

Galvanising Change via Natural Capital

Newsletter

September 2023

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Welcome

This is the third newsletter for the Galvanising Change via Natural Capital project. The project is currently in its second year, and various stages of data collection and analysis. Some preliminary results from our work on the review searching for Natural Capital in policy making are available below. You can also read about interesting work which will be starting on the involvement of whiskey sector in NbS. We also have updates from our colleagues at SRUC related to their research on private finance.

In case you are not already familiar with our project, you can download a [1-page summary](#), visit our webpage at <https://www.hutton.ac.uk/research/projects/galvanising-change-natural-capital> or contact Kerry Waylen: Kerry.Waylen@hutton.ac.uk

Our project runs for 5 years and this newsletter comes out every 6 months: please do forward to any colleagues or contacts that may be interested. Anyone can subscribe directly by following [this link](#).

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Meet a team member

Every newsletter we introduce a different member of our team. This time we welcome Antonio Ballesteros-Figueroa, our newest member.

Antonio is a Researcher in People and Environment Studies at the James Hutton Institute. Antonio comes from Mexico, where he obtained a degree in Political Science from Universidad de las Américas Puebla (UDLAP). After finishing his BA, he worked as a research assistant on the construction of the Global Impunity Index, where he became interested in the sociology of knowledge and the politics of quantification. To further his interests, he was a Visiting Researcher at the Max Planck Institute for Comparative and International Law, where he was able to learn about the global politics of metrics and work on his PhD application. Antonio moved to Edinburgh in 2016 for an MRes and then a PhD in Science and Technology Studies (STS).

He has worked at research centres in Sweden, the UK and the US, and before joining Hutton, Antonio worked as The Chief of Policy Advisors at the Urban Sustainable Development Secretariat in Monterrey, Mexico. He currently works on the Galvanising Change via Natural Capital project, supporting the conceptual analysis of how civil servants engage with different types of evidence and knowledge. In the next section of the newsletter, he writes about what an STS lens can bring to this project and how he thinks about Natural Capital.

If you want to know more about Antonio, or to get in contact, visit <https://www.hutton.ac.uk/staff/j-antonio-ballesteros-figueroa> or email antonio.ballesteros@hutton.ac.uk



STS and the notion of Natural Capital

Antonio Ballesteros-Figueroa

Science and Technology Studies (STS) is a field focused on the study of the development of science and technology within its particular social, political and economic contexts. Rather than understanding science and technology as processes that occur independently from society, where a single truth is sought, STS understands it as being socially contingent. That is, the development of science depends on society, and the use and influence of science depends not only on producing right results, but also on convincing other members of the society. For instance, when Louis Pasteur discovered the existence of microbes, the mere discovery was not enough for the public to accept it as a fact. Instead, he had to convince public health bodies, the army and state scientists. This exemplifies that “facts” are not given and accepted simply because they are “true,” but that scientists need to mobilise other institutions as well.

Another area in which STS is concerned, is questioning what is expertise and who do we consider an expert? Is a farmer who deals every day with sheep in the Scottish Highland an expert in animal behaviour, as much as a scientist with a PhD working at a university? The answer to this question, from an STS perspective, is that both carry different types of expertise which have been developed differently, and neither is better or superior to the other. When trying to solve an issue, each of these experts will consider different elements based on their own experience, understandings, learning and evidence at hand.



In the case of Natural Capital, an STS perspective will allow us to understand the considerations that experts take into account when valuing nature. It will also allow us to expand our understanding of who is considered an expert in valuing nature within the Scottish Government, and why. Valuation doesn't necessarily have to imply monetisation, but in the UK cost-benefit analysis (CBA) is an important part of how many public sector decisions are made - and other sectors too – and so it can be important to attend to existing economic expertise and techniques.

The STS approach means our starting assumption is that the process of nature valuation is affected by dominant social, economic, political, and scientific norms. Hence, we should investigate what is being left out by particular approaches, and the implications of reinforcing them to care for the environment through monetary interpretations.

