8th February 2022

To whom it may concern,

Natural Capital Ireland (NCI) welcomes the opportunity to input into the Public Consultation on Carbon Budgets. NCI is a not-for-profit organisation leading the national conversation on natural capital (view our website here). We are a group of organisations and individuals from academia and public, private and NGO sectors interested in the development and application of the natural capital agenda in Ireland.

NCI's vision is for an Ireland in which natural capital and ecosystem goods and services are valued, protected and restored. Our mission is to help to value, protect and restore Ireland's natural capital and ecosystem services. We will do this by supporting the adoption of natural capital concepts in public policy and corporate strategy, promoting informed public and private sector decision-making and assisting in the establishment of a national natural capital accounting standard as required by the EU [see below].

Natural capital approaches, and natural capital accounting specifically, present a means to support policy and decision-making with a much wider range of analysis/data than that offered by conventional approaches, because it builds in the fullest possible range of environmental – and cultural – costs and benefits in the assessment of any policy. It is also valuable because it can be used continuously to support and monitor the maintenance of ongoing processes relating to carbon budgets.

The main aim of our submission is to inform on how valuable the natural capital approach would be for policy relating to carbon budgets.

Why natural capital?

The topic of natural capital is growing in importance at the European level and nationally:

- In late 2019, the European Green Deal was announced, which states that "*all EU policies should contribute to preserving and restoring Europe's natural capital*". In June 2020, the EU published its new Biodiversity Strategy, which states that by 2050, "*the EU's natural capital will be protected, valued and appropriately restored*". Further, the Strategy sets a target to bring at least 10% of agricultural land under management for biodiversity.

- The economic benefits delivered by natural capital remain very undervalued and underrepresented in government policy. Properly accounting for natural capital can help make these values visible, revealing Ireland's hidden wealth, and the hitherto invisible factors that impoverish us. Natural capital concepts are already found in a range of flagship national policies, including the National Planning Framework, the National Biodiversity Action Plan

2017-2021, the National Adaptation Framework, and Heritage Ireland 2030 – but much more can be done to embed natural capital thinking in decision making. The 4th National Biodiversity Action Plan 2022-2026 is currently being drafted and it is anticipated that the natural capital approach and natural capital accounting will be incorporated into the Plan, in line with EU-wide adoption of the UN System of Environmental Economic Accounting (SEEA) (information on the SEEA in the next section), and proposed changes to the EU Regulation on Environmental Economic Accounts.

- The recent World Economic Forum's Global Risks Report (2022), states that the top three most severe global risks are climate inaction, extreme weather, and biodiversity loss; all of which are inter-related risks that compound each other. These risks are a direct threat to our natural capital.

How can the natural capital agenda support the Department's Public Consultation on Carbon Budgets?

In order to enhance our natural capital, we must first understand the extent and condition of existing natural assets. In other words, we must establish a baseline upon which targets for improvement can be set.

NCI is a partner on the pioneering EPA-funded INCASE project, which is the first project to apply Natural Capital Accounting principles to catchments in Ireland. Natural Capital Accounting reports across four main sets of ecosystem accounts – extent, condition, services and benefits - and presents a standardised platform to collate information and regularly report on progress in relation to climate actions, biodiversity conservation and restoration, protection of waterbodies, and general good environmental practices (as identified in cross sectoral areas such as agriculture, energy, environment, forestry, nature, marine, planning and water supply/use policies).

The INCASE project is piloting this "natural capital accounting" approach in four river catchments across Ireland. The prevailing natural capital accounting approach at country level is the System of Environmental Economic Accounting (SEEA), which has been adopted by the UN and is in use by about 90 countries worldwide. The SEEA is a guide to integrating economic, environmental and social data into a single, coherent framework for holistic decision-making. There is a range of articles, blogs and supporting videos available from the INCASE website here. Evidence supporting the approach has been gathered through the INCASE project and four articles published that are relevant to this Carbon Budgets Consultation in terms of the natural capital approach and natural capital accounting are listed below:

1.1. Farrell C, Aronson J, Daily G, Hein L, Obst C, Woodworth P, Stout J (2021) Natural capital approaches: shifting the UN Decade on Ecosystem Restoration from aspiration to reality. *Restoration Ecology* https://doi.org/10.1111/rec.13613 (accessed 2nd February 2022).

This article highlights a number of initiatives globally that are applying natural capital approaches for national accounting, land use, business support and health and wellbeing.

1.2. Farrell CA, Coleman L, Kelly-Quinn M, Obst CG, Eigenraam M, Norton D, O`Donoghue C, Kinsella S, Delargy O, Stout JC (2021) Applying the System of Environmental Economic Accounting-Ecosystem Accounting (SEEA-EA) framework at catchment scale to develop ecosystem extent and

condition accounts. *One Ecosystem* 6: e65582. https://doi.org/10.3897/oneeco.6.e65582 (accessed 4 February 2022).

This article outlines the approach to gathering data to develop extent (developing an asset register) and ecosystem condition accounts at catchment scale.

1.3. Farrell CA, Coleman L, Norton D, Kelly-Quinn M, Obst C, Eigenraam M, O'Donoghue C, Kinsella S, Smith F, Sheehy I, Stout JC (2021) Developing peatland ecosystem accounts to guide targets for restoration. *One Ecosystem* 6: e76838. https://doi.org/10.3897/oneeco.6.e76838 (accessed 4 February 2022).

