The nature of **policy**

Ever wondered what happens to NERC's research once the papers have been written up and published? Science into policy facilitator **Caroline Fenwick** discusses new initiatives to make the most of environmental science.

As a postdoctoral researcher I was frustrated that much of the fascinating science I saw around me seemed to only reach other academics. So, when I started this job in May 2006, I wasn't too surprised that many of my colleagues agreed. Around 63 percent of researchers currently receiving NERC funding feel their research is relevant to government policy, but of those 63 percent, only 17 percent have actually given advice. Why is this?

First, we need to ask how do decision makers use research? A single piece of research is only one part of the evidence base – other factors, such as socio-economics, politics or cost, also need to be assessed. Policy-makers need research to provide impartial advice that helps them understand an issue, say the loss of sea ice in the arctic or diffuse pollution from agriculture. Having impartial advice and a broad range of evidence helps to communicate the problem and provide authority and integrity during negotiations.

For policy-makers it's extremely difficult to get a complete picture of environmental research in the UK, let alone the world. Where do you go to find out who is doing what and where? And, with dozens of journals to trawl through, how do you find the best way to deal with, let's say, Japanese knotweed? Or improve air quality in towns and cities? Or protect marine biodiversity? Or…the list is endless. Here I hope to unravel some of these issues.

When it comes to disseminating the latest research in a particular area, the environmental research community could learn from the medical profession. In 1993, the British epidemiologist Archie Cochrane set up the Cochrane Collaboration, an international not-for-profit and independent organisation, dedicated to making up-to-date, accurate information about the effects of healthcare readily available worldwide. It produces and disseminates systematic reviews of healthcare research and promotes the search for evidence. The collaboration is the gold standard for determining effective healthcare interventions.

Could something similar work for environmental research? I have been working with the Centre for Evidence-Based Conservation, run by Andrew Pullin from Bangor University. The centre, a first in the field of conservation and environmental management, uses a systematic review technique similar to the Cochrane Collaboration to bring together data relevant to conservation practitioners. The aim of the review is to provide the best available evidence on the likely outcomes of particular action – very useful to policy-makers – significantly, it also picks out gaps in research. The centre already works with a broad range of users including Natural England, the Environment Agency, the Joint Nature Conservation Committee, the Countryside Council for Wales, the National Trust and Scottish Natural Heritage.

It's easy to see how the centre's techniques would be applicable to many areas of environmental science, but if the centre is to expand, it needs more support. To help garner support, I arranged for Andrew to speak to the board of the Environment Research Funders' Forum (ERFF), which includes representatives from NERC, Defra, the Environment Agency and many other environmental funding bodies. The idea made an immediate impact on the board and since then, we have been investigating how to take this forward.

This demonstrates a key part of my job: making environmental research more accessible. Often policy-makers don't have access to journals, or the time to track down individual papers. NERC's new online repository, NORA (NERC Open Research Archive) stores papers from NERC's centres (and eventually NERC-funded university research), but, without technical expertise, these papers could be unfathomable. To improve this, I am heavily involved in developing a publicly accessible case studies database, due to launch in spring 2008. This will display policy-relevant and industry-relevant research in a user-friendly format. It will highlight potential future benefits of NERC research as well as work already in use or commissioned by policy-makers and industry. A benefit of the system is that, when it comes to policy, it's often the weight of evidence that is important rather than an individual research paper. In the past this was difficult to pin down. The new system will make this whole process easier for everyone.

If you have an example of NERC science informing policy, an idea for a briefing, or feel that I could help in some other way, please get in touch. ■

Dr Caroline Fenwick is NERC's science into policy facilitator and works within the knowledge exchange team in Swindon Office. Tel: 01793 411796 email: cafe@nerc.ac.uk

Caroline currently works two days a week in Defra's Climate Change Group to learn more about how and where Defra sources and uses results. During this time, she is also improving Defra's understanding of the breadth of science NERC funds.