Infrastructure
Commission
for Scotland

Investing in Nature Report

SCOTISH FUTURES GROUP

INVESTING IN NATURE-RICH INFRASTRUCTURE FOR A NET-ZERO SCOTLAND

7th October 2019, Scottish Enterprise, Edinburgh.

INTRODUCTION

This workshop, entitled *Investing in infrastructure for a nature-rich, net-zero future Scotland*, was hosted by SNH and sponsored by the Infrastructure Commission for Scotland. It formed part of the Infrastructure Commission's current consultation exercise, and this meeting note is an input to that process.

Ewan Mearns (SE) welcomed attendees and introduced Tony Rose, Director of the Infrastructure Commission. Tony explained the role of the Commission and provided an overview of its consultation process.

The format of the session was a little different to other Scottish Futures Group meetings. Three speakers provided perspectives on different aspects of investing in nature-rich infrastructure, followed by small group discussions using different futures tools.

ALAN HAMPSON (SNH) – WHY IS IT IS IMPORTANT TO INVEST IN NATURE?

https://infrastructurecommission.scot/storage/204/Alan-Hampson%2C-2019%2C-Investing-in-nature.pdf

Why is it important to invest in nature? In terms of the climate emergency, there is a triple challenge. The IPCC report has spurred Scotland to commit to net zero by 2045 and one of the ways to address this challenge is through recognising the value role played by nature. However, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report, highlighting the five drivers of biodiversity, indicates nature is in its worst-ever state – and deteriorating rapidly.

Another issue is the medium-term financial outlook for private investment which is poor. Previously, there have been a lot of public sector interventions to address market failures or distortions but there's little sign this is going to happen. Even if there are local interventions, the scale of the issue is beyond what governments are able to do. The challenge is for all of us as individuals, which will depend on substantial changes in behaviour. On a more positive note, there is an increasing awareness from large-scale investors about backing green/blue projects which support nature.

Fundamentally, we need to present nature in a different way so that it is an integral part of an infrastructure solution. Nature will help society mitigate the effects of climate change and also help us adapt to it as well. Examples of this are carbon capture from the soil and the sea which is a carbon sink, and nature-rich infrastructure that help green our towns and cities. Plants have a huge contribution to health and well-being, and in flood management in the way our catchment areas are managed. We require increasingly efficient and sustainable forestry and fish aquaculture. Looking after these natural resources and caring for it through good stewardship will guarantee the ongoing supply of goods and services.

Economist Dieter Helm is at forefront as chair of the Natural Capital Commission, understanding natural capital assets and liabilities that can support the net zero transition. For too long, nature has been seen as a free resource that we can draw from or waste. Natural capital is not about

monetising nature but recognising the value of the benefits we get from nature. However, the appraisal of infrastructure projects is largely yet to account for the value of natural capital. SNH has been working on ways of narrowing the gap with investors, using the evidence-base of nature's benefits.

Helm's three principles for natural capital are: public money for public good, polluters pay, and net environmental gain. If there is loss to nature, then that has to be compensated and given the poor state that nature is in that needs to be an over-compensation. These are the key principles to integrate green, blue and grey.

There is more talk of 'blended-finance' where public money goes into private-sector projects and therefore nature should be a central part of this. Size matters, institutional investors are looking for larger projects. For example, the £10 million in peatland restoration is viewed as small-scale for some investors who are talking about £500-£600 million. Peatland restoration brings better water quality, acts as carbon storage and helps sustain animals and natural species.

Natural capital needs to be geographically specific, which helps with the 'place-based' approach, and part of an integrated model within a locality, rather than disparate systems. This poses challenges in terms of collaboration and different agendas of various infrastructure partners.

People like to invest in new things but we need to carry on investing in existing successful projects. We require different approaches and different kinds of appraisals to ensure that nature is central to all type of future infrastructure. Greening finance is also looking at carbon accounts and offsetting green against carbon.

The Scottish Government's Economic Environmental Leaders Group is examining how the value of nature can be properly assessed for 'investable proposals'.

One exemplar is the Greater Manchester Natural Capital Investment Plan, looking at natural capital assets and the way those assets will deliver benefits. The Landscape Enterprise Network, part of the Nestle corporation, which consumes 8% of all milk consumed in Scotland, has created project involving suppliers across the value chain.

