



nature's  
voice

# FUTURESCAPES

SPACE FOR NATURE,  
LAND FOR LIFE

**RSPB SCOTLAND**



# FOREWORD

For over a decade, RSPB Scotland has been at the forefront of restoring some of our most iconic wildlife habitats. The majestic Caledonian pinewoods in the Cairngorms, the wild expanse of the Flow Country, and some of our rich and varied islands are just some examples. The list of our partners, funders and friends is an impressive roll call. Between us, we have started to stitch together the tattered fragments of our natural environment.

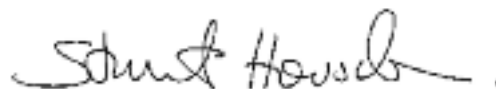
It's a good start. But the challenges grow, and the new agenda is being set by a wide range of issues. These include adapting our landscapes to the changing climate and so giving wildlife the space to move and establish new ranges, protecting the natural systems that give us our soil, clean water and natural defence against damaging floods and a host of other ecosystem services. What is absolutely clear is that the task is well beyond any single organisation. Futurescapes is RSPB Scotland's distinctive framework for contributing to the revolution in landscape-scale conservation that is needed to meet the challenges of the 21st century.

At the heart of any successful conservation initiative are the people who make it happen. Forging partnerships, and developing a shared understanding and passion to shape a better future for us and the natural world that shares our pressured islands, will be the starting point of our Futurescapes programme.

One of my favourite places is Forsinard in the Flow Country – it's an RSPB nature reserve. This wonderful area was subjected to damaging planting of non-native conifers. The RSPB campaigned to stop this damage and is now working with forestry and local interests to restore large areas to their original glory – a large peatland rich in wildlife.

My pride in our achievements at Forsinard is matched by a realisation that it is nowhere near enough. 2010 was the year that the decline of biodiversity should have been halted; it's a target missed. The price of failure will be an increasingly impoverished landscape, failing to respond to the needs of the natural world with more and more wildlife driven down by climate change and the pressure of our own needs. That loss will make us the poorer and will condemn future generations to landscapes with less biodiversity and nature increasingly cocooned in nature reserves. This is not the future we wish to leave to our children.

Futurescapes is a vision we want to share and deliver in every corner of the UK and this document sets the context for our efforts to achieve this in Scotland. Not everything will happen at once. This is the start of a new love affair with our precious landscapes – a new love of life.



**Stuart Housden**  
Director, RSPB Scotland

# FUTURE SCAPES IN A NUT SHELL

The RSPB's Futurescapes programme is working for a thriving countryside cherished by all.



SNOW BUNTING

## A NEW APPROACH

Futurescapes is the RSPB's contribution to landscape-scale conservation, a growing movement among UK conservation groups to provide rich habitats for wildlife and diverse, green spaces for people to enjoy in our countryside, not only in protected areas but far beyond. Futurescapes is a partnership effort among the RSPB, fellow environment organisations, local communities, businesses and government bodies to develop a vision for a wildlife-rich countryside in selected areas and to work together to achieve it.

## THE CHALLENGE FOR WILDLIFE IN A CHANGING COUNTRYSIDE

Thanks to decades of habitat loss, the most threatened and vulnerable of the UK's species are hemmed into the last remaining rich fragments of habitat, mostly in protected areas. Many species that are more widespread have undergone dramatic declines, as the broader fabric of the countryside provides fewer of their food and shelter needs. We have yet to halt biodiversity loss and the 21st century holds many more challenges for wildlife. Even with dramatic action to tackle greenhouse gas emissions, the UK will experience significant climate change by the end of the century: climate change impacts are evident already in the natural world and are set to grow.

## THE LANDSCAPE-SCALE APPROACH

It is clear that current conservation effort is not enough. Species' decline and loss is still happening, and wildlife will need even greater protection if it is to adapt to climate change. We need to devote more space to wildlife. Our countryside is already used for a range of important activities, including agriculture, forestry, recreation, housing and water management. While we can, and must, make key wildlife habitats bigger and more resilient, a lot of the extra space for wildlife needs to come from finding ways to meet wildlife's needs alongside other uses of the countryside. We need to learn how to make the best of our land for multiple objectives. Sometimes that will mean a change in current land uses. It will not just be wildlife that wins. By taking a landscape-scale approach for wildlife, we can improve other natural services provided by the land. Depending on the site, these could include carbon storage, water management and recreational value, alongside food production and other important economic benefits.

## FUTURESCAPES

Futurescapes is the RSPB's boldest, most ambitious programme yet. It aims to tackle challenges to wildlife and society in the following important ways:

Build partnerships among the RSPB and other environmental groups, local communities, the private sector and relevant government authorities to develop a shared vision for a countryside fit for people and wildlife, now and in the future – and to work together to deliver it.

Create more space for nature, by increasing the size of areas that are managed primarily for nature conservation.

Making the countryside a better place for wildlife to adapt to climate change, by making wildlife habitats more resilient to climate change and by managing land in ways that help species move in response to climate change.

Putting nature conservation at the heart of human responses to new pressures on the countryside, such as bioenergy production and new infrastructure development.

The RSPB already has nearly 40 Futurescapes initiatives underway around the UK – from the Flow Country in the far north of Scotland to the Wiltshire Chalk Country in southwest England. In these places, we are working with others to integrate sound environmental stewardship with countryside management and planning for the challenges of tomorrow. We plan to expand our Futurescapes programme to more than 80 places.

