

Next Generation Science for Planet Earth

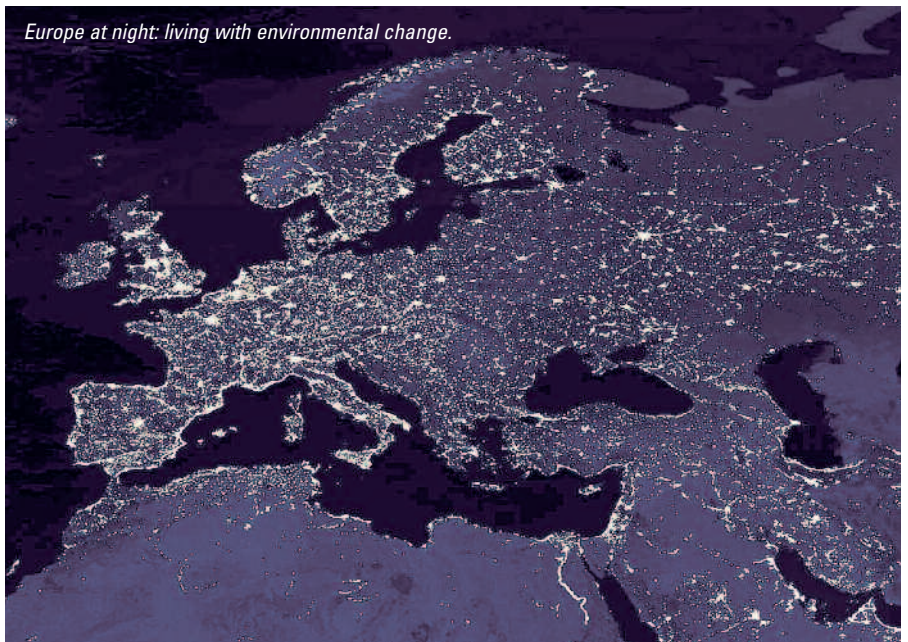
Alan Thorpe, Chief Executive

THE WORDS 'economics' and 'ecology' share a common root: eco meaning a house in Greek. Gordon Brown's recent Budget reminded me of this. He set the Science Budget for the next four years and at the same time he outlined how he would use economic forces to protect the environment. So the environment is now firmly seen as part of the economy. In fact some might argue that it is the other way round in that economics is all about society's use of and relationship with the environment.

We can encapsulate this way of thinking in the term 'ecosystem services.' For plain English, the term leaves a lot to be desired but it is at the core of contemporary scientific thinking on society's relationship to the environment. We can only survive by using various physical and even spiritual aspects of the environment. Obvious examples are vital resources such as clear water, air, minerals and food. In the spiritual camp is the well being we derive from feeling part of the natural world. To call this diverse collection 'services' perhaps seems obscure and even crude. A service generally has a provider as well as a recipient and some might find that a challenging idea for the environment. If we also recognise that through climate change policy or flood protection measures we can regulate our environment, then we can begin to see that whilst 'services' sounds odd, it is hard to think of a better term for this diverse set of inter-relationships.

Even the term ecosystem is suitably vague, which is its strength and weakness. Thought of broadly, it stands for a part of the environment in which living organisms interact with each other and with the physical environment. A good way of thinking of ecosystem services is to keep in mind that they are derived from natural

Europe at night: living with environmental change.



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capital – and that takes us right back to the connections to economics.

The concept of ecosystem services is central to the Millennium Ecosystem Assessment published in 2005 that showed that about 60 percent of these services had been degraded or used unsustainably. NERC has summed this up in the term 'environmental change', which is vastly more than just climate change. In the last issue of *Planet Earth* I described our new initiative 'Living with Environmental Change' (LWEC) which is a central part of the new NERC strategy *Next Generation Science for Planet Earth*.

I am pleased to say, we have received a copious response to the consultation on the new strategy. One concern expressed has been the relative emphasis NERC might place on themed research, such as LWEC, as opposed to non-themed or responsive mode. Themed research

focuses specifically on currently identified priority areas of research. In contrast responsive mode is unconstrained in terms of its subject. We are firmly committed to responsive mode research. It has led to many scientific breakthroughs for which the NERC-funded community is internationally acclaimed. These breakthroughs often set the agenda for future priorities of themed research.

The government has now agreed the overall Science Budget for the period 08/09 to 10/11, and it is most welcome that this maintains the commitment made in the Ten Year Science and Innovation Investment Framework, published in 2004, to grow the budget year on year. Each research council awaits, later in the year, their own allocation from within the Science Budget. Then NERC can start planning in detail how we will deliver Next Generation Science!