



Department  
for Environment  
Food & Rural Affairs

# Reintroductions and other conservation translocations: code and guidance for England

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We are the Department for Environment, Food and Rural Affairs. We're responsible for improving and protecting the environment, growing the green economy and supporting our world-class food, farming and fishing industries.

We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.

We acknowledge the contributions of the Scottish code's authors and International Union for the Conservation of Nature (IUCN) experts in the development of this English code and guidance.



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# 1 Introduction

Conservation translocations are the deliberate movement and release of plants, animals or fungi into the wild for conservation purposes. This includes reintroductions, which are one type of conservation translocation covered by this code and guidance.

Where they are well-planned and executed, conservation translocations can reverse biodiversity declines caused by habitat loss, climate change, or other human influences on the environment.

## How the code and guidance align with other guidelines and legislation

This code and good practice guidance for conservation translocations in England fulfils an action set out in the government's [‘A Green Future: Our 25 Year Plan to Improve the Environment’](#).

The code and good practice guidance align with the [Scottish code](#) for conservation translocations to encourage consistency within the United Kingdom. Both are based on the international standard established by the International Union for the Conservation of Nature (IUCN). They are designed to be read alongside [the IUCN guidelines](#).

The code and the good practice guidance are non-statutory, but many aspects of conservation translocations are covered by legislation. Natural England, the Marine Management Organisation and other statutory bodies oversee these regulatory controls.

Natural England is the government's adviser for the natural environment in England. Its staff can offer guidance on good practice and regulatory requirements relating to conservation translocations.

## How the code and guidance can help you

The code and good practice guidance will help you decide whether a conservation translocation is appropriate. It will also help you to plan a conservation translocation so you can:

- increase your chances of success
- reduce the likelihood of problems and conflicts
- keep people informed about the project

The focus is on individual species. But it also applies to projects that involve multiple species. For example, where the aim is to restore missing component species of an ecosystem.

## What the code does not cover

The code and good practice guide do not cover translocations where the primary purpose is agriculture, fisheries, aquaculture, hunting, forestry or horticulture and releases made for other reasons, such as individual animal welfare.

The scope of the code and guidance does not extend to habitat translocations. These typically involve translocating as many species as possible found together in a habitat, along with the substrate on or in which they are found, from one location to another.

## Types of conservation translocation

Conservation translocations release the focal species or organisms of that species either within or outside its natural (or indigenous) range.

The focal species is the species being translocated.

An organism is the individual species or their propagules, such as seed, eggs, spores, sperm or pollen.

Natural range is the natural past or present geographical distribution of a species. It includes all locations where a species is or was indigenous. It does not include areas where the species was deliberately or accidentally introduced by humans.

There are 4 basic types of conservation translocation.

### **Population restoration**

These are conservation translocations within a focal species' natural range.

#### **Reinforcement**

This is the translocation of an organism into an existing population of the same species.

Reinforcement aims to improve population viability, for example by increasing:

- population size
- genetic diversity
- the representation of specific demographic groups or stages

#### **Reintroduction**

This is the translocation of an organism to areas from which it has been lost. It aims to re-establish a viable population of the focal species within its natural range.

### **Conservation introduction**

These are conservation translocations outside the focal species' natural range.

## **Assisted colonisation**

This is the translocation of a focal species organism to benefit its conservation status.

It aims to establish populations in locations where the current or future conditions are likely to be more suitable than those within the current natural range. Assisted colonisation can be considered if the species is unlikely to colonise by natural dispersal.

The scale of assisted colonisation can range from local movement to wide-scale international range shifts.

## **Ecological replacement**

This is the translocation of an organism to perform a specific ecological function that has been lost through extinction of another organism.

It usually involves replacing the extinct species with a related subspecies or closely related species that will perform the same or similar ecological function.

## **When conservation translocations might be appropriate**

Conservation translocations are just one type of conservation action. In most cases, protecting the species and improving the habitat it currently lives in will be lower risk and more cost-effective.

However, there are some situations where conservation translocations are appropriate, desirable and well-aligned with other conservation actions. For example, if barriers and habitat fragmentation stop the species from being able to naturally recolonise or migrate to new places.

Examples of threats to a species that conservation translocation can help tackle include:

- habitat fragmentation, loss and degradation
- over-exploitation and persecution
- climate change

Conservation translocations may not be appropriate if there is:

- considerable uncertainty in the level of risk
- a high level of risk that unacceptable harm or damage may occur

Your proposal should comprehensively consider and evaluate the benefits, impacts and risks of a conservation translocation. If you can put in place measures to manage the risks, and the benefits clearly outweigh these concerns, it may be possible to go ahead with the conservation translocation.



## Geographical scope

The geographical scope of this code and the good practice guidance embraces the conservation translocation of organisms within terrestrial, freshwater, estuarine and marine environments of England.

While it is specific to England, cross-border co-operation and engagement with relevant authorities and stakeholders is essential where releases occur close to England's neighbours or involve a reintroduction of a species to Great Britain.

It is important to consider the mobility of species and their capacity to disperse or colonise. This will help you decide whether it is appropriate to consult on any translocation proposal close to a border.



White-tailed eagle. Photo credit: Allan Drewitt. Used under [Creative Commons](#).

## 2 The conservation translocation code and guidance

The code and guidance will help you to:

- decide whether a translocation is appropriate
- increase chances of success
- reduce likelihood of problems and conflicts

It covers translocations where conservation is the primary purpose.

### Code principles

The code is a series of principles, which you should apply to plan and implement a conservation translocation. It is not an advocacy document for reintroduction and translocations.

The code is based on principles of proportionality.

#### **Principle 1: Identify the conservation need and set goals**

Assess the status of the species and ecosystem, and evaluate the need for conservation action.

If you need to act, define:

- clear goals with indicators of success
- time frames
- the geographical scale

#### **Principle 2: Evaluate whether conservation translocation is an appropriate option**

Do an initial appraisal of the feasibility of using translocation to achieve the goals. Your initial appraisal will help inform your project evidence and planning requirements.

Consider whether other lower-risk, lower-cost, less interventionist management options would complement or be just as effective for your conservation goals.

Only go ahead with a conservation translocation if the evidence supports its use alone or in combination with other management options.

#### **Principle 3: Where translocation is appropriate, develop a plan**

Develop a plan that includes:

- objectives and actions
- assessment of feasibility and desirability
- risk and resource needs
- monitoring and management actions
- integration with other conservation actions
- an exit strategy

The depth of planning should be proportionate to the level of opportunity and risk.

#### **Principle 4: Get permissions, meet legislation and follow good practice**

Get permissions from landowners before you collect or release organisms in the wild.

Follow animal welfare, health and safety, biosecurity, quarantine and sanitation legislation and good practice.

Consult with Natural England, the Environment Agency or the Marine Management Organisation to get legal permissions and licences. You need to do this if your conservation translocation involves:

- protected or controlled species or designated sites
- moving species outside their current known range

If your translocation involves moving organisms to or from other countries, you must:

- get import or export permissions and licences
- consult with the statutory bodies in all countries involved to establish national legislative requirements

#### **Principle 5: Maximise chances of successful establishment**

You must have a thorough knowledge of the species' ecological requirements and make sure:

- any threats that caused previous extinction are identified and removed or sufficiently reduced
- the release site, wider area and management meets all requirements for survival and maintenance of healthy populations into the foreseeable future considering climate change
- the timing, life stage, numbers and sexes of individuals to be released is based on the reproductive ecology and likely seasonal changes – this will impact the species' chance of survival and establishment
- you provide ongoing adaptive management to help the translocated species survive, reproduce and achieve population goals

Avoid selecting from donor populations that:

- have reduced or inappropriate genetic diversity
- are likely to be poorly adapted to the release site

A donor population is the species population where translocated organisms are taken from.

## **Principle 6: Maximise benefits and minimise the risks of harm to biodiversity**

You should only translocate species into areas where they have not naturally been before if you cannot achieve your conservation goal by other management options.

### **Maximise wider biodiversity benefits**

Aim to integrate translocation with landscape-scale initiatives.

Contribute to national or regional biodiversity objectives, where possible – for example, species recovery plans.

### **Minimise the risks of harm to biodiversity**

Do not remove organisms from a donor site if it will jeopardise the conservation status of that population.

Do not remove organisms from a donor population if it will harm the conservation status of a population.

Unless there is a compelling conservation justification, for example to increase diversity in highly inbred populations, you should avoid mixing genetically divergent populations. This will:

- protect unique or locally adapted genetic types
- minimise the risk of genetic incompatibility

Consider whether the translocation will result in unacceptable, negative effects on the existing:

- species
- habitats
- wider environment – including land, downstream impacts out to sea or seascape-scale initiatives and protected areas

Do not go ahead if unacceptable negative effects are likely to occur or cannot be mitigated.

Do not go ahead if the species or its genes are likely to become invasive.

If translocations involve islands or isolated water bodies, take care to avoid disrupting the natural isolation from invasive species and diseases.

## **Principle 7: Consider societal benefits and minimise conflict with others**

To achieve societal benefits, make sure you:

- evaluate the potential for a translocation to provide economic or cultural benefits
- try to deliver wider economic or cultural benefits, wherever possible

To minimise conflict, make sure you:

- speak to other terrestrial, freshwater, estuarine and sea users and affected stakeholders
- check if the translocation could cause harm to human health, wellbeing and livelihoods
- understand your financial and legal responsibilities

Where there are conflicts, only proceed if you:

- can implement effective mitigation and management mechanisms
- have the resources to cover ongoing management
- are prepared to reverse the translocation in exceptional circumstances

## **Principle 8: Show accountability, transparency and openness**

You should show a clear commitment to openness, so stakeholders and the public have an informed view of the project.

Your engagement with users and stakeholders should be proportionate to the risks and predicted impact of the conservation translocation. Consider both the potential to reshape the environment and the potential for unequal distribution of benefits and costs.

Other terrestrial, freshwater, estuarine and sea users and stakeholders can help you to fully understand the potential environmental and socio-economic impact of the translocation. This may help you decide whether to continue with your conservation translocation.

## **Principle 9: Record translocations and monitor, evaluate and communicate outcomes**

Document the translocation and share findings, so it can be considered for future strategies and projects. Monitor translocation populations to:

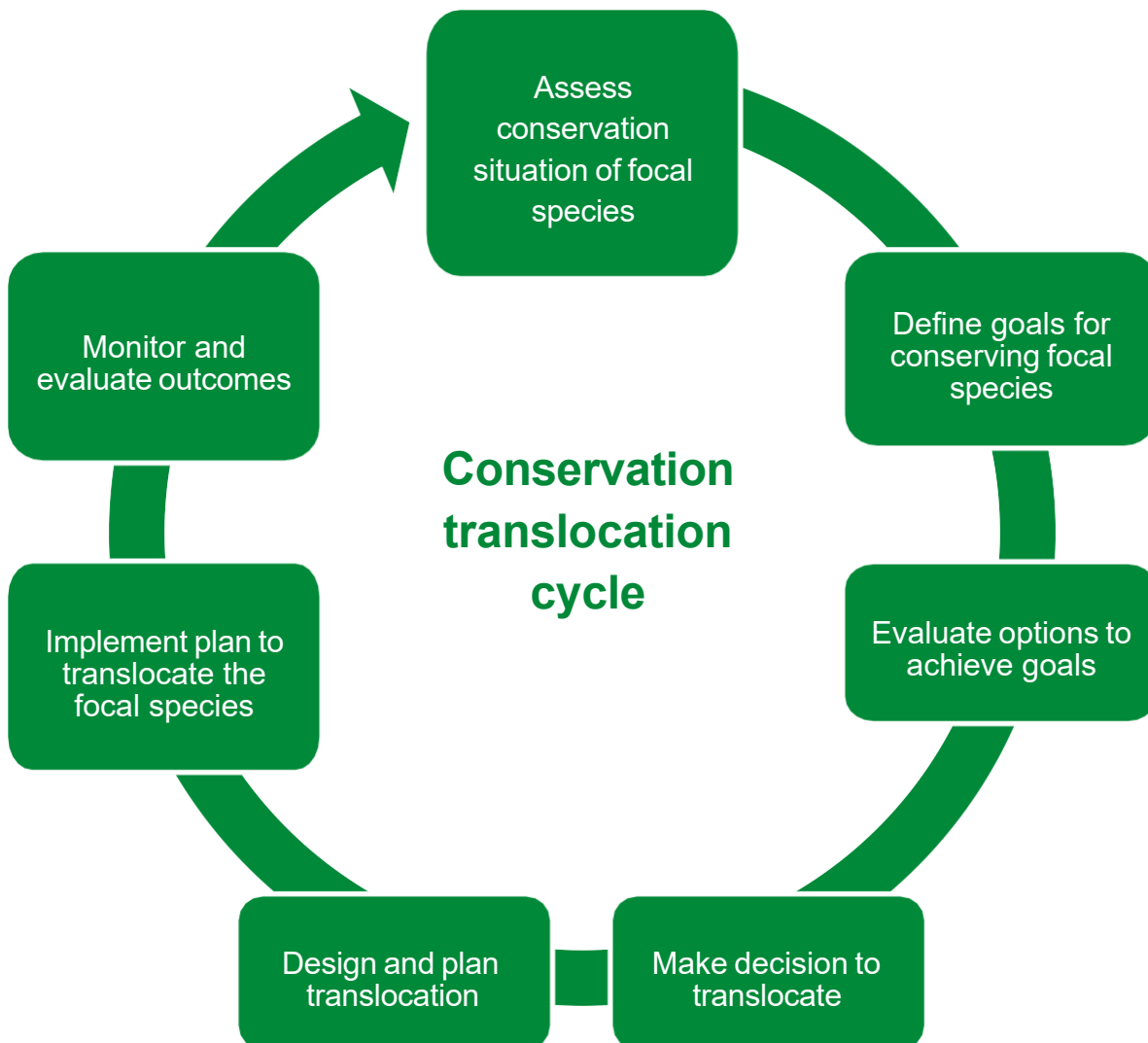
- evaluate success
- inform next steps of the project
- advise ongoing management interventions

## Good practice guidance

You should follow the good practice guidance in this document to help you plan and implement a successful conservation translocation project. For a conservation translocation or reintroduction to be a success, your project should have:

- clear goals
- a sound evidential basis for the planned intervention
- good planning and preparation
- adequate resourcing
- public support
- access to the right specialist knowledge and expertise

### Plan and implement a successful project



**Figure 1: stages of a conservation translocation project**

The main stages of a conservation translocation project are shown in Figure 1 as a cycle because it is important to review and adapt a project as it progresses. This will maximise the chances of success.

