Embedding Natural Capital in Policy: Ideas from Well-being

Author: Kerry Waylen, James Hutton Institute, Aberdeen, Kerry.Waylen@hutton.ac.uk

This briefing suggests ideas for embedding natural capital into policy-making, building on OECD expert ideas about integrating well-being into policy-making.

What are the key concepts?

- Natural Capital refers to how natural systems yield social, economic and environmental benefits to people. It includes geology, soil, air, water and all living things, considered in terms of natural assets that support goods and services[i].
- Well-being refers to the quality of life experienced by individuals and societies, and the ability of people and societies to contribute with a sense of meaning and purpose, and is determined by social, economic and environmental conditions[ii].

Natural Capital and Well-being are intrinsically linked. Definitions of well-being note that it depends on a healthy environment[iii], whilst Natural Capital frames the natural environment as assets that provide flows of ecosystem services to benefit societies and economies[iv]. Embedding both concepts in decision-making should therefore be mutually reinforcing and in support of a Just Transition.

What is the challenge?

Both concepts receive widespread support, including endorsement by the Scottish Government. For example, both feature as part of Scotland's National Performance Framework[v]. Building a well-being economy that operates within safe environmental limits to serve collective well-being, is a well-established aim of the Scottish Government[vi]. Similarly, the Scottish Government is committed to embedding natural capital in decision-making as part of a four capitals approach.

However, neither concept is automatically easy to work with or embed in policy-making. Historically our decisions have tended to 'take for granted' or under-value nature. This has resulted in the degradation of natural capital assets, and limited our ability to benefit societies and economies. Similarly, many governments have often focused on proxies of economic progress that do not fully reflect all aspects of well-being[vii].

We now have a legacy of ways of working, thinking and measuring which may require substantial change in order to reflect and recognise natural capital and well-being. Existing ways of working tend to be quite durable[viii] and so introducing these concepts may be challenging. However, Natural Capital has been identified as being affected by and affecting hundreds of policy areas[ix], so it is essential to find ways to do better.

How can we tackle this challenge?

This briefing does not go into fine details of a well-being approach or natural capital approach, as other specialist sources provide more information on these[x]. Instead, it focuses on how to tackle the challenges of embedding these new approaches.

The OECD has endorsed 5 principles for embedding well-being metrics in policy-making[xi]. These were identified by an expert group on the policy uses of well-being metrics– which included inputs from the UK as well as other countries. Here we summarise those recommendations:

1. Measure natural capital, and publicly report those measurements

Selecting, monitoring, reporting indicators of natural capital is important to help understand and hold governments to account. These should be publicly accessible, e.g. in the form of a dashboards of indicators. Importantly, these indicators should also be incorporated into existing strategic plans so that they reflect and become priorities for different parts and levels of government. A key challenge is selecting a range of indicators that represent the range of underlying issues (i.e. different assets or parts of natural systems) but also are communicable to different audiences. Grouping indicators can help to achieve this.

2. Create and adapt institutional structures

New institution structures and new individual positions can demonstrate and drive commitment to newly important issues. This can range from creating – or adapting – new public sector departments, divisions etc, even agencies, through to creating new ministerial posts, or designating individuals in government with responsibility for a cross-cutting issue such as natural capital. The creation of new "watchdog" or auditor institutions noted above, is also a potential institutional innovation. A key challenge is creating new institutional structures that do enable engagement with natural capital across government, rather than making it the concern only of a new team or single individual.

3. Capacity building for new approaches

To complement leadership, capacity building is needed so that staff have a chance to learn and reflect on how a new concept can be connected with or alter work processes. Capacity building needs include sharing information about specific datasets, and training on specific techniques. It is also useful to go beyond this to reflect on the logic of interventions and opportunities to practically work with the concept. Advice about how new tools and ideas connect with existing approaches and processes will assist with this. A key challenge is providing salient tools and encouraging their use in the face of many competing priorities for time and attention.

