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# Beyond climate change

**C**limate science is at the centre of very public controversy at the moment, arising from the theft of emails from the Climatic Research Unit (CRU) at the University of East Anglia (UEA) and errors or misinterpretations in the Intergovernmental Panel on Climate Change Working Group 2 report.

The email issues, including the availability of datasets and the accusations of deceit and bias, are the subject of two separate independent inquiries. It would not be appropriate for me to comment in any detail on these issues until these inquiries are completed. But as a meteorologist myself, I can reiterate that there is a large body of evidence showing that the main cause of global warming over the last 50 years, and more, is human emissions of greenhouse gases into the atmosphere.

But while the climate change debate is played out in the media and through the inquiries, we should not forget that environmental science is about much more than climate change. The current controversy should not distract us from the fact that there

are many other environmental issues that society and environmental scientists urgently need to address.

The Haitian earthquake and many other examples of natural hazards leading to human disasters show how vulnerable people are to the environment. Even if the planet was not undergoing long-term changes, research about risks like storms, volcanoes, earthquakes, tsunamis and landslides would still be vital to society at large.

But we know that there are longer-term changes happening in the natural environment, many of them caused by human activities. Climate change is one of a sizeable array of environmental, and increasingly economic and social, issues that humanity has to face up to in the 21st century. Irrespective of their climate impact, dwindling stocks of fossil fuels challenge science to come up with alternative and renewable energy supplies.

The environment provides us with a very wide range of so-called 'ecosystem services', and these vital services depend on biodiversity. But we need

research to pin down the link between biodiversity and how these ecosystems function. The fact that biodiversity is falling worldwide shows how important this research now is.

It is, of course, fiendishly difficult to develop an understanding of how the physical, chemical and biological environment of planet Earth works. This requires top-quality science that crosses the boundaries between disciplines to unravel the forces and feedbacks that operate to connect the different parts of the Earth system – sea, air, ice and land.

UK environmental science, much of it funded by NERC, is tackling this very broad range of environmental issues. In many fields our science leads the world. At this point in Earth's history, the case for environmental research is overwhelming. But as scientists we cannot be complacent about this. We must continue to articulate the case for investing in research, and accept that openness and transparency throughout the science process are essential if we are to keep the public's trust.