Stages of the conservation translocation project:

1. Assess conservation situation of the focal species – do not go ahead if this shows intervention is not needed.
2. Define goals for conserving the focal species.
3. Evaluate options for achieving goals.
4. Make decision to translocate – do not go ahead if a more acceptable alternative is found or you conclude that translocation will not work.
5. Design and plan translocation.
6. Implement the plan to translocate the focal species.
7. Monitor and evaluate outcomes – adapt or stop the project using evidence or following your experience.



Fen raft spider. Photo credit: Peter Wakely on Flickr. Used under [Creative Commons](#).



### 3 Identify the issue and form a conservation strategy

Before you begin any conservation translocation, you first need to identify what, if any, conservation issue requires action.

It is good practice to put together a conservation strategy. This strategy should consider the conservation needs of the species or ecosystem. The 4 elements of any conservation strategy are a:

- review of the status of the species or ecosystem at the relevant geographical scale
- vision for the future of the species or ecosystem and a set of goals
- set of objectives and actions to accomplish your goals
- plan to monitor and evaluate progress to reach your goals

Be sensible and proportionate. What and how much you need to do will be influenced by the species, its status, the threats it faces and the biogeographical scale you want to influence.

Even if the conservation issue you want to tackle is local in scale, try to make sure it contributes to regional or national conservation strategies. Whatever scale you are working at, it is important to have a clear vision, clear goals and clear objectives. This will give you the best chance of developing a plan that is achievable and will make a meaningful contribution to the conservation of the focal species.

A conservation strategy will also help you to decide whether translocation is an appropriate solution. The strategy should be sufficiently developed to allow you to identify and evaluate potential options and make a properly informed decision. You may find after you have put together your strategy that a conservation translocation is not the best approach to conserve that species.

Further advice on how to develop a conservation strategy is provided in the [IUCN Species Survival Commission's handbook for Strategic Planning for Species Conservation](#).

### Status review of the species

A status review should cover the:

- historical and current distribution of the species where you plan to release it, across Great Britain and internationally
- population sizes, or at least give a measure of relative abundance
- population trends
- losses and threats to the species



The status review should, where available, be informed by a [red list assessment](#).

Natural England recommends you do your status review using [favourable conservation status \(FCS\)](#).

## Favourable conservation status definitions

Natural England publishes [FCS definitions](#) for a range of individual species and habitats. The definitions are based on the best available ecological data and evidence for the habitat or species. Socio-economic factors are not considered.

If there is a Natural England FCS definition for your project's focal species, you can use the information for your status review. [This methodology can be used to develop new definitions](#).

FCS definitions cover the:

- natural range and distribution of a species or habitat
- extent of the habitat or size of species population
- quality of a habitat when in favourable status
- extent and quality of a habitat that supports a species

The [common statement](#) on FCS, agreed by the UK statutory nature conservation bodies, provides a summary of the legislative context for FCS and principles.

## Vision and goals for the future of the species

A vision is a short statement of the desired future state for the species, population and ecosystem. It describes:

- your aspirations for the range and abundance of the species
- the ecological role of the species
- the relationship of the species with people and communities

The long-term conservation needs and threat analysis you did for your status review should inform your vision. Your vision should be ambitious, realistic, and inclusive of other interests and views.

Your goals are operational milestones taken from your vision. They should cover in greater detail what you need to achieve and include targets or indicators so you can evaluate progress and success. For example, you might include a goal with a target number of individuals or populations.

You need to include the geographical scale or area and an overall timespan in your vision and goal targets.

## Objectives and actions

Your objectives should detail how you will achieve your goals over your chosen timespan. They should be clear, specific and must cover all the species threats identified.

Linked to your objectives are actions. Actions are precise statements of what you need to do to complete objectives to reach your goals.

Actions should be capable of measurement. They must include:

- time schedules
- resources needed
- who is responsible and accountable

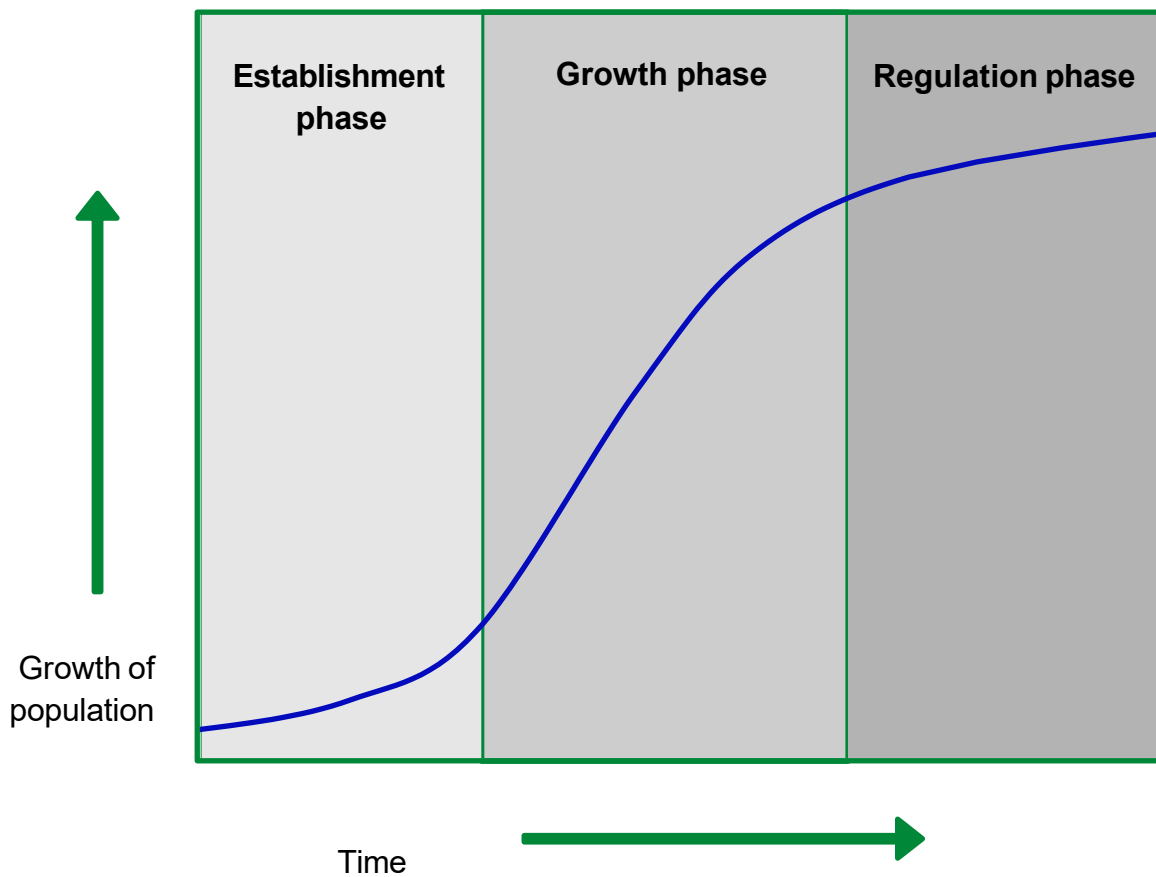
## Plan to monitor and evaluate progress

Plan how you will monitor and evaluate. This will help you to collect the information you need to both manage the project's progress and to evaluate its success.

As a minimum, your plan must collect the appropriate data needed to measure the actions linked to your objectives.

## Phases of a successful conservation translocation

As part of your conservation strategy and planning, the IUCN guidelines recommend you consider the 3 phases of a successful conservation translocation (shown in Figure 2).



**Figure 2: the 3 phases of a successful conservation translocation**

### **Establishment phase**

The initial growth is typically slow as the translocated population recovers from the translocation process and settles into its environment.

### **Growth phase**

During the growth phase the translocated population becomes established and its size or range increases until the population approaches carrying capacity.

### **Regulation phase**

In the regulation phase the population's growth is density-dependent (when survival or recruitment tends to decrease with increasing population density).

## 4 Consider the best options for your conservation goals

After you have developed your conservation strategy, you should have a good idea of the conservation need and your goals. Now you can consider what the best approaches would be to achieve your conservation goal.

Conservation translocations can involve negative outcomes as well as positive ones. Negative outcomes are often costly and come with a certain amount of risk.

Consider these alternative approaches before you decide on a conservation translocation:

- area-based solutions – wider habitat management or restoration, which includes establishing corridors to maximise survival and natural colonisation or dispersal of the focal species
- species-based solutions – targeted management, which includes control of pathogens, predators or invasive species, food provision, assisted reproduction or protective fencing
- social or indirect solutions – promotion of viability and reduction of threats to wild populations, which could include new protected areas, changes in legislation or regulations, an appropriate level of law enforcement, public education, community-based conservation, financial incentives or compensation
- no action – a viable option if there is real potential for the focal species to adapt naturally or move to new suitable habitat without humans getting involved

If these alternative approaches will not work or cannot work alone to help you reach your desired conservation goal, then a conservation translocation may be appropriate.

A translocation will typically form part of a broader plan involving other conservation actions.

### Complete a project scoping form

To assess whether a conservation translocation is appropriate, you'll need to consider the legislative constraints, socio-economic benefits and wider risks.

The [conservation translocation project form](#) will help you identify these benefits and risks and apply the code and guidance to your project. It will also act as evidence you have followed best practice and legal requirements.

You need to submit the form to Natural England if your project needs either:

- a conservation translocation licence
- consent for activities on a protected site, such as a site of special scientific interest (SSSI)

If your conservation translocation does not need a licence, we still encourage you to use the project scoping form. But you do not need to submit the form to Natural England. If you

need to apply for a licence issued by the Marine Management Organisation or the Environment Agency, contact them for advice.

## Assess risk to make informed decisions

Anything that could have a negative effect on a project's success is a 'risk factor'. Risk is assessed as the likelihood of any risk factor occurring, combined with the severity of its impact.

### Risk landscape

You need to identify the risks of your project early on. The range of possible risks is also known as the 'risk landscape'. The risk landscape is made up of:

- the number of risk factors
- level of certainty over the occurrence of each risk factor
- level of certainty over the severity of its impact
- ignorance of other possible risks factors
- the level of competence over those responsible for implementing the project
- the cumulative effects of all risks
- the extent to which these risks interact
- scope to minimise or mitigate these risks

### Risk assessment

Risk assessment is an essential part of any translocation project and should consider all aspects and stages of a project.

The extent of your risk assessment should be proportional to the level of identified risk. Your risk assessment should include both qualitative and quantitative analysis. If the data you have is poor, your risk assessment may be predominantly qualitative. Though it remains essential, as lack of data does not indicate absence of risk.

Risks will change as a project progresses, so you will need to reevaluate at different stages of a project.

To evaluate and reevaluate the risk of your project, you need to:

1. Identify the risks and what could be affected by negative impacts.
2. Decide the relevant risks factors, the probability of them occurring and the consequences if they do.
3. Assess options to control each of the risk factors.
4. Conclude and document the outcome of the assessment.
5. Review and update the assessment as the project progresses.

It is important you consider the likelihood of different outcomes at all stages of your assessment. How certain you are about different parts of your project will impact your assessment and planning. If it is certain that a risk will or will not happen, you can plan

with more confidence. If there is considerable uncertainty, you must consider a wide range of possible scenarios.