## GOVERNMENT ACTION NOW

The RSPB calls on the Scottish Government to:

recognise the importance of the landscape-scale approach to nature conservation to build on and complement work on protected areas and targeted species conservation. To take the intellectual lead in driving forward this approach, at the UK level and in the devolved nations ensure appropriate policy and planning frameworks are in place to facilitate landscape-scale conservation introduce innovative mechanisms for funding landscape-scale conservation, make existing funding mechanisms work harder for wildlife and ensure that public spending does not have negative impacts on the natural resource base pilot their own landscape-scale initiatives and share learning with others.

# THE BASICS

Nature conservation is a long-term game, and an eye to the future is always necessary as we try to predict threats and ensure our work leaves an enduring legacy. We do this because we love nature and know both its current and future value to society.



Our wildlife is under huge threat. Species are now becoming extinct at a rate of two each year. Even once-prolific species are under threat, such as the common toad and common frog. Only where threatened species have been the subject of targeted conservation efforts and reintroductions, have they fared well. Not only have we failed to halt biodiversity loss, but the threats from a changing climate, and increasing pressure on land, are huge. Business as usual is not an option.

We must turn this into an opportunity. Historical habitat loss and fragmentation has in many areas of the UK led to islands of nature surrounded by a landscape of limited value to specialised wildlife. As biodiversity continues to decline, the situation worsens, with remnant populations of once-common species hemmed in by inhospitable land. Nature conservation must be delivered at a much larger scale and in a more successful way alongside other land uses in the wider landscapes, if we are to return to an era of increasing or even stable wildlife. We must provide space for nature to thrive and adapt to a changing climate.

Futurescapes, the RSPB's landscape-scale programme of conservation work, is a major part of our response to these challenges. The programme is a new way of doing nature conservation, at a greater scale and in a more ambitious and integrated way than ever before. It is also an invitation to other organisations and individuals to join us, as together we create, restore and improve habitats across the UK. The programme is about real improvements on the ground, making a real difference for the natural environment.

## WHY WE NEED A LANDSCAPE-SCALE APPROACH

The landscape-scale perspective is not new to the RSPB. We have long been advocates for large-scale habitat work, and have been putting these ideas into practice on and around flagship reserves including Abernethy, Forsinard Flows, Minsmere and Lakenheath Fen for years. In 2001, we set out the case for landscape-scale conservation in *Futurescapes: large-scale habitat restoration for wildlife and people*. It is now clear that we need to think even bigger than was envisaged only a decade ago, if we are to turn the tide of biodiversity loss.

We need to learn new lessons, including how to carry out specialist nature conservation across wider landscapes, and how to provide more space for nature to thrive and adapt to a changing climate. Our choices of Futurescape locations are based on our long experience throughout the UK as conservationists and land managers, and are concentrated in those areas where we feel that, with partners, we can make the biggest contribution to nature conservation.

The increase in the scale is significant. Approximately 50 of our Futurescapes cover nearly 1 million hectares (ha) compared to our current reserves' holdings of 150,000 ha. The Futurescapes programme will work beyond such sites in partnership with other organisations and landowners. The range of these partnerships is already impressive across the UK, and we will continue to seek out those who want to pool skills, resources and knowledge to build a better future.

Governments' collective failure to halt biodiversity loss by 2010 should be a wake-up call across the UK. Redressing the failure will not be an easy task and depends upon genuine political leadership. Landscape-scale conservation needs concerted governmental support to make it happen. The challenge for the Scottish Government, NGOs and other organisations is clear: we must work together, supported by adequate policies and funding, to create a countryside fit for wildlife and people, now and in the future.



# NATURE CONSERVATION IN THE 21ST CENTURY

Scotland already has valuable systems in place to conserve nature – including legal protection for important wildlife sites, the statutory duties of our nature conservation agencies to protect species and bring habitats into favourable condition, agri-environment schemes to enhance habitat on farmed lands, and the range of vital privately-funded efforts, led by conservation organisations, to help threatened species to recover their foothold in a damaged environment.

If strengthened, all these components of nature conservation can provide a solid foundation for the landscape-scale approach to conservation.

There is no time to waste, either. Such are the pressures on the countryside that developing a landscape-scale approach to conservation must go hand-in-hand with strengthening these vital building blocks: protecting, expanding and reconnecting sites, recovering threatened species and enhancing the farmed environment. Only then will we succeed in producing a countryside fit for wildlife in the 21st century.

## SPECIES CONSERVATION

The landscape is a product of its management over a very long period. Over recent centuries, and particularly during the 20th century, our once-extensive tracts of semi-natural habitat, upon which so many of our cherished species depend, have suffered significant losses. What remains today are tiny, and highly fragmented, remnants of that once-extensive coverage; in essence, small islands of habitat. It is little surprise that species dependent on these habitats struggle to maintain viable populations. Specific interventions on localised priority species in the UK such as the bittern, corncrake, corn bunting, curl bunting and red kite have had a very positive impact on the populations of these species. However, declines in species dispersed across the wider countryside have yet to be successfully tackled. This has resulted in an increase in the number of red-listed species of conservation concern across the UK. In a managed landscape, targeted species recovery work will always be necessary to achieve conservation goals. In fact, these goals have been met for corncrakes and we are working on the capercaillie – but much work is needed.

