

What has the concept of natural capital got to do with you?

Workshop held Thursday 8th December 2016, Grant Arms, Granttown-on-Spey



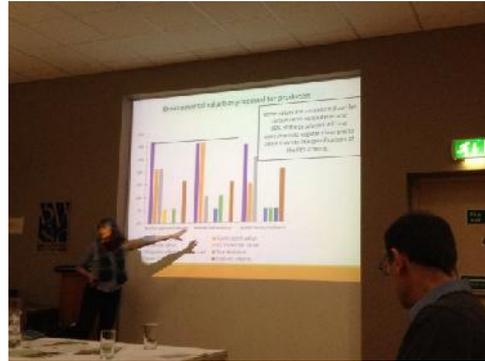
The practical and political relevance of the natural capital and ecosystem service concepts for land managers and farmers were discussed over a pint at the Grant Arms Hotel, Granttown-on-Spey recently deep in the heart of the Cairngorms National Park, Scotland.

Farmers, land managers, Scottish Government agency staff (Cairngorms National Park Authority; Scottish Environment Protection Agency) and researchers from James Hutton Institute and Centre for Ecology and Hydrology met to showcase examples of the utility of the concept and contribute to the open debate encouraged by the Scottish Government.

The night kicked-off with three presentations which highlighted the work conducted in the park. Jan Dick, CEH, started by feeding back the results of two surveys which members of the audience had contributed towards. She first reported the results of a global survey conducted in the 27 case studies (23 European, one each in Kenya, Brazil, Argentina and India). The work funded by the European project OpenNESS (<http://www.openness-project.eu/>) involved work conducted across a range of habitats including, forests, mountains, fresh water bodies, mixed rural landscapes, coastal and urban settings. The scope of the studies encompassed priority-setting for future interventions, awareness raising, more inclusive planning and more transparent decision making. The short term goal of the majority of the case studies was reported as either to map the ecosystem services of an area, test the utility of specific tools, or improve management or planning. The results from the 246 anonymous questionnaires, highlighted that operationalisation of the concept had achieved a gradual change in practices: 13% of the case studies reported a change in action (e.g. management or policy change), and a further 40% anticipated that a change would result from the work. The survey highlighted the crucial role of communication, participation and collaboration across different stakeholders to implement the ecosystem service concept in a way that promotes sustainable and equitable societies.

The second survey was conducted by a Brazilian student, Moara Almeida Canova Teixeira, from UNESP: Universidade Estadual Paulista, Instituto de Biociências, Câmpus de Rio Claro, Brazil, who

visited in autumn 2015. Moara surveyed farmers' and land managers' attitudes to payments for ecosystem services in Brazil and Scotland. The presentation compared and contrasted the land management, policy setting and attitude of farmers to the delivery and payment for ecosystem services in both countries. Farmers reported that they understood the market price for the tradable ecosystem services such as food they provided. However, farmers in both countries felt a desire to be paid for the delivery of other ecosystem services as delivering these represented a financial cost to their business e.g. public liability insurance for members of the public accessing their land for recreation, restricted farming practices in order to ensure high quality drinking water from which the water companies benefit etc.



The results of the survey revealed that in both countries farmers and land managers considered 'opportunity cost' the fairest system i.e. the value they had to give up in order to provide the service. The estimated 'opportunity cost' associated with some of the services by some Scottish farmers was very low which was attributed to them duelling the basic area payment and the SRDP agri-environment grants which they assumed already contributed to the costs of providing the some additional non-tradable ecosystem services. There was a brief discussion where it was asked why did so few Brazilian farmers recognise pollination as a service? It was considered possibly due to the fact that their crops were mainly wind pollinated. One farmer commented that he considered the focus on paying Brazilian farmers not to pollute and using income forgone to calculate payments was a backward step. In Scotland, this has led to the unjust situation where due to the agri-environmental payments being based on income forgone, arable farmers receive more income than livestock farmers, and many farmers rely on the basic payment to even things up.



Andy Wells, Crown Estates, presented the reason why the Crown Estate had invested in methods to establish the value for the natural capital they managed. He drew attention to how the natural assets owned and managed by a business is as important as their other assets such as machinery or skilled staff. He highlighted the recently published 'Total Contribution' analysis undertaken for the Crown Estate (<https://www.thecrownestate.co.uk/media/5282/total-contribution-report.pdf>).