You can find further guidance on risk assessment in section 6 and annex 6 of the [IUCN Guidelines for Reintroductions and Other Conservation Translocations](#).

## Decision making

Conclusions from your risk assessment should inform the decision whether a translocation should proceed or not and also the planning of any project that does go ahead.

If you decide to go ahead with a conservation translocation over other conservation measures you must weigh the potential risks identified in your risk assessment against the expected benefits. Assess the probability that different outcomes may occur, either quantitatively or qualitatively, and place values on those outcomes.

## Structured decision making

We recommend you use a [structured decision-making framework](#)<sup>1</sup>, especially for complex or controversial projects. Structured decision making is a general term used to describe a range of principles and tools that groups of stakeholders can use to make rational decisions, balance project goals and account for uncertainty.

Structured decision making helps present the logic, value judgements and knowledge behind decisions, so they are clear to everyone. Using these approaches will lead to better choices under uncertainty and risk.

## Solutions to identified risks

Where there is potential for harm, projects should only go ahead if acceptable solutions can be developed. Solutions include:

- management actions to minimise impacts – for example, containment, control, damage prevention, translocation of problem animals and culling
- long-term compensation agreements to offset losses
- a viable exit strategy for reversing the translocation if unacceptable impacts occur
- a risk analysis for possible pathogens that may be carried by the focal species, followed by appropriate planning, treatment, quarantine and monitoring
- biosecurity measures – guidance can be found at [GB non-native species secretariat \(NNSS\)](#)

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<sup>1</sup> Runge, M.C., Grand, J.B. & Mitchell, M.S. 2013. Structured decision making. In Krausman, P.R. & Cain III, J.W, eds. Wildlife Management and Conservation: Contemporary Principles and Practices. pp. 51-72. 2013 The Johns Hopkins University Press.





Eurasian beaver. Photo credit: Elaine Gill. Used under [Creative Commons](#).

## 5 Stay legal

You need to consider the law once you complete your conservation strategy and approach. The law helps to protect and restore England's biodiversity, as well as safeguard the public and protect other environmental, social and economic interests.

Your conservation project must follow the law at all stages. This includes any licences and other permissions, which you might need to get for both the donor and release site before your conservation work starts.

There is a large amount of legislation that can apply to translocations. Variation between countries, including within Great Britain, mean it can be a challenge to understand how and where it applies.

In this guidance, legal issues have been divided into 4 themes that are most relevant to conservation translocations in England:

1. Legality of releasing species.
2. Protection of species.
3. Protection of places.
4. Other legal provisions.

This guidance includes a summary of the main legal issues in England. It does not include all the legal requirements that might apply to your project. You must check the legal requirements that could apply.

Check if you need a [wildlife licence for your conservation project](#).

### Legislation: interpretation of terms

These are some of the terms you will find in the legislation and in our guidance. We have included our interpretation of these terms.

#### **'of a kind'**

The legislation on releasing animals does not use specific taxonomic terms such as 'species'. The words 'of a kind' recognise the huge variety of characteristics and traits in the animal world, even among similar species or between international populations. An animal 'of a kind' should be distinct from other animals, but does not need to be a different species or subspecies.

#### **'ordinarily resident'**

A species is considered 'ordinarily resident' if the population has been present in the wild for a significant number of generations and is considered viable in the long term.



## **‘regular visitor’**

A ‘regular visitor’ is a species that appears with reasonable frequency or predictability in Great Britain. For example, seasonal migratory species. Vagrants or strays are not a ‘regular visitor’.

## **‘in a wild state’**

A species is considered to be ‘in a wild state’ where the population lives and feeds for itself in the wild.

## **‘the wild’**

‘The wild’ is the diverse range of natural and semi-natural habitats species can live in. ‘The wild’ includes the wild native flora and fauna of rural and urban areas, which can be described as the general open environment.

## **animals ‘in the wild’**

The deliberate introduction of an animal from a condition of captivity into an area considered to be ‘the wild’ is an act of release. Even a release into an enclosure may count as a release into the wild in certain circumstances.

## **plants ‘in the wild’**

Planting in the wild is intentionally placing viable plant material in or on suitable medium so it can grow. For example, whole plants, seeds, rhizomes, bulbs, corms and cuttings.

[Further guidance on these legal terms and our interpretation of them](#) has been published by Defra.

## **Authorities and their responsibilities**

Different statutory bodies are responsible for licensing conservation translocation releases and issuing consents for activity that impacts a protected site.

Natural England is responsible for:

- terrestrial habitat releases and protected sites
- freshwater habitat releases and protected sites
- marine habitat releases landward of mean low water mark
- marine habitat protected sites of special scientific interest (SSSIs)

The Marine Management Organisation is responsible for marine habitat releases:

- seaward of mean low water mark for most species licensing
- seaward of high water mark for seals

- seaward of mean high water springs for marine licensing

It is also responsible for marine habitat protected marine conservation zones (MCZs), special areas of conservation (SACs) and special protection areas (SPAs).

The Environment Agency is responsible for releases into freshwater habitats.

## Legality of releasing species

With some important exceptions, which are set out below, it is generally legal to release any plant. In general, it is also legal to release any animal of a kind in a wild state that is ordinarily resident or a regular visitor of Great Britain.

The wording of the law for animals has 2 important implications:

1. Without a licence, it is unlawful to release animal species that were once native to Great Britain and are now extinct. This applies if the animal became extinct recently – for example, the short-haired bumble bee (*Bombus subterraneus*), which was declared extinct in 2000. It also applies to animal species extinct in the distant past. For example, the Eurasian elk (*Alces alces*) which became extinct in 13th century.
2. It is lawful to release animal species into an area where it is not currently present in England, so long as an animal of the same kind is resident or a regular visitor somewhere in Great Britain. This applies even if there is no evidence that the release area, or anywhere in Great Britain, ever formed part of its natural range. In this respect, English law is different to [Scottish law](#). In Scotland, releasing a species outside its natural range (referred to as native range in Scottish law) is unlawful.

There are important exceptions to this general position.

### Legal exceptions for releasing species

The most important exception is that it is unlawful to release any species listed on [Schedule 9 of the Wildlife and Countryside Act 1981](#) (including Parts I, IA, IB for species and II for plants and fungi). The species listed are controlled. While most of the species are non-natives that have become established in the wild in Great Britain, the schedule also includes some native species. These are native species that have the potential to cause conflicts. For example, the European beaver (*Castor fiber*) and wild boar (*Sus scrofa*). The schedule also includes species whose welfare or conservation status could be compromised by poorly planned releases – for example, the barn owl (*Tyto alba*).

It is also unlawful to transport or release live specimens of invasive alien species listed under the [Invasive Alien Species Enforcement and Permitting Order 2019](#).

The fact that it is legal to release a species, does not always make it right or acceptable. All conservation translocations should comply with this code and good practice guidance.

Consult Natural England for all cases where conservation translocations involve moving species across UK national borders or large distances within England. This is more likely to involve different subspecies, races or types, and so you may need a wildlife licence.

In cases involving hybrids between an animal of a kind whose release is controlled and one that is not, the hybrid will be subject to release controls.

## **Freshwater fish conservation translocations**

The Environment Agency regulates the movement of all fish, fry and ova (which includes freshwater crustacea and molluscs) into inland waters in England. Inland waters include rivers, estuaries, canals, drains, channels, creeks, bays and stillwaters. This does not include enclosed garden ponds or any authorised aquaculture production business like fish farms.

The River Tweed which runs along the border between Scotland and England is regulated by the Scottish Environment Protection Agency (SEPA).

You must contact the Environment Agency if you plan to move migratory or freshwater fish to a site in England.

You may need different licences and permits for a single fish translocation. For example, to do a conservation translocation of vendace (*Coregonus vandesius*) from one Cumbrian lake to another, you would need:

- a fish movement permit from the Environment Agency to introduce the fish and in some cases to keep them in the destination water
- a wildlife licence from Natural England
- an Environment Agency authorisation if the fish are caught from the donor water by a method other than rod and line, for example, a fyke net
- consent from Natural England if the donor or release sites are protected places, for example, a site of special scientific interest (SSSI)
- permission from the Fish Health Inspectorate if you plan to breed fish in captivity for release

You may also need permission from the landowner or fishery operator.

Without a permit, it is unlawful under the [Keeping and Introduction of Fish \(England and River Esk Catchment Area\) Regulations 2015](#) to introduce or be in possession of fish with the intent to introduce them into inland waters. Under [Salmon and Freshwater Fisheries Act, 1975](#), if you use certain methods to remove fish, you must be authorised.

In some cases, you may need a fish health check to stock fish in rivers, canals and lakes connected to open waters. Advice and application forms are available from the [Environment Agency](#).

## Marine organism conservation translocations

Conservation translocations are appropriate for marine species that have become locally extinct and are unlikely to recolonise an area without help from humans.

You need a wildlife licence from the appropriate licensing authority for a conservation translocation of a [UK protected marine species](#) in English waters.

The Marine Management Organisation issues wildlife licences seaward of low mean water mark. Natural England issues wildlife licences landward of mean low water mark. Advice and application forms are available from the [Marine Management Organisation](#) and [Natural England](#).

You may also need a marine licence from the Marine Management Organisation for a translocation seaward of mean high water springs – particularly if your translocation includes the deposit or removal of a substance or object.

Licence applications in the marine area may also need to explain how the project has considered a marine plan or the Marine Policy Statement. Guidance on [marine licences](#) and [marine plans](#) is available from the Marine Management Organisation.

There are [additional regulatory controls](#) on the import of live fish, molluscs and crustaceans.

## Conservation translocations between England and other countries

If you plan to move organisms between countries, you must follow the law, national regulations and permit procedures of all countries involved if:

- organisms are collected in England and released elsewhere
- collected elsewhere and released in England

Natural England will ask you for evidence that you have organised the necessary licences and permissions in the other countries before they issue any English licences or consents.

If importing live fish from outside of the UK, you may also need authorisation from the [Fish Health Inspectorate](#).

## UK conservation translocations

English law can differ from other parts of the UK and licences and permits issued by one national authority rarely confer legal permission outside that country. For example, you would need a licence to possess and transport beavers (*Castor fiber*) from both Natural England and NatureScot if you wanted to temporarily hold and transport a beaver caught in Scotland and later release it in England.

Consult the relevant statutory agencies if your translocation involves other parts of the UK to make sure you get advice and follow their licensing requirements.

## International conservation translocations

If you plan a translocation that involves countries outside of the UK, check with the relevant statutory bodies in all the countries the species will travel through.

The Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) restricts the international movement of CITES-listed species. Permits are required to allow the legal import or export of those species.

Contact the national [CITES management authorities](#) of the countries of import and export (or re-export) for the rules that apply. The Animal and Plant Health Agency's Centre for International Trade is the UK CITES management authority responsible for dealing with CITES applications. [Information on obtaining permits and applications](#) is available from the Animal and Plant Health Agency.

Translocations between countries must also follow the law on harmful organisms and diseases, and animal welfare.

## Protection of species

You must consider the legislation that protects certain species and biodiversity. You should be familiar with this legislation and understand how it can impact your conservation translocation plans.

### Pre-release considerations

Many species important to conservation are protected by legislation that controls how you can collect or move them before they are released.

The most relevant legislation in England are the:

- [Wildlife and Countryside Act 1981](#) (and amendments), referred to here as the '1981 Act'
- [Conservation Habitats and Species Regulations 2017](#), referred to as the 'Habitats Regulations'
- [Conservation of Offshore Marine Habitats and Species Regulations 2017](#), referred to as the 'Offshore Marine Regulations'

The 1981 Act and Habitats Regulations protect species in the terrestrial environment and up to the 12 nautical miles of English territorial waters. The Offshore Marine Regulations protect species from 12 to 200 nautical miles (UK offshore waters). To find out about the extent and limits of inshore and offshore areas read about [Marine Protected Areas](#) on the Joint Nature Conservation Committee (JNCC) website.

### Different levels of legal protection

The level of legal protection varies for different species.

For animals that are fully protected, it is typically illegal to:

- intentionally or deliberately, and (in some cases) recklessly, capture, injure, kill or disturb specimens of the species
- damage or destroy their breeding site or resting place

For plants and fungi, it is typically illegal to intentionally or deliberately pick, uproot or destroy specimens of the protected species, their seeds and spores. It is also an offence to keep, possess, transport or sell some protected animals, plants and fungi.

Some species have limited protection. Some species may be protected from certain methods of capture, like trapping or be protected by more than one law. For example, it is an offence to disturb otters (*Lutra lutra*) under both the 1981 Act and the Habitats Regulations.

### **Wild-caught donor sources**

You may need a licence to collect and, in some cases, to keep or transport a species caught in the wild. Your licence application will typically be assessed against the following:

1. Is there an appropriate legal purpose to the translocation? In the case of a conservation translocation that complies with the code (specifically principle 1), the answer would be yes, as conservation is a legal purpose.
2. What other solutions have been considered and why have these been discounted? This requirement gives legal weight to compliance with principle 2 of the code.
3. What is the impact of the proposed translocation on the conservation status of the species concerned? To be compliant with the code, a conservation translocation is expected to improve the conservation status of a species.