STS also has a longstanding tradition of incorporating diverse expertise to develop a holistic understanding of an issue. Given the interest of this project in understanding the possibilities for how policy making can productively engage with natural capital concepts, we will incorporate as many views as possible. This means our research should seek a range of types of expertise that exist within the SG and analyse if the diversity in experts is reflected in how nature is valued or if there is a single procedure or understanding to do it.

To summarise, STS has been focused in studying the production of scientific knowledge within its social, political, economic and cultural context. Considering that Natural Capital is a framework developed under specific economic and political understandings, STS is a very relevant starting point, that highlights the importance of studying what is being considered, and left out, and by who.

To find out more about STS, visit <https://sts.hks.harvard.edu/about/whatissts.html>
You can also watch this video <https://www.youtube.com/watch?v=GlBx9ANeFRU>

A peek into related research on private finance in Scotland

Julia McCarthy and Hannah Rudman

Researchers at the [Thriving Natural Capital Centre](#) at Scotland's Rural College (SRUC) are supporting this project as well as working on other related projects. This article explains one of those: a UK Natural Environment Research Council (NERC) funded research project to bring together learnings on business models, community engagement and ecological data from 'supply' and 'demand'-side actors at the intersection of biodiversity and nature finance. The project aims to understand what has been achievable for Natural Capital (NC) projects on the ground, to understand how this meets the needs of investors and financiers, and to identify challenges and gaps to address in future research. It does this via a survey of the [Scottish Nature Finance Pioneers \(SNFP\) network](#) combined with targeted case studies.

Made up of over 550 individuals, the SNFP is an open network that serves as a forum for communities, businesses, landowners, project developers, financiers, and public agencies to collaborate and share knowledge about emerging developments within high integrity markets, nature-based solutions projects and NC financing. The survey was designed to capture information on members' interests and motivations in engaging with the network, as well as gaining an understanding of the importance of incorporating community benefit into nature-based solutions projects and the importance of collecting biodiversity data to define project targets, track project performance, inform project decision-making and evaluate financial investment in biodiversity projects.

The team has completed the survey of the SNFP network, resulting in 96 members completing the survey and sharing their experiences. The results are currently being analysed, however, preliminary survey results show that business models/proof of concept, codes and standards, and scientific evidence base are the top three nature finance topics of interest to the survey respondents. Additionally, respondents identified a number of motivations for engaging with the network, including keeping informed of the latest trends, debates and developments in nature finance and climate change, fostering collaboration to enable cross-sectorial knowledge exchange and sharing of best practices, and exploring new financial mechanisms that can drive investment into nature conservation and climate action. Next steps are to carry out the case studies, and to feed back findings to the SNFP and elsewhere.



You can read more about the SNFP network on their website ([SNFP open network](#)), where you can sign up if you are interested or contact Julia McCarthy (Julia.mccarthy@sruc.ac.uk) to know more. You can also watch the videos of the [RSPB Glencripesdale](#) and [Lauriston Farm](#) case study projects by clicking the links.

What can whisky tell us?

Esther Carmen

This article shares our plans to explore whether Natural Capital (NC) concepts can unlock private-sector involvement in nature-based solutions. This is the last bit of empirical work to get underway in this project, but it's very important as private sector investment in NC could be the key to achieve some of the biodiversity and net zero goals in Scotland. What motivates actors from the business sector to get involved in using nature-based solutions? We hope to answer this question by using the Whisky industry as a case study.

The success of the whisky sector in Scotland is directly linked to the natural environment and particularly freshwater ecosystems in at least five ways:

1. Whisky production requires access to large volumes of freshwater from springs and surface water for processing, for example for cooling, cleaning and dilution.
2. The quality of water is critical to the fermentation process and taste of the final product.
3. A connection with Scotland's landscape is part of the unique selling points of whisky in Scotland.
4. Within Scotland there are distilleries that use peat in the malting process for a distinctive smoky flavour
5. Within the alcoholic drinks sector there is increasing focus on incorporating climate action into business models, for example net zero gin products have recently entered the market.