The organisation is now piloting the Natural Capital Coalition's Natural Capital Protocol that was launched this year. He highlighted that the Protocol Framework covers four stages, namely "Why", "What", "How", and "What Next" which he considered relevant to all businesses large and small. The protocol is based on the thinking that every business wants to create greater value, be more efficient and make better decisions. He went on to explain the nine steps of the protocol which contain specific questions to be answered when carrying out a natural capital assessment. He highlighted the utility of the framework to encourage a wider thinking about a business and illustrated with results of the natural capital assessment the Crown Estate had conducted in Glenlivet Estate. Overall the process does not try to put an abstract value (££) on the environment to be compared across businesses but a business to compare its performance over time, identify risks and protect their valuable assets. Whilst many land based businesses understand that their land is the foundation of their business, there have been few tools to date that allow them

to explicitly manage their natural assets. In the questions and answers, Andy was asked if the protocol considered the 'quality of the tenants'? Good husbandry is what provides the positive outcomes e.g. clean water, healthy soils etc. This has not been applied yet but human skills are an important aspect of providing value – a method would be needed to capture this aspect of value. Has recognising the value of natural capital helped increase the income of the farms on the estate? Generally natural capital protection relies on external public funding support. The Common Agricultural Policy is moving towards payment for outcomes and Brexit may require even more demonstration of value for money from agri-environmental measures. Therefore, being able to quantify and show change may help access agri-environmental schemes in the future. There is already a pilot scheme by Scottish Water that supports farmers working to reduce diffuse pollution as it reduces Scottish Water's operating costs. Has the Crown Estate used the results to evaluate

what land use they should adopt? Not yet, as the granularity of assessment is not sufficient but they could use to inform when and how they re-let farm units.



Kirsty Blackstock, James Hutton Institute, wrapped up the presentations by putting these ideas into the UK and Scottish policy perspective. The importance of investing in natural capital is flagged up in the Scottish Economic Strategy (2015), reflecting signals from the United Nations, European Union and UK Government; and the importance of managing land sustainably lies at the heart of the

Scottish Land Use Strategy as well as the forthcoming Cairngorms National Park Plan. The Scottish Government are funding a programme of strategic research on Natural Assets, including pilot Natural Capital Accounting looking at the value of farmland biodiversity, protection of water quality and woodland recreation across Scotland. She provided hand-outs summarising the growing number of initiatives and projects that provide information about natural capital and ecosystem services; and information about tools that exist to help businesses and planners understand and manage their natural assets. Finally, she raised some more speculative questions about why natural capital might matter in the coming years – including how public funding might be distributed post-Brexit and how farmers might want to promote themselves in a more competitive market, whilst acknowledging that many land based businesses already plan for long-term multi-functional land use.

In the discussion following the presentations, the following points were made (grouped into themes):

General understanding:

-) Participants understood the idea that assets are the things that, when healthy, provide us with services such clean water and clean air
-) Most people attending the meeting were 'bi-lingual'(could speak plain English and ecosystem terminology) so they understood the policy and academic terminology.
-) However we need a better word that is more 'output orientated' – ecosystem services is not a good phrase. Natural capital is better as farmers already think about cash-flow and capital assets. The phrase "Benefits from Nature" is also well understood. Multi-functional is not a good substitute as it doesn't make you think about the value of the land/service.
-) Values help focus on priorities and choices that have to be made.

-) Farmers will engage with ideas about adding value to their business. Whilst many care about the environment, they need to focus on making an income to feed their families.

Practicalities and implications of assessment:

-) Doing an ecosystem assessment is useful and makes you think about the land in a new way, drawing attention to things that you might miss in a standard approach to management and planning.
-) Therefore, it is useful to think about all types of value from land, not just those that provide an income.
-) It is important to ensure that pursuing other forms of value on an estate or farm do not result in a loss of economic value from the production of food. It is important to look at the net value of a choice.
-) Participants felt that all farmers did think about the quality of their underlying assets e.g. soil health, availability of water etc. when managing their land. It is easiest to see the return on investment for soil quality. Farmers did not want to waste money by applying too many nutrients, but may not have been aware of off-farm, down-stream impacts of their management choices.
-) Participants felt that most typical farmers did not manage for biodiversity per se, but having a good biodiverse farm is a sign of a healthy farm functioning well. They are unlikely to pursue enhanced biodiversity as an end-point unless they could capture additional income from it (e.g. attracting birdwatchers to stay on-farm in B&B). So generally environmental gains are the result of good farming.
-) There are farms in arable areas that maximise production over environmentally friendly practices – is this an economic necessity? Farmers tend to pride themselves on efficiency and want to maximise their yields, but many in the Cairngorms will help nature (e.g. move bird nests). Recent research on barley at the James Hutton Institute showed that biodiverse plantings including weeds actually increased the yield and resistance of the crop to disease. Most felt that farmers would have to be paid to change their production methods. However, there are also market signals e.g. Birds Eye only buy from farmers that comply with the LEAF standards.
-) In theory Natural capital accounting can help farmers think about the environment, but farmers have to want to do it and have sufficient time and resources to explore the options; many are not generating enough income whilst working long hours and have little time to consider new approaches which have not yet been proven useful.. Looking after their natural assets is important as stated previously, but not a priority in its self over survival.

