

## The Environment, Climate Change and Land Reform Committee

### Green recovery

#### Submission from the James Hutton Institute

**Do the principles of sustainable development (as set out in the annexe), and those for a resilient recovery, as proposed by the UK Committee on Climate Change, provide a comprehensive framework for guiding an effective green recovery in Scotland?**

We support the principles proposed for sustainable development and a resilient recovery. They are comprehensive and connect Scotland to the international effort. The 6 principles for a resilient recovery reflect those of International Labour Organisation (2015), and so also consistent with the requirements of the Scottish Government of the [Just Transition Commission](#).

The Sustainable Development principle of ‘Promoting good governance’ may have more power if revised to ‘Demonstrating good governance’. This would be consistent with public policies set out in the Scottish Government’s “[Consultation on Environmental Principles and Governance in Scotland](#)” (Scottish Government, 2019), and their guidance on Good Governance ([Scottish Government, 2016](#)). We strongly support the importance attached to ‘using sound science responsibly’.

**What are the key barriers to delivering a green recovery (within your sector and / or community)?**

Barriers to delivering a green recovery exist for:

- **the environment, food and agriculture sector(s):** Inertia, conservatism and polarisation between land sectors around land use and land management is a barrier to change (e.g. trees vs sheep; livestock protein vs plant protein; a focus on maximising yield over wider public benefit). Transitioning to alternative land uses and adopting new technologies will also require financial support directed at change. A lack of consumer confidence will have impacts throughout the agri-food supply chains, leading to caution amongst businesses to retain employees and inhibiting the investment needed for a green recovery. Finally, there is a lack of appreciation by some actors in the environment, food and agriculture sectors of their critical role in securing the transition to sustainable farming systems ([Landert et al., 2019](#); [H2020 UNISECO](#)) and in supporting the Scottish Government policy target of net zero greenhouse gas emissions.
- **the scientific community:** More translational approaches are needed if we are to connect science to the needs of the land use sectors and generate rapid impact. In addition, more “action-based” research investigating ambitious interventions in land use or management is better suited to the urgency of the situation than conventional science approaches. Increased funding is required to deliver the knowledge and understanding essential for supporting the land use sectors in the changes that will be required and thus achieving Scottish Government aims for a green recovery (see response under Question 4). This includes funding to facilitate the open exchange of data and information within the scientific community and support for innovation and translational centres.

- **civic society:** Processes for applying for funding support are often complex (e.g. Climate Challenge Fund, LEADER), restricting applications to communities which have access to relevant expertise (Slee *et al.*, 2020); There is a need to further engage the public in decisions relating to land use and the green recovery including the use of new plant breeding technologies, and the trade-offs inherent between different land uses and land management practices. Citizen juries could be used more in this area to ensure informed deliberation rather than public attitude surveys and open consultations.

### **What key policies, actions and immediate priorities are needed to deliver a green recovery (within your sector and / or community)?**

The Scottish Government should focus funding for a green recovery on activities which deliver both high economic multiplier effects and positive climate impacts (e.g. investment in education and training, natural capital investment, and clean Research and Development). This is in line with the recommendations of the [Advisory Group on Economic Recovery](#) (Scottish Government, 2020), and the scientific and economic analysis of Hepburn *et al.* (2020) in "[Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?](#)".

In particular, the Scottish Government should use the green recovery as means of supporting transformational adaptation in the land use sectors. Scotland is in a unique position to deliver, for example, large scale restoration and expansion of natural environments for multiple benefits (e.g. carbon sequestration and storage, enhance biodiversity, landscapes for human health and well-being), and innovations in food production such as vertical indoor farming (e.g. to flip our derelict land into food producing land as identified in the £1bn Challenge Conservation Finance Road Map see [https://scottishwildlifetrust.org.uk/wp-content/uploads/2020/05/202001\\_1-Billion-Challenge-Document\\_FINAL.pdf](https://scottishwildlifetrust.org.uk/wp-content/uploads/2020/05/202001_1-Billion-Challenge-Document_FINAL.pdf)).

