

# Science for Environment Policy

## Five principles to guide knowledge exchange in environmental management

**Effective 'knowledge exchange'** — the process of producing, sharing, understanding and using knowledge — is vital to good environmental management. New research has uncovered five principles for this process which could help researchers, decision makers and other parties work together to better manage environmental change.

**Policymakers and practitioners** hoping to use research findings in their work can face a number of barriers. For instance, poor communication and dissemination of research by scientists, or a lack of technical expertise amongst policymakers and practitioners to interpret and apply the complex research findings, can limit the use of research in a decision-making context.

In an effort to overcome such barriers, there has been a growing focus on understanding how knowledge is exchanged between interested parties. For this study, the researchers set out to identify the key principles of effective knowledge exchange.

They chose river catchment and upland management as environmental management case studies, as they typically require working within and between different disciplines, with a wide variety of different interested parties and types of knowledge.

The researchers interviewed 32 individuals, who included academics, project managers and non-academic stakeholders from 13 different upland and catchment projects in the UK. They identified over 50 different themes relating to knowledge exchange from the interviews. However, the researchers were able to reduce these down to five broad principles for effective knowledge exchange:

### 1) Design

It is important to know what everyone involved hopes to achieve through knowledge exchange and that these aims are built into the environmental project from the beginning.

### 2) Representation

The distinction between those who carry out research and those who use its results should be made as early as possible. The input of the two groups should be used to help design both the research and knowledge exchange.

### 3) Engagement

Two-way communication and long-term trust should be encouraged between researchers and other stakeholders wherever possible, to facilitate knowledge exchange.

### 4) Generate impact

To keep potential users of research engaged with the research process, there should be a focus on creating tangible results as early as possible, and ensuring that the results that will be valued by as many stakeholders as possible.

### 5) Reflect and sustain

Effective knowledge exchange is based around long-term relationships and learning. Monitoring and reflecting to continually improve the process is key. Considering ways to sustain knowledge exchange, even after project funding ends, is also important.

Following these principles allows different ways of understanding and working with knowledge to be recognised. This in turn should help researchers, policymakers and practitioners in environmental management work together more effectively to produce, share and apply knowledge to manage environmental change.



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