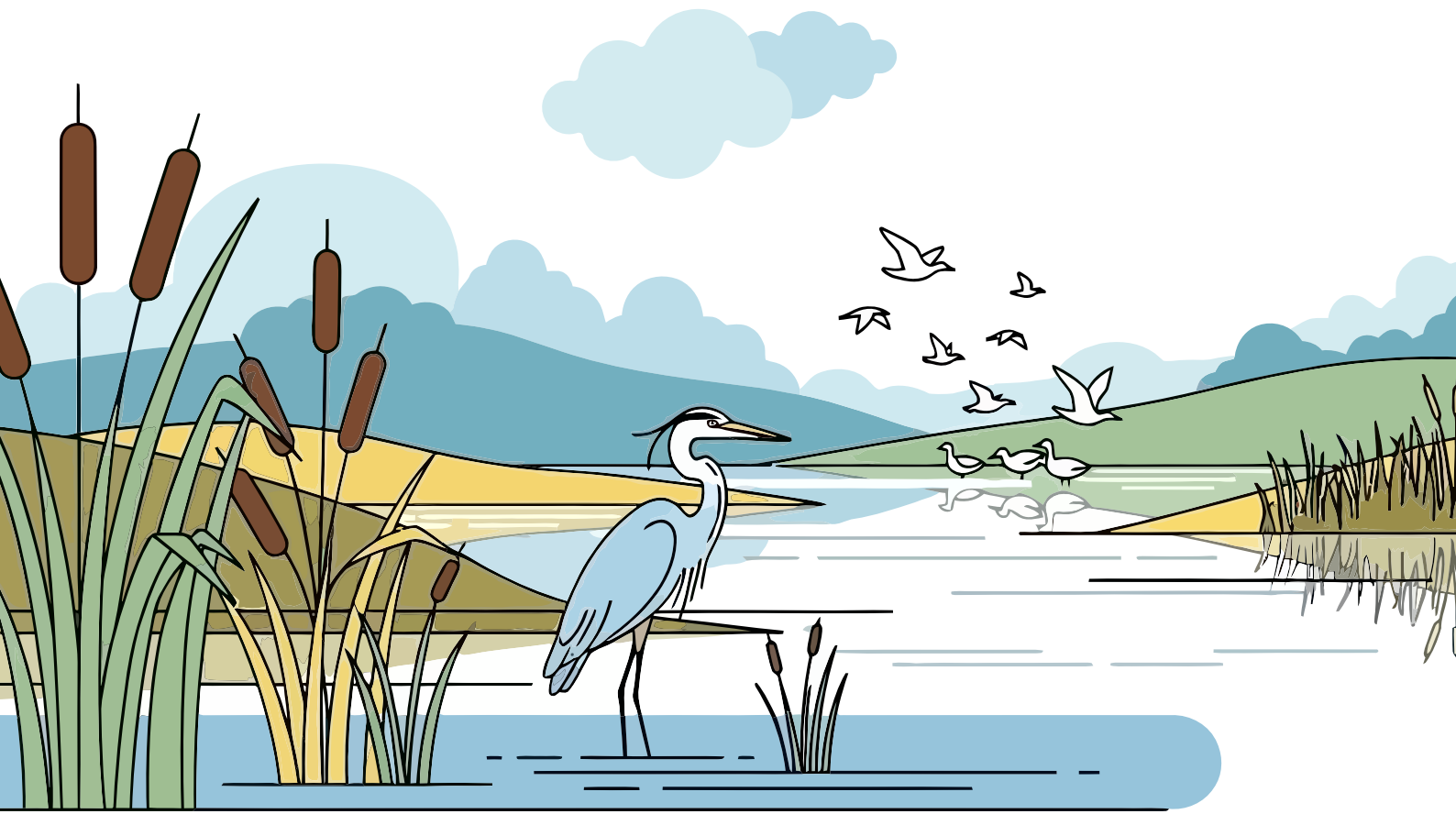


Good practices for nature restoration in Europe



Examples and lessons learned from civil society for effective restoration actions with cross-cutting benefits for our societies in Europe.

This briefing was written by Codruta Savu (WWF European Policy Office) with contributions from Sofie Ruyschaert (Birdlife Europe and Central Asia), Friedrich Wulf (Friends of the Earth Europe), Sanna-Kaisa Juvonen (EUROPARC Federation), Sergiy Moroz (European Environmental Bureau), Zoë Zurn (IUCN Europe Regional Office) and Sabien Leemans (WWF European Policy Office).

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About the European Habitats Forum (EHF)

The European Habitats Forum represents the voice of European nature conservation organisations and coordinates communication between them and the European Commission. It provides advice and knowledge to the Commission and is represented in various fora, including the Expert group on the Birds and Habitats Directives, the EU Biodiversity Platform and the Nature Restoration Expert Group.

The IUCN EU representative office runs the EHF secretariat and the EHF members are: A Rocha, BatLife Europe, BirdLife Europe, Buglife-The Invertebrate Conservation Trust, Butterfly Conservation Europe, ClientEarth, EUROPARC Federation, European Environmental Bureau, European Natural Heritage Foundation (Euronatur), Eurosite, Friends of the Earth Europe, International Mire Conservation Group, Reptile Amphibian Conservation Europe, Rewilding Europe, Societas Europaea Herpetologica, Society for Ecological Restoration, The Nature Conservancy Europe, Wetlands International European Association and WWF European Policy Office.

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Introduction

The EU Nature Restoration Regulation marks a turning point for nature policy in Europe. For the first time, Member States have binding, time-bound obligations to restore degraded ecosystems across land and sea, with restoration measures to cover at least 20% of the EU's land and marine areas by 2030 and all ecosystems in need of restoration by 2050¹.

The task ahead, although significant, does not start from zero. Across Europe, civil society organisations, land managers, local communities, public authorities and scientists have already developed and implemented practical approaches to restore rivers, peatlands, other wetlands, grasslands, forests, coastal habitats and other species-rich landscapes. Their experience shows that restoration is far from being an abstract policy ambition; it is rather an ongoing practical agenda already delivering many benefits for biodiversity and livelihoods, such as food, water security and climate resilience.

National Restoration Plans are the central tool for turning the Regulation into action. By September 2026, Member States must submit draft plans setting out where, how and with what resources restoration will be delivered². Recent civil society assessments show that preparation is underway in many countries, but progress remains uneven³. The next phase is therefore critical to ensure that plans are science-based, inclusive, ambitious and practically implementable.

