On Tuesday 21 September 2021, Scotland House Brussels hosted a Road to COP26 event in collaboration with ICLEI Europe, focusing on peatland restoration for climate and environment.

With both COP26 and COP15 due to take place in the coming months, this timely conversation was an opportunity to start a discussion around peatlands and the role of peatland restoration as a response to both the climate and environment crisis.

The discussion was chaired by Andrew Millar, Chief Scientific Advisor for Environment, Natural Resources and Agriculture, Scottish Government. Andrew highlighted that peat is present worldwide: in Europe, we have peat that presents different needs and different opportunities. Peat is made of partially decayed plant material which accumulates. It can be found in a wide variety of settings across the world, they are a carbon store powerhouse.

Our speakers:

- Francesca Osowska, CEO, NatureScot
- Anne Tolvanen, Director of the Climate Smart Carbon Cycle Research Programme, Natural Resources Institute Finland
- Stefan Leiner, Head of Unit Biodiversity, DG Environment
- Dianna Kopansky, UN Environment Programme, Global Peatlands Initiative

Key thoughts from the speakers:

- Dianna Kopansky explained that peatlands contribute disproportionately to climate change: they are the source of 5-6% of human caused emissions but degraded peatlands are estimated to cover only 0.4% of global land area. We are only starting to understand peatlands. Science is really playing a critical role, so it is great to see the Scottish science community engaging with EU partners who are increasingly looking to peatland ecosystems for their nature and carbon benefits.

- Nature-based solutions are actions to manage ecosystems sustainably. In that sense, peatlands are a super nature-based solution opportunity, especially for Europe. They offer a simple and affordable solution for climate change adaptation and mitigation – and at the same time, they address climate and biodiversity at once. Despite their importance, nature-based solutions remain one of the least understood solutions to climate change, so this conversation is extremely valuable.

Peatlands act as both a store and a stink for carbon. They sequester carbon through decayed plant material. The carbon is then stored for millions of years. Peatlands do require special care – they are not a fast-acting climate solution but are a long and powerful solution. Peatland protection and restoration go hand in hand. When peatlands are on fire, they can harmful pollutants and significant emissions that impact both GHG accounts and people’s health and wellbeing. So, carbon stores need to be protected and at the same time, carbon sinks need to be activated. If they are well maintained, peatlands act as a real refuge for wildlife. They are also important for water management. Understanding how they function as a whole system / landscape ecosystem is really important.
Francesca Osowska highlighted that most of Scotland’s peatland is bog, 30% of land area in Scotland is peatland of some form, representing 2.3 million ha, holding 1.78bn tonnes carbon amassed over millennia. But unless it is in good condition it emits rather than sequesters carbon. NatureScot estimates that due degradation around 80% of peat in Scotland is degrading, which contributes to around 20% of Scotland’s GHG emissions. Turning it around could make huge difference in terms of the GHG emissions inventory, climate change challenges, alongside other benefits. Restoration activities at scale are often happening in remote and fragile communities and they can deliver economic benefits. The climate, nature, people triangle is really important in Scotland. For this reason, Scotland has developed the Peatland Action Programme.

Stefan Leiner highlighted that restoring ecosystems is a priority for the EU. The EU are also pushing for very ambitious targets at COP15 next year. The ambition is to protect 30% of EU land and EU marine areas. A third of these areas should be strictly protected. In the EU over 10 years 0.5% of wetlands were lost, including peatlands. 90% of wetlands in Europe are in bad state, despite a legal obligation to maintain and restore them. That’s why in the EU’s Biodiversity strategy for 2030 there is a strong emphasis on restoration. The Commission is working on a new nature restoration law [note: publication expected mid-December 2021] for Member States to restore 15 to 30% of degraded ecosystems by 2030, which will be increased by 2040 and 2050. The EU Adaptation Strategy and the Fit for 55 package through the so-called LULUCF regulation also put a strong emphasis on nature-based solutions – the Commission wants to strengthen synergies between these initiatives.

Francesca Osowska echoed Stefan and Dianna’s comments regarding the approach, which is in line with what Scotland is doing: protect what we have, restore what we have damaged and manage our peatland so that it benefits climate, biodiversity and people. The Peatland Action Programme was initially led by NatureScot and now involves national parks, eNGOs, Forestry & Land Scotland. So far about 25k ha of peatlands have been restored. The Scottish Government has a target of net zero by 2045, ahead of the rest of the UK (2050), because the advice from the Committee on Climate Change was that Scotland had land types that would allow us to reach net zero more quickly, and peatlands and forestry are a key part of that. That committed budget gives certainty to the supply chain. There is also potential to go further than what is needed to reach net zero target. NatureScot is thinking about how these higher benefits can be achieved: through science and research, alongside technical work. NatureScot is also considering alternative funding mechanisms – green finance, blended finance/ as the public purse cannot bear this on its own.

Andrew Millar highlighted how critical the engagement of many stakeholders is in Scotland to deliver these results. This is an area where municipal and regional areas engage as well. Anne Tolvanen explained that Finland has 10m ha of peatlands, and half of it has been drained. Anne Tolvanen highlighted how research can assist policy makers. In Finland, stakeholders want to continue peatland forestry in areas where it is productive and economic but through new methods (continuous cover forestry and ash fertilization) which avoid further drainage and are expected to decrease adverse effects on climate and water quality. The role of scientists is to bring information to the municipalities through monitoring and modelling for instance, to highlight what the opportunities are in terms of climate and biodiversity. They can also help to identify the best potential areas to be restored. Continuous collaboration with cities and municipalities to inform action is therefore needed – that is where scientists have a crucial role, to prompt local action.

