

# Demonstrating the 'Ecosystem Approach'

## The Carse of Stirling Project

The ecosystem approach to environmental management (Box 1) considers the whole landscape, including its environment, economy and society, working with nature to benefit both people and nature. This is one of a set of case studies that illustrates the ecosystem approach, its advantages, and challenges.



### The Carse of Stirling Project

The Carse of Stirling Ecosystem Approach Demonstration Project stemmed from a proposal in the Scottish Land Use Strategy (2011). The goal was to demonstrate how the ecosystem approach could be used in decisions made by public bodies, to deliver wider benefits and provide practical guidance.

SNH led the project with support from SEPA. The Carse of Stirling was chosen as the project's study area as a well-defined landscape of low-lying flat land with a mixture of land uses and of a large enough scale to apply this approach. SNH contracted two companies (Land Use Consultants and STAR Development Group) to provide technical support and act as facilitators.

#### *Involving people*

The facilitators invited interest from a range of local people to create a 'long list' for the project's 'Stakeholder Panel', including a fair representation of interests within the study area. This long list was reduced to form a panel of around 35 people (farmers, foresters, and people involved in recreation and conservation, local businesses and rural development etc.).

The panel members volunteered their time for five evening meetings over eight months. They were asked what they valued and how they benefited from the land in the area. Later, they considered how these benefits could be sustained through integrated land use and management across the landscape, given 'drivers of change' such as climate change. Based on this vision, the panel developed an action plan at the end of the process. Having the stakeholders lead the development of the plan created a sense of 'ownership' of it, which would help in driving motivation to implement it.

### Box 1: An 'Ecosystem Approach'

*"The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way."*

- Convention on Biological Diversity

The ecosystem approach is a way of managing natural resources. The environment around us is seen as one whole unit, comprising ecosystems and the way nature functions, and the people that live there. The ecosystem approach has twelve principles<sup>1</sup>, summarised as:

- *Involving people*
- *Valuing nature's services*
- *Understanding how nature works*

The ecosystem approach takes account of whole units, beyond administrative boundaries. What constitutes a 'unit' will vary, but will depend largely on ecosystem functioning; for example a river basin, the range of a population of a species, or whole woodland area.

The vision is that we will all play a part in our local environment to take care of nature, and the people that live within it.

- **Advantages:** Stakeholders saw the benefit of, and need for, investing their time to work collaboratively across individual land holdings. The project was successful, so much so that the panel members formed and constituted a new partnership, the Carse of Stirling Partnership, and is now delivering their action plan.
- **Challenges:** Providing time and a place where the stakeholders could deliberate, with respectful listening and equal participation, did require independent and trusted intermediary facilitation. The Panel's vision and action plan created expectations which led to frustrations as the new Partnership encountered barriers to achieving it.



Carse of Stirling Project stakeholder panel workshop, Nick James LUC

### *Valuing nature's services*

The panel used the 'ecosystem services framework'<sup>1</sup> to aid recognition of a wide range of nature's services (or 'benefits') that could be valued from the land in the area (e.g. provisioning, regulating and cultural). No monetary valuation was used. As individuals they ranked and prioritised the services, and then the panel as a whole agreed their 'top five' benefits. Prioritising a list of benefits enabled a more focussed and manageable process of agreeing land use and management actions to take forward. It could be argued that wildlife was also valued for its own sake, as panel members wished their 'iconic' species back into the landscape. Having the panel agree their collective priority benefits (as opposed to individually) enabled a better appreciation of different perspectives amongst the panel members. This was useful whilst the panel deliberated on potential 'trade-offs' and synergies necessary to agree a way forward.

- **Advantages:** The 'ecosystem services framework' was found to be a very useful tool that enabled a more comprehensive range of values to be recognised than might otherwise have been the case. For example it revealed the many regulating and cultural services that are sometimes quite difficult to define compared to more easily recognisable provisioning services.
- **Challenges:** Measuring the different values relative to each other sometimes proved tricky, as some were easier to measure than others. For instance, food production can more easily be quantified compared to aesthetic experiences of landscapes, which have more subjective and qualitative characteristics that define them. The panel did recognise, however, that because a benefit could not be easily measured, it did not mean that it should not be valued and taken account of within decisions making – a pragmatic and common sense approach was required.

### *Understanding how nature works*

Ecologists and natural scientists talked to the panel about the current state of the natural environment in the study area, and how certain 'drivers of change' across the landscape might affect the panel's prioritised list of benefits. '3D visualisations' were produced to help the panel discuss various scenarios for the future. These visualisations provided broad (not location specific) indications on 'what might happen where' within the landscape if different benefits were prioritised. For instance, if woodlands were to be planted then where might they be best placed; and if land was able to store flood waters then what types of natural features might support this. Experts were on hand to answer questions about how the land supported the different benefits.

- **Advantages:** The further insight stakeholders gained from understanding more about how nature might work across the landscape reinforced the motivation for them to work more collaboratively together in order to try and keep the land in "good heart" for the longer term.
- **Challenges:** Pragmatism, flexibility and common sense were required in using available data. Broad assumptions had to be made, given the lack of specific baseline data / evidence, on how ecosystems

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<sup>1</sup> Towards a common classification of ecosystem services, <http://cices.eu/>

might function across the landscape. The lack of data makes it difficult to monitor the health of the land over time.



The Carse of Stirling from Kippen, *Lorne Gill/SNH*

### **An ecosystem approach**

This project aimed to demonstrate an ecosystem approach, so in some sense it is unique in that regard. Despite some challenges and many lessons learnt ([full report](#) is available via SNH's website) the project was seen as a success overall by the panel members and project team. This view is supported by the creation of a new partnership motivated to deliver their action plan.

<sup>1</sup> The twelve principles were created by the Convention on Biological Diversity, and are intended to help implement the ecosystem approach. They have been adapted to provide an evaluation framework for applying the ecosystem approach and have also been translated into Plain English; for more information click [here](#).



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