This implementation moment also sits within a wider European and global framework. It is essential to meet the EU's biodiversity objectives, strengthening nature protection, and contributing to global commitments such as the Kunming-Montreal Global Biodiversity Framework and the UN Decade on Ecosystem Restoration⁴. It also supports the EU's broader resilience and preparedness agenda by helping reduce climate, water and land-use risks⁵.

This briefing brings together examples from civil society and partners across Europe to show what effective restoration can look like in practice. The cases illustrate key ingredients for scaling up restoration: meaningful stakeholder engagement, clear ecological delivery, wider co-benefits, cost-effective approaches and visible results. The message is simple: nature restoration is necessary, feasible and already happening. The challenge now is to scale it up with the urgency, quality and cooperation that the ecological and climate crises require.

For the first time, Member States have binding, time-bound **obligations to restore degraded ecosystems across land and sea, with restoration measures to cover at least 20% of the EU's land and marine areas by 2030** and all ecosystems in need of restoration by 2050.

Why nature restoration matters

Nature restoration is often framed mainly as a biodiversity issue, while it is also a matter of public resilience. Healthy ecosystems are part of the foundation on which health, security and long-term prosperity depend⁶. Across Europe, ecosystem degradation is weakening the capacity of natural systems to support wellbeing, economic stability and societal resilience. The EEA has shown that most protected habitats in the EU remain in poor or bad condition, while the European Climate Risk Assessment makes clear that climate risks are already affecting food and water security, infrastructure, ecosystems and human health⁷. In this context, restoration should be understood as a necessary part of how governments reduce risk, prepare societies for a more climate-unstable future and rebuild the natural systems on which long-term resilience depends⁸.

The Nature Restoration Regulation gives this shift operational meaning: now restoration needs to move from rather isolated projects to a more strategic, planned and larger-scale effort through National Restoration Plans. This matters because rivers, peatlands, other wetlands, forests, grasslands, and coastal ecosystems help regulate water flows, buffer floods, reduce drought impacts, limit erosion, store carbon and strengthen the resilience of landscapes and communities. The IPCC has highlighted that healthy ecosystems can help societies absorb shocks and reduce climate-related risks, while the EEA has underlined that restoring ecosystems is an important part of strengthening resilience to water scarcity, drought, floods and other climate hazards in Europe.⁹

Restoration also helps align climate resilience, water management, land-use planning and risk reduction within a more coherent policy response. Its contribution will depend on measures being well targeted, adapted to local conditions, sustained over time and integrated into wider planning and investment decisions.¹⁰ When this happens, restoration can deliver multiple benefits at once: water security, healthier soils, more resilient productive landscapes, pollination, fisheries, carbon storage, rural livelihoods, recreation, tourism and quality of life.¹¹ These benefits do not arise equally in every case, and trade-offs can occur. But when restoration is guided by clear ecological objectives, adapted to local conditions and sustained over time, it can generate multiple gains for nature, people and economies together.

For all these reasons, restoration should be approached as a preventive public investment. Degradation imposes real costs through flood damage, water stress, declining ecosystem functions and growing pressure on public budgets. IPBES has underlined the scale of the social and economic losses associated with land degradation, while the Commission's work on climate risk stresses that better prevention and preparedness save lives, reduce losses and protect prosperity. Acting early is more effective than delaying until degradation deepens and risks become more difficult and costly to manage.¹²

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What successful nature restoration requires

Protecting Europe's most valuable natural areas remains essential, but protection alone has not been sufficient to reverse the decline in biodiversity. Many protected habitats and species continue to deteriorate because ecosystems remain fragmented, management is at times insufficient, despite the best efforts, and pressures such as drainage, pollution, land abandonment, invasive species, unsustainable land use and climate change continue to act both inside and beyond protected areas. Restoration needs to be therefore complementary to nature protection, adding to the puzzle the recovery of degraded ecosystems, strengthening ecological connectivity and bringing nature back to a condition where it can sustain biodiversity and provide benefits to society over the long term. In order to do that,

successful restoration needs to be about improving the condition, functioning and resilience of ecosystems so that they can recover over time and continue supporting species, habitats and wider public benefits. This requires measures that are ecologically sound, well-targeted and sustained beyond short project cycles.

Under the NRR, restoration should help bring ecosystems into good condition by improving their structure, functions, typical species and long-term resilience. In practice, this means looking not only at individual habitats or species, but also at the ecological processes that allow recovery to happen: water flows, soil functioning, habitat connectivity, natural grazing, species interactions, sediment transport, peat formation, pollination and other key functions.



Project site after restoration

© Maris Sepp

Good restoration also depends on how measures are designed and delivered. Five elements are particularly important: a robust science base, inclusive participation, ambition aligned with ecological needs, empowerment through governance and resources, and effectiveness through well-chosen and monitored measures. These elements are closely linked. Scientific evidence helps identify what needs to be restored; stakeholder involvement helps ensure that measures are workable and socially supported; adequate resources and governance make implementation possible; and monitoring allows measures to be adapted over time.

Stakeholder engagement is central to this. The NRR requires Member States to ensure that the preparation of restoration plans is open, transparent, inclusive and effective, and that the public and relevant stakeholders have early and effective opportunities to participate. In practice, this means involving landowners, farmers, local communities, public authorities, scientists and civil society early enough for their knowledge and concerns to shape implementation, not only to react to decisions already taken.

Restoration measures will be more effective when they also address the pressures that caused degradation in the first place. Rewetting a drained wetland, removing a river barrier or restoring grassland management will have limited long-term effect if unsustainable water use, pollution, inappropriate management or land-use conflicts continue unchanged. Successful restoration therefore requires planning beyond individual project boundaries and stronger links with water management,

agriculture, forestry, spatial planning, climate adaptation and disaster-risk reduction.

The cases in this briefing show that successful restoration can take different forms. It can involve technical measures such as rewetting peatlands, restoring ponds or removing river barriers; process-led approaches such as natural grazing; or community-based action that builds long-term stewardship. The examples were selected because they illustrate practical conditions for scaling up restoration under the NRR: meaningful stakeholder engagement, clear delivery for biodiversity and ecosystem recovery, wider co-benefits, cost-effective approaches, and visible or timely results.