## PROTECTED AREAS

The building blocks of nature conservation have been painstakingly assembled over the last 30 years, and the RSPB has been involved in many of them. The UK's system of protected areas can be effective, however threats remain and this network of our finest wildlife sites remains incomplete, even though it is an essential part of the species recovery toolkit. The protected area network was established at a time when the wider countryside was in a considerably less impoverished state and these were qualifying sites rather than representative samples of a designation feature. These sites have subsequently become more isolated, and while many of them are now being helped to recover, more work will be needed to bring them into the required favourable condition. We therefore need the protected area network expanded, improved and properly conserved.



RSPB ABERNETHY NATIONAL NATURE RESERVE, HIGHLAND

# THE ROLE OF PROTECTED AREAS

The UK's protected areas are a cornerstone of nature conservation delivery. As well as sites of national importance, our Sites of Special Scientific Interest (SSSIs) include the network of the most important European sites in the UK. These are the Natura 2000 sites, comprising Special Protection Areas (SPAs) designated under the Birds Directive and Special Areas of Conservation (SACs) designated under the Habitats Directive.

Recent work looking at population trends for all wild birds since 1970 has shown how important the Birds Directive has been for them, especially those listed on Annex 1 (the most threatened and significant species in the European Union). The rate of recovery of Annex 1 species has been significantly greater inside the EU than outside, and within the EU has been greater for Annex 1 species than those not listed.<sup>1</sup>

The role of protected areas in this recovery is critical. The greater the area of SPAs, the stronger the recovery, especially for the rare and vulnerable species on Annex 1. This was evidenced by those countries that designated larger areas of SPAs having trends that were more positive.

As our climate continues to change, protected areas will play an even more important role in ensuring a future for wildlife. Tomorrow's biodiversity can only come from today's, so the role of protected areas in improving the conservation status of species is a vital first step in enabling adaptation. Designated sites don't just protect the species that reside within them, but the underpinning environmental conditions or site function.

Many of our protected areas have been relatively undisturbed by human activity, and contain key environmental conditions such as low-nutrient soils, high water quality, and geologies and topographies that are now rare in the wider landscape. Conditions like these are the foundation of diverse ecological communities. They will continue to have a diverse ecology, as the species that make up those communities alter over time.

For these reasons, the protected area network will be central to the Futurescapes approach. While protected areas are at the core of all Futurescape initiatives, identifying the opportunity to support wildlife over a wider landscape does not imply or signal a new tier of designation.

## ENVIRONMENTAL LEGISLATION

The intrinsic value of wildlife, and society's ethical duty to conserve it, has been given expression by the environmental laws passed at EU and national levels over the past 30 years. These have all set out safeguards that limit the degree to which human activity can be allowed to impact on the natural environment, and assigned responsibilities for its protection and restoration. This legislation has made a huge contribution to the conservation agenda and is responsible for much of what we hold dear today.

However, there remain areas where more positive use could be made of the existing legislative toolkit to bring about the changes needed to our countryside, eg creation and restoration of habitats outside our protected area networks to support species recovery. We need to build and sustain this success while at the same time ensuring the full national implementation of newer directives (eg the Water Framework Directive) and the integration of nature conservation into all regulation governing land use. Such careful integration can help avoid conflicts, delays and increased costs by ensuring nature conservation concerns are factored in at the earliest stage of planning land-use change.

## CONSERVATION IN THE WIDER COUNTRYSIDE

The Common Agricultural Policy (CAP) provides funding that can deliver environmental outcomes in the wider countryside. These benefits include those delivered through agri-environment schemes, such as increased habitat for farmland birds, and resource protection. However, the funding available for these schemes is currently inadequate, and the majority of funding is delivered as direct payments to farmers, for little public benefit return. In the current CAP framework, the increased funding needed for those public benefits could be achieved by a significant transfer of resources towards such schemes.

At the same time, agri-environment schemes must be shown to deliver real environmental improvements. Many are currently judged by how many participants they have, or how many hectares they cover. Success must be judged against clear objectives such as species and habitat recovery. Good scheme design and advisory capacity on the ground are essential to ensure public benefits are delivered. The RSPB's working farm at Loch Gruinart is one example that demonstrates that profitable, wildlife-friendly farming is possible, but more must be done to ensure schemes deliver on this potential in all situations.

For the landscape-scale approach to conservation to bring the real benefits anticipated, current schemes need improvements in funding, design, delivery and co-ordination. A speedy improvement in delivery is vital as we look to the future and the uncertainties brought about by climate change.



BLACK-THROATED DIVER

# THE CLIMATE CHALLENGE

Among the greatest challenges to managing the UK's landscape in the future is climate change.

Climate change is a huge long-term threat to wildlife. For every degree Centigrade that the Earth's average temperature warms, another 10% of species are projected to be at higher risk of extinction globally.<sup>2</sup>

While average global temperatures have risen 0.8 degrees Centigrade since pre-industrial times, warming has gone farther and faster in various parts of the globe, including the British Isles. Average annual temperatures in central England have increased by 1 degree Centigrade since the 1970s. Sea surface temperature in the UK's seas has risen by around 0.7 degrees since 1980.<sup>3</sup> While that may not sound like much of a change, the impacts on wildlife are already significant.