SELECTION OF VIEWS FROM THE BREAK-OUT GROUPS

Participants used the three horizon model to help identify a high-level timeline for the implementation of nature-rich infrastructure. Horizon 1 represents the status quo with a world in crisis, Horizon 3 represents a net-zero Scotland in 2045 and Horizon 2 therefore represents the transition that bridges business as usual and the future state.

It helped attendees address several questions including: Hhow close are we to our vision for Horizon 3? What are the priorities to achieving the vision? What are the changes that are within our control? Which aren't? What are the enablers and barriers?

Among the topics highlighted by the breakout groups were the importance of:

- Green chemistry
- Adopting more interventionist approaches to driving the circular economy
- Accelerating carbon offset schemes
- Using the Sustainable Development Goals to create a common language
- Aligning strategies with investors' needs/expectations.

Nature and biodiversity is in crisis globally. Bees in California used to pollinate almonds are dying because of pesticides. Intensive farming is destroying habitat and soil quality. Chemicals that are harmful are leeching into land. 50% of pollution comes from the delivery of pharmaceuticals industry. There is a requirement for more **green chemistry** to ensure biodiversity.

In designing infrastructure we must design-out pollution. There is increasing discussion about the **circular economy** but we need to have a mind-set which starts now. To speed up the circular economy we need to use more stringent regulation, market pricing and other incentives to reward responsible behaviour. We must develop accounting and pricing mechanisms so that the lifecycle cost of materials are taken into account with producers taking responsibility for their use of materials across the lifecycle.

Developing **carbon offset schemes** to generate investment in natural infrastructure could help us reach Horizon 3. Microsoft already issues credits to benefit farmers; Wessex Water operates an offset scheme. Would a carbon trading scheme work? If so, would this count carbon emitted in China for imported goods? We need to adopt a systemic approach. While there are difficulties in introducing transformative changes in the short-term, if we don't introduce disruptive change then Horizon 1 will prevail. Moreover, we also need honest conversations to address the challenges. We need to dramatically change human behaviours with a primary focus on nature.

The **Sustainable Development Goals** (SDGs) have helped to provide a useful, common framework which can facilitate collaboration – it provides a shared language and takes a systems approach which can be useful to apply to investment questions and challenges. Could the SDG model be a useful one to explore?

The rapid growth of on and offshore wind provides a good example: good alignment of stakeholders, the Scottish Government took the lead, market mechanisms were created, and the planning framework supported the sites. This was seen as good investment and with a value for society.

In conclusion, there is a need to **align strategies and policy frameworks to invest in natural capital**, utilise carbon reporting and pricing, and drive disruptive technologies and change in the whole economy in terms of production and consumption. Physical, human and natural infrastructure needs to work together to reach Horizon 3, and enable fairness and greater participation in wider society.

DR JOHN ROGERS (SCOTTISH INTERNATIONAL ENVIRONMENT CENTRE) – LEADERSHIP FOR INVESTING IN NATURE-BASED SOLUTIONS

https://infrastructurecommission.scot/storage/203/John-Rogers%2C-2019%2C-Research-%26-Innovation-Services.pdf

Dr John Rogers, Executive Director of Research & Innovation Services at the University of Stirling, talked about the role of leadership in the context of the Scottish International Environment Centre. The SIEC aims to transform the relationship between business and environmental management to protect and enhance Scotland's natural resources. SIEC seeks to address the challenges faced by producers, consumers, retailers, regulators and policy makers. "*It is absolutely not about more science telling us we are destroying the planet. It's about a place where we can use research from across the spectrum, including social science, to have a mature and take the conflict out of discussions between sectors, communities and citizens*.''

The University of Stirling hosts the Scottish Aquaculture Innovation Centre which is examining the farmed salmon industry, one of the UK's premium, highest-value food and drink export, and how it can improve its environmental track record.

He explained the University's involvement in the Stirling-Clackmannanshire City Region Deal Programme, the Argyll Rural Growth Deal as well as the Falkirk Investment Zone Growth Deal. He asked what is the role of infrastructure in helping to address multiple deprivation? He pointed to the Clackmannanshire Bridge exacerbating the problem of a divided community, enabling the better-off to drive into Edinburgh for work and remain disengaged from the rest of the local community.