The emphasis given to these considerations will depend on the species and how it is protected.

You must also consider whether your conservation translocation might result in an offence against another protected species. For example, preparing a release site for the translocated species might negatively impact on a protected species already at that site. If you cannot avoid this, then you may need a [wildlife licence](#).

A habitat regulations assessment might be needed if the capture of a wild donor affects a special area of conservation (SAC), a wetland of international importance (Ramsar site) or a special protection area (SPA).

### **Biodiversity duty**

Your conservation project should avoid or mitigate against any significant negative impacts on biodiversity at the donor or release site. Focus on [species and habitats listed as being of principal importance](#). If you do not consider this, your application may not be successful.

Licensing authorities have a duty to conserve biodiversity under the [Natural Environment and Rural Communities Act 2006](#). This is called the 'biodiversity duty' in [section 40](#) of the act.

## **Post-release considerations**

The protected status of a species is not diminished at any point during a conservation project.

Specimens of protected species reared in captivity are not protected. But once they are released into the wild, they typically become protected.

The release of a novel or former native species that has protection under international law or convention does not automatically mean the species is protected in England. An amendment to English law is usually needed to get protected status.

Birds are the exception. Most bird species that are ordinarily resident or a visitor in a wild state anywhere in Great Britain or in the European territory of any European Union member state, are protected by default in England (and elsewhere in Great Britain) under English law.

## **Project owner rights and responsibilities**

Once a species has been lawfully released into the wild, the person or project that released the species has no ongoing rights of ownership over it. But if you need a wildlife licence as part of your project, the licensing authority may choose to include certain conditions in the licence.

These conditions could include responsibilities to manage a released organism or deal with problems the focal species may cause after the species has been lawfully released into the wild. For example, to catch and remove released animals that cause problems or to offer advice and assistance.

## **Active monitoring, management and removal of species**

You will usually need a licence to disturb, capture or remove a protected species if it needs active monitoring or management after the conservation translocation. This includes catching for monitoring purposes and for lethal control or removal as part of an 'exit strategy'.

Licence applications will assess:

- the nature of the problem
- alternative monitoring and management solutions you have considered, and why you have discounted them

When you plan your translocation, consult with the licensing authority over the process, timelines and feasibility of getting permissions for these interventions.

If you know you will need to manage the species after release, you can apply for a [wildlife licence](#) in advance. For example, you may need to intervene to remove the dams of newly released beavers that obstruct rivers.

You may need a [Home Office licence](#) for some research and monitoring methods.

## Protection of places

In addition to the legislation protecting species, there is also legislation for protected places. In England, the most comprehensively protected places include:

- sites of special scientific interest (SSSIs)
- special areas of conservation (SACs)
- special protection areas (SPAs)
- wetlands of international importance (Ramsar sites)
- marine conservation zones (MCZs)
- scheduled monuments (SMs)
- historic environment assets (registered parks and gardens, registered battlefields and listed buildings)

These places have legal protection under various nature conservation statutes. The most important are the:

- [Wildlife and Countryside Act 1981](#)
- [Marine and Coastal Access Act 2009](#)
- [Conservation of Habitats and Species Regulations 2017](#)
- [Conservation of Offshore Marine Habitats and Species Regulations 2017](#)

To find out if the potential donor or release sites for a proposed conservation translocation are protected, or are near protected places, use [MAGIC map](#). Protections between locations will vary. Details of the special features of these places can be found using [Natural England's Designated Sites View](#).

Translocations may have a significant effect on a protected place. For example:

- a translocated species could change the features that make the protected place special
- the activities of people involved in the translocation could disturb species or features that make the protected place special

In these situations, you need to do a thorough impact assessment and contact the relevant regulatory authority before you start the project to find out if you need consent. If you need a licence for your translocation project, consent will be dealt with as part of the licence application process.



## **Sites of special scientific interest (SSSIs)**

If your translocation sites are listed as 'operations requiring Natural England's consent' the land manager or owner must apply to Natural England for consent.

The 'operations requiring Natural England's consent' vary between SSSIs and are identified on [Designated Sites View](#).

Information is available on how to [give notice and get consent for a planned activity on a SSSI](#). If you need further advice, you can [contact Natural England](#).

## **Special protection areas (SPAs), special areas of conservation (SACs) and Ramsar sites**

A competent authority must carry out a habitat regulations assessment before it can approve applications for licences and other permissions unless the translocation is necessary for the management of the site. In some cases, this includes an 'appropriate assessment'. The authority will then decide whether to grant you a licence or consent. They will also let you know if there are any conditions needed to protect the sites' special features.

Most Ramsar sites, SPAs and SACs are also SSSIs, so you may need to get SSSI consent too.

### **Appropriate assessment of protected areas**

An appropriate assessment will focus on any potentially negative impacts for SPAs and SACs if your translocation went ahead. The competent authority will use common sense to identify any relevant sites. No distance is exempt from consideration if a protected site could suffer harm from the translocation.

In most situations you will be expected to provide evidence to assist an assessment. You can get more information on the appraisal process from the relevant competent authority.

## **Marine conservation zones**

The Marine Management Organisation is responsible for monitoring and enforcing marine conservation zones (MCZs). Inshore fisheries and conservation authorities (IFCAs) and other regulators may be involved too. If your translocation proposal could impact an MCZ, contact the Marine Management Organisation for advice.

Inshore and offshore MCZs are shown on [Marine Protected Area Mapper](#).

## **Other special places**

As well as places protected by conservation legislation, other areas in England are classed as important for conservation. These include:

- national nature reserves
- world heritage sites
- local nature reserves
- undesignated historic environment assets

There is no statutory requirement for consent for these protected places, but you must get the landowner or manager's permission for any translocation proposal.

Many of these sites also fall within SPAs, SACs or SSSIs, so you may still need to go through a habitat regulations assessment or get operations requiring Natural England's consent. For example, all national nature reserves have parts that are also classed as SSSIs.

On GOV.UK you can [find protected areas of countryside](#). Most sites with a formal designation are shown on [MAGIC map](#).

Some authorities also have some historic environment assets mapped on [Heritage Gateway](#).

## Prevent the spread of diseases and harmful species

Conservation translocations must avoid the spread of diseases, non-native and other potentially harmful species.

Some pathogens can be transmitted by equipment, footwear or vehicles and not just by the translocated organisms.

You need to follow biosecurity precautions for all translocations.

Even local translocations pose a potential risk. For example, chytrid fungus, which infects amphibians, is not present in all ponds across the UK, or even within all ponds of individual counties. It is important to prevent it spreading to new ponds.

National and international conservation translocations must follow quarantine, sanitation and phytosanitary (plant health) legislation in England and any other countries involved.

This includes if the import or export involves movement through Scotland, Wales or Northern Ireland.

The relevant authorities must be contacted and consulted. You will need to get certification before you import, export or move species.

## Animals and germplasm controlled by the Balai regime

The Balai regime controls imports of [some animals and germinal products \(semen, ova and embryos\) for conservation or research programs](#).

You should [check with the Animal and Plant Health Agency \(APHA\)](#) if the Balai regime applies to your conservation translocation project.

## Rabies

If the animal you are importing is susceptible to rabies you should find out [how to bring rabies-susceptible animals into the UK](#).

[Contact APHA](#) for more information.

## Live fish and shellfish

If you are translocating live fish or shellfish, you should follow guidance on [importing or moving live fish or shellfish](#) to find out what you need to do.

## Plant health

Plant health legal requirements can be complex and may change at short notice in response to a newly identified threat. For example, new legislation was introduced in 2018 to tackle the threat caused by the oak processionary moth (*Thaumetopoea processionea*). The caterpillars of this moth cause significant damage to oak trees and can be a risk to human and animal health.

APHA and the Forestry Commission can provide information on:

- plant health requirements
- notifiable diseases
- the potential to spread harmful species and disease

If your conservation translocation involves animals, plants or trees, contact [APHA](#).

If the translocation involves wood, timber or bark, contact the [Forestry Commission](#).

## Plant imports

Regulated plants need a phytosanitary certificate to enter England, and the rest of Great Britain.

Read guidance on [how to import plants from the EU and non-EU countries to Great Britain](#).

You need a [UK plant passport to move regulated plants](#) within Great Britain, to the Isle of Man and to the Channel Islands.

## Plant exports

When you export regulated plants from England to other countries outside Great Britain, you need to check whether a phytosanitary certificate is needed in the destination country.

Samples of your plants may need laboratory testing to make sure they are free from pests and diseases.

Read guidance on how to [export plants from Great Britain to the EU and non-EU countries](#) and the movement of plants from Great Britain to Northern Ireland.

## Protect animal welfare

Conservation translocations should be designed to avoid stress, harm and mortality to translocated organisms. Harm could occur:

- at the point of capture
- during transit
- at any holding phase, including breeding and rearing
- during and after release

Animal welfare legislation, particularly the [Animal Welfare Act 2006](#), protects the welfare of all vertebrate animals kept by humans on a temporary or permanent basis.

You must make sure your conservation translocation meets the requirements of the Animal Welfare Act 2006 and any other relevant welfare legislation. Natural England has published guidance on [the Animal Welfare Act 2006: what it means for wildlife](#).

Other welfare legislation may also apply to your conservation translocation, such as the [Wild Mammals \(Protection\) Act 1996](#).

If your translocation involves capture in another country, you need to follow the relevant animal welfare legislation of that country.

## Animal welfare: the law

The person responsible for the care of vertebrate animals in a conservation translocation must look after their welfare needs.

An animal's welfare needs include:

- a suitable environment
- a suitable diet
- being able to exhibit normal behaviour patterns
- housing with or apart from other animals, as appropriate for the species
- protection from pain, suffering, injury and disease

You will be committing an offence if you do not take reasonable steps in all circumstances to look after the animal's welfare needs.

## Capture

Certain methods of capture of wild animals are unlawful except under licence. [Check if you need a wildlife licence for your project](#). For example, the use of traps to catch certain species of mammal is subject to the [Agreement on International Humane Trapping Standards \(AIHTS\)](#). Read guidance on [how to trap badgers, beavers, otters, pine martens and stoats humanely](#).

## Transport

Any transportation of animals by air must also follow [International Air Transport Association's Live Animals Regulations](#) (LAR). LAR is the global standard and includes classification of thousands of animal species along with the container specifications needed for their transport.

LAR's website has guidance on how to transport animals by air in a safe, humane and cost-effective way, in compliance with airline regulations and animal welfare standards.

## Point of release

Anyone involved with the release of an animal is responsible for its care, even if this is only for a short period of time. This applies whether the animal is released under a wildlife licence or not.

The people who release the animal may commit animal welfare offences if they:

- cause suffering to the animal as a result of a poorly planned release
- do not take reasonable steps to make sure the animal is able to fend for itself and live independently at the point of release

## Dangerous wild animals: the law

The Dangerous Wild Animals Act 1976 may be relevant for some species of animal as listed in the Act. If an animal is licensed under the Dangerous Wild Animals Act 1976, it would be an offence to release that animal. The list of species includes a small number of former native English mammal species, plus our only venomous snake, the adder (*Vipera berus*).

## Animal welfare: good practice

Animal welfare legislation places a strong emphasis on good practice. The risk of committing an offence can be significantly reduced by following recognised good practice.

Facilities and all equipment, including traps and vehicles, for holding animals should be designed, constructed and maintained to avoid pain, injury and suffering.

Anyone handling animals should be trained and competent in the task.

Carefully plan all activities in advance and make sure there is a clear protocol for dealing with injuries, including access to veterinary assistance, if it is needed.

## **Capture**

You should plan captures carefully and take steps to:

- minimise the risk of injuries and fatalities
- avoid non-target captures through design and siting of capture equipment
- avoid the risk of separating dependent young from parents

## **Keeping, including breeding and rearing**

You should keep wild-sourced animals in captivity for the minimum time necessary.

Make sure the animal:

- has a suitable environment, including sufficient floor space and height to allow the animal to exhibit normal behaviour patterns
- eats a suitable diet, including sufficient clean water
- is kept with or apart from other animals, as appropriate for the species
- is protected from disease

## **Transport**

Plan journeys to keep transit time to a minimum. Make sure the animals are fit to travel and check them during the journey.

Make sure the needs of the animals are met. This includes:

- water
- feed
- rest
- sufficient floor space and height

## **Release**

Make sure the location and timing of the release is appropriate. Consider the life cycle of the animal.

Choose a release site that is safe and can provide all the animal's needs for the foreseeable future.

Use a 'soft-release' strategy if this benefits the welfare of released animals. A soft-release strategy involves you providing housing, food or both to help translocated organisms become established at the release site.

## **Post-release**

Conduct post-release monitoring to inform future releases.