Warmer springs and hotter summers are causing some species to fall out of sync with their prey. For instance, on upland moors, milder spring weather has encouraged golden plovers to nest earlier than they did two decades ago. However, there is no longer enough food for the chicks to eat because craneflies, the mainstay of their diet, have not changed their hatching times. Meanwhile, hot summers are drying out cranefly eggs, leading to smaller populations of craneflies the following year.

Warming seas are disrupting the marine food chain. The abundance and distribution of cold-water plankton is changing so that numbers of sandeels, which rely on the plankton, are falling. Seabirds at the top of the chain, such as puffins and kittiwakes, are suffering huge breeding failures due to lack of nutritious sandeel food.

On our coasts, sea levels have risen 10 centimetres in the past century<sup>4</sup>, mostly due to seas expanding as they warm up. Sea level rise is reducing the area of saltmarsh habitat on our coast – fertile feeding and breeding grounds for wading birds – and, in some cases, threatening human settlements. One thousand hectares of coastal saltmarsh were lost in Eastern England in just 10 years.<sup>5</sup>

We need to work hard to adapt to changes in the climate that are already underway and that challenge both nature conservation and human well-being. Already the RSPB has many projects underway, with others, to help wildlife adapt. For example, we are blocking upland peatland drains to help the water remain in the soils better over the summer months, and we are creating new coastal saltmarsh habitats through managed realignment schemes. But even with such conservation innovations underway, there are more negative impacts ahead for the natural environment as a result of climate change. Even bolder action is needed.

Even if today's society musters tremendous political will to limit climate change, further warming is inevitable this century. As a result of greenhouse gas emissions in our recent history, a certain degree of warming is already built into Earth's systems. As we look towards the century's end, our future climate is highly uncertain and the localised impacts even more so. At a global level, future scenarios range from a further average temperature rise of 1.4 degrees Centigrade to 4 degrees or more.

Uncertainty about the nature and scale of future climatic change makes it difficult to project consequences for wildlife, but existing studies suggest alarming trends. Shifts in species distributions are the most studied, such as detailed in the *Climatic Atlas of European Breeding Birds*. Based on a scenario of mid-range emissions, the authors find that suitable climatic conditions for the average bird species will shift nearly 550 km north-east by the end of this century, be reduced in size by a fifth and overlap the current range by only 40%. Historic species population declines, coupled with the speed of these changes and a landscape with comparatively little semi-natural habitat, means that many species will not be able to adapt in time without our help.



BLACK GROUSE

## BLACK GROUSE

We do not know precisely how climate change will affect wildlife, though our ability to predict and forecast its responses is improving. It is clear that some species will fare well while others will experience problems – some of them serious.

By making conditions as good as possible for key species now, we can increase the natural world's resilience to the climatic changes that human activity is causing. A key mechanism to achieve this resilience is to maximise both the quality and extent of important habitats.

The black grouse is a beautiful species of the upland and woodland fringes of Scotland. It remains a widespread species here but, for a variety of reasons, numbers have fallen sharply in recent decades, particularly in the south and west. Moreover, predictive ecological models suggest that the areas of Scotland with ideal climate for this species will shrink in coming decades. We can help our black grouse withstand this change by creating and expanding areas of high quality habitat now. This needs more than just the odd nature reserve: it will require securing positive management for black grouse through the integration of conservation thinking into wider land use practices – agriculture, forestry and estate management. This landscape-scale, partnership approach to conservation is at the heart of Futurescapes.

# EMERGING PRESSURES ON OUR COUNTRYSIDE

**Both our society and countryside will be pressured by new challenges in the decades ahead, and we will, in turn, place more pressure on the natural environment to meet our human needs. Demographic changes will drive increased demands for food, housing, transport and recreational uses of land. The Land Use Strategy, a requirement of the Climate Change (Scotland) Act 2009, is an opportunity to set out a co-ordinated and biodiversity friendly response to climate change mitigation and adaptation in the land use sectors. This will be published for consultation in autumn 2010 and RSPB Scotland will contribute with many of the ideas and issues set out in this report.**

Among these challenges, food security debates have the potential to become particularly heated. Not only a growing population, but also growing incomes and increased per capita consumption will drive up the UK demand for food, and changing consumer tastes could influence the type of food we want to buy. Future governments may let market signals for food and other crops govern farmers' cropping choices, or they may introduce policy measures to advantage one crop over another, just as current policy in Scotland is encouraging afforestation targets to significantly expand the landscape.

For food and more general agricultural policy, and policies across forestry, housing, transport, infrastructure and other sectors of the economy, it is essential that future policies take account of wildlife needs in a pressured countryside. The relevant policies may be at UK or Scotland level, or they may relate to key decisions made by the EU, such as Common Agricultural Policy (CAP) reform, due in 2014.

Government policies to mitigate against climate change will also have profound implications for the way our land is used and managed. The actions we take could affect wildlife dramatically. At the heart of the UK's climate change mitigation policy are its commitments to slash greenhouse gas emissions by at least 80% by 2050, enshrined in the UK Climate Change Act (2008) and in the Climate Change (Scotland) Act 2009. The RSPB campaigned hard for these targets and we continue to press for medium-term emissions cuts in the UK of 42% by 2020 (the Scottish Government has already embraced this goal). But we argue that the policies to deliver these emissions cuts must be made in a way that respects our most important wildlife sites and provides habitat in the wider countryside.

