BEYOND NET ZERO – SCOTLAND'S RESPONSE TO COP

Note of proceedings

January 2025

As a coalition of 13 of Scotland's universities launched in January 2024, Scotland Beyond Net Zero aims to accelerate and catalyse high-impact research on climate, natural systems and net zero. We are focussed on mobilising research that can support ambitious action across policy, business & industry, charity and research communities. We focus on six priority research areas – the built environment, food, finance, energy, natural systems and transport.

The 16th Conference of the Parties (COP16) to the United Nations Convention on Biological Diversity (CBD) was held in Cali, Colombia from October 21 to November 1, 2024. Shortly afterwards, in November 2024, the 29th UN Climate Change Conference (COP29) was held in Baku, Azerbaijan. Scotland Beyond Net Zero hosted an event at COP29 in Baku, and a follow-up panel discussion and reception in Edinburgh in December 2024, entitled *Scotland's Response to COP* to share insights from attendees at each conference, and consider what Scotland's response to the conferences could be.

1. Event aim and scope

Scotland's Response to COP was held in the Edinburgh Climate Change Institute on 10th December 2024. The goal of the event was to develop a co-ordinated response from Scottish Universities and other stakeholders to both the climate and nature COPs. This goal was selected for the following reasons:

- Several universities across our SBNZ academic membership had sent delegates to either or both conferences, and we wanted to develop opportunities for collaboration across the SBNZ network.
- We wanted to develop conversations and an agenda which brought the aims of both conferences closer together, and consider the close relationships (and tensions) between biodiversity and natural systems protection, and GHG emission reduction agendas.

- Having recently awarded several SBNZ Seed Fund projects in areas relevant to COP themes of energy, climate finance and natural systems, we wanted to showcase these research projects.

The event was designed to facilitate discussion on these aspects. We held two panels, one for each COP, comprising university COP delegates and seed fund awardees from across the SBNZ membership. We then held a plenary session which encouraged contributions from the audience on the question of: What are the implications for Scotland of the biodiversity and climate COPs, and what could the response be from Scotland's research and innovation communities? The event was intended to be one step in a broader programme of work across SBNZ members.

2. Event participants

Around 100 people attended the event. This was made up of approximately 10% from local and national government and associated agencies, 10% from business and charities, and the remaining 70% from universities from across the Scotland Beyond Net Zero membership.

The speakers included:

Introduction and formal welcome

- Dr Kate Symons, Scotland Beyond Net Zero
- Prof. Lindsay Jaacks, University of Edinburgh

Panel 1 - Biodiversity COP16

- Elouise Mayall, University of Aberdeen
- Dr Katherine Simpson, University of Glasgow
- Dr Andrew Sudamant, University of Edinburgh
- Dr Alfy Gathorne-Hardy, University of Edinburgh
- Panel chaired by Prof, David Burslem, University of Aberdeen

Panel 2 - Climate COP29

- Prof. Mercedes Maroto-Valer, Heriot-Watt University
- Dr Nandan Mukherjee, University of Dundee

- Dr Karishma Ansaram, University of Edinburgh
- Dr Alejandro Moreno-Rangel, University of Strathclyde

Panel chaired by Prof. Pete Higgins, University of Edinburgh

Closing discussion

Prof. Lindsay Jaacks, University of Edinburgh

Prof. Jaime Toney, University of Glasgow

Drinks reception welcome

Prof. Christina Boswell, University of Edinburgh

3. Summary of panels

This discussion summary is organised by key themes rather than by panel.

Major gaps in climate and nature finance

- Mobilising finance to support climate and biodiversity action was a central theme at both COP16 and COP28.
- Both panels identified major gaps in climate and biodiversity finance. There is a £200 billion global gap in finance to reach 2025 goals for biodiversity and nature, and a £20 billion finance gap in Scotland.
- Regarding climate finance, the cost of climate change is estimated at $569 billion annually, which translates to a $1,400 financial burden per person worldwide. Yet the financial support pledged to address these challenges falls short. Only $83.3 billion of the $100 billion annually by 2020 pledged by developed countries has actually been mobilised.
- There is a lack transparency in finance mechanisms, and a lack of ability to get money moving 'on the ground'. Improving the capacity of countries to access and spend climate finance on mitigation and adaptation measures will help bridge the gap. It is not all about pledging large numbers, there are very practical challenges in spending the money. This can be seen as a cause for optimism as these capacity issues can be relatively straightforward to address.

- Irrespective of the new US administration, there are a series of initiatives already in place and there are positive messages of progress that have to be brought out – for example, articles have been passed to introduce new mechanisms for climate finance.
- Expert opinion is needed from academics – COP training for academics would be helpful to contribute to climate finance debates.
- Loss and damage funding needs to be substantially increased.

Natural capital markets

- Finance was a key theme at both COPs. However, COP16 delegates failed to reach consensus on nature finance, so we don't currently know how natural capital markets and other finance mechanisms will help meet the finance gaps in biodiversity conservation and nature restoration.
- Natural capital markets (NCM) are currently an active area of policy and research. NMC's based on a mandatory uplift of 10% biodiversity work may come to Scotland. These are driven by private interest, so there is a need to engage with multi-level stakeholders to develop a system based on principles of transparency, credibility, fairness and effectiveness.
- There is policy work to do to establish and enforce a robust basis for nature finance and NCM's which can support positive outcomes for nature, people and climate. One such gap is applying the lessons learned from mechanisms around land-based nature into marine environments.
- Scotland is exploring nature finance mechanisms in its forthcoming Natural Environment Bill. It has also published its natural capital market framework based on principles for responsible investment. There is a major policy and research opportunity in developing these policies and principles specifically for marine environments. There is ongoing research at Glasgow and St Andrews in this area. NatureScot suggested they are already working on standardised metrics for marine biodiversity, in the context of a shifting baseline.
- Events that take place around pre and post COP need to address how the financial mechanisms around natural capital markets work, and reframe the debate away from charitable giving or aid towards making a broader business case.