4. Ensure legislation is in place to promote accountability and continuity across government

Legislation can 'lock in' certain approaches or commitments, for example by placing a duty on all future governments to regularly report on certain issues. As new legislative proposals are subject to parliamentary scrutiny, this may raise salience of the issues across political parties as the proposals are debated and refined. A key challenge is ensuring new legislation is flexible enough to accommodate change, whilst continuing to fulfil its original purpose: independent scrutiny can help with this – for example, in Wales, the Future Generations Commissioner and the Auditor General hold the Welsh Government to account for its performance regarding the Future Generations Act.

5. Influence budget decisions

Allocating public spending is hugely influential. Approaches to do so include using a dashboard of indicators to frame early priorities; complementing 'standard' fiscal reporting of budgets with an analysis of impacts on well-being and/or natural capital over future years. This approach can also be used to appraise specific proposals. A key challenge is ensuring such dashboards are actually used, and working out how and when this should occur – e.g. when specific projects or spending proposals are made – and/or to appraise the consequences of the whole of a government's spending plans?

These recommendations are key starting points by which we can plan to embed natural capital in policy development. They show that natural capital could be connected across government in a range of ways, and a range of levels: from projects, which might need an appraisal to show costs/benefits; to programmes, which should consider a range of options for solving a problem,

informed by natural capital consequences and dependencies; and strategic – how budgets are allocated between departments (and even the structure of departments themselves).

These recommendations are not always easy to put into practice – and each is associated with its own challenges. This emphasises the need to start with targetted efforts, check on progress and update and adapt.

How is Scotland doing so far?

Scotland already has several activities related to embedding natural capital. Below we review progress in relation to the five recommendations above.

1. Measure natural capital, and publicly report those measurements

- ✓ Scotland's Natural Capital Asset Index (NCAI) [xii] reflects the health and extent of terrestrial ecosystems and their potential to sustain flows of ecosystem services. Some broad biodiversity indicators are also included.
- ✓ Scotland also has National Natural Capital Accounts, adapted from the existing UK-wider accounts by the Office of National Statistics (ONS). These differ from the NCAI in presenting natural capital in monetary terms, considering some marine values, and including values of geological resources (e.g. oil, gas, minerals) as well as living systems.
- ✓ The indicators used are visible on public sector websites, both in accessible dashboard forms as well as with underlying datasets available.

2. Create and adapt institutional structures

- ✓ Scotland has a small 'Natural Capital' team working within the Environment and Forestry Directorate. Their work includes promoting natural capital within policy development as well enabling the involvement of private sector actors in high quality markets for natural assets, as part of the National Strategy for Economic Transformation (NSET).
- ✓ Natural Capital is mentioned in the strategic or framing documents of some specific policy areas such as the Vision for Scottish Agriculture[xiii].
- ✓ Enabling a Natural Capital Approach (ENCA)[xiv] is supplementary green book guidance available online. This is intended to connect with the existing procedures used to appraise the spending of public money, to help economics and analysts ensure their appraisals and impact assessments take into account impacts on natural capital.

3. Capacity building for new approaches

- ✓ Economic analysts who participate in the "Green Book Network" have the opportunity to learn about ENCA.
- ✓ The Natural Capital team have produced guidance on natural capital[xv] and discussed with colleagues in other teams within government.

4. Ensure legislation is in place to promote accountability and continuity across government

- ✓ Natural capital (based on the NCAI) is an indicator within Scotland's National Performance Framework (NPF)[xvi].
- ✓ Natural Capital indicators also feed into the monitoring framework of Scotland's Environment Strategy[xvii]. The Natural Capital Accounts and NCAI form indicators for its fourth outcome of 'Economy: Our thriving, sustainable economy conserves and grows our natural assets'.

5. Influence budget decisions

- ✓ At the level of specific options appraisal, ENCA could be used to ensure attention to natural capital, although its use is not yet widely embedded in government or used to direct resources across the government portfolio.

Could Scotland do more?