Producing feedstocks for bioenergy, minimising the emissions associated with agriculture, developing renewable energy schemes, constructing low-carbon transport infrastructure – these are all necessary measures that must be balanced carefully with the needs of wildlife and the natural world today. Without proactive measures to conserve important species and habitats and provide sympathetic land management, landowners' responses to the climate crisis could have a bigger inadvertent negative effect on wildlife than climate change does directly.

For example, without careful policy decisions and adequate funding, the drive to increase bioenergy crops to support climate change mitigation could lead to vast areas of the landscape being covered in monoculture plantations with virtually no wildlife value – where there is the potential, instead, to develop many habitat features in a productive landscape. RSPB studies demonstrate how we have worked with developers to produce renewable energy projects and cropping systems with specific features to create and enhance wildlife habitat. In other words, we have gathered a significant body of evidence to demonstrate how our society can mitigate against climate change while protecting the natural world.



BARN OWL

# HELPING NATURE HELP US

**As we plan ways to manage our cities, towns, countryside and coast to take account of climate change impacts, there are ample opportunities to develop solutions that benefit both people and wildlife. Adapting to climate change in ways that improve people's economic security and recreation, and enhance wildlife habitats simultaneously, is at the heart of the RSPB's approach. Managed realignment schemes on our coasts, upland conservation projects and improved agri-environment schemes are all examples of measures that help nature to help us.**

Managed coastal realignment schemes, as discussed earlier, involve dismantling uneconomic flood defences, where concrete barriers have held back the sea to protect farmland, and returning these areas to the sea as intertidal habitat. Such projects allow scarce funds to be diverted to protecting higher priority coastal areas – including densely settled areas – and re-create important saltmarsh habitats for vulnerable wildlife. RSPB partnership projects to realign coastal areas have been highly successful in bringing back saltmarsh flora in a short time and, with it, attracting charismatic birdlife ranging from avocets (at our southern and eastern realignment sites) to shelducks, pintails and redshanks (across our UK sites).

In 2008, RSPB Scotland highlighted the opportunities of major habitat recreation for wildlife and people in our report *Nature and Sustainable Growth*. These concepts have been taken forward in the Scottish government's National Planning Framework 2 – which gives National Development status to the Central Scotland Green Network and a major habitat recreation project.

The RSPB has worked for many years with governments to develop agri-environment schemes that provide wildlife habitat in productive lands. With an eye to the changing climate of the future, we will be advocating that these schemes are geared to ensure that wildlife is helped to adapt to climate change, partly by using existing measures to strengthen and protect existing populations, and partly by developing new measures that address future needs such as increased water retention to prevent drying of wetlands.

A changing climate in the UK, with warmer springs, hotter summers and a longer growing season, will encourage farmers to grow new crops. These could range from expanding the area of maize further north into the UK, to introducing more exotic crops such as sub-tropical fruits. Providing insect habitat among these crops may prove to be essential to their viability, as they will depend on wildlife to pollinate them. In Scotland, wetter and stormier conditions are predicted with more frequent flood events.

Of major significance in Scotland is our extensive peatland resource. Peatlands, if well managed, provide valuable eco-system services especially as carbon stores. Past damage from drainage and afforestation must be reversed to maximise these benefits.

While all the examples given here show clear win-win solutions for people and wildlife in a multi-functional landscape, they involve trade-offs in some form. These trade-offs among land uses will only become more acute in future decades.

Ecosystems provide a complex web of services for people, which cannot be easily replaced. They include providing the food, fresh water, fuel wood and genetic resources that support people's lives and livelihoods. They include cultural, spiritual, recreational, aesthetic and educational uses of the natural environment. We depend on land for all these visible ecosystem services that support and enrich our lives, and for many less visible services, too, ranging from climate and flood regulation to nutrient cycling. Our demands are already increasing and are set to continue apace. We need to take account in our decision-making of all the services that land provides us with and devise fair processes for deciding how such services are provided, and for whom. This includes speaking up for nature, which without us, does not have a voice.



# LANDSCAPE-SCALE CONSERVATION: FROM VISION TO ACTION

Landscape-scale conservation is a big, bold approach to address the issues of habitat loss and fragmentation, the need to help wildlife adapt to climate change, and the imperative to adapt our natural and built environments to a changing climate, but in a truly sustainable way.

The landscape-scale approach aims to restore ecological function across whole landscape units, rather than just protecting limited nature reserves or sites. This means creating more habitats where remnant areas have become too fragmented to support the species that depend on them, particularly important for heathland and woodland. It means restoring the hydrology of wetland complexes at a scale that allows natural and sustainable water regimes to be resumed, rather than having small verdant patches desiccated by surrounding drained land – vital for water meadows, and the insects and breeding waders that rely on them. It means ensuring that a mosaic of habitats is put back, often integrated with other land uses such as farming, forestry or housing, that allows wildlife to move through a landscape and thrive within it.


Landscape-scale conservation is not only about making the countryside better for wildlife – but also about making the countryside better for people. It's about a countryside where people can celebrate nature, a countryside that sustains the supply of food, fuel, fibre and water that people need now and in the future.

