The Wildlife Trusts

Ecological Restoration Fund

Transforming nature's recovery

Supported by the Ecological Restoration Fund

30% of land and sea for nature

In 2022, contracting parties met in Montreal to thrash out a new agreement to reverse the decline of nature. This 15th Conference of the Parties (COP15) of the Convention on Biological Diversity (CBD) had been timetabled for 2020 to be held in Kunming, China, but had been repeatedly delayed by the Covid-19 pandemic. Prospects for agreement at COP15 were not good but nevertheless, the UK co-chaired a 'high ambition' group of nations calling for an ambitious agreement. At the heart of this was '30x30' – a call for 30% of land and sea to be protected for nature.

In the event, a historic agreement was signed including two '30x30' targets. The first called for parties to **restore** 30% of **degraded** land and sea for nature by 2030. The second called for all governments (parties) to **protect** 30% of land and sea for nature. The Wildlife Trusts' new *Transforming Nature's Recovery* programme is designed to help the UK meet that first target by transforming the way we restore nature to our landscapes and seas.

Currently, the UK's nature protection system is based on protecting existing sites of high value for wildlife, including nature reserves, Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Local Wildlife Sites (LWS) and so on. However, this protection system only partly works. There are no management measures to protect the wildlife interest of Local Wildlife Sites for example. Through the Countryside and Rights of Way Act 2000 the state has powers to put in place appropriate management measures, but these are not always enforced. Many upland SSSIs, for example, are routinely burnt, often leaving them in an unfavourable condition.

Even if all SSSIs were well managed they still only cover 12% of the UK. 70% of land is under agriculture where the principle management activity is food production, not nature's restoration. Whilst both can be delivered alongside one another, the incentives to do this are not sufficient.

The scale of the challenge is huge. In England, Wildlife & Countryside Link estimates that only 3.3% of land is currently protected and managed in a way that contributes to nature's recovery. We are a very long way off the UK Governments' own ambition of '30x30'.

Remarkably, despite the fact that British uplands are often designated for nature protection, only 40% of upland blanket bog (Special Area of Conservation peatlands) are protected from burning. Regular burning is used by grouse moor owners to remove the natural vegetation of blanket bog, upland heath and upland grasslands, and replace it with heather monocultures (because adult grouse eat heather). As a result, many of our upland Sites of Special Scientific Interest are in poor condition despite their protected status.

Changing tack from preservation to restoration

The 2020s have been badged as the decade of ecosystem restoration by the United Nations. This is apt. The climate and nature emergencies are inextricably intertwined, and we are witnessing a rapid intensification of both crises. They must be resolved together – it is in this decade that action to reverse these emergencies is required.

To bring about nature's recovery, we can point to five critical actions:

1. The development of a **nature recovery network** that allows species and the habitats they create to move as climate changes
2. **Landscape recovery areas** that are large enough to allow natural processes to operate and drive restoration of species diversity and abundance, which will spill out across the nature recovery network and out into the wider countryside
3. A system of **regenerative farming** where we produce food in a way that secures a recovery of wildlife rather than at the expense of our natural world
4. A pattern of **sustainable development** that recovers wildlife and builds the necessary green infrastructure to thread through our towns and cities; fundamental to a high quality of life. It will act as a natural health service and protect us from urban flooding and heat stress
5. At sea, an ecological coherent network of effectively managed **Marine Protected Areas**, would allow marine wildlife to rebuild, in turn supporting vibrant fisheries.

