

Thank you for the opportunity to speak to you this afternoon about biodiversity, in the context of the climate bill and emissions reduction.

Biodiversity, the variety of life, is fundamental to humanity. Without a variety of different creatures in soils, in hedgerows and woodlands, in bogs and heaths, we wouldn't be able to produce food, timber and other raw materials. Without a variety of different creatures and habitats in the landscape, we wouldn't have protection against natural hazards – sea-surges, floods, droughts. Without a rich and diverse landscape, our culture and recreational opportunities would be diminished.

And with loss of that biodiversity loss, I can't over-state the problems that will face human societies.

Currently, the covid 19 pandemic is caused by an infectious disease that spread from other animals to humans. Our destruction of biodiversity, deforestation and simplification of habitat, and the trade and handling of animals by people, has brought humans and wild animals into closer contact – facilitating disease transfer. 75% of all new diseases in humans in the past 10 years have come from animals, and more will come.

But with restoration of biodiversity and ecosystems, solutions to global challenges are all around us.

In terms of climate change, biodiversity is key to both mitigation and adaptation:

1. Climate change mitigation – slowing climate change in the first place – biodiversity can help slow carbon release. In Ireland, we hold a trump card – healthy peatlands are fantastic carbon sinks. Peatlands cover only ~3% of the Earth's land surface, but store about double the amount of carbon in all forests which cover 10 times that area. Peatlands retain carbon and prevent it from being lost to the atmosphere; as well as acting like giant sponges, holding rainwater and releasing it slowly, and preventing flooding; and they provide habitat for plants, and animals, like birds, that need these wild open spaces.
2. Climate change adaptation – street trees and other green spaces can help urban areas cope with higher summer temperatures, cooling cities; coastal wetlands can protect against storm surges; wooded floodplains and peatlands attenuate flood water; patches of scrub hold soil together and prevents erosion and soil loss.

By restoring biodiversity and ecosystems, nature can provide solutions to the climate crisis.

And we need diversity - diversity in ecosystems gives them resilience – if there are more species, then an ecosystem is more adaptable in the face of change, and can bounce back from severe events more effectively. Studies have shown that with more species in grasslands, they are more resistant to a broad range of climate events, including wet or dry, moderate or extreme, and brief or prolonged events. Diversity is going to be very important in adapting to a climate-changed future, for example in our agricultural systems.

But we do need to restore ecosystems back to health, ensure that biodiversity is there. Most of our ecosystems are not in good health. Peatlands have been converted to grassland, planted with forestry and harvested for fuel – most of them are emitting carbon rather than storing it. Intensive agriculture and chemical inputs from farmland are polluting soils and waterways. Well-intentioned, but wrongly sited, installations to address greenhouse gas emissions can cause instability to entire habitats.

Restoration of biodiversity is urgent, but there has never been a better time – it's the UN decade on ecosystem restoration¹. We will have legally binding targets as part of the EU biodiversity strategy to 2030². The public has got back in touch with nature during lockdown.

Which is good, because to restore ecosystems back to health, we need action – we actively have to work with nature to restore biodiversity and create these nature-based solutions. We have to work with local communities, empower them to restore their own patch. Ditch the perverse policies, make people proud of being stewards of nature. Don't penalise farmers for having uncultivable land and pay them for actions that have no positive effect, work with them and pay them to restore biodiversity on parts of their farms they can't cultivate. Look to the success of initiatives like the All-Ireland Pollinator Plan, which has brought together local communities, local authorities, schools and businesses. Working together for pollinators has brought additional benefits for other wildlife, has got commercial companies investing in nature and has brought people together with a common purpose.

We have access to an immediate Nature based Solution. Restoration of biodiversity and healthy ecosystems is a solution to the climate crisis, and fundamental to all of our well-being. Nature is not a luxury, it's a necessity. Investing in nature now will not just affect the next 5-10 years, but the next 100-200 years.

It doesn't cost the earth, but it gives us and the earth a chance.

¹ <https://www.decadeonrestoration.org/>

² https://ec.europa.eu/info/sites/default/files/communication-annex-eu-biodiversity-strategy-2030_en.pdf