SPIRAL Briefs
SCIENCE POLICY INTERFACES: RESEARCH, ACTION & LEARNING

A beginner's guide to understanding challenges of communicating about biodiversity

The brief in brief

This brief, as part of an FP7 project called 'SPIRAL', outlines six key challenges in communicating about biodiversity and ecosystem services. This brief is aimed at both holders and users of biodiversity knowledge and seeks to understand the factors currently constraining the communication on the role of biodiversity in ecosystem service provision and human well-being. This brief is complemented by other SPIRAL briefs which focus on different aspects related to biodiversity science-policy interfaces, from understanding science-policy interfaces and biodiversity, to help on developing them, including ways of addressing the communication challenges explored here from institutional levels to individuals.

Uncertainty, complexity, ignorance

Issues related to biodiversity and ecosystem services are often referred to as "wicked" problems, full of uncertainty, highly complex and therefore unlikely to lead to simple solutions. Scientists may feel that a lack of understanding of the uncertainty about and/or complexity of ecosystems can lead to certain ideas or concepts being taken up before sufficient evidence has been accrued. In addition there is often a perception that decision-makers prefer simplistic approaches (e.g. simple climatic envelope models to predict the impact of climate change on biodiversity, or cost-benefit analysis to compare costs and benefits of actions), despite reservations from the scientific community.

> The policy maker would also want to say can you not just tell us what you've found and why it's important? I've heard scientists say…"it's not my job to actually be even suggesting what we should be doing. That's…that's not for me, I'm a scientist!"
> *Dr M, scientist*

There is a big challenge therefore in balancing the communication of complexity and uncertainties, but also of ignorance, to decision-makers whilst remaining pertinent and useful.

Lack of links, or differences, between disciplines and sectors

Although interdisciplinarity has long been advocated in research relating to biodiversity and ecosystem services, implementing this approach remains a challenge. Many of the challenges associated with communication between science and policy are, in fact, similar to those associated with interdisciplinarity. A key task associated with communicating research to policy is initial integration of different natural and social sciences that jointly better inform on biodiversity and ecosystem services.

Lack of links, or differences, between research and policy

There are important institutional barriers between science and policy, which affect communication and more broadly interaction. In the policy community there is often a high turn-over of people, which means that knowing who to contact can be difficult and keeping contacts within policy circles even more so. The latter is an important consideration as many science-policy interfaces are one-to-one interactions which relate to personalities of the individuals involved. As with the challenge of interdisciplinarity, there is certain amount of jargon associated with the science and policy communities – understanding each others' language can pose problems. There may also be a mismatch between the needs and constraints of policy and science.

> The policy people don't understand what science can deliver. They don't understand how long it takes and they don't understand the limitations because they're not trained in that area. Equally the scientists don't understand that policy people need to be able to communicate, need certainty and so they're always saying "oh well it might be but it might not be"
> *Dr G, policy adviser*

Norms and values

Fundamental differences in norms and values can prevent effective communication between science and policy. For example, conservationists may worry about allocating a

monetary value to ecosystem services feeling that biodiversity may be devalued and at more risk. In addition, some scientists may not always understand other, non-economic, influences on decision-making, which reflect other societal values. There can also be a perception that certain groups whose norms and values match better with those held within policy may have a greater influence on policy, resulting in potential lack of scientific rigour. The same holds for more powerful groups. Lack of acknowledgement and understanding of different norm and value systems can lead to frustration and disappointment, thereby impacting on the willingness to communicate and on effective interactions between science and policy.

Appropriateness of communication procedures

Aspects that are particularly challenging in terms of procedure relate to timing and format issues, and getting it right in terms of sources of information. Scientists often get frustrated with their research not being taken up. This can be due to a mismatch between provision of research and the policy cycle. Timing also dictates standards of science. Whilst there may be a case for rushing results to meet policy demands, there is a risk this may impact on the quality of the science produced, and, in turn, its credibility. These trade-offs need to be carefully considered.

> Scientists tend to be very matter of fact. It's all facts so they present it as facts and then it's…just not accessible. And they think "well why is it not accessible?" Because they've kind of presented information that is fact as fact and that's not how people really communicate
> *Dr K, policy-maker*

Another issue relates to sources of information. It is not always clear how policy gains its evidence - there are rarely "audit" trails to follow information pathways. This has led to the perception that policy-makers are not using published results, but rely on expert panels or workshops – that can be perceived to have less legitimacy. This may be because from a policy perspective it may be easier to gain distilled information from an expert panel than trawling through scientific publications. Indeed, policy-makers often feel that there is no lack of information, but a lack of "relevant" and synthesised information.

Influence of media and other sectors

Scientists often have the perception that sectors other than science, particularly the media, can and do have an important influence on the communication of scientific information to policy. Scientists are often wary of the media distorting or misrepresenting their research. This can, in the long-term lead to scientists not engaging in communication outside of the scientific community, and the potential loss of that research to policy. The perceived influence of lobbies can also lead to disillusionment over the quality and usefulness of research.

> Politicians I'm afraid probably only listen to the last person that they spoke to.
> *Mr G, local decision-maker*

Looking for more information on science-policy interfaces?

For more SPIRAL results, including separate briefs focussing on practical steps or recommendations to address some of the above challenges, see companion SPIRAL briefs at http://www.spiral-project.eu/content/documents

This brief is a result of research and interactions within and around the SPIRAL project. It was written by Juliette Young (Centre for Ecology and Hydrology) and Kerry Waylen (The James Hutton Institute).

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Interfacing Biodiversity and Policy