International guidance can support this shift from individual projects to well-designed restoration programmes. The Food and Agriculture Organisation of the United Nations (FAO), the Society for Ecological Restoration (SER) and International Union for Conservation of Nature (IUCN) have developed [principles and standards](#) for restoration across the full project cycle: assessment, planning and design, implementation, ongoing management, monitoring and evaluation. These frameworks reinforce the same cross-cutting elements outlined above: a strong science base, inclusive participation, clear ambition, adequate resources and effective, adaptive measures. They are complemented by a growing body of ecosystem-specific knowledge from EU-funded initiatives such as [MERLIN](#) on freshwater ecosystems, [PONDERFUL](#) on ponds, [SUPERB](#) on forests, [REST-COAST](#) on coastal ecosystems and [WATERLANDS](#) on wetlands.

Successful restoration therefore requires planning beyond individual project boundaries and **stronger links with water management, agriculture, forestry, spatial planning, climate adaptation and disaster-risk reduction.**


Nature restoration in practice: examples from across Europe

The following case studies show that restoration is already being delivered across Europe in different ecosystems, landscapes and governance contexts. They include technical interventions such as rewetting peatlands, restoring ponds and removing obsolete river barriers; process-led approaches such as natural grazing; and community-based initiatives that build local stewardship.


The examples were selected because they illustrate practical lessons for scaling up restoration under the Nature Restoration Regulation: meaningful stakeholder engagement, clear delivery for biodiversity and ecosystem recovery, wider co-benefits, cost-effective approaches and visible or timely results. Taken together, they show that restoration is not only necessary but also implementable, provided it is well planned, adequately resourced, and adapted to local ecological and social conditions.

CASE STUDY 1

Natural grazing for grassland restoration and wildfire prevention


 **Location:** Spain, Castilla-La Mancha and Aragón region


 **Implementing organisation:** [Rewilding Spain](#)


 **Key partners:** Regional Governments, Alto Tajo Natural Park, Serranía de Cuenca Natural Park, Micoriza and Terranaturalis

 **Restoration focus:** Grasslands and open mosaic landscapes

 **Scale:** Grazing rights secured over approximately 30,000 hectares; 182 large grazers introduced

 **Primary NRR relevance:** Article 4 on terrestrial ecosystem restoration, especially grasslands; with links to Article 10 on pollinators, Article 11 on agricultural ecosystems and Article 12 on forest ecosystems

 **Main co-benefits:** wildfire prevention, climate adaptation, soil health, pollinator support, rural employment, tourism and local economic revitalisation

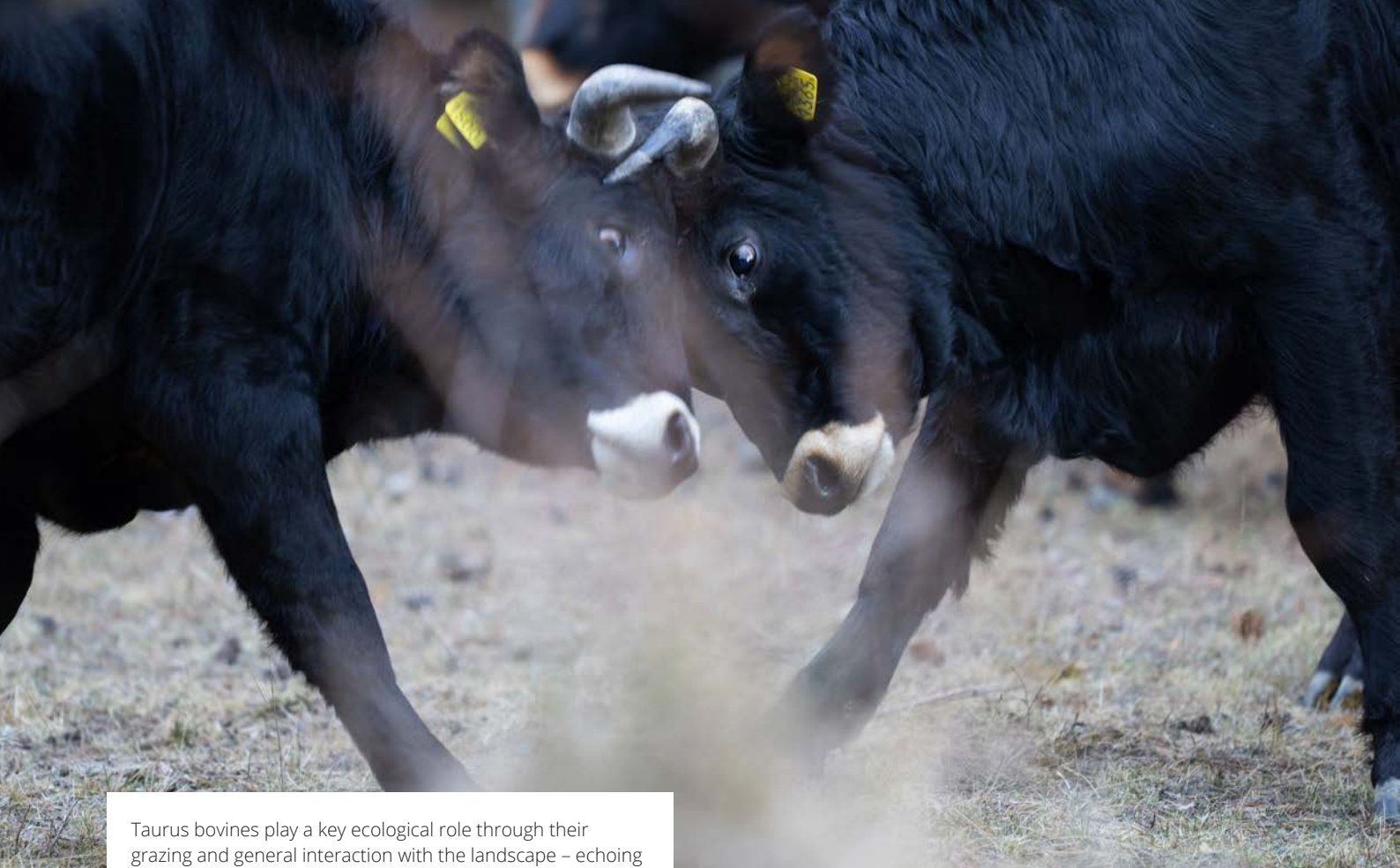
 **More information:** [Rewilding Europe](#), [Natural grazing practices in the rewilding of cattle and horses](#)

Across many rural landscapes in Spain, land abandonment and the decline of extensive livestock grazing have allowed vegetation to accumulate and open habitats to close. This increases wildfire risk, reduces landscape heterogeneity and weakens habitat quality for grassland and open-landscape species, including birds, insects and small mammals.