Picture credits: [HighlandWhiskyco](#)

Many people think Scotland has an abundance of water: however, due to climate change more extreme weather patterns and climatic shifts mean that water scarcity or drought, as well as flooding are predicted to become increasingly prevalent, also linked with and degraded water quality and ecological challenges. (If you want to know more about these and other future changes to Scotland's natural capital, please visit our sibling project - '[Climate Change Impacts on Natural Capital](#)'). This therefore creates directly interconnected risks to the whisky production. Engaging with nature-based solutions (NbS) is one way the sector could better meet these challenges. A few are already engaging in or exploring NbS-related activities and there are potential reputation benefits in doing so. Whisky is a 'futures' industry – what is made now might not be sold until 2040 – so thinking ahead (and thinking about what the consumer will be seeking) is not unusual.

As we move into 2024 we hope to explore how, when and why whisky companies get involved in NbS at present, and to ask – if Natural Capital framings, tools or data do – or could - play a role in encouraging their involvement in NbS? If you are reading this and are already working in this sector, or have relevant experience, then please do get in contact!

Dr Esther Carmen will be leading this work and she can be contacted on Esther.Carmen@Hutton.ac.uk.

Where is Natural Capital being used in policy making across the world?

Simone Martino, Ishaan Patil and Kerry Waylen.

The terms natural capital (NC) and ecosystem services (ES) are attracting interest beyond academia, including by policy-makers. Some European countries (especially the UK, Netherlands, Sweden, Spain) have already commissioned work to value nature in terms of NC, or promoted other exploration of how to work with NC; others in the Global South have participated in accounting exercises, often due to the [UN WAVES initiative](#). However, it is often unclear if and how these initiatives have affected any policy development or decision-making.

We therefore searched for examples of policy impact from anywhere in the world. We looked in academic databases but also used web searches to look for the ‘grey’ literature – any type of organisation’s reports, where natural capital (NC) or ecosystem services (ES) concepts were reported has been used or influential in policy making. This was a big search as we found many reports claim that NC or ES should be used and useful for policy-making, but rather fewer statements that NC and ES have actually been used.

We found 170 cases where NC or ES was being used or incorporated in policy making in some form. Our analysis shows 17 different policy domains where NC was being utilised. The most common domains were forestry – about 25% of our cases - and water management (nearly 20%).