The landscape-scale approach will help tackle these challenges to wildlife and society in four important ways:

## PUT COMMUNITY INVOLVEMENT AND PARTNERSHIPS AT THE HEART OF DECISION-MAKING ABOUT THE FUTURE OF THE COUNTRYSIDE

A thriving natural environment enhances people's quality of life. But in order for people to benefit most from landscape-scale conservation, communities need to have good information about the options for nature conservation – big and small – in their area. They also need the opportunity to have a say in decisions that affect them. Local communities may be at the forefront of delivering conservation action, too, whether they are landowners or land managers, volunteers for conservation, business sponsors or local spokespeople and organisers. That is why partnerships among communities, government, business and civil society organisations are critical to achieving a viable shared vision of landscape-scale conservation, and implementing it.

Natural and semi-natural habitats in the UK provide a vast array of ecosystem services. More research is needed to quantify the extent and value of these functions properly, but their value to the UK is estimated to be hundreds of millions of pounds in the form of reduced flood risk, better water quality, carbon storage and sequestration, health benefits, tourism and recreation revenues, and education provision. Action for biodiversity may help restore other functions to the environment: for instance, restoring native woodland for wildlife habitats can also increase natural carbon stores and



Corncrake:  
catastrophic  
decline across the  
UK to less than  
500 calling males –  
after conservation  
measures, there  
are now over 1,000

CORNCRAKE

recreational places for people to enjoy.

To take another example, creating managed realignment sites on the coast can create great wildlife habitat and reduce the cost of trying to bolster uneconomic hard defences, but it may take some land out of production. Seldom are decisions about land management without trade-offs. That is why it is important that stakeholders work closely together at the local level to ensure that concerned parties are consulted, and communities are involved in developing sustainable solutions for their area.

#### INCREASE THE SIZE OF AREAS THAT ARE MANAGED FOR NATURE CONSERVATION

There is abundant evidence to show that small, fragmented and isolated pockets of wildlife habitat are likely to fail the species that depend upon them – in nature conservation size really does matter.<sup>6</sup> Larger sites, managed primarily for nature conservation purposes, will be needed, and can build on existing important wildlife sites. Large sites usually offer a greater variety of conditions for a wider range of species. They buffer sensitive features from external pressures such as pollution, and from some of the difficult climatic conditions we will come to expect, such as drought. For example, by making wetland sites larger and innovating ways to store and manage water, we can keep those places in better condition for wading birds, water voles, dragonflies and other wetland species as our summers become hotter and drier. Large sites allow for more cost-effective management, making better use of natural processes, and they support species that require mosaics of different

habitats or a large range to complete their lifecycles.

#### MANAGE THE COUNTRYSIDE TO HELP SPECIES ADAPT TO CLIMATE CHANGE

As well as making habitats more resilient to climate change by increasing the size of protected areas, it is possible to make targeted interventions that will help individual species to cope. For example, we can develop ways to manage for stronger winds as weather events become more severe – another predicted effect of climate change. On grasslands, we can adjust grazing and mowing regimes to suit longer growing seasons and still provide the right grass height for breeding waders.

Modelling shows the broad scale and significant extent of species' expected movements. Projections of species' potential movement to the north and to higher altitudes are only meaningful if adequate habitat is in place for the species concerned. Only relatively small areas of our present countryside are protected or managed as habitat for wildlife. These are set within a wider landscape that contains many barriers to movement, including towns and cities, roads and railways, and intensively managed farmland and forestry with little by way of suitable habitat. In a productive landscape, a range of simple, practical measures can make the countryside better for wildlife and more amenable to species movement: features such as hedges, ponds, water-filled ditches, woodland and scrub patches, and field margins. Agri-environment schemes can, and already do, support many of these features, but they must be fully funded and available.

## PUT NATURE CONSERVATION AT THE HEART OF OUR RESPONSE TO NEW PRESSURES ON THE COUNTRYSIDE

As indicated previously, the measures we take to avoid dangerous climate change could transform parts of our countryside. The Scottish Government and Westminster are legally committed to ambitious targets for reducing greenhouse gas emissions by at least 80% by 2050. They have similarly ambitious targets for developing renewable energy: 15% of the UK's energy is to come from renewables by 2020, and 50% of Scotland's electricity in the same period. These aspirations have profound implications for the way our land is managed, as a mix of renewable energy technologies will need to come on-stream in the next two decades to provide low-carbon heat and power. These range from onshore wind farms to feedstock crops for solid biomass.

With careful planning, siting and evaluation of wildlife impacts, all these technologies can be developed to protect and even to enhance benefits for wildlife. It is essential that they do so, in order to safeguard biodiversity for today and tomorrow. The other pressures foreseen for the countryside in the coming decades – increased agricultural production, housing, infrastructure and other developments – could, likewise, hold deep implications for wildlife. At the landscape scale, these developments must be planned strategically in a way that leaves space for wildlife and for thriving habitats to support it.

While we can anticipate many of the challenges to our countryside in the future, the details – naturally – remain uncertain. The actual impacts of climate change, the response from wildlife and people to climate impacts, and other social and economic trends of the future, point only in the direction of contentious debates over the use of land, and a countryside where space for wildlife will be under strain. A landscape-scale approach to conservation helps create flexibility for people and wildlife to adapt to all these unknown pressures in the future.