# Landowner permissions, responsibilities and rights

## Get landowner permission

You need to get permission from landowners at donor sites and at release sites for your conservation translocation project. This applies to:

- open access land, including land mapped as 'open country' – for example, mountain, moor, heath and down
- registered common land, where the public has a right of access under the [Countryside and Rights of Way Act 2000](#)

## Landowner rights

Once a species has been lawfully released into the wild and is no longer under the control of the person or project, then it is regarded as 'wild'. The person or project that released the species has no ongoing rights of ownership over it.

Landowners and occupiers also have the right to manage wildlife on their land, subject to any legal restrictions. They are entitled to control species that have been released, whether as part of a licensed project or not.

If the released species is protected, the landowner must follow the law and might need a licence to control it.

## Landowner responsibilities

Landowners or occupiers may have a responsibility to control certain species in some situations. This could be relevant to your conservation translocation project.

### Agriculture Act 1947

[Agriculture Act 1947](#) provisions sections 98 to 100 can require landowners to take action to prevent damage to:

- crops
- pasture
- animal or human foodstuffs
- livestock
- trees, hedges or banks
- any works on land

It applies to:

- rabbit (*Oryctolagus cuniculus*)
- hare (*Lepus europaeus*)
- rodents (all species)

- deer (all species)
- fox (*Vulpes vulpes*)
- mole (*Talpa europaea*)
- birds ([except Schedule 1 species](#))

### **Wildlife and Countryside Act 1981**

The Wildlife and Countryside Act 1981 has provisions for [Species Control Agreements and Orders](#) which may require landowners to take action.

These provisions could apply to projects that release a native species that:

- is no longer recognised as resident in or regular visitor to Great Britain
- has recently become re-established in the wild, as a result of escapes, illegal releases and reintroductions and is listed on [Schedule 9\(1B\)](#) of the Wildlife and Countryside Act 1981 – one species is currently listed: wild boar (*Sus scrofa*)



## 6 Maximise success

To maximise the success of your conservation translocation, you must:

- understand the biology of the species
- choose the best approach for your conservation translocation
- select an appropriate donor population or populations
- match the donor populations with suitable release sites
- put together a release strategy to make sure your translocation methodology promotes the survival of the translocated organisms
- monitor translocations and adapt management, if needed, so you can achieve your project goals
- use stakeholder engagement, consultation and communication so everyone affected or interested is informed of the proposals
- understand the wide range of environmental values (beyond the biodiversity value) at the release sites – this includes the significance of the landscape and historic assets

How you achieve this will vary from species to species, and place to place. Here, we summarise the issues outlined in the IUCN guidelines, and provide links to resources that apply to conservation translocations in England.

### Understand the biology of the species

Conservation translocations must be informed by biological knowledge of the focal species. The level of biological knowledge you need will vary depending on the species, the type of translocation and scale of the project.

#### Species biology knowledge

You need to be familiar with the biology of your species before you start a conservation translocation project.

In addition to published information, you can get expertise on the biology of plants, animals and fungi from specialist natural history societies and governmental and non-governmental conservation and environmental organisations.

#### Reproduction

You need to understand the:

- mating system
- mode of reproduction – for example, sexual or asexual
- time to sexual maturity
- seasonality and phenology of reproduction
- gestation time – for example, pregnancy, incubation and ripening periods

- number of offspring produced
- dormancy periods and seed-bank longevity
- birthing, hatching and germination requirements

## **Population dynamics**

You need to understand the:

- offspring establishment requirements
- extent and type of parental care
- patterns of individual growth and development
- social structure and behaviour
- population dynamics including natural cycles of population expansion and contraction
- survival, reproduction and dispersal

## **Movement**

You need to understand the:

- dispersal, fertilisation and pollination distances and vectors
- migration patterns and pathways
- territory size
- colonisation dynamics

## **Environmental requirements**

You need to understand the:

- climate – for example, precipitation, temperature, humidity, wind velocity and frost sensitivity
- altitude and aspect
- soils or substrate

## **Species interactions**

You need to understand the:

- food and nutrient sources
- biotic pollinators and dispersers
- predators and herbivores
- harmful pathogens and parasites
- symbionts, commensalisms, and mutualisms – for example, mycorrhizal fungi, nodulating bacteria

## **Distinctiveness from other species and populations**

You need to think about:

- distinctiveness from related species – for example, clarity about which species is being translocated

- hybridisation and introgression dynamics to understand whether the translocated species hybridises with other species
- intra-specific (within a species) taxonomy – for example, subspecies
- geographically structured genetic races, also known as phylogeographic structure
- intra-specific variation in local adaptations – for example, ecotypes, locally adapted populations

Introgression is the transfer of genetic material from one species to another by hybridisation.

## Missing biological information

If important information is lacking on the biology of your focal species, 4 main options are available to you:

- Option 1.** Wait until that knowledge is available.
- Option 2.** Pro-actively encourage, undertake or commission research to fill the knowledge gap.
- Option 3.** Get proxy information from related species and similar systems if this information is sufficiently informative and relevant.
- Option 4.** Conduct an experimental or trial translocation combining the translocation with the research.

You should only consider option 4 if it can be done without risk of harm to the focal species or release site biodiversity. It is not acceptable to ‘test’ the habitat requirements of the focal species if it might cause animal welfare problems or if it makes existing conservation problems worse.

## Choose the best approach for your conservation translocation

The type of conservation translocation you choose will depend on the desired conservation benefit.

You should only consider out-of-range conservation translocations if you cannot achieve the desired conservation benefit within the natural range of the focal species.

You may consider out-of-range conservation translocations if:

- climate change, pathogen pressures or land-use changes make it unfeasible to establish new populations within the natural range – this is known as assisted colonisation

- the reinstatement of an important ecosystem function is otherwise prevented because the species previously providing the function is now extinct – this is known as ecological replacement

If your conservation translocation aims to reinforce an existing resident population to increase the number of individuals, its genetic diversity, or both, make sure there are no genetic or behavioural incompatibilities between the translocated individuals and the resident population.

## Select an appropriate donor population

A translocation project will need to source organisms. You need to know the risks to avoid. Donor sources can be from:

- a wild population
- individuals held in captivity – for plants, this includes a seed bank or propagation facility

### Wild donor sources

If your conservation translocation will source individuals from a wild population donor source, you should:

- make sure there are sufficient populations that are genetically diverse to provide suitable source material
- be sure there are enough individuals in the donor populations for them to be sampled without adverse effects
- follow adequate screening, quarantine and biosecurity procedures to avoid pest and pathogen transfer
- have the correct permissions and licences to remove individuals or their propagules from the populations

### Captive donor sources

In many cases, a translocation project will set up facilities to breed organisms to release. If you plan to use captive donor sources, design your translocation project to minimise problems from:

- inadequate recording or mix ups, which could lead to confusion as to the original source locations
- adaptation to captive conditions, which could reduce survival prospects in the wild
- unwanted hybridisation when multiple, related species are held in the same facility
- increased pathogen or parasite loads when individuals are kept captive at high densities
- low genetic diversity if the collection was established from a few individuals or if the individuals have been in captive conditions for many generations

These points may also be relevant when individuals are sourced from wild populations but are maintained in a captive holding phase.

## **Sourcing your donor populations**

The best donor population for your conservation translocation will depend on your project, animal welfare considerations and any risks you have identified. Populations of many species are adapted to their local environment. It is important to match the characteristics of the donor site and its population with your chosen release site.

Wherever possible, use large populations as donor sources. This maximises the likelihood of getting a genetically diverse sample and minimises risks to the donor population.

### **Single source donor populations**

Single source donor populations are often appropriate if a large donor population is available and there is a close ecological match between the conditions at the donor and release sites.

### **Multiple donor populations**

Multiple donor populations may be appropriate if:

- the only available populations are small – for example, under 50 breeding individuals
- there is a need to maximise levels of genetic diversity

Mixing populations to maximise genetic diversity may be appropriate if the translocation is introducing a species:

- into a novel or changing environment
- outside its natural range

## **Choose the right release site**

It is important to match the donor populations with suitable release sites.

When you select the release site, consider:

- the habitat needs of the donor population
- project support from landowners and managers
- anthropogenic impacts from infrastructure, future development and land use
- the causes of any previous decline or loss of a species at a location and how you'll mitigate these

Recent occurrence of a species at a location should not necessarily be taken as an indicator of habitat suitability. The conditions may no longer be optimal.

When you have found a potential release site, check it is:

- suitable for the species' biotic and abiotic requirements either naturally or with management – this also applies to the surrounding area
- suitable for all life stages
- suitable throughout all seasons, except for migratory species
- within the appropriate climatic zone, taking account of climate change projections
- adequately isolated from sub-optimal or non-habitat areas, where there is a likelihood they may act as a sink for the translocated population
- selected based on your conservation translocation aim – for example, connected with existing populations or to keep the translocated population separate and contained
- large enough to support self-sustaining populations of the focal species

The immediate location where the focal species is released should be:

- suitable for rapid and successful establishment with limited stress or mortality
- suitably accessible for post-release care and management



Lady's slipper orchid. Photo credit: Peter Wakely on Flickr. Used under [Creative Commons](#).

## Create a release strategy

You must have a release strategy to make sure your translocated species has the best chance of survival. Your release strategy should include assessment of the:

- optimal life stage of the species and seasonal timing of the release



- number of individuals released
- phasing and timings for when individuals are released
- locations where individuals or the population are released
- expected dispersal of the focal species
- post-release care needs
- post-release monitoring and evaluation

## **Optimal life stage and seasonal timing**

For plants and fungi, check the best propagule type – for example, whole plants, cuttings, seeds, spores. Consider if acclimatisation or other post-release care is needed.

For animals, think about the:

- age class – for example, juveniles, adults or both
- social requirements – for example, family groups, age and sex
- whether to release individuals immediately or have a soft release involving some confinement or husbandry

## **Number of individuals**

Assess the number of individuals you need to achieve your intended conservation goal. Consider their expected survival rates as part of your assessment.

[Population viability analysis](#) offers a useful framework for exploring potential future population trajectories. As with any modelling approach, the scenarios generated will greatly depend on the quality of the data you input.

## **Phased release times**

Assess whether to release all individuals together or to do a phased release over several months or years. The best strategy will depend on the ecology of the focal species and the environmental conditions at the release site.

## **Focal species dispersal**

Assess the expected dispersal of the focal species from a release site. As part of your assessment, consider whether animals that disperse further than you expected from the release site soon after release should be captured and returned.

## **Release site locations**

Assess whether to release the translocated focal species at one or several locations.

Releases at multiple release site locations can reduce competition and minimise risks of a single catastrophic loss. A concentrated release of individuals can be better for social animals or where attraction of mutualists is necessary – for example, specialist pollinators.

A mutualist is an organism that interacts with another organism, where they both benefit.

## Post-release monitoring and care

Post-release monitoring and care should help the focal species to establish in the release habitat. It should aim to avoid unnecessary suffering, harm or mortality.

## Donor population and release site resources

Your selection of suitable donor populations and release sites will be based on field-based observations and specialist knowledge.

There are web-based tools and Geographical Information System resources available for England that can help you find suitable donor and release sites. These include:

- [land cover maps](#)
- [geological maps](#)
- [climate change predictions](#) and advice on [the adaptation of species and habitats to climate change](#)
- species distribution maps, including [NBN Atlas](#)
- [MAGIC map](#)

The MAGIC map website provides geographic information about the natural environment and designated historic environment assets (including scheduled monuments, registered parks and gardens, registered battlefields and listed buildings) from across government. It is an interactive map, which covers rural, urban, coastal and marine environments across Great Britain.



## 7 Biodiversity outcomes: benefits and risks

Conservation translocations can have a wider impact on biodiversity than just the focal species of the translocation. It is critical your project considers biodiversity benefits and risks.

If your translocation involves countries outside of England, take care to consider biodiversity and wider environmental risks to them.

### Maximise biodiversity benefits

Ideally, you should integrate your conservation translocation with other initiatives to conserve or enhance biodiversity in the release area. If you do not, you could miss opportunities for collective benefits to biodiversity. Worse, you could undermine other conservation initiatives, or your project could have unintended negative biodiversity consequences.

### Keystone species

Take account of any existing or proposed landscape-scale initiatives, especially for projects that involve 'keystone species'.

Keystone species have a big effect on ecosystems and their restoration often has a large benefit for diversity. Examples include:

- apex predators, whose reintroduction can have ecological consequences for smaller predators and prey that cascade through a food-web
- beavers (*Castor fiber*), which have the capacity to 'reengineer' riverine landscapes
- pine marten (*Martes martes*), which may help to protect a local red squirrel (*Sciurus vulgaris*) population from the threat posed by non-native grey squirrel (*Sciurus carolinensis*) or contribute to creating conditions in which red squirrel could be reintroduced in future

### National and regional biodiversity objectives

Your project should be informed by and aim to contribute to national or regional biodiversity objectives, where these exist.