Overall, Scotland has made a good start on embedding natural capital in policy. In particular, some issues – especially metrics and monitoring – have received excellent attention. However, others – especially influencing budget decisions – may need more targeted attention. This is not surprising, and Scotland is far from alone in this challenge – many countries across the world have experimented with working with natural capital and related concepts, but have found it challenging to achieve influence over decision-making[xviii]

Even in areas where there has already been some activity, we may need to do more. For example, although some training on 'ENCA' is available to policy analysts, insights from our recent survey of policy makers[xix] suggest that very few are confident in working with approaches such as ENCA. Many see the need for new tools and resources, but also state they need more staff time and capacity, and leadership on the subject. Furthermore, there may be need to look beyond cost-benefit analysis to consider how other stages in policy development could or work with natural capital.

It is also important to maintain attention to natural capital through new policy development – for example at the time of writing, the development of a Circular Economy bill and its monitoring framework. Embedding natural capital across monitoring frameworks can aid policy coherence and support its salience across departments.

The mandate to sustain such efforts – and also to look back on established ways of working – could be aided by the leadership of the natural capital team. Reviewing whether they have sufficient institutional mandate and resourcing is important. Changing existing structures e.g. directorate portfolios, or creating new independent bodies to encourage accountability should also be considered. This may ultimately help to motivate and justify the budget decisions.

Are there other ideas for tackling the challenge?

This briefing has focused on learning from efforts to embed well-being in policy. However, there are other analyses and experiences that could also be relevant. An obvious source of learning is:

Other countries' natural capital initiatives. Scotland and the wider UK have pioneered working with natural capital, but there are also other countries who have worked hard to embed natural capital in policy, such as the Netherlands[xx]. There is an emerging body of evidence on attempts to work with natural capital across various countries, in various ways. This project has reviewed these practices and is currently preparing this work for publication: please contact us for more information.

Analyses and ideas focused on other issues may also offer useful sources of learning. These include:

Systems approaches. Part of the challenges associated with natural capital relate to the high levels of complexity and uncertainty inherent in natural systems their links to economic and social systems. A good starting point to consult is CECAN, the Centre for the Evaluation of Complexity Across the Nexus[xxi], on embedding complex systems approaches into policy development and appraisal.

Knowledge and knowledge use, not necessarily specific to natural capital or policy. Studies of what has enabled other forms of environmental knowledge to have influence[xxii], as well how individuals

can work to achieve this[xxiii], draw attention to the important of people, processes and context as much as the content of knowledge itself.

Policy studies has many aspects[xxiv], many of several are relevant: in particular, a body of work on Environmental Policy Integration[xxv], which has studied decades of attempts to embed environmental considerations, in various ways and levels. Additionally, work on change, innovation and tool adoption in policy all offer insights into the conditions and strategies facilitating natural capital's use.

Leverage points for sustainability transformations[xxvi] analyse opportunities to achieve change in societal systems, and especially helps to make visible the 'deep' leverage points which are often neglected in favour of more palatable or convenient changes.

These various literatures together offer complementary insights into opportunities for change when working with individuals and institutions in different stages and levels in policy development. A full review of what these literatures identify is beyond the scope of this briefing. However, as an example of what they add: some studies of policy making show that public interest and support for a topic can affect policy-makers' commitments to work with it[xxvii]. As such, an additional area of work, to foster public engagement with nature. Another possibility is to reconsider if natural capital can be conceived in beyond its current accounts and specific ENCA tool, learning studies of how ideas can be expressed, represented and achieve influence across policy stages[xxviii].

Conclusions and next steps

Scotland has made good early progress in embedding Natural Capital into policy making processes: however, more interventions will likely be needed in order to fully achieve this goal. This briefing has focused on borrowing ideas from efforts to embed well-being approaches in policy, which is a related idea facing similar challenges. Appraising Scotland's activities against its five recommendation areas suggests where more efforts may need to be targeted, including more capacity-building in policy teams, ensuring institutional responsibilities for using existing data for accountability, and appraising how natural capital could be used to inform budget allocations.

