

Natural capital concepts and evidence were used to demonstrate the wider economic benefits of creating a new wood-meadow in North Yorkshire. The annual benefits were in the range of £15-20,000 per annum, providing a significant return on investment.

The case study also shows that natural capital assessment can generate useful information based on little data and small budget.

In 2012 Hagge Woods Trust set about designing a new 10 ha wood-meadow that would provide a rich and varied habitat to maximise biodiversity. The coppice wood and meadow transition provides the best possible habitat for a wide range of invertebrates which in turn enhances birdlife and other wildlife.

Whilst the Trust had a strong vision for the enhanced provision of plant life and wildlife, it was less clear about the value of the other economic benefits that the site could deliver. *The case study was able to estimate the likely recreation, education and carbon sequestration benefits and the market value of hay. These benefits that are not normally taken account of in financial analysis can enhance the case for investment in this and other similar projects.*

The main lesson from this study was that the additional economic benefits (above and beyond the provision of biodiversity) can be several times higher than the investment costs.



Photo: Hagge Woods Trust

The case study aimed to generate better measurement of benefits from natural capital to improve its future management. This was done in three steps:

- **Understand** the major ecosystem services provided.
- **Value** the major benefits delivered, in economic terms wherever possible.
- **Account for** natural capital as part of conventional accounting practice.

The first step was to carry out a top level prioritisation of the major ecosystem services delivered by the wood-meadow. This was used to focus the subsequent analysis on the most significant ecosystem benefits.

The second step was to assess the quantity and value of the ecosystem benefits. In addition to the provision of coppice wood, meadow flora and wildlife the major additional benefits were valued in perpetuity and included:

- **Recreation** to the local population. Using value evidence from the literature, the present value was assessed at a minimum of £183k. There was considerable scope to increase the value of this important benefit.



Photo: Lin Hawthorne, Hagge Woods Trust.

- **Educational** visits, from local schools alone were valued at £158k in present value terms. The benefits would grow if guided walks are developed.
- **Carbon Sequestration** benefits of the coppice wood were evaluated at £50k to £180k in present value terms. Additional benefits of carbon sequestration in the soil of the meadow was likely and should be quantifiable in the near future as soil samples results become available.

The third step involved setting out the costs (liabilities) and benefits (asset value) of the natural capital in a balance sheet format. The costs of maintaining the wood-meadow were established, and included activities such as weeding, thinning the coppice wood and mowing the meadow in late summer. These maintenance costs were compared with the present value of the benefits in order to demonstrate the net natural capital value of the site.

The balance sheet format is the same as the Corporate Natural Capital Accounts we developed (with RSPB and PwC) for the Natural Capital Committee. The format is useful in explicitly presenting the extent to which the main beneficiaries of the

wood-meadow were external stakeholders (local residents for recreation and local school children for educational benefits). This provided important insights into the priority uses of the wood-meadow in the future and will be used by the Trust.

Lin Howthorne, the Project Designer for the Trust, said,

“We now have the data to show land managers and government that conservation makes economic sense.”

There are of course many other aspects of natural capital value generated at Three Haggess Wood-Meadow that could be usefully measured and accounted for in non-monetary terms. For example the biodiversity of the site can be measured by tracking the population of key indicator species overtime. This study is a useful baseline for such future work.

<http://www.haggewoodstrust.org.uk/>

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