The importance of rewilding

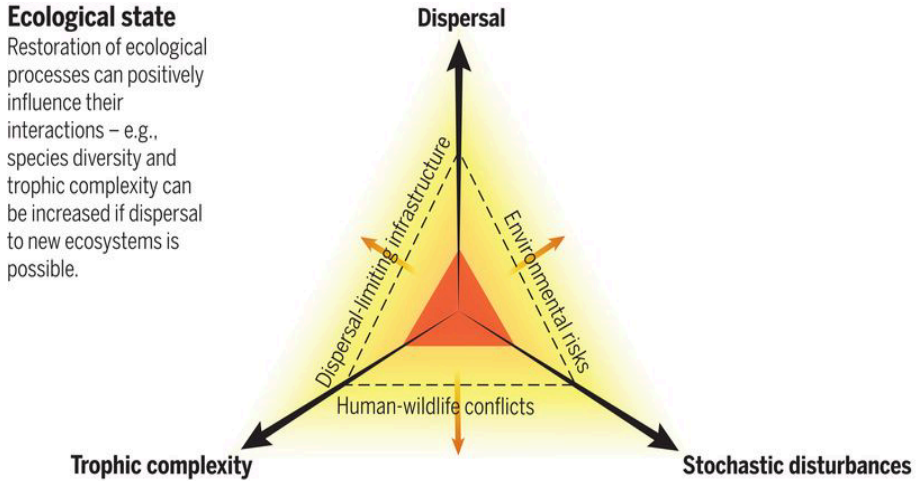
Rewilding science has sought to understand how natural complexity is driven. An article in Science (2019) pointed to three critical axes – dispersal (or connectivity – the nature recovery network), stochastic disturbance (or random natural processes) and trophic complexity (the web of life and especially the role of keystone species).

Obviously, the plants and animals that inhabit the meadows, field, forests and moors of today's agricultural landscapes largely evolved before agriculture. Plant growth attracts grazing animals, in turn attracting predators and host of scavengers when animals die. This co-evolution of species led to a myriad of variety – from defensive strategies such as thorny bushes to the ability to run fast, disperse seed in different ways, or varied pollination strategies by producing fruits or flowers. All this led to the complexity and variety of our natural ecosystems.

Herbivores play a particular role in driving up complexity because of their outsized impact on their surroundings. Large herbivores maintain natural meadows, spread seeds and propagules, change nutrient regimes, build up soil organic matter, open closed forests through de-barking and pushing trees over. By doing this they drive the complexity of natural processes, in turn driving up species complexity and abundance. Low intensity agricultural herbivory can mimic the natural processes of wild herbivory, which is why some traditional agricultural landscapes still retain some wildlife, and why UK nature conservationists are often focussed on preserving traditional grazing agricultural practices. Rewilders extend that concept by seeking to reintroduce large herbivores (or proxies for extinct species) that can behave in as wild a way as practically possible.

In densely populated northwest Europe, it can be impractical to release large wild grazing animals such as bison, elk, wild cattle and wild horses into sub-urbanised countryside, but large fenced areas can be envisaged, where large herbivores can adapt to a more-or-less natural lifestyle. This is often called 'kept-wild' grazing and the results can be spectacular (cf. Knepp Estate in Sussex and Kent Wildlife Trust and Wildwoods' bison in Blean).

Rewilding is sometimes characterised as land abandonment. This is not the case, rather rewilding seeks to intervene to restore natural process. Often this can mean 'kept-wild grazing' – a low intensity form of agriculture where few animals roam semi-wild in large fenced areas. Low intensity grazing can be more profitable than intensive grazing[1].



[1] The Wildlife Trusts and the Nature Friendly Farming Network (2023) *Farming at the sweet spot – How farming with nature can make you happier, healthier and wealthier*. RSWT, Newark. https://nora.nerc.ac.uk/id/eprint/523175/1/N523175PP.pdf

Ecological Restoration Fund

The Ecological Restoration Fund helps organisations and projects around the world that strive to enhance the diversity and complexity of the natural world, promoting a vibrant, green future for all.

The focus of the fund is on initiatives that contribute to ecological protection and restoration – and create dynamic economic, social and cultural opportunities for local communities, particularly indigenous peoples.

The Fund is supporting The Wildlife Trusts – made up of 46 local organisations and a central service charity, the Royal Society of Wildlife Trusts, to transform their approach to nature's recovery. The fund will focus on four critical areas:

1. Development work to coordinate and foster landscape-scale nature recovery
2. Acquisition within landscape recovery areas
3. Removing barriers to recolonisation or reintroduction of keystone species – those species whose ecological impacts are so great, they help to define the whole ecosystem
4. Restoring the ecology of Welsh marine waters and UK coasts.

