

## **How your policy may impact on biodiversity**

### **What are impacts on biodiversity?**

Your policy will impact biodiversity if it is likely to cause the following types of changes:

- Gains or losses in the variety of species
- Gains or losses in variety and abundance within species
- Gains or losses in the amount space for ecosystems and habitats
- Gains or losses in the physical connectedness between ecosystems and habitats
- Environmental changes within ecosystems and habitats

These changes are important to consider if they even occur in terrestrial or aquatic environments which are already managed, such as farms, aquaculture sites and parks. Furthermore, we should consider impacts even if they occur outside the UK, in foreign countries or international oceans, because the UK benefits from biodiversity outside its borders.

The size of the effect will depend on the policy actions and the sites that are likely to be affected.

### **Policies which have biodiversity impacts**

- Those which change land or aquatic environment management and use
  - Such as building development, habitat fragmentation
- Those which change wildlife control and management
  - Such as trade in wildlife
- Those which will introduce or remove living or non-living elements from habitats
  - Such as pesticide pollution, restriction of water supply
- Those which will cause or inhibit disturbance of ecosystems
  - Such as by transport systems, tourism, and other activities

### **Areas affected**

Biodiversity tends to be very localized. Different sites vary enormously in terms of the richness of their biodiversity. However, you should not only consider the effects of policy which have an immediate impact on a biodiversity-rich area. You should also

consider whether your policy has impacts that can leak into other biodiversity-rich area, such as emitting pollutants that will affect air quality, or discharge of effluents effecting water quality.

One means of determining whether or not a particular site is important with respect to biodiversity is to find out whether the site has any relevant designation at the local, national or international level. For example, Sites of Special Scientific Interest (SSSIs) are designated in England on the basis of their wildlife habitats, geological features and landforms and therefore a policy affecting an SSSI is likely to have a considerable impact on biodiversity.

Of course, designation is only one measure of the likely impact; policies that impact non-designated sites may also significantly affect biodiversity.

### **Does your policy have substantial biodiversity impacts?**

You should include any significant effects on biodiversity in your IA. This will enable you to weigh the significance of the biodiversity impacts relative to the other costs and benefits of the policy, and reach an informed judgment on the desirability of the proposal.

If the outcome of the overall assessment is that there is a major adverse impact on biodiversity, you should think about whether it would be possible to avoid these impacts. If it is not possible, you should consider ways in which the effects could be mitigated. The exact nature of any potential mitigation action will depend on the nature of the impact. Mitigating action itself carries costs, and these would need to weighed against the benefits of preserving biodiversity and included in the IA.

If you need any further help in assessing whether the impacts are substantial, and how to present them in an IA please contact us – details below.

## **Measuring the biodiversity impacts**

There are three steps to developing a detailed biodiversity assessment into your IA:

1. Establish a baseline against which to assess the policy by describing the biodiversity currently in existence, its importance, and any trends that would lead to a loss or change in the biodiversity in the absence of any policy.
2. Assess the magnitude of the impact of the policy on biodiversity, by quantifying and then monetising costs and benefits wherever possible.
3. Evaluate the significance of the all non-quantifiable impacts qualitatively.

### **Putting Prices on Biodiversity Impacts**

Whilst valuation of biodiversity impacts is always likely to be partial, it is beneficial, where possible, to present these money values to help establish the value for money of interventions. Positive impacts are treated as monetary benefits, while negative impacts are costs. Calculating the costs and benefits of biodiversity is often complex, as most goods and services provided by such systems are not marketed, and therefore do not have an associated monetary value. However, biodiversity produces an enormous range of economic benefits including: direct, indirect and non-use values.

More information on the **economic benefits of biodiversity** is available.

The [Green Book](http://greenbook.treasury.gov.uk/) (<http://greenbook.treasury.gov.uk/>) provides advice on quantifying non-market benefits and costs (Annex 2). It may also be possible to use a benefits transfer approach, whereby estimates of benefits from previous studies are applied to new, but similar, situations.

The [EVRI database](http://www.evri.ca/) (<http://www.evri.ca/>) may provide some broad indication of the likely magnitude of the value of the changes in biodiversity. Advice on the feasibility of calculating costs and benefits and assistance with its application can be provided – details below.

## Getting help

Assistance with identifying and quantifying impacts (where possible) can be provided by ecologists who may already form part of the policy team. For help with economic issues such as valuation, you can contact James Vause, email: [james.vause@defra.gsi.gov.uk](mailto:james.vause@defra.gsi.gov.uk)