In England, many of the rarest and most threatened species are listed under [Section 41 of the Natural Environment and Rural Communities Act 2006](#). Alongside the list of priority species and habitats is a list of necessary actions identified to help these species recover. The list indicates where conservation translocation has been identified as a national priority. The list also indicates actions you need to do before a project could go ahead.

The [Joint Nature Conservancy Council website](#) has the conservation threat statuses for UK species. Its assessment follows the internationally accepted Red List guidelines developed by the IUCN.

## Minimise risks of negative biodiversity outcomes

You must identify any aspects of your conservation translocation that might cause harm.

### Avoid harm to the donor population

Only remove organisms from a donor population if it can handle the losses. Do not select individuals for translocation if their removal from the donor population will result in:

- increased harm or mortality due to disruption of social hierarchies
- removal of parental or nurturing support to juveniles
- a long-term reduction in range, size or viability of the population

Apply caution if the total number of reproductive individuals and the total reproductive output of the donor source is low.

### Minimise genetic incompatibility

Genetic incompatibilities between populations are most likely if the:

- species is outbreeding
- populations were isolated for more than 500 years in similar habitats or in ecologically divergent habitats for more than 20 generations
- populations have known behavioural or genetic differences

If your project has genetic problems, you should investigate why. You could select a less divergent donor population.

Increased hybridisation with related species may occur if the translocation disrupts natural isolation barriers.

You should reduce the likelihood of increasing inter-specific hybridisation, except for the rare cases where hybridisation for genetic diversity is your conservation goal.

You should avoid conservation translocations if hybridisation would threaten the genetic integrity or survival prospects of threatened, economically or ecologically important species or populations.

You can get information on the species that hybridise from specialist publications on UK plants, animals and fungi, and from experts within specialist natural history societies and organisations.

## **Avoid negative effects on the wider ecosystem**

Evaluate any negative biodiversity impacts on the wider ecosystem that may be caused by your conservation translocation. Consider if your translocated organism could cause:

- direct damage to other species – for example, through predation, competition, trampling or shading
- indirect damage to other species due to habitat or trophic changes – for example, a predator may impact a prey species, which in turn affects other predators of that species or the prey's food species
- associated damage to habitats at the release location by the people involved in the translocation project – for example, trampling or increased disturbance

Take particular care if threatened, ecologically or economically important species live at the release site or surrounding areas.

Carefully consider downstream impacts out to sea if your translocated species is released in rivers.

Apply the precautionary principle if:

- scientific evidence is insufficient, inconclusive or uncertain
- preliminary scientific evaluation shows there could be dangerous effects on the environment

## **Consider if the translocated organism could become an invasive species**

An invasive species is any non-native animal or plant that can spread and cause damage to the environment, the economy, our health and how we live.

Evaluate the potential for your translocated organism to become invasive. The further organisms are moved outside their current or natural range, the greater the uncertainty as to how they will behave.

Avoid or treat with extreme caution, any species that are known to be invasive in other places. This also applies to their close relatives.

## **Avoid the spread of potentially invasive species and diseases**

You should design your translocation to prevent the spread of diseases and minimise the transmission of other harmful organisms. You can do this through:

- biosecurity best practices
- identifying risks and assessing potential diseases or parasites associated with the focal species

## Biosecurity best practice

Guidance on biosecurity best practice is available from the [GB Non-Native Species Secretariat](#). It covers:

- different levels of biosecurity control
- health and safety considerations
- planning site visits
- personal, vehicle and equipment biosecurity

The Secretariat provides [free online training](#) on biosecurity in the field, and advice on steps to reduce the risk of spread of invasive species.

## Focal species diseases and parasites

No translocated organisms can be entirely free from micro-organisms or parasites.

If an outbreak occurs, you must monitor the health of the translocated population and take steps to minimise the impact.

If you suspect or detect a notifiable disease or pest, you must inform the relevant authorities at the earliest opportunity. [Find out when and how to report notifiable diseases](#).

## Disease risk assessment

You will be expected to have completed a disease risk assessment for your conservation translocation. The level of detail should be proportionate to how likely it is that a pathogen or parasite will be a problem and how severe the impact could be. You should review this periodically throughout the project.

Your disease risk assessment may need comprehensive risk analysis. This could include assessment of:

- all possible pathogens, parasites or pests that could be carried by specimens of the focal species<sup>2</sup>
- stress caused by the translocation that could elevate infection susceptibility or pathogenicity
- organisms for translocations that should be selected or treated to avoid the spread of pathogens and parasites
- steps you would need to take if a disease or pest outbreak occurred

<sup>2</sup> Hartley, M and Gill, E. 2014. Assessment and mitigation processes for disease risks associated with wildlife management and conservation interventions. *Veterinary Record* (2010) 166, 487-490 doi: 10.1136/vr.c2051

## Animal disease: resources

Information on UK surveillance schemes that monitor disease in vertebrate wildlife is provided by [WILDCOMS](#) (Wildlife Disease and Contaminant Monitoring and Surveillance Network). [Topical information on potential disease threats](#) is available from GOV.UK.

GOV.UK also provides guidance on:

- [zoonotic and other disease risks](#) associated with animal movements
- [disease prevention in livestock and poultry](#)
- [importing animals](#) and quarantine requirements

Information on [disease risk assessment and animal health surveillance for translocations](#) is available from the Zoological Society of London.

## Plant disease and pests: resources and contacts

You can get [information on plant disease and pest risks from the Animal and Plant Health Agency \(APHA\)](#).

If your translocation includes tree or woodland species, [contact the Forestry Commission](#).

## Avoid accidental transfer of harmful organisms

If your translocation involves moving substrates such as soils and water, take care to avoid inadvertent transfer of harmful organisms. You should check vehicles, clothing and equipment used to move substrates.

The Great Britain Non-Native Species Secretariat provides information through its '[Check, Clean, Dry Campaign](#)' on preventing the spread of aquatic invasive species.

## Take care releasing organisms outside natural range

Occasionally conservation translocations introduce a species to an area where it has not naturally been before to improve biodiversity.

Reasons to do this include to:

- help immobile species adapt to climate change (assisted colonisation)
- restore an ecosystem by providing a functional replacement for an extinct species (ecological replacement)

Translocating a species outside its natural range carries a particularly high risk to biodiversity because it is difficult to:

- be certain about ecological relationships
- predict ecological outcomes

It is also common for the species to become problematically invasive, sometimes with extreme adverse impacts on native biodiversity.

## **Protect islands and other isolated ecosystems**

The larger part of the island of Great Britain, England has over 100 offshore islands with concentrations in Essex, Cumbria and the harbours of Poole, Portsmouth and Chichester.

Most of these islands lack distinct ecological isolation, but the islands of Farne, Scilly, Wight and Lundy are all separated by seawater channels or straits.

Islands can provide:

- an important resource – for example, breeding sites for marine sea birds that are safe from mammalian predators
- a refuge for species lost on the adjacent mainland – for example, red squirrel (*Sciurus vulgaris*) on the Isle of Wight

### **Natural protection**

Islands are naturally protected from invasive species, pests and diseases because of their physical isolation from the mainland. Take particular care if your conservation translocation involves the release of organisms onto islands or other isolated ecosystems – for example, isolated water bodies.

Your risk assessment must include what you will do to minimise the risk of invasive species, pests and diseases.

### **Unique communities**

Islands are often characterised by a unique community of species. It is important to consider this uniqueness when you decide if a translocation to an island is appropriate.

As a general rule, you should not introduce a new species to any island. The fact that a species is native to Great Britain is not a good enough reason to introduce it to an offshore island. For example, native hedgehogs (*Erinaceus europaeus*) introduced to the Scottish island of South Uist had a profoundly negative impact on breeding bird colonies.

Proposals to translocate a species should be based on exceptional justification. For example, if the species was previously present on the island. But even if your project is to restore a lost species, you must carefully consider the impact on the current community of species.

### **England and climate change**

Not all species found on mainland Europe are present in Great Britain. Present-day climate change may provide an exceptional justification for introducing certain new species to the British Isles, particularly to Great Britain.

The ranges of many organisms are likely to track climatically suitable habitat. While this will often happen naturally, some species will need human intervention in the form of assisted colonisation.

## 8 Socio-economic outcomes: benefits and costs

Successful conservation translocation projects can generate a range of benefits for people and the economy. There is potential for direct and indirect monetary benefits, such as improved goods or services from nature or increased income from ecotourism. Non-monetary benefits include enriched human experiences from increased contact with nature.

However, projects also have the potential to impact negatively on individuals and communities, particularly when they are poorly planned or managed. For example, the translocated species may harm livestock, habitats or other species, affecting livelihoods or other established uses of the land.

It is important to engage with communities and other important stakeholders when you design your project. This will help you realise the benefits and reduce the potential costs for people and the economy.

### Natural capital

To recognise and demonstrate the impacts of a reintroduction or translocation project, you may find it useful to adopt a natural capital approach.

Natural capital are the aspects of the natural environment that provide benefits to people. The benefits are wide ranging and can be anything from clean air and water, to crop pollination, heritage and enjoyment from wildlife.

This approach can help you understand a project's impact on natural capital. You can then identify the costs and benefits of those impacts to communities.

### Cost-benefit analysis

It may be useful to commission a cost-benefit analysis to help assess the anticipated benefits, risks and costs of your project. This is a systematic process for assessing whether society is better off implementing a policy or project.

A project is considered desirable if its total benefits outweigh total costs over the lifetime of the project.

Whether a cost-benefit analysis should be done and in what form will depend on several factors. These include:

- the costs of the project
- who will pay the costs
- how contentious the project is

You should consider any financial gains from your project in the context of costs. Pay particular attention to reconciling conflicts if the recipients of income are different people to those incurring the costs. For example, where local tourism benefits at the cost of higher livestock predation to local farmers, or where reduced flood risk for a village from beaver activity means farmers suffer costs from fields flooding more often.

For projects involving top level predators or species with major ecological impacts, commissioning a cost-benefit analysis is advisable. If you decide to do a cost-benefit analysis, you should follow government guidance in [HMRC's Green Book](#).

## Achieve socio-economic benefits

There may be a high level of public interest in the project particularly if it involves a large or charismatic species. There may be a trade-off between promoting public accessibility and access restrictions so the translocated organisms can establish itself without being disturbed.

### Public engagement and access

Generating income from the project will typically require an investment in marketing and promotion. You need to factor these costs into any projected financial benefits from the translocation.

Develop communications and activities that will engage the public. This can educate them about conservation challenges for the translocated species and wider environmental issues relevant to managing the countryside and its biodiversity.

Communication activities include:

- on-site panels and displays
- remote cameras and webcams
- presentations
- guided tours
- press releases
- internet resources

Where possible, design your project to allow public viewing or contact that minimises disturbance to the translocated organism and its habitat. For example, hides, viewing platforms, boardwalks and signs. Make sure these are in proportion to the scale of human interest.

Your project could provide opportunities for volunteer involvement. This would allow you to:

- offer health and educational benefits
- strengthen community interactions
- increase the amount of spend in areas local to the release sites



## Minimise socio-economic costs

For many conservation translocation projects the risk of societal harm is limited. For example, establishing a new population of short-haired bumblebee (*Bombus subterraneus*) within its natural range is highly unlikely to substantially or negatively impact individuals or communities.

Translocations involving large predators, such as the Eurasian lynx (*Lynx lynx*), or species capable of shaping the natural environment, such as beaver (*Castor fiber*), can result in real or perceived conflicts. For advice on how to manage the risk of conflict, read the [IUCN guidelines on human-wildlife conflict and coexistence](#).

### Livestock and game

Potential problems for livestock and game include:

- predation
- disease transmission
- habitat modifications that impact on health and wellbeing

### Rural economies

Potential problems for rural economies include:

- damage to crops and economically important natural vegetation
- habitat modifications that impact on the viability of rural economies such as farming, forestry, fishing and hunting, which may lead to persecution of the translocated organism
- statutory protection of translocated species placing restrictions on land uses
- the translocated population increasing human presence in sensitive or economically important sites
- inadvertent transfer of diseases or invasive non-native species
- damage to historic environment assets (for example, a building, designated or historic landscape, an aspect of cultural heritage or an archaeological site)

### Human harm

Predators and species capable of shaping the natural environment could cause direct harm to humans and pets in the form of:

- bites
- stings
- venom
- allergic reactions
- transmissible diseases

## 9 Engagement, consultation and transparent communication

Conservation translocations can have a transformative effect on the environment, but the distribution of benefits and costs among those affected is often unequal. A clear commitment to openness is important, so that everyone affected or interested has an informed view of the proposals.

Translocations are often the subject of public debate, especially those involving apex predators and species that have been absent for a long time, like the white-tailed eagle (*Haliaeetus albicilla*). Projects of this type can cause unease, particularly if there is potential for negative impacts on people or other wildlife.

People can become uncooperative if they cannot share their views on decisions that might affect them. Being poorly informed about proposals and their impacts can have the same effect. In the worst cases, the result is opposition and even direct action to disrupt a project. This can compromise the success of a project and may lead to failure.

The aim is to understand and address any concerns through respectful discussion and then work together to find suitable options and mitigation if required.