Landscape scale ecological restoration

In 2010, Professor Sir John Lawton, then Chair of Yorkshire Wildlife Trust, published the seminal 'Lawton Report'[2]. This review examined whether the protected sites network in England was adequate to conserve England's wildlife. The report was unambiguous – it did not and could not. The network of protected sites were too few, in too poor condition, often not big enough, nor effectively connected. Lawton called for 'more, bigger, better, and well connected' sites. Behind this statement lay robust science. For example, the science of island biogeography shows why larger natural areas are more effective at conserving species than smaller sites.

Lawton made it clear that any network of wildlife sites should sit within large landscape-scale recovery areas. Rewilding science published subsequently goes further showing that only by increasing the scale can there be room for natural processes to operate. It is these random processes (stochastic disturbances in the language of rewilding science) that drive ecosystem variety, in turn driving species diversity and abundance.

There are some great examples of such thinking permeating action on the ground. In Scotland, Cairngorms Connect has joined together five huge land-holdings into a single rewilding initiative – ecological restoration at a grand scale. In Dorset, landowners have joined together to create the Purbeck Super National Nature Reserve; in Cambridgeshire the Great Fen project is restoring over 10,000 hectares of former fenland; in Somerset, organisations have come together to recreate the Somerset Level fenlands.

The Ecological Restoration Fund donation will allow The Wildlife Trusts to build on these initiatives facilitating three more:

1. Developing an ecological restoration corridor along the World Heritage Site of Hadrian's Wall – not a return to the Roman landscape of the past but informed by it
2. Collaboration by nine Wildlife Trusts to restore the floodplain of the Severn and its catchments, providing both room for the river to store floodwaters on the floodplain, rather than in people's homes and businesses, and to create an amazing backdrop to the urban and rural communities within the Severn catchment.
3. Working alongside funding from Aviva, an ambitious 100-year programme to rebuild the Atlantic temperate rainforest system of western Britain, Isle of Man and Northern Ireland.

Crag Lough is one of the original Rothschild Reserves, identified as place worthy of preservation back in the 1920s. Today Crag Lough is part of World Heritage Site of Hadrian's Wall. Northumberland National Park are working to restore the ecology of the central part of the Wall. Northumberland and Cumbria Wildlife Trusts aim to extend that corridor from the North Sea (Tynemouth) to the Irish Sea, taking in a sumptuous set of wildlife sites. This would create a landscape that befits such an important archaeological site and a fabulous backdrop to the Hadrian's Wall National Trail, as well as provide increased prosperity to farming communities in the area.

[2] J.H., Lawton & Brotherton, Peter & V.K., Brown & C., Elphic & A.H., Fitter & J, Forshaw & R.W., Haddow & S., Hilbourne & R.N., Leafe & M.P., Southgate & Sutherland, William & T.E., Tew & J., Varley & G.R., Wynne. (2010). *Making Space for Nature: A Review of England's Wildlife Sites and Ecological Network*.

Acquiring land for nature's recovery

Most land is owned by private landowners who aim to maximise profit from their land – to create family wealth, for shareholder value and so on. It is often a difficult business decision to move from the status quo of industrialised, intensive agriculture to a regenerative form of agriculture. Given this, some of our more successful landscape recovery areas have a core of land owned and managed by public bodies for nature or by wildlife charities. However, a nature recovery network will never be achievable through this form of land ownership. The RSPB has one of the largest landholding that is managed solely for nature – 332,000 acres. Despite being the UK's fifth largest landowner, this amounts to just half a percent of the UK's land.

Yet, care of land allows charities like The Wildlife Trusts to:

- Demonstrate what is possible – provide exemplars of nature's recovery and encourage others to follow
- Inspire, educate and involve people in nature's recovery – by making our nature reserves welcome and accessible, and giving opportunities for involvement
- Conserve species within nature reserves as a gene pool that can then spill out into a wider nature recovery network.