Rewilding Spain is addressing this by restoring **natural grazing** as an ecological process. In Castilla-La Mancha

and Aragón, the organisation has introduced semi-wild large grazers, including rustic cattle breeds ([Tauros](#) cattle), wild horses (Przewalski, Potoka and Serrano) and European bison, to maintain open, structurally diverse landscapes. Unlike conventional livestock systems, these animals are managed with minimal human intervention and help recreate the ecological role once played by wild herbivores such as tarpans and aurochs.

The approach has been positively received by many



Taurus bovines play a key ecological role through their grazing and general interaction with the landscape – echoing the function of their extinct ancestor, the aurochs.

© Staffan Widstrand/[Rewilding Europe](#)

local authorities and communities, who have recognised the [role of herbivory in reducing wildfire risk](#) and preventing vegetation encroachment, particularly in areas affected by rural depopulation and wildfire risk. Municipalities have actively requested the introduction of large herbivores after major fires or the perception of high fire risk, both to reduce fuel loads and to create new opportunities for local tourism. The model is also compatible with existing extensive livestock systems where they are still present.

In Iberian Highlands, the introduction of large grazers has created eight herd-manager jobs, with most staff based locally, and has opened new opportunities for tourism and local enterprise. Natural grazing already shows several practical benefits in different sites in Europe where it has been implemented, including various rewilding landscapes. Large grazers help reduce vegetation biomass, maintain grasslands and create mosaic landscapes that are less vulnerable to fire. They can also contribute to nutrient cycling, seed dispersal, soil health and plant diversity, increasing flowering plants for pollinators and the abundance of some insects.¹³

While initial costs such as animal transport and introduction can be significant, natural grazing can be cost-effective over time because the animals provide an ongoing land-management function. This makes the approach particularly relevant for large, abandoned or fire-prone landscapes where maintaining open habitats through mechanical management alone would be costly and difficult to sustain.

Similar approaches are now being explored in other European landscapes, including Mediterranean areas, showing the wider relevance of natural grazing where land abandonment and fire risk overlap.



Scaling lesson: Natural grazing can be a practical and cost-effective restoration tool in regions where land abandonment, wildfire risk and biodiversity loss intersect. Its success depends on early engagement with municipalities, land users and local communities, and on governance arrangements that allow grazing, hunting, forestry and conservation objectives to coexist.

CASE STUDY 2

LIFE for MIRES – Transboundary restoration of mires for biodiversity and landscape hydrology in Šumava and Bavarian Forest

Location: Bavarian Forest / Green Belt area at the Czech-German border, Germany

Implementing organisation: BUND / Friends of the Earth Germany, National Competence Centre Green Belt

Key partners: Šumava National Park, Bavarian Forest National Park, University of South Bohemia

Restoration focus: Mires, bogs, fens, wet meadows and associated Natura 2000 habitats

Scale: Approx. 25 ha of implementation measures in the German project area

Timeframe: 2018–2024

Primary NRR relevance: Article 4 on restoration of terrestrial habitats, including Natura 2000 habitats, Article 11 on agricultural ecosystems, where wet meadows and low-intensity land use are involved

Main co-benefits: Water retention, climate adaptation, habitat connectivity, transboundary ecological corridors, local awareness and cooperation with farmers and municipalities

More information: LIFE for MIRES, [Transboundary restoration of mires for landscape hydrology and biodiversity in Šumava and Bavarian Forest](#)

The LIFE for MIRES project restored mires, bogs, fens and wet meadows in the Bavarian Forest and Šumava region, along the Czech-German Green Belt. These ecosystems had been degraded by drainage, altered stream courses, afforestation and changes in traditional land management, reducing their value for biodiversity, water retention and landscape resilience.

In the German project area, restoration focused on practical demonstration measures near small municipalities and Natura 2000 sites. Measures included closing drainage ditches, restoring stream courses over 2.4 km, installing sheet piling, removing spruce afforestation, supporting extensive grazing, and creating habitat structures such as piles of stones and branches for endangered species. Land purchase was also used to secure areas for long-term nature conservation.



July 2024: A group of voluntary workers from Czech Republic and Germany blocking an old drainage channel to restore a mire area at the state border near Philippsreut.

© BUND



Visit of German farmers on Czech project areas for an exchange on restoration and maintaining of wet grassland in October 2023.


© BUND

The project's delivery model is one of its main strengths. It combined EU LIFE funding with national and regional co-financing, and brought together national parks, NGOs, universities, municipalities, farmers and local communities. Transboundary cooperation between Czech and Bavarian organisations was central, and the project helped establish new cooperation between local stakeholders, including exchanges between Czech and German farmers on wet grassland restoration and management.

The restoration measures improved and enlarged Natura 2000 areas, strengthened ecological corridors for wetland species and improved water retention. The project also created local acceptance through field trips, talks, summer festivals, workshops for students and youth groups, and guided visits organised with tourist offices. By linking mire restoration to visible local benefits, especially water retention and landscape

resilience, the project helped build understanding and support in participating communities.

This case shows that mire and wet meadow restoration can deliver biodiversity and hydrological benefits while strengthening cross-border and cross-sector cooperation. It is particularly relevant for regions where degraded wetlands, agricultural use, local communities and protected-area management intersect.


 **Scaling lesson:** Mire restoration can be scaled when ecological measures are combined with land security, transboundary cooperation, farmer engagement and visible local benefits such as improved water retention. The case shows how restoration in and around protected areas can strengthen wider ecological networks and build community support for long-term management.