We should expect to keep trying and adapting efforts – the idea of 'adaptive governance' – as we can not assume that any single initiative will be sufficient or achieve its desired effects. It is therefore important to track and periodically reflect on progress, and ideally sharing this learning widely. To achieve this, transdisciplinary partnerships with academics can facilitate this learning, and help academic insights to be constructively articulated for practical ongoing work.

Appraising existing and future efforts across all levels and stages of government – as well as learning from innovations by other countries – will identify specific opportunities to embed natural capital and how to carefully target these to embed natural capital in policy-making.

Acknowledgements

This report is an output of the 'Galvanising Change via Natural Capital' project, which is funded by the Scottish Government RESAS Strategic Research Programme 2022-2027, project JHI-D5-3. It is informed by our recent work to survey Scottish Government policy-makers about their familiarity with natural capital, and our reviews of uses of natural capital in other countries. For further information about this project please visit https://www.hutton.ac.uk/research/projects/galvanising-change-natural-capital or contact Kerry.Waylen@hutton.ac.uk

On the following pages are references linked to the main text via the superscript letters. It provides a mix of webpages, reports and key academic papers. Sources have been selected that are likely to be widely accessible and available, but please contact the author in case of any access problems or for more ideas about related reading.

References

[i] NatureScot website: 'What is Natural Capital'. https://www.nature.scot/professional-advice/social-and-economic-benefits-nature/natural-capital

[ii] World Health Organisation (WHO) 2021. The Geneva Charter for Well-Being. Available from https://www.who.int/activities/promoting-well-being

[iii] Chartered Institute of Ecology and Environmental Management (CIEEM) 2021. How do Governments and Organisations Define Wellbeing? Available from https://cieem.net/wp-content/uploads/2021/10/Government-Definitions-FINAL-Oct2021-1.pdf

[iv] NatureScot website: 'What is Natural Capital'. https://www.nature.scot/professional-advice/social-and-economic-benefits-nature/natural-capital

[v] Scotland's National Performance Framework dashboard: https://nationalperformance.gov.scot/

[vi] https://www.gov.scot/groups/wellbeing-economy-governments-wego/

[vii] Stiglitz, J. E., Marcus, H., Hawley, D., Buck, J., Hipp, A., Manos, P., Cavender-Bares, J., Michalakis, S., Hare, B. and Woods, V. (2020). GDP is the wrong tool for measuring what matters, *Scientific American*, 323(2), 24-31. https://www.scientificamerican.com/article/gdp-is-the-wrong-tool-for-measuring-what-matters/

[viii] Waylen, K. A., Blackstock, K. L. and Holstead, K. L. (2015). How does legacy create sticking points for environmental management? Insights from challenges to implementation of the ecosystem approach, *Ecology and Society*, 20(2). http://dx.doi.org/10.5751/ES-07594-200221

[ix] Maes, M. J. A., Jones, K. E., Toledano, M. B. and Milligan, B. (2020). Accounting for natural capital has cross-cutting relevance for UK public sector decision-making, *Ecosystem Services*, 44, 101127. https://doi.org/10.1016/j.ecoser.2020.101127

[x] Bateman, I., Brett Day, A. B., Faccioli, M., Fezzi, C., Rusby, A. and Smith, G. (2020). *The natural capital approach to integrating science, economics and policy into decisions affecting the natural environment*. In (Eds, J. A. Vickery, N. Ockendon, N. Pettorelli, P. N. M. Brotherton, W. J. Sutherland and Z. G. Davies) Conservation Research, Policy and Practice, Cambridge University Press, Cambridge, pp. 196-215. http://doi.org/10.1017/9781108638210.012

[xi] Durand, M & Exton, C. (2019). Adopting a Well-being Approach in Central Government: Policy Mechanisms and Practical Tools. Global Happiness and Wellbeing Policy Report 2019, Chapter 8 https://www.happinesscouncil.org/report/2019/global-happiness-and-well-being-policy-report