For high profile or contentious proposals, you may want to work with an impartial professional to help design and deliver your consultation and engagement strategy.

### Engage stakeholders

Effective engagement and consultation with stakeholders is essential to the success of most conservation translocation projects and fundamental to project design and planning. It can:

- help to create mutual understanding
- offer a sense of shared purpose and benefits for all sides
- establish good relationships
- reduce conflict further down the line
- bring opportunities for collaboration
- give you the chance to tap into a wider range of expertise and can help manage any residual opposition

Anyone who can affect or is affected by the proposals should be included.

### Scientific community

The scientific community includes local, national and international individuals, groups or organisations with relevant expertise and specialist knowledge of your focal species.

Start your engagement and consultation with experts to consider whether a conservation translocation is the best conservation solution. You can also explore the feasibility and desirability of embarking on such a project.

## **Regulatory bodies**

Consult relevant regulators to make sure you include legal constraints, requirements and likely implications at the planning stage.

These decision makers are responsible for licensing, permits and consents.

## **Local community**

The local community are people living or working around the proposed project area. It includes landowners, land users, farmers, residents, community groups and businesses.

These people are most likely to be directly affected by the project, so it is essential you engage with them to understand the potential socio-economic impacts of the project.

Provide the local community with enough information to form a view about the project. Give them the opportunity to help shape proposals if your project goes ahead.

## **Organisations and interest groups**

There are likely to be organisations and groups across sectors with relevant knowledge and experience to offer. They may also want to influence whether your project goes ahead and if it does go ahead how parts of it will run. Membership organisations will want an opportunity to represent the interests of their members.

Local and national organisations and interest groups you might engage with, depending on your project, include:

- environment and conservation
- land owning and farming
- hunting, shooting and fishing
- heritage, tourism and recreation

## **How and when to engage stakeholders**

The scale of your stakeholder engagement will depend on the complexity of the proposal and the risks and benefits associated with it.

For low risk, very local and straightforward projects, you might only need to engage with some specialists, local land users and managers, residents or interest groups. For example, a project to reintroduce an invertebrate or plant.

More complex, high risk projects will usually require a more extensive stakeholder engagement process. For example, those that could or are perceived likely to result in species-human conflict.

## **Identify stakeholders**

Identify who locally and nationally will have an interest in your proposal, could affect it or be affected by it. Consider all the potential costs and benefits of the proposals in relation to these stakeholders. This will help you understand what your stakeholders are likely to find important or concerning.

## **Develop a stakeholder engagement strategy**

Good stakeholder relationships and collaborative working are the cornerstones of a successful project. Do not underestimate the need for clear, targeted and carefully considered communications before, during and after the project.

Your stakeholder engagement strategy should cover:

- your different audiences
- the messages you want to get across
- what information you need from stakeholders
- how you want to work with stakeholders
- the best methods of communication
- the timing of your interactions

## **Consult and engage**

Get stakeholder views early so they are involved in whether the project develops and how. Make sure stakeholders have the chance to participate in discussions, share their concerns and give ideas.

It is better to cast the net widely at an early stage, than to hear unexpected views later in the process. Make an effort to engage with people most likely to disagree with your proposals.

If the project goes ahead, provide opportunities for stakeholders to get involved – for example as a partner or volunteer.

You may need to continue engagement throughout the project to understand and respond to changing opinions and concerns. You may also need to do this after the translocation, if the project was contentious or involved a species that could bring big changes to the community.

## **Listen to and act on concerns**

As well as generating lots of enthusiasm, conservation translocation projects can be the cause of anxiety. This applies particularly to those who may be directly affected by the proposals.

Acknowledge and respect all concerns, whether they are real or perceived. Be prepared to provide clear evidence to help allay fears and demonstrate the benefits of the proposals. Show that you've thought about possible solutions to help mitigate potential risks and involve those concerned in helping to develop them. Your exit strategy can help you address concerns.

## **Manage opposition**

For some proposals it will be difficult to get to a point where everyone is supportive. This does not necessarily mean a project should not go ahead, but it is crucial that any outstanding opposition is managed appropriately, so it does not jeopardise your project's success.

Where concerns or objections are raised, you will most likely reach agreement if you can:

- provide open, accessible and unbiased evidence that shows adverse impacts are likely to be within acceptable bounds
- develop a working agreement or business model that enables impacted stakeholders to receive benefits from the translocation
- demonstrate clear responsibility and liability for any negative consequences – for example, the presence of adequate and stable funds and human resource to underpin necessary management, and possibly compensation arrangements

If you cannot reach an agreement with stakeholders, consider contacting Natural England for advice.

## **Transparent communication**

Information about the project must be accessible. You should regularly share decisions, progress and outcomes to keep everyone informed throughout the project.

A website and social media presence may be beneficial, but a variety of methods will be required to reach different audiences. For example, popular press, workshops, lectures and meetings. Share your information in scientific publications, using 'open access' where possible.

You should make as much information as possible publicly available. This will help to show transparency and encourage support for your project.

## **Explanatory context for project**

Include why you are doing the project. Explain how the project contributes to the conservation of the species or ecosystem. Include details of any other benefits that are expected from the project.

## **Project implementation and decision making**

Include information on who is involved in the project and how they are contributing to it, including any partners.

Share information on how:

- the project will be managed and delivered day to day, including project staff, roles and responsibilities
- any issues will be dealt with and the decision-making process
- oversight and governance structures will work, including information on membership and chair of management and steering groups

## **Communication plan**

Develop a communication plan for your project that outlines how and when you will share information about the project and who you will keep informed.

Your communication plan should include:

- all the actions needed to deliver the project and when they will happen
- who is responsible
- the lifespan of the project
- expectations of future governance and responsibilities
- a breakdown of project costs, budget available and how further resource will be generated

Share the latest news and updates about the project.

Advertise volunteering opportunities for people to get involved – for example with monitoring or habitat management.

Share information on planned events and activities, such as talks and guided walks.

Include a clear point of contact so anyone can get in touch to report a problem or discuss concerns.

Keep landowners and land managers informed of the status, abundance and location of translocated organisms on their land.

## Information not to share

While information sharing and diligence in reporting are best practice, there are some constraints on the types of information that can be made fully accessible.

Restrictions are appropriate or required where the release of:

- locations of organisms may result in harm due to hunting, collection, persecution or excessive disturbance
- personal information may violate data protection rules – for example, landowner or stakeholder addresses



Pool frog. Photo credit: Allan Drewitt. Used under [Creative Commons](#).

# 10 Governance and resourcing

All projects need good governance so there is accountability and transparency in decision making and implementation.

## Governance: decide a structure

Governance should be proportionate to the scale and potential risks and impacts of the project.

### Leadership

It is important to be clear who is responsible for making important decisions, whether this is an individual person, or a group of people.

Important decisions include:

- starting the translocation
- adaptively managing the project in response to monitoring
- terminating the project, which includes starting the exit strategy if needed

### Steering group

A steering group gives oversight and guidance to a project.

Steering groups can provide constructive discussion about progress, challenges, opportunities and unexpected outcomes.

It allows collective, informed decisions to be made and formally recorded about the direction of the project.

Stakeholders on the steering group could include:

- project partners
- relevant experts
- researchers
- regulatory organisations
- local landowners

The chair should be someone impartial who has relevant knowledge, but who is not directly involved in implementing the project.

You should agree terms of reference for the group. These should clearly set out the:

- purpose of the group
- chair



- members
- process for resolving disputes

For complicated projects it can be useful to set up specific working groups to cover important aspects of the project, such as monitoring, evaluation and research or public engagement. These specific working groups would report to the main steering group.

## **Partnership**

A partnership approach helps with advocacy and provides resilience around resource and funding. It also gives people confidence that the project is well planned and that appropriate people, with the right skills and experience, are involved.

Getting the right partners on board is fundamental to your project's success. They must have relevant expertise to help you manage and implement the project.

Partners should be identified through developing and planning stages and during engagement and consultation. But there may be others that want to get involved once it is clear your project is going ahead.

Clarify and agree the roles, responsibilities and contribution of each project partner at the beginning of your project. Make sure this is formally documented so everyone understands their role.

## **Resourcing: secure enough funding**

Conservation translocations can be extremely resource intensive. You need to consider all the potential resource requirements before any conservation translocations take place. This includes costs for licences and other regulatory approval, mitigation and project delivery. You should have a clear resource and funding plan that covers the life of the project.

As a minimum, you must have enough resources and funding to:

- begin the project
- monitor the project
- manage the project
- carry out your exit strategy
- meet any legal requirements

Only go ahead with this minimum level of funding if you are confident you can secure any further funding you need to complete the project within your proposed timescales.

# 11 Monitor and evaluate

All conservation translocations must monitor and evaluate progress to confirm whether a project is achieving its aims, to understand changes and share outcomes.

This information can be used to:

- engage the public with activities
- gain support from stakeholders and the community
- secure further funding
- adapt the project to improve success
- inform strategies for future reintroduction and conservation projects

When you design your project, make sure it has a robust programme of monitoring and evaluation.

The greater the biological and socio-economic risks, the greater the need for a detailed programme of monitoring and evaluation. You should design your monitoring and evaluation with an appropriately skilled partner, so your project has a rigorous and objective approach.

Outcomes that would trigger the exit strategy must be considered and clearly set out within the monitoring and evaluation strategy.

## Plan your monitoring and evaluation

When you design a programme of monitoring and evaluation consider:

- the purpose of your project – make sure you have a clear idea of your project's goals and objectives
- evaluation objectives – think about 2 types of questions: 'What difference will the conservation translocation project make?' and 'How will it be done?'
- data collection – make sure your monitoring strategy supports the collection of data you need to measure changes and answer your evaluation questions
- stakeholder involvement – through participatory processes or questionnaires, stakeholders can help you identify unintended consequences and give a more balanced perspective
- sharing outcomes – think about what you need from monitoring and evaluation and who you will share this information with. This will help inform timescales, the level of rigour needed and how to communicate findings

### Evaluation objectives and questions

Evaluation objectives are likely to be broad in scope. For example, 'To understand the impact of beaver reintroduction on fish populations'.

Evaluation questions will be specific. For example, 'Did the reintroduction of beaver affect the breeding behaviour of salmonids?'

If the evaluation is looking at the impact an intervention has made, you may need to consider a range of possible impacts, including:

- environmental
- economic
- social

## **Data collection methods**

You should have data collection methods in place from the beginning of your project to effectively analyse the data. You can then use the information for any necessary management interventions or to adapt your approach.

Monitoring can offer multiple opportunities for individuals and communities to engage in the project in a positive, tangible way. For example, they can help with detailed monitoring or contribute casual observations to a formal monitoring framework.

## **Monitoring types**

The IUCN guidelines outline 6 primary types of monitoring.

### **Demographic performance**

This includes monitoring population growth or spread. To monitor the performance and survival of individuals, use intensive individual-level monitoring to estimate survival, reproduction and dispersal. For example, with large mammals, raptors, ecosystem engineers.

### **Behavioural monitoring**

Monitoring the behaviour of translocated animals gives an indication of how well they are establishing after translocation. Behavioural monitoring can give you an early warning of animal welfare or demographic problems. For example, if individuals are unlikely to survive or breed.

### **Ecological monitoring**

You must monitor habitat changes and ecosystem functions if:

- a translocation is designed to create or restore an ecological function
- establishment of the focal species is likely to have ecological impacts

Establish baseline conditions at the start of the translocation, so you can tell whether later changes are beneficial, benign or harmful.

## **Genetic monitoring**

Use genetic monitoring to:

- establish whether genetic diversity has been lost during the translocation process
- track the integration of genes from the translocated individuals into resident populations

Genetic monitoring is costly and so it is mainly appropriate for translocations where genetic issues have been identified as critical to the project's success.

## **Health and mortality monitoring**

Health monitoring is good practice in translocations and essential in cases where there is concern that translocated individuals may carry pathogens.

For translocations involving animals, health and mortality monitoring can help you to:

- establish whether there are animal welfare problems caused by the translocation
- guide management intervention

Health and mortality monitoring is particularly important for vertebrates.

## **Social, cultural and economic monitoring**

If your project is likely to change the local area or economy, you should monitor the direct and indirect socio-economic costs and benefits.

If possible, develop your monitoring programme with participation from the local community. This is a practical way to get interest and support and can help you to assess attitudes towards the translocation and address concerns.

## **Timescales for monitoring**

Timing is often crucial in whether evaluation findings will be useful. Think about:

- what information you need
- the format of your information
- when you will need the information

Your chosen timescales will impact the design and approach of your evaluation. There may be stages when interim findings would be helpful, even if these indicate a general direction, rather than a definitive answer.

Start monitoring before any release, so you have a baseline to measure change against.

Continue to monitor throughout your project and usually beyond. This is so you can check if things are going to plan or you need further intervention.

