



1. Introduction

With biodiversity in crisis across the planet, the fate of Scotland's natural environment hangs in the balance. After decades of environmental degradation and species loss, the need to restore our habitats and species has never been more urgent. There is now an opportunity for Scotland to turn these losses around and become a world leader in biodiversity recovery, alongside the leadership shown on tackling the climate emergency. Nature and climate are inextricably linked and cannot be meaningfully addressed separately.

The new Scottish Biodiversity Strategy must offer the mechanism to achieve this. To be successful, the strategy must be ambitious, challenging and focused on achieving targeted, measurable results. It must also inspire and engage people across society. To reflect that, we propose that the next strategy is called **Scotland's Nature Emergency Strategy**.

The few years between now and 2030 are the most crucial we have ever faced, named by the UN the Decade of Ecosystem Restoration. If we do not make significant progress with ecosystem restoration during this time, future success becomes increasingly unlikely.

We must also halt species extinctions and reverse the fortunes of rare and threatened species. They must be the stars of our habitats and ecosystems approach; and their unique individual needs must not be lost within our habitat-level actions.

To face the scale of the challenge of reversing nature loss and to support a resilient environmental sector, this crucial work needs to be adequately funded. Successful action for biodiversity does not happen in a vacuum but needs a supportive and integrated policy framework, delivered in partnership and through investment from multiple sources. Explore some examples [here](#).

LINK welcomes the Scottish Government's commitment to protect 30% of Scotland's land for nature by 2030. Scotland's protected areas, managed appropriately to help nature recovery and strengthen ecological processes should form the backbone of [Scotland's Nature Network](#). Much more needs to be done to deliver more, bigger, better and joined up nature sites, and to restore the ecosystems that they protect to good health. Find out more here: [30 by 30: Protecting Scotland's Land, Restoring Scotland's Nature](#). LINK recommendations for Scotland's seas can be found in our [Ocean Recovery Plan](#).

This paper sets out a vision for each of the ecosystem types LINK believes must be represented within the new Scottish Biodiversity Strategy. Collectively, we have the technical knowledge and expertise to realise a new, wildlife-rich future for Scotland. A truly ambitious strategy is now required to enable Scotland to unlock its potential.

2. Ecosystem Restoration - making it a reality

A habitat-focused approach, working to restore specific ecosystem types via dedicated programmes of action, will allow effort to be targeted to where it is most needed. The following is a list of Scotland's key ecosystem types, and sets out a 2030 vision for each habitat and restoring ecological processes and linkages between them, along with the key steps required to get there.

Ecosystem type	Positive vision	Key asks
Mountains and arctic-alpine habitats	Our mountains are refuges for special plants and animals adapted to colder, harsher, conditions in which they thrive.	<ul style="list-style-type: none"> ● Restore upland peatlands ● Stop muirburn ● Re-establish montane scrub - juniper, birch and willows ● Reduce nitrogen deposition/ pollution ● Sustainably manage deer populations ● Manage recreational pressures to prevent damage to fragile mountain top ecosystems
Peatlands	By 2030 Scotland's peatlands are recovering, and are functioning as carbon stores as well as providing vital wildlife habitat.	<ul style="list-style-type: none"> ● End burning on peatlands ● End the extraction and sale of peat for horticulture ● End afforestation on peat ● Reduce nitrogen / chemical deposition onto peatlands ● Tackle sitka spruce incursions from plantations ● Protect blanket bogs and lowland raised bogs
Rainforest	By 2030 Scotland's rainforest is thriving once again.	<ul style="list-style-type: none"> ● Eradicate <i>Rhododendron x. ponticum</i> strategically, at whole-catchment scale ● Reduce deer densities in the rainforest zone to 3 per km², and sustainably manage deer populations ● Protect/encourage veteran trees and deadwood habitats ● Protect and enhance internationally and nationally important populations of lichens and bryophytes
Caledonian pinewoods	By 2030 a connected and expanding network of Caledonian pinewoods full of unique species, including ants, twinflower, red squirrels and pine hoverfly for example, tower over our landscape.	<ul style="list-style-type: none"> ● Restore the health and resilience of Caledonian pinewood in our landscape ● Support rare species restoration programmes, eg pine hoverfly breeding programme ● Ensure no loss of important populations of key species, eg wood ant colonies - translocating nests where needed
Ancient woodlands	By 2030 loss of ancient woodlands has been halted and they are in good ecological condition.	<ul style="list-style-type: none"> ● Sustainably manage deer populations ● Ensure no further loss and degradation from inappropriate development ● Eradicate invasive non-native species ● Develop and deliver an Ancient Woodland Register to map the location