Highlighting the co-benefits of biodiversity and climate action as a way to raise finance and scale action

- The benefits of biodiversity and climate are often based on narrow economic measures and other metrics – broader co-benefits are not often considered in policy decision-making or business cases.
- For example, the social benefits of actions are about four times larger than the financial savings plus the carbon savings, but decisions still seem to be being made around narrow business case arguments. This applies in in treasury logic but also individual decision-making.
- The panel suggested there was a need to make the benefits of climate and biodiversity investment more visible to help scale action and attract investment. This might help meet the gap in both biodiversity and climate investment identified by both panels.
- However, although the social benefits of climate and biodiversity actions are very large, the question then becomes why at a societal level and an individual level, are we not realising these actions?
- As noted, climate finance is currently in the billions of dollars and needs to scale to the trillions of dollars. One way to help grow confidence in raising finance, and thereby scale climate action is by demonstrating co-benefits.
- Demonstrating co-benefits can also help scale action at an individual level. For example, heat pumps sometimes have a poor financial case at a household level but generate significant social benefits by making homes warmer and keeping people out of the hospital in the winter. Increasing the scope of analysis of the costs and benefits of climate action to consider social impacts seems to be key to increasing the scale of action.
- This principle applies well to food systems which are complex and can result in broad benefits for natural systems, climate and wellbeing.

Justice and representation in biodiversity and climate COP debates

- Indigenous communities, youth and women are most impacted by biodiversity collapse, however their voices are not necessarily given weight in biodiversity negotiations. Neater and more effective pathways are required to enable such communities to become involved in multiple negotiations.

- There appeared to be more private (industry) interest at the biodiversity COP than previous conferences – private money can provide resources, but needs to be managed.
- At the same time, businesses themselves play important roles in advancing net zero (for example, businesses and social enterprises are part of SBNZ seed fund projects).
- There is a deep relationship between biodiversity, nature and food production. This can be modelled to understand fairness and loss across multiple communities.
- Initiative like Scotland Beyond Net Zero can play a role in highlighting research focussed on climate justice, and contributions from arts, humanities and social sciences are particularly good in this area,

4. Q&A summary – what are the key priorities for climate research and innovation in Scotland following Biodiversity COP16 and Climate COP29?

There were a several key themes which emerged from a Q&A session following the panel discussion. At a general level, participants noted the need for far greater scale and urgency on many aspects of climate and nature discussed in the panels. This included:

- Welcoming the acceleration of climate and nature research represented by Scotland Beyond Net Zero, however noting that the network would benefit from more events like this one, and more opportunities for academics, industry and policy to engage.
- Several participants from policy noted that they would like greater emphasis from universities on the research-policy interface.
- Participants from business highlighted that they are already playing roles in research and innovation in many ways, not least via the SBNZ seed fund.

One major theme was **shared priorities related to COP for climate and COP for biodiversity.** The discussion noted the interconnectedness of climate systems and biodiversity and how climate and net-zero activities (in both adaptation and mitigation) need to also simultaneously contribute to nature-positive goals.

This leads to a challenge of aligning policies, goals, funding, and strategies so that they are mutually reinforcing. It is also an opportunity to engage in more research which helps support policies that align climate and biodiversity goals, and **solutions that address both climate change mitigation, adaptation and biodiversity restoration**.

The panels highlighted that biodiversity and climate policies have substantial **co-benefits across social and natural systems** beyond the narrowly economic or carbon reduction benefits which drive policy decisions. There is a major research opportunity to develop ways to make these co-benefits more explicit, and to demonstrate them clearly across different audiences.

Much of the discussion focussed on various aspects of **climate finance**, including the substantial gaps in finance for both nature and biodiversity. The panels focussed on the private sector as one way of meeting these gaps, with natural capital mechanisms. There is therefore a clear opportunity for university research to support policy development for Scotland which can meet the investment challenge while meeting obligations around responsible and ethical investment. Additionally, a clear priority is increased focus on research into **financial frameworks that achieve the dual objective of carbon reduction and biodiversity gain.**

A final theme was the need for research to better describe **positive (rather than apocalyptic) futures**, and the need to more actively bring in the arts & humanities to support this. This relates to an important cross-cutting theme related to **representation in climate debates** and negotiations, with social sciences, arts and humanities able to contribute to increasing the diversity of voices heard, and highlighting the need for justice.

5. Next steps for Scotland Beyond Net Zero

This event was intended to be one point in a broader agenda across Scottish Universities on accelerating high-impact research and innovation on climate across our priority themes. Following this conference, Scotland Beyond Net Zero will be appointing **academic theme leads** who will work across two of our priority themes for 2025 – food systems, and climate finance. These leads will be well-placed to take forward specific research ideas from this session.

Additionally, we will work to develop a greater emphasis on **inter- and cross-disciplinary work** in our research. One way to do this is to further develop our **seed fund** to highlight the importance of arts & humanities, social sciences, and interdisciplinary work.

We will also develop further opportunities for **networking and collaboration** across sectors and across universities.

To stay in touch and hear more about our work as it develops, please visit https://scotland-beyond-net-zero.ac.uk