Stefan Leiner described examples from Scotland and Finland as inspiring for what the Commission are trying to achieve at EU level. These examples demonstrate what it is possible to achieve with the right actors and the right incentives in place. Action at the local level is essential. In the EU Biodiversity strategy there is also a whole chapter about working at urban level. The Commission works with ICLEI and others on how to integrate this consideration into decision making through urban greening plans.
Dianna Kopansky highlighted that peatlands will have a dedicated Pavilion at the UNFCCC COP26 in Glasgow in November. With both a physical and virtual presence, countries will share how they have developed plans and what they have achieved so far, how they have included peatlands in climate change targets. Other topics and results such as advances in peatlands policies, science and economics, new jobs and opportunities for people, as well as new inter-disciplinary mechanisms will be shared. The COP26 Pavilion will then also become virtual and turn into a virtual knowledge hub for peatlands impacts for global biodiversity, climate and resilience.

Stefan Leiner outlined what to expect from the EU in the coming years. The Commission will do what it takes to deliver on commitments in the Biodiversity Strategy for 2030. A key element of the new restoration law is expected to be the requirement for Member States to develop national restoration plan – how, where, what they are going to restore using all elements at hand. In her State of the Union speech, Commission President Ursula von der Leyen also announced that the EU will double its support to most vulnerable countries. The EU budget will dedicate 30% to climate, 10% to biodiversity: there are a lot of win-win opportunities to tackle both climate and biodiversity. More investment, more legislation, better implementation of existing legislation can be expected from the EU going forward. Stefan Leiner also expressed very strong support for the Edinburgh Process and thanked Scotland and the UK for promoting the importance of local solutions through the Edinburgh process and promoting this governance strand which is important to reach targets.

Q&A with participants:

Role of private sector investments: NatureScot have been looking at the ability of private investment to support restoration but enabling conditions are need:

➢ package restoration in a way that makes it attractive, and for that some form of market mechanism is needed, parallel to woodland planting and woodland carbon code – in Scotland, a Scotland Peatland Carbon Code has been developed, in time this could allow for carbon trading which would develop private sector interest;
➢ whilst private investment is important, wide scale behavioural change is also needed to encourage the move to a low emissions pathway;

In Finland, a new government programme Helmi aims to restore 60 000 hectares of peatlands between 2021-2030, while 30 000 ha has been restored since the 1990’s. Restoration will therefore total 2% of drained peatlands. There is lots of interest towards restoration from private companies and private people – to compensate carbon emissions in the country rather than planting trees elsewhere, which also represents an opportunity.

Drivers of peatland degradation: conversion for agriculture is the most common. Drainage for land use change, afforestation and peat extraction are other causes of degradation. With the global restoration movement ongoing facilitated through the UN Decade on Ecosystem Restoration, we need to take special notice to plan rewilding and restoration activities carefully – customized for local ecosystems and natural landscapes.

How will land usage be accounted for under EU law? The numbers in the Commission’s impact assessment clearly demonstrate that the economic benefits in restoring peatlands far outweighs the costs. But this is for society as a whole – it might be different at local level for farmers who get more income from agriculture or forestry. Hence the need to change the incentive model: we need to start
providing public and private incentive such as carbon markets for instance. Peatland restoration can also create jobs in rural areas.

**Just Transition:** Francesca Osowska highlighted the Just Transition work in Scotland. The Just Transition Commission is delivering advice to the government on the move to net zero. A guiding principle in NatureScot’s work as we move to different forms land use is to ensure no communities are left behind as that change is happening.

**Andrew Millar** concluded that peatland management offers an enormous opportunity for carbon storage but is a risk if degraded. Sadly, a high proportion of peatland in Europe is degraded, which places a challenge on all to adapt action locally. The approach cannot be one for all – it has to be localised. Both private and public actors are recognising that peatland restoration is one of the key nature-based solutions to respond to climate change and biodiversity challenges.

Annex: Delivery of peatland restoration in relation to climate change ambitions - NatureScot

![Delivery of peatland restoration in relation to climate change ambitions](image)

**Note:** The graph shows the extent to which the delivery of peatland restoration has increased over recent years in Scotland, but also highlights the challenges of delivering the increased targets – and the need to investigate new and alternative ways of ‘scaling up’ peatland restoration if Scotland’s 2045 climate neutrality target is to be met. The top line (purple triangle) shows the ‘gap’ between the currently-available public funding, and the overall scale of the task – and illustrates the need to look at alternative and innovative mechanisms for delivery, including the potential role for private or other forms of finance/incentive to deliver this.

**Useful links for further information:**

- [https://www.globalpeatlands.org/](https://www.globalpeatlands.org/) | [https://www.decadeonrestoration.org/](https://www.decadeonrestoration.org/)
- [https://iclei-europe.org/](https://iclei-europe.org/)
- [EU Biodiversity Strategy 2030](https://iclei-europe.org/)