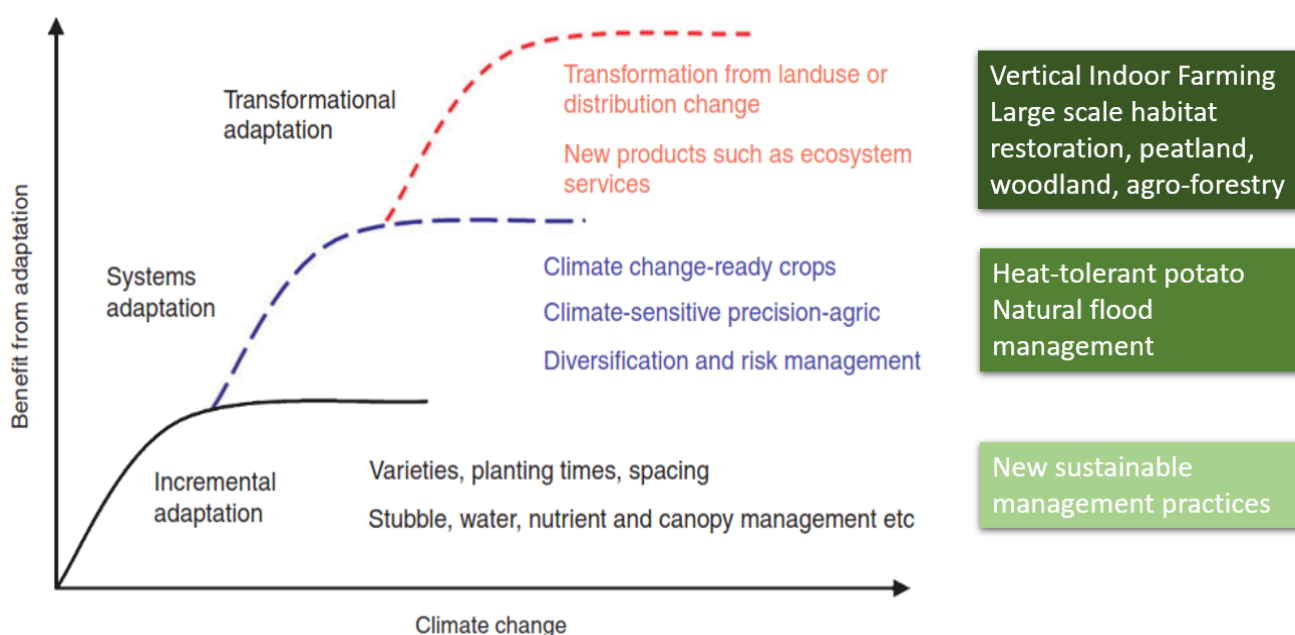
The Scottish research and innovation 'ecosystem' is ideally placed to deliver a Scottish equivalent of Horizon Europe Pillar 3 (Open Innovation). The missions of Horizon Europe have close alignment those of the Scottish Government (e.g. Mission - Adaption to climate change, including societal transformation; [Just Transition Commission](#); Healthy oceans and natural waters – [Scotland as a HydroNation](#); Carbon-neutral and smart cities – [Climate Ready Scotland, Climate Change Adaptation Programme 2019 to 2024](#); and Soil health for sustainable food – [Scottish Government Strategic Research Programme](#), and Scottish Soil Framework). These themes are of direct relevance to a green recovery (Hepburn *et al.*, 2020). The aim should be to build networks 'of interactions through which information, knowledge and talent flow in systems of sustained value co-creation'.

### **How should the 2021/22 Budget support a green and sustainable recovery and avoid locking in carbon; and what funding is needed in the ECCLR portfolio to deliver a green and sustainable recovery?**

The Scottish Government's Programme for Government notes that "Businesses that innovate are central to achieving our economic and social ambitions as they enable growth and create high quality jobs", and is "focused on hitting our target of doubling business investment in research and development (R&D) to £1.75 billion by 2025." The James Hutton Institute and its SEFARI partners within the ECCLR portfolio contribute to achieving those aims.

For example, over the last 7 years, the James Hutton Institute has attracted £57m of EU and UKRI funding as well as a commitment of £35m from the UK government to support projects within the Tay City Deal. An independent evaluation of the economic impact of the Institute demonstrated the level of return on investment that can be achieved. For 2015/16, the Institute generated £448.9 million gross value added (GVA) and supported approximately 3,280 jobs worldwide, including £211.8 million GVA and approximately 2,130 jobs in Scotland. For each £1 the James Hutton Institute received from the Scottish Government it generated the equivalent of £12.75 in economic benefit across the UK. Therefore, it seems incongruous that the funding of the research Institutes within the ECCLR portfolio have been on a downward trajectory in real terms since 2011.

The 2021/22 budget should reflect the recommendations of Hepburn *et al.* (2020) in response to COVID-19, and of the [Report of the Advisory Group on Economic Recovery](#) (Scottish Government, 2020), which provide evidence of the benefits of directing “investment towards a productive and balanced portfolio of sustainable physical capital, human capital, social capital, intangible capital, and natural capital assets.” (Hepburn *et al.*, 2020). Research funds need to be directed at the science that can deliver truly transformational and systems adaptation rather than focussing on just incremental adaptations.



**Figure 1.** Transformational change Levels of adaptation (modified from Howden *et al.*, 2010).

Specific examples of areas for funding include:

- Investment in Scotland’s natural capital, supporting the design and implementation of carbon positive businesses and multi-functional land use, such as that demonstrated at [Glensaugh Carbon Positive Farm](#), and exploring innovative uses of resources to raise co-financing, as set out by Vivid Economics and Environmental Finance (2018).
- Funding Scottish Open Science and Innovation Campuses. Investment in science and innovation will inform investment in natural capital (e.g. designed to reverse environmental degradation), and the provision of universal, quality, essential services (e.g. high-quality education and training). The importance of Open Science has been

highlighted by the COVID 19 pandemic. As explained in the OECD report on [Why open science is critical to combatting COVID-19](#), Open Science requires support for research infrastructures, human and institutional capabilities, and mechanisms for sharing data across borders and between the public and private sectors, civil society, and researchers. Such campuses would place Scotland at the forefront of Open Science, building upon investments through the City and Region Growth Deals. The James Hutton Institute has led two successful infra-structure bids totalling £62m for the [International Barley Hub](#), and Advanced Plant Growth Centre; Tayside Region. More funding is needed to complete the campus at Invergowrie and upgrade the site at Craigiebuckler, Aberdeen. Both sites are attracting private and public organisations to co-locate with the Institute, and to build collaborative approaches that take advantage of resources and expertise that are unique in Scotland.

The James Hutton Institute ([www.hutton.ac.uk](http://www.hutton.ac.uk)) is one of the Scottish Environment, Food and Agriculture Research Institutes (SEFARI; [sefari.scot](http://sefari.scot)) commissioned to deliver the Scottish Government funded Strategic Research Portfolio.

## References

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