This article outlines the approach to developing peatland extent and condition accounts at catchment scale to prioritise areas for restoration.

1.4. Farrell CA, Stout JC (2020) Irish Natural Capital Accounting for Sustainable Environments: Stage 1 Feasibility Report. www.incaseproject.com URL: https://www.epa.ie/publications/research/biodiversity/research-322.php (accessed 4 February 2022).

This report presents a good overview of the UN System of Environmental Economic Accounting Ecosystem Accounting and potential applications in the Irish context.

The INCASE project pilot can be built upon to develop a national strategy for the management and enhancement of Ireland's natural capital. This would closely align with current government initiatives such as the National Land Use Review, the development of a National Soil Strategy, revision of the National Biodiversity Action Plan, and expansion of Ireland's Marine Protected Areas network; and Department priorities such as sustainable, balanced development and sustainable management of water resources from source to sea under the EU Water Framework Directive.

There are further relevant publications listed in Appendix 1 of this document relating to carbon budgets for peatlands and peaty soils, with details briefly outlined below:

- Renou-Wilson *et al.* 2019 - Carbon budgets for two rewetted peatlands
- Renou-Wilson *et al.* 2016 - Carbon budgets for grassland on peaty soils
- Wilson *et al.* 2016 - Carbon budget for a rewetted industrial peatland
- Wilson *et al.* 2015 - CO_2 emission factors for domestic and industrial peat extraction

Natural capital is highly relevant to many of the areas under the Department's remit, including planning and sustainable development, the National Parks and Wildlife Service, water management, emergency planning, the gathering of weather and climate information. Given the wide range of policy areas covered by the Department, a natural capital framing could provide the holistic, whole-of-government approach that would strengthen policies and avoid duplication across policy areas.

The NCI calls on the Department to embed the natural capital approach as a core decision-making tool across government, and as part of broader cross-departmental co-ordination on the conservation and sustainable use of biodiversity. This could include the establishment of an Irish equivalent to the UK's Natural Capital Committee, or inclusion of natural capital approaches in the remit of a cross-departmental working group on biodiversity. This cross-departmental working group could operate in the same way as the Senior Officials Group on SDGs, to deliver a national register of natural capital assets.

The UK government established their Natural Capital Committee (NCC) in 2012. The Committee of experts provides advice to all government departments on the sustainable use of natural capital. The NCC has provided advice to the UK government on a range of policy areas including:

- Advice on how to use natural capital to appraise and evaluate policies, projects and programmes (HM Treasury's "Green Book");
- Advice on establishing an environmental baseline census of natural capital stocks;
- Advice on marine management;
- Advice on improving cost benefit analysis of projects that affect the natural environment.

The NCI believes that the establishment of a similar Natural Capital advisory group would support the Department in balancing environmental, social and economic considerations in its decision-making.

We hope you find the points above offer opportunities to expand, deepen and co-ordinate policies across the whole range of economic, environmental, social and cultural values, and we look forward to working closely with your Department to deliver on carbon budgets over the coming years. Please contact us for clarifications, and further information at info@naturalcapitalireland.com.

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APPENDIX 1

ADDITIONAL RELEVANT PUBLICATIONS:

Renou-Wilson, F., Byrne, K. A., Flynn, R., Premrov, A., Riondato, E., Saunders, M., Walz, K. & Wilson, D. (2022). *Peatland properties influencing greenhouse gas emissions and removal (AUGER Project). EPA Research Report No. 401* Johnstown Castle, Ireland. https://www.epa.ie/publications/research/climate-change/research-401.php (accessed 4 February 2022).

Renou-Wilson, F., Moser, G., Fallon, D., Farrell, C. A., Müller, C., & Wilson, D. (2019). Rewetting degraded peatlands for climate and biodiversity benefits: Results from two raised bogs. *Ecological Engineering, 127*, 547-560. doi:https://doi.org/10.1016/j.ecoleng.2018.02.014 (accessed 7 February 2022).

Renou-Wilson, F., Müller, C., Moser, G., & Wilson, D. (2016). To graze or not to graze? Four years GHG balances and vegetation composition from a drained and a rewetted organic soil under grassland. *Agriculture, Ecosystem and the Environment, 222*, 156-170. doi:http://dx.doi.org/10.1016/j.agee.2016.02.011 (accessed 7 February 2022).

Wilson, D., Dixon, S. D., Artz, R. R. E., Smith, T. E. L., Evans, C. D., Owen, H. J. F., Archer, E. & Renou-Wilson, F. (2015). Derivation of greenhouse gas emission factors for peatlands managed for extraction in the Republic of Ireland and the United Kingdom. *Biogeosciences, 12*(18), 5291-5308. https://bg.copernicus.org/articles/12/5291/2015/ (accessed 7 February 2022.

Wilson, D., Farrell, C., Fallon, D., Moser, G., Muller, C., & Renou-Wilson, F. (2016). Multi-year greenhouse gas balances at a rewetted temperate peatland. *Global Change Biology, 22*, 4080-4095, https://onlinelibrary.wiley.com/doi/abs/10.1111/gcb.13325 (accessed 7 February 2022).