CASE STUDY 3


Life on the Edge: Restoring coastal grassland mosaics for pollinators and landscape connectivity


 **Location:** South Devon, South West England


 **Implementing organisation:** South Devon National Landscape

 **Key partners:** Buglife, National Trust, South West Coast Path Association, Doorstep Arts and private landowners

 **Restoration focus:** Species-rich grasslands, maritime cliff and slope grasslands, grassland-scrub mosaics and pollinator habitat connectivity

 **Scale:** 675 ha targeted for restoration; 144 ha already created or restored across 13 estates/sites by the end of 2025

 **Timeframe:** 2024–2029, following a development phase in 2022–2023

 **NRR relevance:** Article 4 on terrestrial ecosystem restoration, including habitats comparable to Annex I grassland, heath and sea-cliff habitats; Article 10 on pollinator recovery; Article 11 on agricultural ecosystems

 **Main co-benefits:** Pollinator recovery, habitat connectivity, sustainable land management, farmer engagement, tourism, community participation and long-term agri-environment support

 **More information:** South Devon National Landscape, [Life on the Edge](#)

Life on the Edge is restoring a network of **wildflower-rich coastal grasslands and grassland-scrub mosaics** in South Devon to improve habitat connectivity for pollinators and other invertebrates. The project aims to support the recovery of **30 threatened invertebrate species** and strengthen the wider South Devon coastal B-Line, where fragmented habitats limit species' ability to move, recover, and adapt.

The project works with farmers, landowners, local authorities, communities and conservation organisations to restore degraded habitats, create new habitat stepping stones and secure long-term nature conservation management. Measures include restoring species-rich grasslands, supporting conservation grazing, creating donor seed sites and helping landowners enter agri-environment schemes.



Long-horned Bee (*Eucera longicornis*)

© John Walters

This is important because restoration will only be durable if land managers have a financially viable way to maintain restored habitats over time.

A major strength of the case is its landscape-scale and partnership-based delivery model. The project encourages coordinated restoration across multiple sites and ownerships, rather than isolated interventions. By the end of 2025, landowners had already delivered **144 ha of habitat creation or restoration across 13 estates or sites**, while management advice had been provided to **34 landowners collectively managing 4,326 ha**. This gives the project relevance beyond the immediate restoration area, because it helps shift wider land management practices across the landscape.

The project also connects ecological restoration with local communities and the visitor economy. Its location along the South West Coast Path creates opportunities to link nature-rich landscapes with tourism and public engagement. The wider €5 million programme includes education, arts, creative activities and community work alongside conservation delivery, helping build public support for pollinator recovery and landscape restoration.

This case is particularly useful because it shows how grassland and pollinator restoration can be delivered

through a mix of habitat creation, landowner advice, agri-environment support and community engagement. Although it is outside the EU, the habitats, pressures and delivery model are highly relevant to NRR implementation, especially where Member States need to restore species-rich grasslands, improve ecological connectivity and reverse pollinator decline.



Green hay restoration work underway with local landowners

© Emma Reece

The land management aspects of this project echo aspirations of the recently initiated LIFE funded [‘Habitat restoration, grassland birds conservation status improvement and promotion of nature based solutions through resilient mosaic Mediterranean landscape’](#) project in Croatia, which will restore 560 hectares of grassland mosaics by empowering livestock farmers and other stakeholders by supporting economically profitable traditional extensive agriculture and boost climate resilience.


 **Scaling lesson:** Pollinator and grassland restoration can be scaled when individual sites are connected through a wider landscape strategy, landowners are supported with practical advice and long-term incentives, and restoration is linked to local identity, tourism and community engagement.


CASE STUDY 4


Restoring grey dunes to recover threatened amphibians

 **Location:** Estonia


 **Implementing organisations:** Estonian State Forest Management Centre on state land; Estonian Environmental Board on private land


 **Key partners:** University of Tartu, non-profit organisation Põhjakonn

 **Restoration focus:** Grey dunes, open sandy habitats, shallow temporary ponds and natterjack toad habitat

 **Scale:** Restoration carried out across several surviving natterjack toad sites, including state and private land

 **Timeframe:** 2006–2023

 **NRR relevance:** Article 4 on restoration of Annex I habitats and habitats of protected species, including grey dunes and species listed under the Habitats Directive

 **Main co-benefits:** Recovery of open dune habitats, restoration of breeding ponds and wider ecological functioning of early-successional habitats

 **More information:** Rannap et al., [Restoration of open sandy habitats for natterjack toads in Estonia](#); Societas Europaea Herpetologica, [SEH Congress abstracts](#)

In Estonia, the natterjack toad has declined sharply as the open sandy habitats it depends on have disappeared or deteriorated. In the second half of the twentieth century, many open dune areas were afforested and converted into pine plantations, reducing both the terrestrial habitat and the shallow, sun-exposed temporary ponds and depressions needed for breeding. Today, the remaining Estonian populations are concentrated in a small number of protected sites, many of them on former dunes now affected by forest succession or quarrying.

Initial restoration efforts began in 2006 and focused mainly on maintaining existing breeding sites by removing brushwood and tall vegetation. These measures helped prevent further decline, but they did not expand the overall habitat complex. From 2010 onwards, restoration was scaled up to improve and enlarge the full habitat system needed by the species.

Pine plantations and scrub were cleared, stumps were uprooted, topsoil was disturbed to recreate open sandy conditions, overgrown ponds and silted depressions were restored, and new water bodies were created to increase the number of breeding sites.

The case shows the importance of restoring an entire habitat complex rather than only isolated habitat features. Where only partial restoration took place, populations stabilised or increased only slightly. Where restoration addressed both terrestrial open sandy habitats and breeding sites at sufficient scale, natterjack toad populations began to increase clearly. Extensive habitat restoration started in four sites and was later replicated in another four afforested dune areas.

Stakeholder engagement was practical and targeted. Before restoration began, landowners were contacted to explain and discuss the planned measures and



Project sites before and after restoration

© Riinu Rannap

obtain permission. According to the project information, landowners saw the work as an opportunity to restore former landscapes. Implementation involved both public and private land, with the Estonian State Forest Management Centre working on state land and Estonian Environmental Board working on private land, supported by the University of Tartu and Põhjakonn.

This case provides a strong biodiversity delivery example. It demonstrates that restoration can achieve measurable recovery when it is based on the ecological needs of the species and implemented at the right scale.

It is particularly relevant for Member States restoring Annex I habitats and habitats of protected species, where small or partial interventions may not be enough to recover viable populations.



Scaling lesson: Species recovery is more likely when restoration targets the full habitat complex needed across the life cycle, not only isolated features. For open sandy habitats, restoring both terrestrial habitat and breeding sites at sufficient scale can turn stabilisation into clear population recovery.