		<p>and condition of ancient woods</p> <ul style="list-style-type: none"> ● Protect transition woodland/bog habitats on woodland edges ● Protect ancient trees and standing deadwood, encourage veteranisation of trees if needed ● Improve biosecurity to prevent spread of tree pests and diseases
Grasslands and High Nature Value farmland	<p>Scotland's species-rich grasslands are valued and restored. Machair, meadows and species-rich pastures are protected and managed for their biodiversity and multiple ecosystem services.</p>	<ul style="list-style-type: none"> ● Develop a comprehensive grassland database for Scotland ● Support species-rich grassland restoration, meadow creation and management in agri-environment schemes ● Support High Nature Value farming. ● Legally protect ancient grasslands ● Protect hedgerows and field margins ● Encourage intercropping ● Reduce pesticide use and ban certain pesticides eg neonicotinoids ● Plant the right tree in the right place, avoiding unimproved grassland
Estuaries, Saltmarsh and Intertidal habitats	<p>Where freshwater meets saltwater the perfect conditions are created for snails and beetles and other food sources needed by the birds and other species we see enjoying our estuaries and saltmarsh. The ability of these habitats to provide nature-based solutions to mitigating climate change, ameliorating pollution and preventing floods is maximised.</p>	<ul style="list-style-type: none"> ● Protect Ramsar sites in law as well as SSSIs, SPAs and SACs ● Protect brackish lagoons and pools ● Remove barriers for water movement to maintain salt/freshwater conditions and allow passage of anadromous fish such as salmon and sea trout ● Manage reed beds ● Manage coastal realignment to prevent loss of these habitats
Islands	<p>Seabird colonies are in good health and are breeding successfully. Endemic island species are thriving, alongside species making our islands their last refuge and home.</p>	<ul style="list-style-type: none"> ● Implement a rolling programme of island restoration (INNS eradication) and biosecurity (INNS prevention and protection) for the whole Scottish Archipelago ● Support monitoring and science for endemic island species ● Enhance habitats for refuge species such as Great Yellow Bumblebee ● Protect sand eel populations
Rivers and lochs, ponds and wetlands	<p>Our rivers are naturally dynamic, a shifting mosaic of small channels, islands and wetlands along the majority of their length. They are devoid of pollution and invasive species. Dippers dive under the</p>	<ul style="list-style-type: none"> ● Protect Ramsar sites in law as well as SSSIs, SPAs and SACs ● Prevent aquatic pollution such as agricultural runoff, chemicals from buildings and sewage waste

	water's surface to feast on a wealth of life below.	<ul style="list-style-type: none"> ● Remove barriers, restore river channels and natural processes including braiding and floodplain wetting ● Ensure riparian edges have native species, providing dappled shade and cooling to the watercourses ● Reduce soil erosion to reduce silting of water ● Manage water abstraction and temperature changes from industry ● Eradicate invasive non-native species ● Support community based freshwater invertebrate monitoring as an early alarm system to environmental changes in rivers
Coastal dune habitat, beaches, machair and maritime cliff habitat	Towering sand dunes are buzzing with rare bees and home to endemic species, safe from encroachment from the sea or damage from people. Beach ecosystems are natural and litter-free, with rich strandlines that naturally fertilise succession of coastal habitats. Extensive high nature value crofting systems sustainably supported and valued.	<ul style="list-style-type: none"> ● Protect and manage machair habitats via crofting support and innovation ● Manage successional habitats to maintain ecosystem function ● Stop damaging developments (golf courses) on dune habitats ● Implement circular economy interventions to “stop the tap” of plastic and other waste into the sea, that washes up along the coastline ● Maintain, while needed, hand gathering of litter to support natural strand lines
Inshore and continental shelf seabed habitats, including seagrass, flamsnell, horse mussel, native oyster and maerl beds, fan shell aggregations and kelp forests for example	Complex, interconnected seabed habitats support a variety of species throughout their life stages, from spawning and nursery grounds for fish and shellfish, securing refuges and foraging areas for small and large marine species alike.	<ul style="list-style-type: none"> ● Implement LINK's Ocean Recovery Plan in full, including completing and protecting the MPA network and fully protecting at least 10% HPMAs ● Transform fisheries management to deliver nature and climate smart fishing ● Simplify the licensing system to enable active restoration of “blue carbon” and other ecosystem-service supporting habitats, such as seagrass and native oyster beds, from a diminished baseline ● Enforce a presumption against any mechanical harvesting of any of Scotland's kelp species ● Control non native invasive species and their spread ● Ban neonicotinoid based pesticides from aquaculture ● Regulate and prevent diseases from aquaculture
Pelagic species and habitat	Pelagic ecosystems, the foundation of	<ul style="list-style-type: none"> ● Implement LINK's Ocean Recovery Plan

	marine food webs, are functioning and connected; migratory routes for fish and mammals are free of anthropogenic hazards.	<p>in full including fully protecting at least 10% of pelagic habitat in HPMAs</p> <ul style="list-style-type: none"> ● Ensure all fisheries are climate and nature smart and operating within ecosystem limits ● Prevent sensitive species bycatch and entanglements ● Avoid negative impacts on non-target species to protect their populations and the marine food web ● Protect the role of oceanic blue carbon (species and habitats) as pathways for long-term carbon storage ● Protect features that drive key oceanic processes, such as fronts, from damaging activities
Deep water marine communities	Fragile and stable deepwater communities, including coldwater coral gardens, sponge fields, seamounts and sediment communities remain undisturbed in perpetuity, allowing recovery from historic damage.	<ul style="list-style-type: none"> ● Implement LINK's Ocean Recovery Plan in full ● Extend the deep-sea access regime for bottom-towed fishing gear from deeper than 800m to 600m ● Implement all outstanding MPA management measures, particularly to protect sea mounts shallower than 800m ● Reduce plastic pollution ● Prevent sensitive species bycatch and entanglements ● Reduce noise levels to the extent that they do not impact or impede the behaviour and migration of cetaceans
Urban habitats	Our cities and towns are full of light but still with refuges of darkness, with green roofs and signs of nature creeping into our urban buzz.	<ul style="list-style-type: none"> ● Maintain open mosaic habitats in urban areas ● Reduce light pollution ● Increase the extent of blue/green infrastructure- green roofs, green bridges, walls, SUDs, rain gardens etc. ● Ban or reduce the use of pesticides and herbicides by local authorities

Scottish Environment LINK is the forum for Scotland's voluntary environment community, with over 40 member bodies representing a broad spectrum of environmental interests with the common goal of contributing to a more environmentally sustainable society.

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