



Andy Hay (rspb-images.com)

Recent breeding failures of UK seabirds may be due to rapid climate change.

Nature conservation and climate change

What does biodiversity have to do with climate change?

Biodiversity and climate change are closely interlinked: many habitats such as forests and wetlands are important carbon sinks. Diverse and healthy ecosystems can provide the essential services that people, animals and plants need and can help us adapt to the expected environmental changes. Nature can help protect us against extreme weather events like floods, forest fires or erosion, if we do our part to conserve nature.

What impact is climate change having on biodiversity?

Climate change is already having multiple impacts on birds and their habitats, including the following.

- Climate change causes species to shift location, broadly towards the Poles and up mountain ranges to follow suitable climate conditions. Natural and man-made obstacles, such as roads, make species movement much more difficult, and there needs to be appropriate habitat in the new locations for species to survive and thrive.
- Essential parts of a species' lifecycle, such as migration and breeding, are timed to coincide with optimal climatic circumstances and hence food availability. The very rapid climate change that we are currently experiencing could mean that many species may fail to adapt and face mass starvation and breeding failure. The recent reproductive failures of several UK seabirds, including

much-loved puffins, are thought to be the result of these changes.

These and other problems, including unsustainable land use and land use change, may lead to further declines in bird populations and biodiversity. This loss of biodiversity not only makes our world poorer, but is also contributing to weakening the ecosystems on which we ultimately depend, hence reducing our chances of sustainable living.

How can we reduce the impacts of climate change on biodiversity?

The highest priority for action needs to be the reduction of greenhouse gas emissions, but, even if the most effective mitigation measures were taken now, a significant degree of rapid and significant climate change is already underway and unavoidable.

In order for people and nature to survive this unprecedented crisis, it is essential to understand the impacts of climate change on birds, biodiversity and land use practices, and to plan appropriate, integrated adaptation measures to meet the requirements of biodiversity and people. At the same time, climate change mitigation measures, such as the location and extent of alternative energy sources, must take into consideration the needs of nature and wildlife now and in the future.

How can we help biodiversity to adapt to unavoidable climate change?

There are two overarching and complementary approaches: resilience and accommodation. Firstly, we should increase the resilience of the natural environment and biodiversity to climate change, building strong populations to put biodiversity in the best position to meet future challenges.

Alternative energy sources need to be positioned appropriately with consideration of the needs of wildlife now and in the future.



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Lars Lachmann

Biebrza marshes Poland. Wetland areas are often important carbon sinks, as well as areas of high biodiversity. Elks, wolves and the last of the European Bison can still be found in Biebrza.

This includes action to reduce non-climate threats to wildlife, as well as reducing the impact of changing climatic conditions. Secondly, we must accommodate change, by making it easier for wildlife to move through the countryside. We need a coherent network of protected sites, linked within sustainably managed landscapes to ensure this.

The ability of species, habitats and ecosystems to cope with these climatic changes depends on a number of factors:

- the speed and extent of climate changes
- the general health of ecosystems and existing pressures from other threats and stresses, such as habitat destruction, degradation and fragmentation, invasive species and over-exploitation of natural resources
- the availability of adequate and well-connected habitats in the areas where species might have to move to.

How can the Birds and Habitats Directives help with this?

To keep wildlife strong and healthy under climate change, we need strong populations today and ways to help species move as their climate conditions change location. The Directives provide a flexible and dynamic framework for keeping wildlife populations and habitats in a good status, both today and in the future.

Studies show that protected areas are powerhouses of species recovery and

strongholds of productive populations. Furthermore, stronger recovery is associated with larger and well-connected protected sites, especially for rare and vulnerable species. By developing adaptive conservation management, protected areas help to improve resilience against climate change and other impacts.

The Directives call for the establishment of the Natura 2000 protected area network, which is now nearing completion. Article 3 of the Birds Directive and Article 10 of the Habitats Directive invite Member States to improve the ecological coherence of the Natura 2000 network and meet the ecological needs of habitats and species across the whole of the EU. These Articles provide the basis to build stronger conservation measures into the economic

fabric of activities, such as farming, forestry, water management, and mineral extraction. The Directives also foresee habitat restoration and creation in the wider countryside. However, these general requirements are currently little used by Member States, and co-ordination across borders is missing.

What can the European Parliament do?

- Support the integration of biodiversity conservation into all relevant sectors, including agriculture, fisheries, energy, regional and transport policies.
- Call for the full implementation of the Birds and Habitats Directives across the EU.
- Promote the integration of nature conservation and ecosystem protection and restoration into spatial planning, and encourage harmonisation and co-ordination between national planning policies.
- Ensure that all climate change adaptation measures, such as flood defence, land management and land use changes, support rather than weaken the resilience and diversity of ecosystems.



Land uses such as quarrying need to support the resilience and diversity of ecosystems.

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The RSPB speaks out for birds and wildlife, tackling the problems that threaten our environment. Nature is amazing – help us keep it that way.

We belong to BirdLife International, the global partnership of bird conservation organisations.

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