CASE STUDY 5

Na-Tu-Re: Restoring Natura 2000 oak forests through invasive species removal and cross-border cooperation

Location: Hajdú-Bihar County, Hungary, and Bihor County, Romania

Implementing organisations: Zöld Kör / Friends of the Earth Hungary, Sânmartin, Aqua Crisius Sports Fishermen Association, Foundation for Culture and Ecologist Education Ecotop

Restoration focus: Forest-steppe habitats, riparian forests, Euro-Siberian steppic woods with oak species, native flora and associated protected species

Scale: Hungarian part focused on the Debrecen-Hajdúböszörmény Oak Forests Natura 2000 site, covering 5,634.62 ha; 56 ha directly restored through invasive species removal

Timeframe: May 2018–April 2022

Primary NRR relevance: Article 4 on restoration of terrestrial habitats, including Natura 2000 habitats and habitats of protected species

Secondary relevance: Article 11 on agricultural ecosystems and pollinator support, where restoration improves wider landscape biodiversity

Main co-benefits: Climate adaptation, microclimate regulation, water retention, environmental education, slow tourism, youth engagement and cross-border cooperation

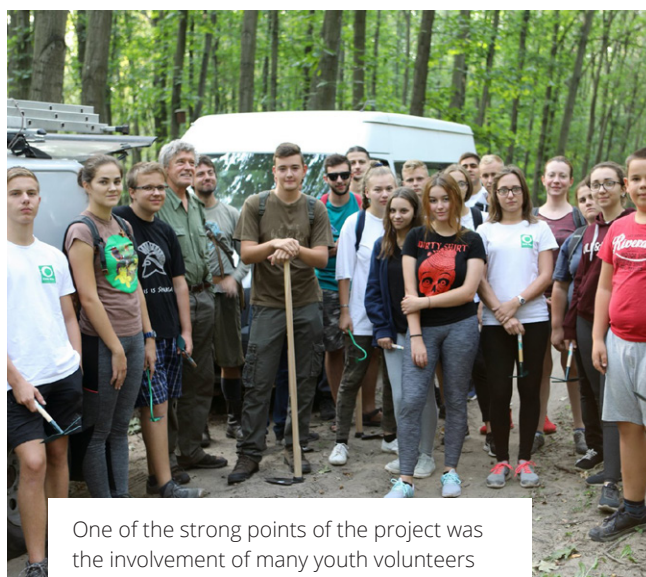
The Na-Tu-Re project focused on the ecological reconstruction of degraded forest-steppe habitats in the **Debrecen-Hajdúböszörmény Oak Forests**, a Natura 2000 site in eastern Hungary, as part of a wider cross-border initiative with Romania. The site includes important habitats such as riparian forests and Euro-Siberian steppic woods with oak species, but these had been affected by invasive non-native species and habitat degradation.

The restoration approach combined practical habitat management with species support. In the Hungarian project area, **56 ha of forest were cleared of invasive species**, and native shrubs and herbaceous perennials were planted, including species such as lily of the valley, steppe iris, snowdrop anemone and silver speedwell. The project also installed **255 artificial bird nests and a bat tower**, and included targeted habitat protection for species such as the southern festoon and scarce fritillary.



After removal of neophytes, the project involved replanting native forest species such as lily of the Valley

© Antal Molnár



One of the strong points of the project was the involvement of many youth volunteers


© Zöld Kör / Friends of the Earth Hungary

A key strength of the case is its cooperation model. Zöld Kör worked with academic institutions for planning and with state forestries for practical management, while the wider project connected Hungarian and Romanian partners. International nature conservation volunteer camps also played an important role: Romanian and Hungarian youth contributed more than **2,000 hours of volunteer work** to biodiversity protection. This gives the case a strong stakeholder and education dimension, not only a restoration one.

The project delivers several wider benefits. By supporting a shift towards continuous forest cover and avoiding clear-cutting, it contributes to climate adaptation, improved microclimate and natural water retention. It also strengthens environmental education and sustainable tourism through a new tourist map,

educational nature films and materials linked to the Debrecen Great Forest, Hungary's first protected natural area.

This case is most useful as an example of how Natura 2000 restoration can combine habitat management, species support, cross-border cooperation and public engagement. Its restoration outputs are concrete, while its broader value lies in showing how local ecological restoration can be connected to education, identity and international cooperation.

 **Scaling lesson:** Restoration in Natura 2000 forest landscapes can be strengthened when invasive species removal and native habitat recovery are combined with scientific planning, forestry cooperation, youth engagement and cross-border partnerships.


CASE STUDY 6


Removing obsolete barriers to restore a free-flowing Ega River


 **Location:** Navarra, Spain


 **Implementing organisation:** CIREF, Iberian Centre for River Restoration


 **Key partners:** Government of Navarra, Ebro River Basin Authority, Zúñiga City Council

 **Restoration focus:** River continuity, hydromorphological restoration, fish habitat and free-flowing river recovery

 **Scale:** Removal of the obsolete Molino de Zúñiga dam, with follow-up work initiated for another obsolete weir 8 km upstream

 **Timeframe:** from September to December 2024, with further scale-up initiated in 2026

 **Primary NRR relevance:** Article 9 on restoring free-flowing rivers; Article 4 on restoration of habitats of protected and threatened species

