

# BIODIVERSITY

Communications Toolkit

## Common Questions, Helpful Answers

This section provides answers to some commonly asked questions that target audiences are likely to ask.

You can use the answers to help develop communications materials that will offer audiences all the information they need to help improve their awareness and understanding of biodiversity.

### What is biodiversity?

Biodiversity is the rich variety of life which exists on Planet Earth, and ensures the survival of people. It concerns all species of plants and animals, as well as people, their genetic variation and the range of habitats upon which all living things depend. It encompasses the whole of the natural world, not just the rare or the endangered. It touches and benefits all aspects of our lives.

### Isn't biodiversity just another word for 'nature'?

'Nature' is an abstract idea. It carries implicit value judgements about the worth, attractiveness and significance of various species and habitats. It is subjective and is therefore impossible to measure.

Biodiversity is a more objective concept. It rates all species and all habitats as being of equal importance. Whether we like them or not, a leech, a tapeworm and even a food-poisoning bacterium like Salmonella are just as important to the totality of biodiversity as more appealing species such as otters or golden eagles. In the same way, the dullest-looking piece of riverside gravel is just as important a component of biodiversity as a pinewood or a flower rich meadow.

Biodiversity is also measurable. We can count the number of different species and describe their habitats. To some extent, we can find ways to measure the range of variation between individuals of a species and between different ecosystems.

Therefore, the difference between nature and biodiversity is like the difference between beauty and the physical attributes that help make someone beautiful or handsome (which can be measured and described).

### Is biodiversity only about rare species?

Some uncommon species, like the red squirrel or the corncrake, are valuable and powerful symbols of the urgency of biodiversity conservation. As flagship species, they attract public concern for the work that must be done. They are a high priority for conservation, because if we do not take action and a species becomes extinct, then we lose not just one statistic from the total roll-call of species diversity, but we also lose that species as a component of genetic and ecosystem diversity.

Action for biodiversity must also ensure that common species remain common and that the ecosystems in which they live continue to function in a dynamic way. Where ecosystems have become degraded by human activity, efforts should be made to restore them to their full ecological health. There is a requirement to take action, where possible, to restore lost biodiversity.

It is important to remember that species diversity is not the sole measure of biodiversity. In some naturally species-poor ecosystems, especially in upland areas, it is possible to increase the total number of species, e.g. by ploughing and fertilising the land, but this could actually be decreasing biodiversity by damaging a natural ecosystem; it may lead to 'weed' species flourishing at the expense of the natural range of species that have become highly adapted to living in that extreme environment.

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## Why should I care about biodiversity?

Humans are dependent on biodiversity which provides food, medicines and raw materials, and delivers many other goods and services that support human life. For example, forests provide wood, oxygenate the air, purify water, prevent erosion and flooding, help regulate our climate and turn waste into nutrients or raw materials, such as oil and gas.

Scotland's biodiversity has great intrinsic value, it enriches our lives, is a foundation for economic and social activity and provides huge opportunities for leisure and learning.

It is important for many reasons, including:

- Its contribution to Scotland's economy. Around 93,000 jobs are directly dependent on it. About 87% of visitors to Scotland say that our fine scenery is one of the things that draws them to Scotland.
- As a place to visit and enjoy, and through outdoor recreation, to get healthy. In 2005, 75% of the Scottish adult population made at least one visit to the outdoors for leisure and recreation purposes. Around 291 million trips in total were made to the outdoors.
- Its contribution to community well-being. Attractive and safe green spaces in and around our towns, and active volunteering, help to improve community well-being.
- As a place to learn and an inspiration to our young people, which will help Scotland adapt to major challenges, such as climate change and sustainable development
- Its role in helping people to adapt to climate change. Climate change is the biggest threat to biodiversity over the coming decades – habitats and species may not be able to adjust quickly enough to the changing temperatures and rainfall. However, biodiversity such as salt marshes and other coastal wetlands for example can play a key role in protection against the effects of climate change like extreme weather events, rising sea-levels and coastal erosion.
- Its role in maintaining Scotland's international reputation and our quality of life. The quality of our environment is a key factor in making Scotland competitive in attracting or retaining jobs.

Scotland's biodiversity is important in global terms.

## Is our biodiversity under threat?

It is clear that the biodiversity of Scotland is under threat from development, habitat destruction, pollution, intensive grazing, over-exploitation and other human-induced pressures.

Approximately one third of the moss species found in Scotland are listed in the IUCN Red Data Book of threatened mosses and a quarter of our flowering plants are declining or severely restricted in their range.

About 30% of the 300 or so bird species recorded in Scotland are regarded as being in need of special conservation action and most other groups of animals probably have similar proportions of endangered species.

Only 11% of the former extent of raised bogs remain in Scotland and many of these are not functioning to their full ecological potential with only limited growth of bog mosses and accumulation of peat because their areas are now so small and their hydrology so disturbed.

The IUCN Red List now contains 784 documented extinctions and 60 extinctions in the wild since 1500AD ([http://www.iucn.org/themes/ssc/red\\_list\\_2004/GSAexecsumm\\_EN.htm](http://www.iucn.org/themes/ssc/red_list_2004/GSAexecsumm_EN.htm))

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## **What can I do? Surely my small, individual actions do not have an impact.**

Everybody has a role to play in conserving biodiversity. It is a shared resource and a shared responsibility. From the smallest individual action to a national campaign, every contribution helps.

Biodiversity benefits everyone and we need to work together to conserve biodiversity in Scotland.