The duration of monitoring and evaluation will vary on a case-by-case basis. As a minimum, it should continue until at least one of the following apply:

- the population is stable
- the population is behaving in a well understood, predictable and benign way
- the translocation has failed and the population is extinct
- the translocation is failing, no further interventions are likely to be successful or feasible, and all necessary steps have been taken to avoid unnecessary harm, mortality or suffering to the translocated organisms
- the exit strategy is implemented

## Evaluation

Evaluate the project at specific milestones using the monitoring data. The goal of your evaluation should be to assess:

- how well the project is going
- what difference it has made
- whether it has met its goals
- any unintended consequences
- any harm it caused

You should use the outcome of your evaluation to inform further intervention.

## 12 Management and exit strategy

Every translocation project should aim for the translocated focal species to be 'self-sustaining'. However, ongoing management is often needed after a translocation, before the population reaches a point when it has good future prospects without outside assistance.

### Ongoing management

Ongoing management interventions range from general habitat management that aims to maintain or establish favourable conditions, through to the nurture, feeding or watering of individual organisms.

There may be rare situations where it is justified to go ahead with a translocation, even though it is recognised that management interventions will be needed in the long term. For example, if the available habitat at the release site is too limited in extent or quality for unsupported survival, no other suitable release sites exist, and it is important for conservation to create a new population.

In certain cases, there may also be a need to manage in the long-term to minimise conflict with other land uses.

### Adaptive management

You should carry out progress reviews at all stages of your project. This will allow you to adjust objectives or timings based on progress. This is called adaptive management.

Use adaptive management to:

- improve the health and viability of the translocated population
- stop or minimise unintended and undesirable environmental or socio-economic impacts

Monitor, evaluate and refine your management interventions in a cyclical way until you reach your conservation goals. Alternatively, if your translocation is failing or has resulted in unacceptable harm you may need to implement your exit strategy to reverse the translocation.

### Exit strategy

An exit strategy is a planned set of actions that brings an end to a translocation once a predefined set of conditions are met.

Your translocation project should have an exit strategy that explains what to do in situations such as where:

- the project achieves its goals and the organisation that instigated the translocation stops actively participating – for example, you might need to consider who will carry out any ongoing monitoring and management
- the project fails and needs to be ended early – for example, you might need to consider what to do if the translocated population becomes unhealthy or causes unacceptable levels of damage to the land or livestock
- the project's funding stops before the project achieves its goals
- an important partner stops participating before the project achieves its goals

You should develop the exit strategy with partners at the start of the project. This will help build confidence in a project. It will also address any concerns about anticipated problems and what happens after the project ends. You should agree on the predefined set of conditions that trigger the exit strategy.

It is important that translocation projects are not seen to have intervened and then just abandoned a local community to live with a species that is high maintenance or has the potential to cause conflict. For more information, read the [article 'Exit strategies for wildlife conservation: why they are rare and why every institution needs one'](#).

## 13 Using this code and guidance for other purposes

There are instances where a translocation may take place for a different primary purpose. It could also provide a conservation benefit, even if it is not seeking to establish a self-sustaining population.

These translocations are outside the intended scope of this code and guidance. However, it may be relevant and useful for:

- releases for rehabilitation
- population reinforcement for recreational or commercial exploitation
- translocations to mitigate land-use change
- translocations to mitigate other conflicts
- translocations of biocontrol organisms
- translocations as a conservation management tool
- habitat translocations

### Releases for rehabilitation

The release of individuals following rehabilitation in captivity, is done primarily for the benefit of the released individuals. It is not done for the conservation of a population or species.

Releases of rehabilitated animals may result in some conservation benefit, but it is also possible that they could cause harm.

The code and guidance can help shape strategies for the release of rehabilitated animals to maximise their potential to benefit conservation and minimise the risks.

The best strategy is to release rehabilitated animals at or as close as possible to the location of their origin, if it is safe to do so.

### Population reinforcement for recreational or commercial exploitation

Wildlife populations are sometimes reinforced for recreational or commercial exploitation. This can involve either native or non-native species.

Translocating native grey partridges (*Perdix perdix*) or red grouse (*Lagopus lagopus*) can provide a meaningful conservation benefit, alongside a benefit for recreational hunting. The code and guidance are relevant to this type of translocation and their use is recommended.



The release of non-native pheasants (*Phasianus colchicus*) for recreational shooting or rainbow trout (*Oncorhynchus mykiss*) for angling does not provide a direct conservation benefit. In some cases, they can negatively affect the conservation of native species and habitats.

Even where management associated with this activity does provide indirect conservation benefits, it will always be a secondary goal. While the relevance of the code and guidance is limited for recreational or commercial exploitation, they can still be used to assess risks in translocating and releasing.

## Translocations to mitigate land-use changes

Translocation to mitigate land-use change is a common activity in England.

Mitigation translocation involves removing organisms from a habitat due to be lost through anthropogenic land-use change, followed by release at an alternative site. For example, relocating great crested newts (*Triturus cristatus*), whose pond habitat is being destroyed to make way for new housing.

Permission for these land-use changes is often conditional on mitigating or offsetting the impact on the local population of the species.

One way to offset the impact would be to translocate individuals of important species from the site to suitable and safe habitat at another location. In some cases, the habitat at the relocation site will be improved, enhanced or restored for the benefit of the translocated species.

Typically, mitigation translocations in England involve short-distance movements, where the objective will be to:

- build resilience in the existing population, known as reinforcement
- expand its distribution into unoccupied suitable habitat within its current natural range, known as reintroduction

The primary goals of a mitigation translocation are to save individual organisms from being killed and to avoid a reduction in conservation status of a population, rather than to improve it. A mitigation translocation can do better than simply maintaining the status quo if it follows good development practice and seeks to deliver a net gain for biodiversity.

[Good practice principles for development are available from CIEEM.](#)

Because of the similarities with conservation translocation, the code and guidance are relevant to mitigation translocation proposals and its use is recommended.

## Translocations to mitigate other conflicts

Translocation may be used to mitigate other conflicts involving wildlife if relocation is viewed as a more acceptable solution than killing the animals. Conflict translocations often involve one or a small number of 'problem' individual animals, and they aim to protect their welfare. For example, relocating beavers whose dam-building activities are obstructing a watercourse or flooding farmland as an alternative to killing the animals.

While these translocations are primarily for the benefit of relocated individuals, relocated animals can provide a donor source for conservation translocations. In such cases, you should follow the code and guidance. However, it's important to avoid moving a conflict to a new location. You also need to take steps to prevent animals returning to their previous location and the problem happening again.

In other cases, the code and guidance can help shape strategies for the release of relocated animals to maximise their potential to benefit conservation and minimise the risk of negative outcomes. The IUCN has published advice on using translocation as a tool to resolve human-wildlife conflicts. For more information, read chapter 25 of the [IUCN guidelines on human-wildlife conflict and coexistence](#).

## Translocations of biocontrol organisms

Biological control or biocontrol is a method of controlling harmful species or pests by using other organisms.

Typically, the biocontrol organism is a natural enemy of the pest species. For example, a predator, parasite, parasitoid or pathogen. Translocation of biocontrol organisms is a method commonly used to control invasive invertebrate or plant species accidentally introduced into a new geographic area without their associated natural enemies.

There are projects using biocontrol organisms to control a number of non-native invasive plant species in the UK. This includes using a psyllid (*Aphalara itadori*) to control Japanese knotweed (*Fallopia japonica*) and a weevil (*Stenopelmus rufinasus*) to control water fern (*Azolla filiculoides*).

While the use of biocontrol organisms to control these species can provide a conservation benefit, the primary goal is to control an unwanted species. The release of any organism outside its natural range can have unintended detrimental consequences for biodiversity, if the released organism harms native species. Care is needed to make sure any biocontrol organism is safe to introduce.

There are similarities between biocontrol and conservation translocations. Guidance on releasing a species outside its natural range may be relevant to biocontrol projects.

## Translocations as a conservation management tool

Wild and domestic animals, like cattle and horses, are commonly used as a management tool to help create or maintain habitats for conservation purposes. Domestic animals often

replace the role in an ecosystem played in the past by a now extinct species.

Occasionally a project will reintroduce a formerly native species for this purpose. For example, beavers were released into a secure fenced enclosure encompassing an area of Ham Fen SSSI in Kent in 2003 to help improve the condition of the habitat on this site.

If formerly native species are securely contained within a discrete area, then in most circumstances this is not a true reintroduction. However, the code and guidance are still relevant and should be used as a guide. You will need to give particular attention to:

- local stakeholder and landowner engagement
- potential risks to people
- wider environmental risks should the species escape
- putting robust provisions in place to recapture escapees
- need for licences and other permissions (a release into a fenced enclosure may be regarded as a release 'into the wild' and require a licence)

## Habitat translocations

Habitat translocations are a conservation tool of last resort for a habitat due to be lost to land use change. They differ significantly from species translocations.

Habitat translocations involve relocating both of the following:

- assemblages of species – typically plants or sessile marine organisms
- the substrates on or in which the species are found

Rather than moving one or few individual species, habitat translocation moves as many species that exist together in a habitat. The aim is to retain the ecological functionality of that habitat when it is moved to the new location, as best as possible.

Habitat translocation has been used most widely for semi-natural grasslands. The most successful examples involve drier habitat types that lack complex hydrology. It should not be viewed as a substitute for onsite conservation, as even the best carried out schemes result in plant or habitat community composition changes. The Joint Nature Conservation Committee<sup>3</sup> provides national policy guidance on habitat translocations.

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<sup>3</sup> JNCC. 2003. A Habitats Translocation Policy for Britain. Joint Nature Conservation Committee on behalf of The Countryside Council for Wales, English Nature and Scottish Natural Heritage. Peterborough, UK.

# 14 Glossary

Definitions relate to the use of the terms in this document.

**Adaptive management:** A cyclical approach to conservation management. The outcomes of management actions are used to improve and refine future management activity.

**Assisted colonisation:** Translocation of an organism outside its natural range, where the primary purpose is to benefit the focal species.

**Conservation translocation:** The intentional movement and release of a living organism where the primary objective is a conservation benefit.

**Donor site, donor location, donor population:** The place where translocated organisms are taken from.

**Ecological replacement:** Translocation of an organism outside its natural range, where the primary purpose is to perform a specific ecological function lost through extinction.

**Exit strategy:** A planned set of actions implemented if the translocation does not go to plan or reaches a pre-determined endpoint.

**Favourable conservation status (FCS):** The situation when a habitat or species is thriving throughout its natural range and is expected to continue to thrive into the future.

**Focal species:** The species being translocated, including organisms, individuals and populations.

**Invasive species:** An invasive species is any non-native animal or plant that can spread and cause damage to the environment, the economy, our health or how we live.

**Native range:** The term 'native range' is used in Scottish, but not English legislation. It is the locality where the animal, plant or fungus is indigenous. This term does not apply to localities where the animal, plant or fungus were imported by any person, intentionally or by accident. Once a type of animal or plant becomes extinct in a locality, and it is unable to re-colonise naturally, that locality is now outside its 'native range'. It is subtly different to the term 'natural range'.

**Natural range:** Refers to the natural past or present geographical distribution of a species. This excludes areas where it has been deliberately or accidentally introduced by humans, if it never occurred there naturally and would not have done so naturally in the foreseeable future. Natural range includes all locations where a species is or was indigenous.

**Non-native:** Non-native refers to a species, subspecies or lower taxon, introduced outside its natural past or present distribution. It includes any part of the species that might survive and subsequently reproduce, including gametes, seeds, eggs and propagules. Non-native species include all fauna and flora except for genetically modified organisms, bacteria and

viruses. The term 'non-native species' is the equivalent of 'alien species', as used by the Convention on Biological Diversity.

**Of a kind:** Section 14 of the Wildlife and Countryside Act 1981 does not use specific taxonomic terms such as 'species'. The words 'of a kind' offer an important degree of latitude bearing in mind the huge variety of characteristics and traits in the animal world – even amongst similar species, the same broad taxonomic groups or between international populations. We consider 'of a kind' means a prohibited animal should be significantly distinct in some way from animals ordinarily residents or regular visitors of Great Britain. But they do not necessarily need to be of a different species or subspecies.

**Ordinarily resident:** For a species to be considered ordinarily resident, the population should have been present in the wild for a significant number of generations and be considered viable in the long term.

**Regular visitor in a wild state:** A 'regular visitor' is a species found in Great Britain with reasonable frequency or predictability – for example, seasonal migratory species. This does not include species that are vagrants or strays.

**Reinforcement:** Translocation of an organism into an existing population of the same species.

**Reintroduction:** Translocation of an organism inside its natural range from where it has disappeared.

**Self-sustaining:** A species or population of a species is self-sustaining if it can maintain itself without active and deliberate human intervention.

**Source population:** The place where translocated organisms are taken from. Also called the donor population.

**Translocation:** The deliberate movement of organisms from one place to another.

**Wildlife licence:** A derogation issued under nature conservation legislation that allows a person or project to do an activity that would otherwise be unlawful. Derogation is the act of 'putting aside' a legal provision.