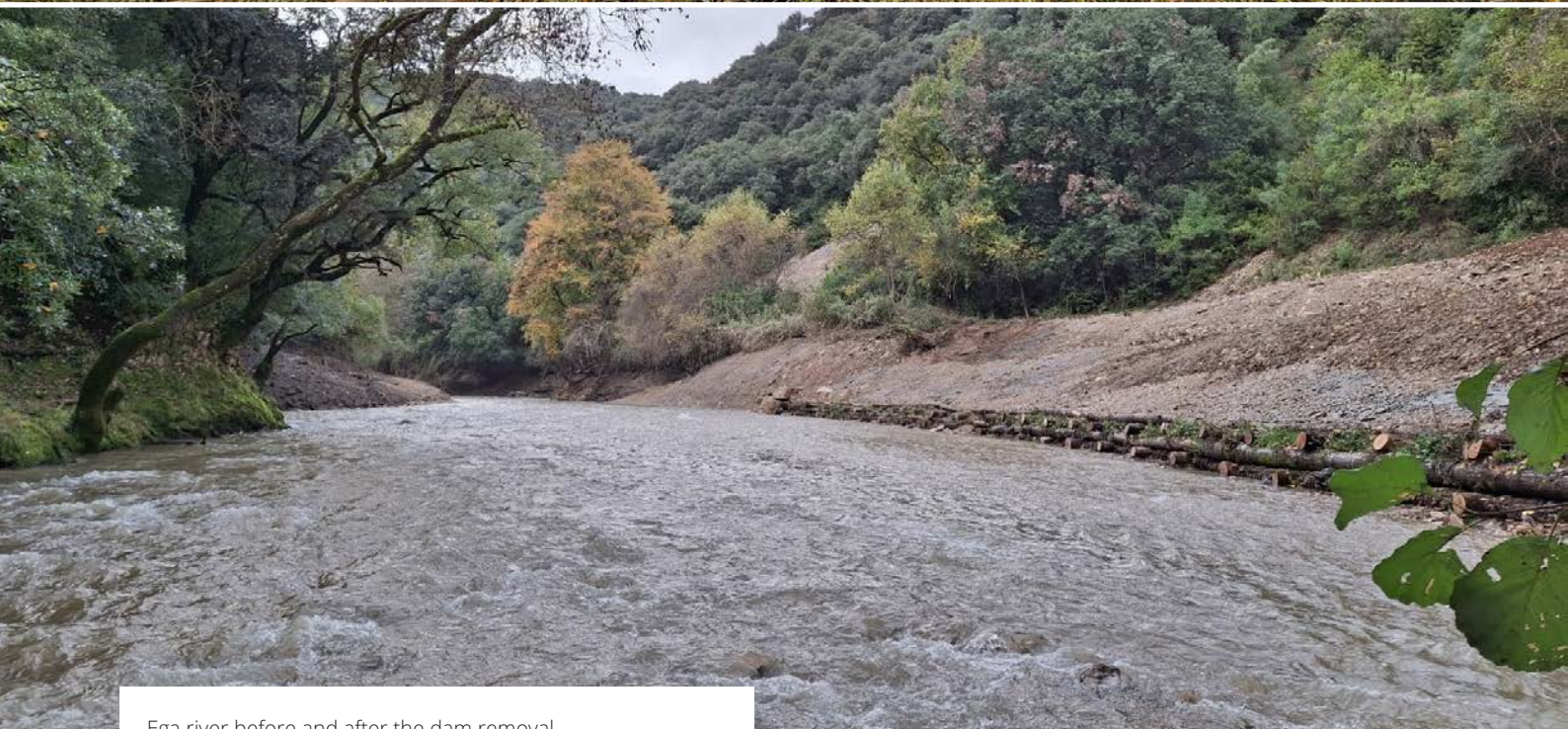
 **Main co-benefits:** Improved river connectivity, fish migration, sediment transport, flood resilience, water quality, climate adaptation, recreation and local socio-economic opportunities

The Molino de Zúñiga dam removal project on the **Ega River** in Navarra is a practical example of how obsolete river barriers can be removed to restore river continuity and support the EU objective of restoring **25,000 km of free-flowing rivers by 2030**. The project also contributes to Spain's national objective of restoring **3,000 km of rivers**, showing how EU and national restoration priorities can be aligned through concrete action on the ground.

Led by **CIREF** in partnership with the **Government of Navarra** and the **Ebro River Basin Authority**, the project removed an obsolete barrier to reconnect river habitats and restore more natural flow and sediment

dynamics. The restoration is particularly relevant for endemic fish species such as **Parachondrostoma miegii** and **Achondrostoma arcasii**, both near threatened and in unfavourable conservation status in Spain.

The project's success relied on strong institutional cooperation between conservation actors, regional authorities and river basin managers. This cooperation helped align permitting, technical delivery and policy objectives, demonstrating how administrative and practical barriers to dam removal can be overcome when public authorities and restoration organisations work around a shared restoration goal.



Ega river before and after the dam removal

© CIREF

Early results show improved river connectivity, with immediate benefits for sediment transport, habitat quality and fish movement. The project also delivers wider co-benefits by restoring more natural river dynamics, which can support flood resilience, water quality and climate adaptation. By improving the ecological condition and landscape quality of the river, it also creates opportunities for recreation and nature-based local benefits.

A particularly important feature is the project's scale-up effect. Following the dam removal and successful engagement process, the owner of another obsolete weir located 8 km upstream approached CIREF to request


support for its removal. With the backing of the water authority and the Basque Country regional government, preparatory work began in 2026. This shows how one well-delivered barrier removal can unlock further restoration opportunities along the same river system.





Scaling lesson: River restoration can accelerate when obsolete barrier removal is linked to clear public objectives, strong cooperation with river basin authorities and visible early results. Successful first projects can build trust and trigger further removals, turning individual interventions into wider free-flowing river recovery.


CASE STUDY 7


LIFE Microtus & LIFE Microtus II: Restoring wetlands to bring water back to the landscape


 **Location:** Čiližské močiare, Danubian Lowland, Slovakia


 **Implementing organisation:** BROZ – Conservation Association


 **Key partners:** Water Research Institute, Faculty of Natural Sciences at Comenius University Bratislava


 **Restoration focus:** Wetland and freshwater ecosystem restoration, hydrological restoration, Natura 2000 connectivity


 **Scale:** 43.6 ha of original wetlands restored; restored wetland now covers more than 100 ha and can retain up to 70 million litres of water

 **Timeframe:** LIFE Microtus I, 2010–2016; LIFE Microtus II, 2018–2027

 **Primary NRR relevance:** Article 4 on freshwater ecosystem restoration

 **Secondary relevance:** Article 9 on river restoration and connected floodplains

 **Main co-benefits:** Water retention, drought mitigation, local climate buffering, flood prevention, climate mitigation, biodiversity recovery and community engagement

 **More information:** Eurosite, [Čiližské močiare wetland restoration factsheet](#); BROZ, [We saved the wetland](#); [project video](#).

The **Čiližské močiare wetlands** are located in the Danubian Lowland, a landscape where wetlands were once widespread but have been heavily drained for agriculture over the last century. This drainage reduced the area's capacity to hold water, weakened wetland habitats and contributed to biodiversity loss in a landscape increasingly exposed to drought and rising temperatures.