[xii] Scotland's Natural Capital Asset Index (NCAI) webpage: https://www.nature.scot/professional-advice/social-and-economic-benefits-nature/natural-capital/scotlands-natural-capital-asset-index

[xiii] Scottish Government, 2022. Vision for Scottish Agriculture https://www.gov.scot/publications/delivering-vision-scottish-agriculture-proposals-new-agriculture-bill/

[xiv] Defra (2023). Guidance: Enabling a Natural Capital Approach (ENCA) https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca

[xv] Natural Capital Policy Team (2021) 'What do we mean by a natural capital approach to policy and planning decision-making in Scotland?" Internal briefing developed for ARE.

[xvi] Scotland's National Performance Framework: Natural Capital webpage https://nationalperformance.gov.scot/national-outcomes/national-outcomes/economy/about-national-indicators/natural-capital

[xvii] Scottish Government, 2024. Environment Strategy: Initial Monitoring Framework https://data.gov.scot/environment/

[xviii] Zolyomi, A., Franklin, A., Smith, B. and Soliev, I. (2023). Ecosystem services as the silver bullet? A systematic review of how ecosystem services assessments impact biodiversity prioritisation in policy, Earth System Governance, 16, 100178. https://doi.org/10.1016/j.esg.2023.100178

[xix] A short article on this survey was featured in a recent newsletter from the 'Galvanising Change via Natural Capital' March 2024 project https://www.hutton.ac.uk/wp-content/uploads/2024/05/24_03_20_JHI-D5-3Newsletter_March2024final.pdf

[xx] Ruijs, A. and van Egmond, P. (2017). Natural capital in practice: How to include its value in Dutch decision-making processes, Ecosystem Services, 25, 106-116. https://doi.org/10.1016/j.ecoser.2017.03.025

[xxi] Centre for the Evaluation of Complexity Across the Nexus (CECAN) website https://www.cecan.ac.uk

[xxii] Posner, S. M., McKenzie, E. and Ricketts, T. H. (2016). Policy impacts of ecosystem services knowledge, Proceedings of the National Academy of Sciences of the United States of America, 113(7), 1760-1765. https://doi.org/10.1073/pnas.1502452113

[xxiii] Dunlop, C. A. (2014). The possible experts: how epistemic communities negotiate barriers to knowledge use in ecosystems services policy, Environment and Planning C: Government and Policy, 32(2), 208-228. http://www.envplan.com/abstract.cgi?id=c13192j

[xxiv] Cairney, P. (2019). Understanding public policy: Theories and issues, Palgrave Macmillan, Basingstoke, England. https://www.bloomsbury.com/uk/understanding-public-policy-9781350311978

[xxv] Persson, Å., Runhaar, H., Karlsson-Vinkhuyzen, S., Mullally, G., Russel, D. and Widmer, A. (2018). Editorial: Environmental Policy Integration: Taking stock of policy practice in different contexts, *Environmental Science & Policy*, 85, 113-115. https://doi.org/10.1016/j.envsci.2018.03.029

[xxvi] Abson, D. J., Fischer, J., Leventon, J., Newig, J., Schomerus, T., Vilsmaier, U., von Wehrden, H., Abernethy, P., Ives, C. D., Jager, N. W. and Lang, D. J. (2017). Leverage points for sustainability transformation, Ambio, 46(1), 30-39. http://dx.doi.org/10.1007/s13280-016-0800-y

[xxvii] Schaffer, L. M., Oehl, B. and Bernauer, T. (2022). Are policymakers responsive to public demand in climate politics?, Journal of Public Policy, 42(1), 136-164. https://doi.org/10.1017/S0143814X21000088

[xxviii] Swinkels, M. (2020). How ideas matter in public policy: a review of concepts, mechanisms, and methods, International Review of Public Policy, 2(2: 3), 281-316. https://doi.org/10.4000/irpp.1343