakers represent a variety of disciplines both inside geography and from across multiple fields including economics, history, art, philosophy and public health. One third of delegates are postgraduate researchers, while one quarter are from outside the UK (predominantly Europe, North America and Australasia). Full details on the RGS-IBG Annual International Conference 2011 "The Geographical Imagination" can be found at **www.rgs.org/AC2011 (http://www.rgs.org/AC2011)** .

4. The Royal Geographical Society (with The Institute of British Geographers) is the learned society and professional body for geography. Formed in 1830, our Royal Charter of 1859 is for 'the advancement of geographical science'. Today, we deliver this objective by developing, supporting and promoting geography through research, expeditions and fieldwork, education, and public engagement, while also providing geographical input to policy. We aim to foster an understanding and informed enjoyment of our world. We hold the world's largest private geographical collection and provide public access to it. We have a thriving Fellowship and membership and offer the professional accreditation 'Chartered Geographer' **www.rgs.org (http://www.rgs.org/)**

5. Gross World Product (GWP) is worth approximately £43trillion at current prices The EU emissions trading scheme deals in tonnes of CO_2 and the current value is about £10/12 per tonne. The weight of 1 cubic metre of air is 1.2 kilogram, so one cubic meter of air would cost between 1.2 and 1.44pence. We each breathe around fifteen cubic metres of air a day, this equates to 18-21.6 pence per day, or £65.7 to £76.86 per year.

Average gas and electric (household) bills are £608 and £424 respectively (**www.decc.gov.uk (http://www.decc.gov.uk/)**) - an average per person (based on an average household of 2.36) of £257.62 and £179.66. This is a total of £437.

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