Transforming Nature's Recovery will provide match funding to facilitate land acquisition either by funding development work to secure funds (i.e. fundraising appeals or business plans to secure finance or funding bids) or directly contribute towards acquisition. The fund is designed to be reactive to Wildlife Trust need. The first three acquisitions are:

- Pentywn, Radnorshire Wildlife Trust – within the Wilder Marches nature recovery area
- Archers Green, Hertfordshire and Middlesex Wildlife Trust – within the Mimram Valley nature recovery area
- Ughill Farm, Sheffield and Rotherham Wildlife Trust – within the Sheffield Lakes nature recovery area

Pentwyn, Powys has been bought by the Radnorshire Wildlife Trust to demonstrate low intensity farming to restore nature in the central Welsh hills. The land connects to Cwynch Bank nature reserve, in turn, connecting through to the 5,000 acre Beacon Hill Common, owned by the Crown Estate. This landscape could be restored for wildlife, part of the wider Wilder Marches Landscape Recovery Area, stretching across the border into Herefordshire and Shropshire.

Keystone species

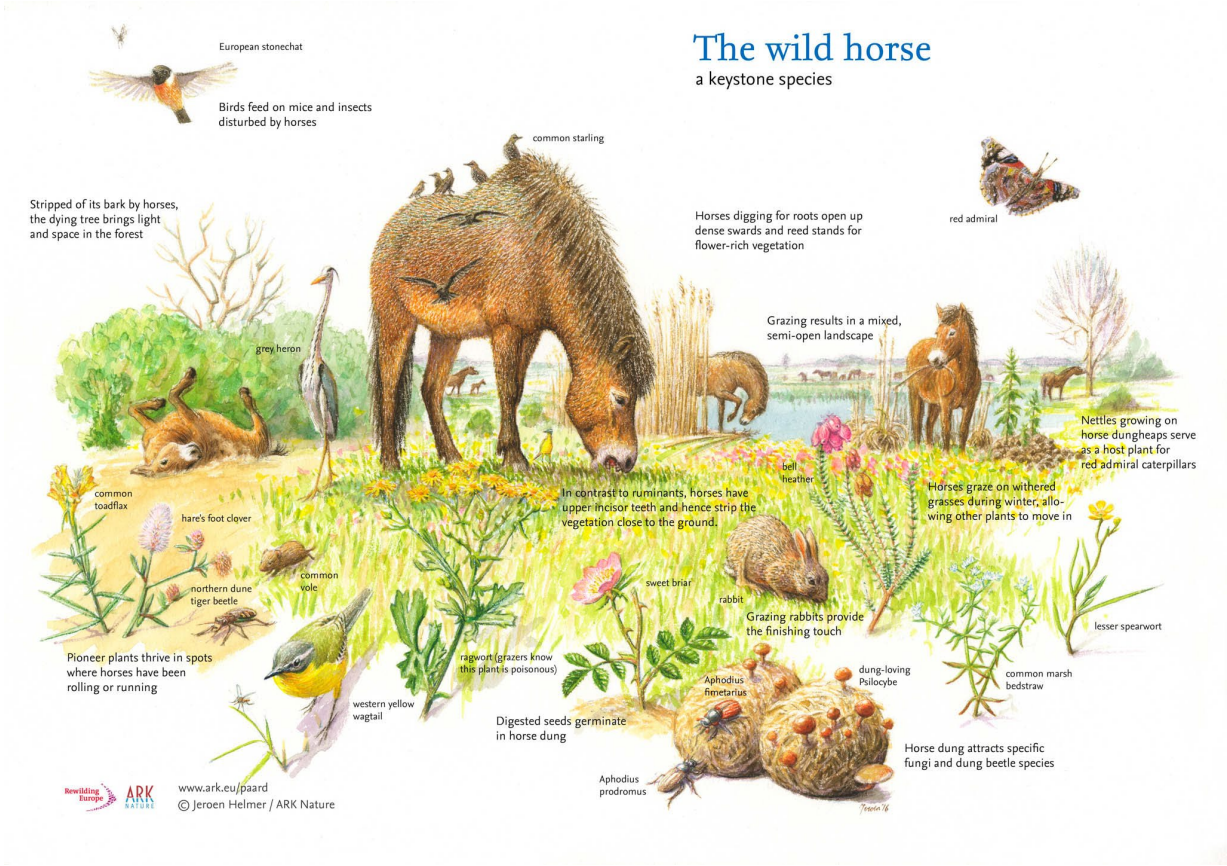
In the 1960s, Bob Payne – an ecologist working on the Pacific coast of North America, ran a simple yet profound experiment. He removed all the starfish from one rockpool and compared what happened in that rockpool with a control pool that he left alone. In the pool in which the starfish had been removed, the diversity of life collapsed. Mussels, that had formerly been eaten by starfish, dominated the starfish-less pool, removing the ecological niches for most other species. He coined the term 'keystone species' – the species without which the system collapses, much as an arch would collapse if the key 'stone' is removed.

