



Service Area Factsheet

Above image: The chalk arches and caves off Rathlin Island could be eroded at a faster rate due to increased storminess and ocean acidification reducing habitat availability for the seaweeds and animals which live on them. Photo by Claire Goodwin.

Biodiversity

How will biodiversity be impacted by climate change?

Our climate is changing. We each need to understand our role in addressing this challenge and work together to increase the resilience of our organisations and society. Cutting carbon emissions is vital as we must reduce the severity of climate change. However, it is equally important to begin preparing for the increase in extreme weather which we are already experiencing, and which is projected to increase substantially in intensity and frequency in the coming decades. We call this act of preparation 'Climate Adaptation.'

Local councils will play a pivotal role in the implementation of any measures, and so require a collaborative approach from different service areas in order to address the impacts of climate change. Every service has something to offer to increase resilience for the council and communities it represents, from overall strategies to daily decisions and management.

This brief is not designed to provide a comprehensive overview, but rather to initiate discussion on the role of biodiversity in addressing climate change impacts as part of a wider suite of documents for other services.

What are the climate risks posed to biodiversity?

Climate action and biodiversity restoration are interconnected. Life on Earth is impacted by climate change, with consequences for human well-being. The oxygen in our every second breath is produced by tiny seaweeds (plankton) in the ocean, the plants on our hills and peat beneath our feet absorb and filter the water we drink, and our patchwork of flowering plants support pollinating super highways so we can have food to eat. Northern Ireland is biologically and geologically diverse with over 20,000 recorded species and 40 habitats¹ and has endemic species (therefore found nowhere else) such as the 29 new species of sponge found off Rathlin Island².

There are global and local impacts on biodiversity due to the climate crisis. Northern Ireland is already suffering impacts to biodiversity and this is expected to increase as the magnitude of climate change increases:

- Increased potential for non-native species introduced by people (including pests and pathogens) to establish and spread.

- Species populations and habitats affected by yearly variations in rainfall and extreme weather events, particularly droughts. Projected changes in these factors could significantly impact biodiversity and ecosystems.
- Changes in distributions of species, many species are occurring further north and in higher altitudes.
- Loss of habitats and degradation of landscapes.

What actions could you take?

Conserving and restoring ecosystems and at the same time reducing impacts of climate change on society is possible by using ecosystem-based adaptation approaches³. You could take action by getting involved with your council's adaptation planning process, which should outline short to long-term impacts, implications and recommended actions for biodiversity including:

- Protect, restore and enhance biodiversity to increase the resilience of natural and human systems to climate change.
- Promote ecosystem restoration and conservation through investment in actions that increase carbon sinks while promoting biodiversity.
- Put adequate monitoring and evaluation measures in place to review the implementation of climate change adaptation within your council's Biodiversity Action Plan.
- Undertake natural capital accounting in all sectors to ensure natural capital is being valued and Ecosystem Based Adaptation and green infrastructure options are being employed.
- Improve landscape connectivity to facilitate mobility in a changing climate.
- Support the development and implementation of all-island biodiversity strategies i.e. invasive species, soil, coastal and shoreline management plans.
- Look for win-win solutions – better biodiversity can have benefits for tourism, recreation, food supply, air and water quality, and of course climate adaptation.

Additional Resources

Natural England and RSPB - Climate Change Adaptation Manual 2020: <http://publications.naturalengland.org.uk/publication/5679197848862720>

Government of Ireland - Biodiversity Climate Change Sectoral Adaptation Plan: <https://www.npws.ie/news/biodiversity-climate-change-sectoral-adaptation-plan>

References

¹ Department of the Environment (2015) 'Valuing Nature: A Biodiversity Strategy for Northern Ireland to 2020' Available online: <https://www.daera-ni.gov.uk/sites/default/files/publications/doe/natural-policy-biodiversity-strategy-to-2020-2015.pdf>

² Picton, B., & Goodwin, C. (2007). Sponge biodiversity of Rathlin Island, Northern Ireland. *Journal of the Marine Biological Association of the United Kingdom*, 87(6), 1441-1458.

³ Climate Adapt (2020) 'Biodiversity' Available online: <https://climate-adapt.eea.europa.eu/eu-adaptation-policy/sector-policies/biodiversity>