The SIEC is demonstrating 'place-based leadership', locating at a site off the main campus on the River Forth waterfront and in an area of social deprivation. This is about leading by example, so instead of building an 'iconic' concrete and chrome building on the campus the SIEC will be housed in an environmentally sustainable structure that is cost-effective across its full life-cycle.

On future flooding protection, land management and mitigation, he used the example of the Forth Estuary, which is fed from rainfall in the Trossachs and Highland Perthshire. He highlighted the £152 million Grangemouth Flood Protection Plan which requires 25km of concrete and steel to protect 3,000 homes, yet natural flood management was discounted early in the appraisal. Why was this? The RSPB Inner Forth Futurescope survey in 2014 had previously highlighted that the natural floodplains upstream could be used for flood mitigation and so a nature-based solution already existed.

In the Netherlands the 'Room for the River' vision uses airborne and satellite monitors to provide real-time data to support smarter flood management systems. A similar full-system scale approach will be deployed by SIEC to cover Scotland. This will strengthen business and community resilience and such expertise can exported to other places. In talking about 'bright spots', he stated the SIEC was 'designed to be a perpetual bright spot' and looking for partners to work with.

SELECTION OF VIEWS FROM THE BREAK-OUT GROUPS

The breakout groups used the 'bright spots' technique to identify exemplars of good practice across Scotland that could form the basis of scaled-up and accelerated infrastructure delivery.

Among the bright spot examples highlighted were:

- the Clyde Gateway Green Grid Innovation District and the Construction Scotland Innovation Centre (CSIC) in Hamilton
- upland land use in some areas
- peatland restoration is an example of where investment and engagement with communities has worked. Clear codes were established to calculate and monitor carbon content. Peatland loss and associated carbon release is a key challenge given the amount of carbon stored in peatland
- the reinstating of natural riverbanks along the River Tweed
- Scottish Canals and Scottish Water are using canals to channel storm water, reducing flood risk and enabling more housing to be built in targeted sites
- in Fife, the River Leven catchment is home to a range of projects that are helping to reconnect industrial communities such as Methil to the river
- Climate Ready Clyde is an existing initiative that is acting as an aggregator for relevant projects
- the Scottish National Investment Bank or the private sector could also act as aggregators.

A recurring theme was there is still too much silo-thinking and there must be transparency and honesty about the hard decisions that must be made to protect nature and the planet. Collaboration

is key – early on in any process – so that the relevant parties and investors are part of projects from the start.

The breakout groups discussed how investable propositions can best be packaged to appeal to investors:

- we should start by connecting the infrastructure assets owned by public sector institutions across Scotland such as the Forestry Commission, local councils and NHS. If institutional investors and funds are only interested in packaged projects valued at over £500 million, there is a risk that smaller projects will be unattractive. Increasingly pension schemes are being driven by regulatory and public pressure to adopt ESG principles (environmental, social, governance).
- we should develop a 'menu' of investable projects that conform to standardised models/approaches so there's a degree of consistency of scope, scale and financial returns.
- the community wealth-building approach pioneered by Preston City Council provides a fantastic model where local anchor institutions (the Council, NHS, College, University, police etc) have pooled their pension and other assets to invest in projects that benefit the Preston and Lancashire economy.

MIKE MCCUDDEN (PROJECT HEATHER) – REFLECTIONS FROM AN INVESTMENT COMMUNITY PERSPECTIVE

Mike McCudden, of Project Heather, reminded attendees that climate change is a global problem and requires massive international action. Project Heather is building a new, 'ethical' stock market for Scotland supporting the growth of ethical and sustainable infrastructure and businesses. Scotland will be the host for the first regulated 'impact' exchange. Project Heather is looking at impact measurements to interest a global audience of investors. Social and environmental measures will increasingly become key to future investment decision-making. It is about full disclosure, transparency, and working together.

Mike said there is a massive opportunity for Scotland to tap into global private investors and pension funds who are increasingly interested in green solutions. His organisation is working with the United Nations on its Sustainable Development Goals, using the EU taxonomy on green investment.

Mike highlighted that while there is a willingness, there is still insufficient collaboration across Scotland that connects investors to investable nature-rich infrastructure projects. "*We are on the verge of a new Enlightenment because we are up against it. But we need to solve these problems tomorrow, not in 20 years' time*".