



Wildlife Trusts Wales

What is a Living Landscape?

Living Landscape Schemes in Wales

Climate Change

Pitch For Nature

WaterSource

Welsh Beaver Project

Climate Change & Wildlife



Climate change is a significant threat to the UK’s wildlife. The Wildlife Trusts believe that nature should be central to both climate change adaptation (e.g. through the use of natural processes to reduce flood risk) and mitigation (e.g. through the protection and restoration of peat and peatlands to store and sequester carbon).

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We need to restore healthy, Living Landscapes that help to alleviate floods, control pollution and help us cope with extremes of temperature

The world’s climate is constantly changing, and in the past it has done so to dramatic extremes (think of the Ice Age). However there is now widespread agreement among scientists that we are living in an era of accelerated climate change, much of which can be attributed to increased human activity (for example through increased carbon emissions from air pollution).

Climate change means that there are complex demands being placed on land for food, wildlife, recreation and development. Wildlife has adapted to climate change in the past but our modern landscapes - full of buildings, transport links and intensively managed farmland and fragmented natural habitats - present a new challenge to species. It is vital that we manage and use land sustainably, so it allows plants and animals to move and adapt to new conditions for survival as the climate changes. The Wildlife Trusts’ vision for [A Living Landscape](#) is working to bring about landscape scale restoration of the natural environment and adaptation to climate change, realising and using the multiple benefits provided by nature.

Protecting and restoring our natural environment and ecosystems is important in its own right, but it also produces a range of other services that can help people and wildlife to adapt in a changing climate. Flood prevention,

crop pollination, carbon absorption, clean and healthy water sources – these benefits of our natural environment must all be considered and maximised as we prepare for the effects of climate change. Critically, we need to restore

...tion of these sites but their underlying value as protected reservoirs of wildlife will not diminish and they will remain important sources of biodiversity.

Many of The Wildlife Trusts' Living Landscape schemes have been designed with climate change adaptation at the forefront. At the heart of Living Landscape approach is habitat restoration and connectivity.

The Wildlife Trusts are working to:

- restore damaged and fragmented areas of habitat;
- recreate habitats and natural corridors and stepping stones in the landscape; and
- reconnect these habitats, including linking them to the green space in our cities, towns and villages.

Only by taking a strategic view, and involving local communities, will we be able to secure the survival of wildlife-rich places, and aid nature's recovery in the face of pressures such as development and climate change.

Impacts of climate change on UK wildlife

There is strong evidence that climate change is already affecting our UK biodiversity with many species occurring further north and at higher altitudes (e.g. the Adonis blue butterfly) than in previous decades. Although a warmer climate will benefit some species, this is likely to be countered by extreme weather events and negative impacts on others. The same goes for some of our most iconic landscapes and habitats, including wetland, heathland and some types of woodland. Climate change impacts that will have an effect on species and habitats include rising sea levels, heavier rainfall, droughts, warmer summers and flooding.

For example, high spring rainfall can negatively impact on birds, causing reproductive failures and poor chick condition. In west Scotland, golden eagle populations declined by 25% when there was a significant increase in May rainfall. Flooding has a negative impact on almost all mammals, except bats, and on ground-nesting birds with free-ranging chicks. When large areas of land are inundated with floodwater during spring and summer, nests and burrows are flooded causing the young to drown or die from cold.

Droughts can also pose a significant threat, alongside unseasonal high rainfall. These can limit the growth rates of many UK trees; this has on occasion resulted in the death of trees, with beech and silver birch being particularly vulnerable. Bird populations can be affected, too, such as thrushes and golden plover, as well as mammals like badgers, moles and hedgehogs, all of which eat invertebrates that favour wetter weather. The same goes for many bat species. Reductions in frog and toad populations are consistent with low summer rainfall, alongside loss of suitable habitats. Because of the dependence of many migratory species on wetland habitats, they would be negatively affected by lower water tables, too.

Migrant species may be especially vulnerable to changes in the timings of natural events. Migrations are carefully synchronised with food availability to give species the maximum chance of survival and as such the earlier peaks in availability of insects before species arrive at their breeding grounds can have a serious negative impact, whilst other species are arriving too early. Substantial changes in the strength and direction of prevailing winds during migration could have a major impact too, particularly on birds of prey.

Some species may benefit from a changing climate. Warming has been associated with a general increase in species diversity among butterflies and birds, and new species will naturally colonise the UK over time, as is already happening with some invertebrates. However, those species faring well close to home may be declining elsewhere and isolated species are greatly under threat: ptarmigan, dotterel and snow bunting are restricted to the highest Scottish mountains and those cool, specialised conditions may disappear by the end of the century. Other species that may be similarly affected include common scoter, black grouse, arctic-montane bryophytes and lichens.



Our wildlife will have mixed fortunes faced with a changing climate, but the key is to give all species the best possible chance of survival. Protected areas will remain important although there may be changes in species populations and communities. Species with limited dispersal abilities are unlikely to keep pace with climate change, so every effort is being made by The Wildlife Trusts to make sure that they are given the fairest chance to disperse successfully,



through our nature reserve management and Living Landscapes schemes.

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