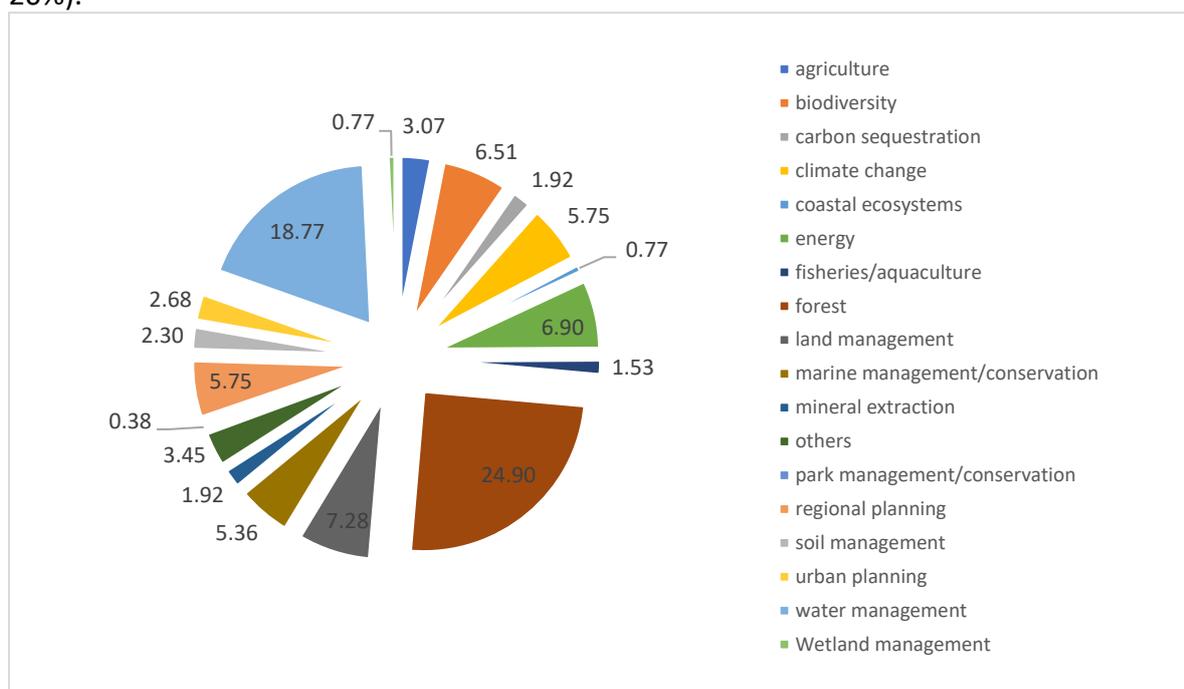


Fig 1: Percentage of policy domains mentioned in the selected case studies.

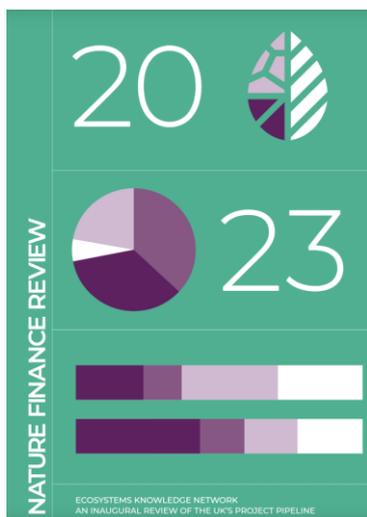
Interestingly, there are also claims that these concepts are associated with facilitating stakeholders' engagement in decision making – so perhaps some think NC is not a tool directly benefiting policy-makers themselves, but is helpful for them to use in order to engage others on these issues.

We are still studying the data and finalising this analysis, and next year we hope to have more insights to share next year about where and how NC is being used in policy making.

Events and resources

Here are a few outputs and events that we find interesting and might also interest you!

- Is Natural Capital Accounting (NCA) useful for local policy and natural resource management? This recent paper uses the case of Dartmoor and Exmoor National Parks in the UK to review the usefulness of these accounts for land management. They also highlight the possible gaps and ways to improve NCA in local contexts. <https://www.sciencedirect.com/science/article/pii/S030147972201845X#ack0010>
- The IPBES has reviewed more than 50,000 scientific publications, policy documents and Indigenous and local knowledge sources and applied the findings to improve valuation of nature and address barriers to their uptake. The report from this work was recently released. See this piece in Nature for a summary of its messages: <https://www.nature.com/articles/s41586-023-06406-9>
- For those of you interested in finance, the Ecosystems Knowledge Network (EKN) released a very interesting review of all UK projects in the 'nature finance pipeline' – visit <https://ecosystemsknowledge.net/resources/nature-finance/nature-finance-review-2023/> to read more. We'll be connecting with its Nature Finance Scotland Forum on 2nd October <https://ecosystemsknowledge.net/event/nature-finance-scotland-2023/> to keep up with this subject.



- The Scottish Government released the new report 'Measuring Biodiversity: Research into Approaches' which our colleagues from SRUC's Thriving Natural Capital Challenge Centre and SAC Consulting authored. It can be found here [Measuring biodiversity: research into approaches - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/measuring-biodiversity-research-into-approaches/pages/1_to_4.aspx).



For more information contact Kerry.waylen@hutton.ac.uk or visit the project website <https://www.hutton.ac.uk/research/projects/galvanising-change-natural-capital>.

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