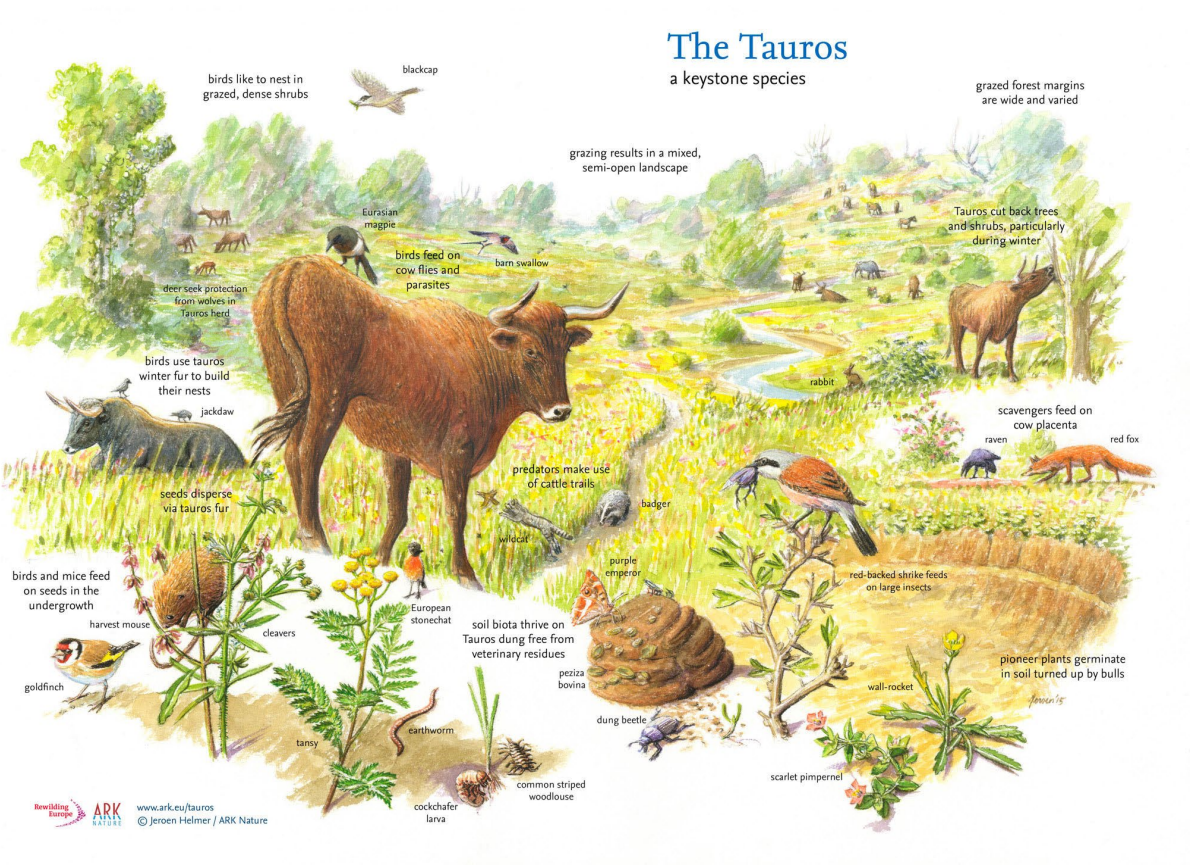
On land and in the seas, our keystone species are often much bigger. In Yellowstone, the return of the wolf had a cascade of ecological impacts by creating a 'landscape of fear', which discouraged elk from grazing riverbanks, in turn allowing more luxuriant river growth and creating more plant food for beavers. This, in turn, led to more beaver-created wetlands, which were better for salmon. More salmon led to more of one of their predators – bears. The bears were then effectively moving nutrients from the sea (where the salmon had fattened up before migrating to the spawning waters) to the surrounding forests through defecation, creating more luxuriant forests.