## RESTORING NATURE IN A COMPLEX WORLD

RSPB Scotland advocates an approach that supports the ecological processes that drive the natural world supplemented by a targeted approach for the species that are in greatest need of our help. Our ecosystems are too damaged, too fragmented and too small to rely solely on species responding to broad-brush measures. This risk is compounded by the uncertainties that are faced in relation to a changing climate.

We have been at the forefront of showing what can be achieved through targeted, well-researched, species-focused work. It is an approach that comes from our history and is central to our passion to ensure that we can hand on a natural world to future generations that is in better condition than it is now.

The improving fortunes of ospreys, bitterns, corncrakes, red kites, white-tailed eagles, pine hoverflies and great yellow bumblebees all demonstrate that species-focused conservation works.

Too often, the benefits of either an ecosystem or a species approach are posed as alternatives. We believe the solution lies in an intelligent combination of delivering vital ecosystem services alongside effective nature conservation strategies that deliver for both species and habitats. To combine both approaches demands a landscape-scale approach.

Red kites:  
from virtual  
extinction  
in Britain to  
more than  
1,350  
breeding  
pairs



RED KITE

**THE  
RSPB'S  
FUTURE  
SCAPES  
PROG  
RAMME**

# Futurescapes is the RSPB's programme of landscape-scale initiatives that will build on our strengths, in partnership with others, to achieve a step change in sustainable countryside management.

It is based on our best current knowledge of what wildlife needs to thrive now and in the near future, and it aims to provide enough versatility to plan for greater species movements and new societal needs, many years ahead.

Futurescapes aims to contribute to a revolution in thinking and delivery of nature conservation, at a scale capable of making a real difference. Our programme will complement, add to and support a growing movement, including in particular the Living Landscapes programme led by the Wildlife Trusts and other initiatives from across the conservation community. These initiatives share a common vision: to see nature thriving in a landscape that provides ecosystem services and supports rural industry and inspires the millions of people who live in it and visit each year. The key is working together to shape the future of a countryside fit for us all.

The RSPB has begun working towards this goal by developing a first tranche of Futurescapes initiatives across the UK. There are approximately 40 sites in our programme and this is set to increase. At these sites, we are acquiring or expanding nature reserves, we are developing species recovery plans for threatened wildlife and we are expanding our conservation management advice both at the farm estate level and also strategically at various spatial levels. All of these projects are in areas of the UK where the RSPB has a good understanding of local situations and where we are part of strong partnerships that can ensure conservation measures are delivered.



SMALL PEARL-BORDERED  
FRITILLARY BUTTERFLY



RSPB FORSINARD FLOWS  
NATIONAL NATURE  
RESERVE, HIGHLAND

# SCOTLAND

For decades, RSPB Scotland has been working at a scale that embodies the Futurescapes approach. Its delivery of large-scale habitat recreation at Abernethy and the Flows has been among the most extensive projects anywhere in the UK. This experience will contribute significantly to its ability to deliver the Futurescapes programme.

The peatlands of Caithness and Sutherland form the largest expanse of blanket bog in the world. The RSPB's Forsinard Flows National Nature Reserve sits in the middle of this expanse, and over 15 years around 10,000 ha of damaged bog has been restored, principally through blocking drains and removing inappropriate forestry. RSPB Scotland works as part of a wider partnership, advocating wise management of this fantastic resource across Caithness and Sutherland.

Many people associate Abernethy with the world-famous ospreys at Loch Garten. However, the 14,480 ha reserve is in the heart of Scotland's remnant Caledonian pinewoods, and has been at the forefront of developing and promoting best practice management and expansion of this important habitat.

In Scotland, the RSPB has an initial 22 areas in its Futurescapes portfolio, including the Flows and Abernethy.

## INNER FORTH

With its focus around the Firth of Forth SPA, this Futurescape includes areas of international importance for wintering wading birds and wildfowl. At the heart of central Scotland, it also has a long history of industrial and agricultural use that has resulted in loss of valuable habitat over centuries. With new pressures from development, climate change and disturbance to the birds using the Forth, there is a need for action on a big scale to ensure this rich biodiversity interest is maintained and to make the most of the exciting opportunities available for sustainable flood management and climate change mitigation.

Our vision is for large-scale habitat creation of over 2,000 ha around the Falkirk and Alloa area, centred on our Skinflats nature reserve. By creating a network of new wetland habitats including saltmarsh, mudflat and reedbed, we will deliver for wildlife and help to achieve a wide range of other socio-economic benefits. In particular, we will work in partnership with local authorities and land managers to maximise opportunities for sustainable flood management, recreation and education in an area within easy reach of the majority of Scotland's population.

## RSPB VANE FARM RESERVE, BY KINROSS, PART OF THE LIVING LOCH LEVEN FUTURESCAPE



## LIVING LOCH LEVEN

At the heart of this Futurescape is the beautiful Loch Leven National Nature Reserve, which, just 30 minutes from Edinburgh, forms a significant visitor destination as well as supporting large numbers of birds throughout the year. The Living Loch Leven Futurescape will link to the economic re-development of the area, restoring existing wetlands and creating new habitats, particularly wetlands on mineral extraction sites, improving the quality of life for residents and providing a draw for visitors to stay in this accessible area. Projects will contribute to environmental restoration, improvements to water quality and flood management. Partnerships with landowners, industry and national and local government agencies will help achieve this. Links to cities such as Perth and Edinburgh with a focus on environmental education will be at the heart of this Futurescape – Living Loch Leven, for birds and people.