Here are a few of the ways in which individuals can choose to make a difference:

- Take positive action to enrich the biodiversity of your local area. Planting nectar-rich flowers to attract butterflies, or fruit-bearing trees and shrubs to attract birds, in the garden can bring in more species. Even in the heart of the city, a window-ledge bird table will attract a surprising range of birds and help sustain them through severe winter weather. You can find out more about biodiversity in your area by doing a postcode search via WIMBY (What's in My Back Yard) at [www.snhwimby.org.uk](http://www.snhwimby.org.uk).
- Let plants go to seed over winter to provide food and shelter for wildlife.
- Get involved in local biodiversity projects through BBC Breathing Places ([www.bbc.co.uk/breathingplaces](http://www.bbc.co.uk/breathingplaces)), your Local Biodiversity Action Plan Partnership ([www.biodiversityscotland.gov.uk](http://www.biodiversityscotland.gov.uk)) and local schools and community groups.
- Develop a Biodiversity Action Plan (BAP) for your employer or a site BAP for where you work. Contact the Business and Biodiversity Project Officer at the Business Environment Partnership (BEP) ([www.thebep.org.uk](http://www.thebep.org.uk)).
- Use less chemicals in the garden and around the house, reducing the poisoning and over enrichment of burns and rivers.
- Avoid using peat-based composts in the garden or for house plants, helping to slow the destruction of peat bogs in Scotland and elsewhere in the world.
- Recycle more household waste, reducing the natural space needed for landfill sites and coups, and slowing the rates at which non-renewable raw materials are consumed.
- Reduce energy wastage in the home, contributing to a reduction in the fumes that cause acid rain and global warming. You can find some useful tips at [www.energysavingstrust.org.uk](http://www.energysavingstrust.org.uk), which can help you save money too.

## **What can businesses do to help conserve biodiversity?**

Business plays a key role in helping to protect our biodiversity. At first, the link between biodiversity and business may not be obvious, but our natural resources provide the raw materials and natural assets that are often required by businesses to achieve their goals.

There are a number of things that businesses can do and make a valuable contribution to conserving biodiversity in Scotland, including:

- Reduce waste by reducing the amount of material used for packaging and recycle where possible.
- Save energy by reducing your consumption, which will save you money and benefit the environment.
- Raise awareness of biodiversity issues among your employees, customers and suppliers. Including your 'green credentials' on advertising and other company literature is one way of doing this and can help to enhance your reputation.
- Manage your land to enhance its biodiversity – plant more trees and shrubs; install bird tables and boxes and leave

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areas of uncut grass to encourage growth of wild flowers.

- Support local community biodiversity projects through funding and / or employee involvement, which can help to improve staff morale.

## What is Scotland doing to conserve biodiversity?

Scotland is involved in conserving biodiversity in a number of different ways.

At a national level, much of biodiversity activity will be informed by the Scottish Government's Scottish Biodiversity Strategy (<http://www.scotland.gov.uk/Publications/2004/05/19366/37239>) which was produced in partnership with the Scottish Biodiversity Forum, a broad partnership of many different organisations and bodies across Scotland with an interest in biodiversity.

The vision of the Scottish Biodiversity Strategy is for Scotland to be a world leader in biodiversity conservation where everyone is involved and everyone benefits. Government, agencies, organisations, voluntary bodies and individuals across Scotland are working together to achieve this vision.

Scotland is also a key partner within the UK Biodiversity Action Plan ([www.ukbap.org.uk](http://www.ukbap.org.uk)) process, as well as being an active signatory to the UN Convention on Biological Diversity ([www.biodiv.org](http://www.biodiv.org)).

## What will happen if we do nothing?

We will lose our 'life support system'. The living things on our planet help to provide a lot of the things we need to survive – oxygen, food, water, shelter, medicine.

Biodiversity acts as a main resource for many of our industries, including agriculture, fishing, recreation and tourism. In addition, many species are national emblems – the thistle, golden eagle – and contribute to our culture and traditions.

If we do not take steps to help protect our biodiversity we will be losing various – some crucial – aspects of life in Scotland.

- Currently after 10,000 years of farming and a few hundred years of capitalism, we have a situation where out of about 250,000 species of flowering plants, less than 3,000 are regarded as a food source, and about 200 domesticated for food while 90% of the per capita plant food supply of 146 countries is supplied by 103 plant species.
- Another major use-value of biodiversity is medicine. Extracts from organisms have been used by humans for millennia to treat illness, with millions of people using traditional medicines every day. However only 5,000 of 250,000 species of flowering plants have been investigated as potential sources of new treatments. If these species no longer exist in the wild, then new or revived old medicines, whether via the local herbalist or a transnational corporation, will not become available.
- A major use of other species has been in biological control - using organisms to control pests, usually those that attack foodstuffs. Biological control has been very successful, but is rarely noted as once the control organisms are established, you don't need to do anything else. If only nature reserves are preserved and nothing else, these useful species may be lost.
- Other uses of our fellow species are non-food materials, most importantly wood, but also fibers, resins, gums, adhesives, rubber, oils and waxes, agricultural chemicals, perfumes.

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## **Species have been changing and disappearing for years - perhaps change is just an inevitable part of evolution and our natural world?**

A lot of Scotland's biodiversity has already been lost due to human activity and poor management of our natural resources, including habitat destruction to make way for residential and commercial developments, air, land and water pollution and increased marine activity. We must ensure that the natural resources needed for life are managed responsibly to ensure our own and future generations can continue to enjoy and benefit from them.

## **How does biodiversity relate to sustainable development?**

Sustainable development is commonly defined as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs'.

Biodiversity is one of the key resources that must be used wisely if development is to be truly sustainable. Any development which destroys biodiversity cannot by definition be sustainable.

More information on sustainable development in Scotland can be found at [www.ssdforum.org.uk](http://www.ssdforum.org.uk) and try the resources in the Links section.