Beavers and large wild (or semi-wild) herbivores are particularly important keystone species for European landscapes.

- **Beavers** – the tree coppicing, damming and burrowing activities of beavers make them natural wetland engineers. Beaver wetlands are full life – they reduce flooding downstream and improve water quality. The Wildlife Trusts aim to allow natural recolonisation, aided by reintroduction where required, into every major river system in Britain.
- **Large herbivores** – perhaps the most important keystone species on land were our large herbivores – auroch (wild cattle), tarpan (wild horse), elk, steppe bison and the omnivorous wild boar. All of these are either fully extinct or extirpated from Britain. This is part of the reason why Britain is one of the most nature-depleted countries on earth. Whilst auroch, tarpan and steppe bison are fully extinct, proxies can be used – hardy domestic cattle such as Highland cows, primitive horse breeds such as Exmoor ponies, and European bison. There are numerous obstacles to wild or 'kept-wild' grazing and the Ecological Restoration Fund funding will allow us to identify and address those barriers.

Keystone herbivores – from conservation grazing to 'kept-wild'





It is rather difficult to envisage the UK with wild cattle and ponies – although we are culturally used to wild deer in the lowland landscape. In the Netherlands, the approach taken is 'kept-wild': fenced herds of domestic animals that are given the freedom to behave as wild animals. Domestic animal legislation applies such as ear-tagging, daily checks and so on. Some exemptions are possible and animal welfare can be maintained by keeping numbers to a level that ensures animals do not starve to death. In extreme conditions, managers would step in to provide supplementary feed.

Restoring our seas

Britain's cherished coastlines and seas are one of our richest wildlife areas, with kelp beds, seagrasses and muddy estuaries acting as nurseries for fish. Millions of waders, ducks and geese migrate from the Arctic each winter to escape the ice and feed in the northern, yet unfrozen, estuaries of the United Kingdom.

The seas around Wales are particularly unique, lying where warm waters from the south meet cool nutrient-rich currents from the north. The Welsh territorial sea almost doubles the size of Wales. Covering 15,000 km2, it is home to a vast array of habitats and species, supporting internationally important populations of Manx shearwaters, Atlantic grey seals, bottlenose dolphins and more.

But our seas are under extreme pressure. Decades of over-exploitation, pollution and unchecked development have resulted in continued biodiversity loss and the degradation of marine habitats.

They are also under increasing threat from offshore renewables. As Wales and the rest of the UK transition the energy supply from fossil fuels, this requires a massive upgrade in the our grid infrastructure. Cables will have to be dug across precious coasts and ploughed into the seabed. We believe there is both a threat and opportunity in this energy transition. We must plan how we use our seas strategically, avoiding developing in protected areas and using the massive investment to help our seas recover by allowing them to naturally adapt to climate change and rising sea levels.

Research shows that marine wildlife can recover within a few decades by removing some of these pressures. To achieve this, Marine Protected Areas (MPAs) should be the backbone of recovering nature in our seas, safeguarding important wildlife and habitats. This will benefit the protected area and the surrounding seas, as mobile species swim and spread into surrounding waters. However, many of our MPAs are not adequately protected. Damaging fishing, developments and pollution within their boundaries mean the majority are damaged and degraded.

The Wildlife Trusts have been campaigning for better management of our seas – calling for strategically planned developments and better protection for our seas. The Ecological Restoration Fund funding will allow us to employ a Welsh marine policy officer and a UK coastal officer to work with the Welsh and UK Governments. This new funding will enable the development of partner support to deliver nature's recovery in 30% of our seas by 2030. Both posts will develop strong marine legislation and policies, including calling for well-placed developments and properly protected and managed MPAs.