# GOVERNMENT ACTION NOW

**The 2010 target to halt and reverse the decline in biodiversity was not met. Despite many successes, it is clear that our current tools are not sufficient to adequately conserve nature in the future.**

The RSPB's Futurescapes programme sets out an ambitious programme of action led by one organisation, but it will not be enough on its own. To date, landscape-scale conservation has been constrained by a lack of funding and insufficient support among policy-makers. The new European biodiversity target for 2020 is just as ambitious, if not more so, than the one we have just failed to meet.

We need new tools if we are to rise to this challenge: new tools that turn landscape-scale conservation from a possibility to a probability; tools that reflect the huge contribution nature makes to the UK's well-being with an appropriate level of specific funding. These new tools are additional to, rather than instead of, species and site safeguards.

**RSPB Scotland calls for the following Government commitments to enable wildlife to flourish across the UK:**

Recognise the importance of the landscape-scale approach to nature conservation and take the intellectual lead in driving forward this approach, to build on and complement work on protected areas and targeted species conservation.

Ensure appropriate policy and planning frameworks are in place to facilitate a landscape-scale approach.

Introduce innovative mechanisms for funding a landscape-scale approach, make existing funding mechanisms work harder for wildlife and ensure that public spending does not have negative impacts on the natural resource base.

Government agencies should undertake pilot projects to test the landscape-scale approach. Scottish Government must, in partnership with others, learn the lessons from practice to inform future policy-making.



# WORKING WITH YOU

**The RSPB has decades of experience of helping to put the natural world at the centre of decision-making; we have often done this in co-operation with communities and in broadly-framed partnerships. The RSPB draws its strength and inspiration from the passion people have for the natural world.**

“Lochwinnoch Reserve is an amazing place to volunteer, with fantastic loch and meadow views and an exciting array of wildlife from otters to woodpeckers to hen harriers. It provides a superb mixed local environment of city and countryside. I enjoy providing office support at the reserve and this I hope enables the Lochwinnoch team to devote more time on habitat and wildlife activities. This means that not only does the environment benefit, but all those who support it.”

*Mike Flinn, Lochwinnoch volunteer*

Our Futurescapes programme challenges us to build on our experience and apply, consistently, the lessons we have learned from our most successful and enduring projects. In recognising and embracing the challenge of true, empowering engagement, we believe that the natural environment will benefit and we will embark on a journey together that will have the power to change lives.

“I welcome the Futurescapes initiative. There is growing recognition that the quality of the landscapes, habitats and wildlife in the countryside around us contributes to the quality of our life and economic security. There are also significant challenges ahead to ensure that we respond effectively to the impacts of climate change on the health of our ecosystems and biodiversity. By shifting the focus from protected places to what can be achieved through wider land-use management and spatial planning, based on shared objectives, we will be able to achieve so much more.”

*Susan Davies, Director of Policy and Advice,  
Scottish Natural Heritage*

The landscapes that we have identified within our Futurescapes programme have been shaped by their histories and are at the heart of their communities. Our shared vision will only be achievable if we work together in co-operation and mutual respect.

Please contact us to discuss how we can work together to make our countryside rich in wildlife and better for people, now and in the future.



RSPB ABERNETHY NATIONAL NATURE RESERVE, HIGHLAND



HIGHLAND CATTLE AT VANE  
FARM, PART OF THE LOCH LEVEN  
NATIONAL NATURE RESERVE

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# FUTURESCAPES

SPACE FOR NATURE,  
LAND FOR LIFE

[www.rspb.org.uk/futurescapes](http://www.rspb.org.uk/futurescapes)



RSPB Scotland is part of the RSPB, which speaks out for birds and wildlife, tackling the problems that threaten our environment. Nature is amazing – help us keep it that way. We belong to BirdLife International, the global partnership of bird conservation organisations.

Footnotes: 1 Donald *et al.* 2007. *Science* 317, 810. 2 Secretariat of the Convention on Biological Diversity. (December 2008). Draft findings of the ad hoc technical expert group on biodiversity and climate change. 3 *Warming* Met Office, 2009. 4 *Warming* Met Office, 2009. 5 RSPB, Wildlife Trusts, WWF, National Trust: *Coast in Crisis*. 2000. [www.rspb.org.uk/Images/CRISIS72\\_tcm9-133013.pdf](http://www.rspb.org.uk/Images/CRISIS72_tcm9-133013.pdf). 6 Donald, Paul. *Climate change and habitat connectivity; assessing the need for landscape-scale adaptation for birds in the UK*. RSPB, Sandy, 2005.

IMAGES: Abernethy by Laurie Campbell, children by Jesper Mattias, snow bunting by Roger Tidman, lapwing by Steve Knell, Abernethy by Andy Hay and Mark Hamblin, black-throated diver by Danny Green, black grouse by Mark Hamblin, barn owl by Nigel Blake, cyclists by Eleanor Bentall, corncrake by Nigel Blake, red kite by Danny Green, small pearl-bordered fritillary butterfly by Steve Knell, Forsinard by Steve Austin, Vane Farm by Andy Hay and Highland cattle by Andy Hay (all [rspb-images.com](http://rspb-images.com)); Scottish Parliament by iStockphoto.com.