



Benefits from the environment

We all depend on a wide range of essential benefits provided by the environment for our day to day existence, including the air we breathe, the food we eat and the water we drink. By managing the environment well we can greatly improve our quality of life.

Summary

Key messages

- We all depend on many benefits from the environment and nature, which affect every aspect
 of our existence.
- Decisions about managing our environment often fail to take account of nature's ability to provide these benefits.
- Managing the environment in ways that provide some benefits can sometimes reduce its ability to provide others.
- By managing the environment well we can provide many more benefits and greatly improve our quality of life.

State and trend

A summarised assessment of the state and trend has not been made for this topic.

Please read the topic for more information; if you have any questions about Scotland's benefits from the environment please feel free to contact us using the comment button above.

Overview

Our environment provides a wide range of benefits, such as the air we breathe, the food we eat and the water we drink, as well as the many materials needed in our homes, at work and for leisure activities. But a lot of what comes from the environment, and its chemical, physical and biological components, is taken for granted. For example, nature can prevent flooding by storing water, keep our water clean by processing and diluting pollutants, and provide enjoyment, inspiration and a place to socialise. The environment is often managed to extract or create products that can be sold, but this can be at the expense of other benefits that are equally important.

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Work is underway across Europe to improve our knowledge about the ways that our environment provides benefits, for if we, and nature, are to keep healthy we need the environment to function well. Pollution, intensive land use and over-exploitation of key minerals, for instance, can all stifle systems that support life and reduce or destroy the benefits.

Economically, we get huge gains from the environment, and <u>recent research</u> has highlighted this in Scotland. You can find links to up-to-date information about this on the <u>Scottish Natural Heritage</u> website, along with information on <u>Scotland's Natural Capital Asset Index</u>.

What do we get from the environment?

The benefits provided by the environment are known as 'ecosystem services'. These are not as drab as they sound! One way to categorise the huge amount that the environment does for us is to think of this in terms of the 'services' it provides, as shown in the diagram below.

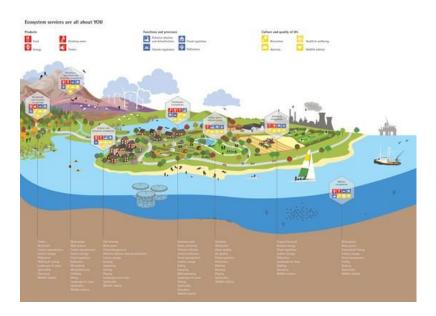


Figure 1: Ecosystem services and human well-being

Supporting – underpinning the benefits

To support life, our environment depends on clean air, land, soil and water. We need to manage our influences over these resources and protect them so the environment can continue to provide the benefits we rely on, now and in the future.

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Our environment supports all life forms. Rocks, soils, minerals, air, water, microbes, fungi, plants and animals work together to support life and its ability to provide all the other benefits — provisioning, regulating and cultural. The capacity of the environment to support all of this depends on trillions of physical, chemical and biological interactions. Our understanding of these is just beginning to unravel how sensitive some systems are, and how resilient others can be.

Provisioning – food, drink and fuel

Most of our food, water and fuel comes directly or indirectly from the environment. Fuel for warmth, timber for building, and the fuel in our cars all come from nature. The natural environment provides income from tourism, and resources for development. In the past our environment has often been over exploited to provide products which mean its ability to provide the full range of benefits is jeopardised. Wise and sustainable use of our environment allows us to replace and replenish resources, rather than losing them forever.

Regulating – keeping things in check

The environment is amazingly well able to keep itself in check. Regulating services are vital for healthy ecosystems and are largely taken for granted. Our air, water and food have been through a huge range of physical, chemical and biological interactions that are naturally regulated. The dispersal and dilution of pollutants, steady supply of clean water, protection of our coast, prevention of flooding, regulation of our climate through locking away of carbon, and pollination of crops are all governed by 'regulators' in the environment – often the combined work of chemicals, microbes and insects.

How we make use of these services is often controlled, as excessive use of one service (for example, discharging sewage into rivers to dilution and process it) can reduce the environment's ability to provide others. The way we manage our environment can prevent regulatory services being lost. For example, reducing flooding by restoring wetlands on farmland, which can reduce the speed at which water runs off the land.

Culture and quality of life

We get massive benefits to our health, well-being and quality of life from the environment. These include recreation, inspiration, spirituality and learning. Watching wild birds, mountaineering in a beautiful landscape or visiting a special historic building are all 'cultural' benefits of the environment. The colour and texture of the rocks making up a castle can tell us as much about the origins of the earth and its geology as it does about the history of the people who built it.

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We do not even have to visit these places to benefit from them; people value the mere existence of some habitats and wildlife, often in remote mountains, without ever going there. Just the thought of Scottish wildcats, golden eagles or capercaillie living in the wild can be enough to make people feel happy.

An enormous range of places offer us pleasure and enjoyment, including green spaces in towns and cities, rivers, lochs, seashores, farmland, forests and remote wildland. Many important areas are protected by law, but not all areas that are valued for their cultural benefits can be deliberately protected.

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