Natural Capital Accounting:

-) The Natural Capital Protocol helps the Crown Estate see where diversification is adding value to their business. These are not normally tradeable values but helps show where further investment is a good idea, and provides a regular benchmark for management and investment choices.
-) The approach can be used to make private business decisions or to justify use of public funding – it is up to the individual how they set up the protocol and what questions they want to answer.
-) The approach to valuing the recreational use of the Estate was discussed – the OpenNESS project used time multiplied by the living wage to estimate the value. In future, they might need to consider the damage created by recreation as well (e.g. soil erosion from mountain

biking). They can use this same method in a few years' time to see what has changed. The Estate itself doesn't get any direct income from this use but it does support the wider community and local economy as well as tourism.

-) The Crown Estate has a statutory duty to manage sustainably and this is one way of demonstrating its performance. Other businesses might adopt it to manage risk, or position themselves in the market place, or respond to challenges from the transition post-Brexit. For example, some NGOs manage estates and will have different priorities to other private owners.

Wider concerns:

-) Do the majority of Scottish people understand and value natural capital? They are likely to value birds or trees but may not understand the value of land providing food, water or carbon sequestration.
-) Whilst natural capital accounting might help promote premium products e.g. Cairngorms beef, this only works if the consumer will pay this premium. Too many surveys suggest people value environmentally friendly production but then they still shop based on price.
-) Is it a good idea to try to put a price on Nature? It allows us to get Nature considered within the dominant economic models and business language. It is not about putting a £ value on individual flowers or trees. Converting values into pounds allows it to be included in the accounting framework. However, some might just want to use the first steps to think about their business in a new way without actually calculating the costs and benefits.
-) There is good information at the level of the Park about natural capital but this information is not used by farmers – the State of the Park Report is really for policy makers not individual land managers.
-) There is potential for Natural Capital Accounting to be used at the regional or Park level to help the farming sector illustrate its performance over time, and it might be more appropriate to implement it at this level than to do it on individual farms. The results could be used to market the local products.



Agri-Environmental Measures:

-) The problem with tying payments to the outcomes e.g. increased biodiversity is that there are lots of things affecting numbers that are outwith the control of the land manager. The

bigger the land unit, the more things can be controlled, but it is hard to tie funding to results for small tenant farms.

-) Agencies implementing environmental regulations need to take a wider perspective and help farmers to achieve what they want. There is a perception that many salaried public servants enforce the regulations without really understanding the specific conditions e.g. compliance with protocol for agri-environmental measures actually saw a decrease in birds. The outcome orientation won't work if the wrong targets are adopted.
-) There was also a concern about how these outcomes would be audited and the potential for increased paperwork for both the farmer and the agencies.
-) It would be great if Brexit made farmers and agencies work together as a team to get the best from the land and society, as currently, it feels as if they are constantly being held back by following the rules, rather than doing what is best for Scotland.

Participants were thanked for their input to the discussions. An open invitation was offered to return and discuss the issues in more depth if that would be useful. One take-home message was that the language and concepts presented needed to be presented in a way that was relevant to a small family farm, rather than the academic, policy or large business examples that we were able to provide. Scottish Forum for Natural Capital is working on a proposal to trial the Natural Capital Protocol on three land based business across Scotland (upland, mixed and arable) and these results might be very useful to engage farmers at a future meeting.

For further information about the topic, please contact Jan Dick (jand@ceh.ac.uk) or Kirsty Blackstock (Kirsty.blackstock@hutton.ac.uk). For more information about ECom, please see the website: <http://escom.scot/>.