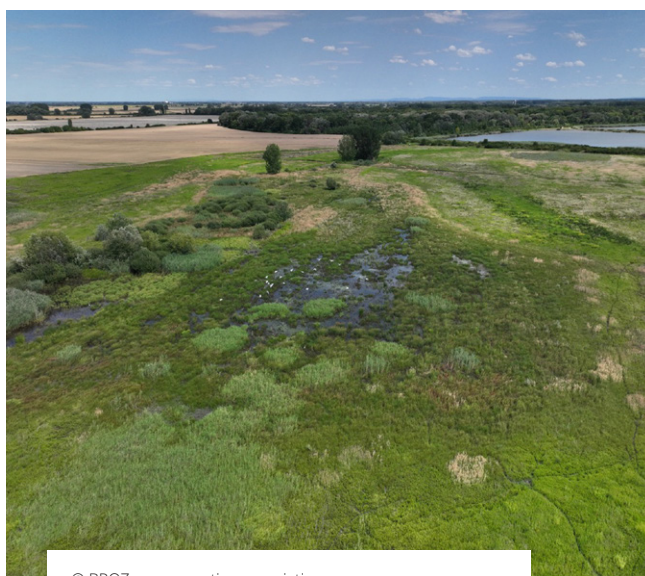
Since 2011, BROZ has worked through the **LIFE Microtus** and **LIFE Microtus II** projects to bring water

back into the landscape. Restoration measures included the construction of a water-management sluice and several melioration actions that allowed water to return to the wetland. The work restored **43.6 ha of original wetlands**, which had until recently been agricultural fields. Today, the wetland covers **more than 100 ha** and can retain up to **70 million litres of water**.

The restored wetland now connects two Sites of Community Importance, **Čiližské močiare** and **Čičovské luhy**, strengthening the ecological network



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in the area. It provides habitat or feeding opportunities for a wide range of species, including herons, storks, the rare **Pannonian root vole**, soil invertebrates, amphibians and pollinators. The case shows how hydrological restoration can quickly rebuild ecological function in a heavily modified lowland landscape.

A major strength of the project is its community support. BROZ mobilised **1,076 supporters** through an unprecedented crowdfunding campaign, raising **€100,000 in 10 months** to acquire 1.6 ha of wet field and enlarge the existing Natura 2000 site. BROZ now works closely with local farmers and landowners to implement grazing management on the restored land, linking wetland recovery with long-term site management.


The case also demonstrates strong co-benefits. The restored wetland acts as a natural sponge, helping retain water during prolonged droughts and allowing the area to be flooded when needed to support wetland species. It can also help buffer local temperatures, contribute to flood prevention and support climate mitigation. In this way, wetland restoration delivers both biodiversity recovery and practical resilience benefits for the surrounding landscape.



Scaling lesson: Small but well-targeted hydrological interventions can restore significant wetland functions when combined with land acquisition, community support and cooperation with local land users. Restoring water retention in drained lowland landscapes can deliver rapid benefits for biodiversity, drought resilience and wider ecosystem functioning.


CASE STUDY 8


LIFE Multi Peat: Restoring peatlands to reduce emissions and test wet land-use solutions

 **Location:** Poland, Germany, Belgium, the Netherlands and Ireland


 **Implementing organisation:** NABU


 **Key partners:** Eurosite, OTOP, Natuurmonumenten, Natuurpunt


 **Restoration focus:** Degraded peatlands, drained peatland habitats and peatland-associated land use

 **Scale:** Multi-country project across five European countries

 **Timeframe:** Five years

 **Primary NRR relevance:** Article 4 on terrestrial ecosystem restoration, especially peatland habitats; Article 11 on agricultural ecosystems, especially drained peatlands; Article 12 on forest ecosystems where forests occur on peat

 **Main co-benefits:** Greenhouse gas emission reduction, carbon storage, biodiversity recovery, hydrological restoration, policy learning, farmer engagement and development of wet land-use models

 **More information:** LIFE Multi Peat, [Project approach](#)

Peatlands are among Europe's most important carbon-rich ecosystems, but when drained and degraded they become major sources of greenhouse gas emissions. The EU is one of the world's largest emitters of greenhouse gases from drained peatlands, making peatland restoration highly relevant for both biodiversity recovery and climate mitigation. LIFE Multi Peat addresses this challenge by restoring degraded peatlands across five countries: Poland, Germany, Belgium, the Netherlands and Ireland.

The project aims to improve the hydrological condition of degraded peatlands in order to reduce greenhouse gas emissions and create the conditions for peatlands to recover their carbon sink function over time. Restoration measures vary according to local conditions, but include rewetting drained areas, removing shrubs and trees where needed, and actively planting peat-forming vegetation in some sites. Monitoring is built into the project, with hydrology, vegetation and greenhouse gas emissions measured to assess progress against climate and biodiversity objectives.



Häsener Luch, Germany

© Marvin Gabriel, NABU

A major strength of the project is that it combines practical restoration with policy learning and technical innovation. LIFE Multi Peat is developing a knowledge base and replicable techniques for different classes of degraded peatlands, as well as a peatland policy toolkit, an EU-wide policy catalogue, a data portal and a policy development tool. This makes the case particularly useful for Member States preparing National Restoration Plans, because it connects on-the-ground restoration with the policy tools needed to scale peatland action.

Stakeholder engagement is also a core part of the project. A European peatlands policy working group has been established, and baseline socio-economic assessments and stakeholder surveys are being carried out. In Germany, the project works closely with local farmers to test wetland-adapted land-use practices. In Belgium, [paludiculture using willows is being tested for the first time](#), with the aim of producing biomass

that could be used in sustainable insulation materials. This shows how restoration can be linked with emerging economic models for rewetted landscapes.

The case is especially valuable because it addresses one of the main implementation challenges for peatland restoration: how to reduce emissions and restore ecosystem function while developing realistic options for land managers and rural economies. It demonstrates that peatland restoration is not only a conservation measure, but also a climate, land-use and policy innovation agenda.



Scaling lesson: Peatland restoration can be scaled when rewetting is combined with monitoring, farmer engagement, policy tools and viable wet land-use models such as paludiculture. Multi-country projects can help Member States move from isolated peatland restoration sites to more systematic approaches in National Restoration Plans.

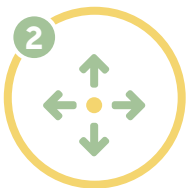
Key recommendations

The case studies in this briefing show that restoration is already being delivered across Europe in different ecosystems and governance contexts. They also show that successful restoration is rarely the result of ecological measures alone. It depends on planning, cooperation, long-term management, adequate resources and the ability to connect biodiversity recovery with wider public benefits. To turn the Nature Restoration Regulation into effective implementation, the following priorities should guide National Restoration Plans and EU-level support.



Prioritise restoration measures that deliver for nature and resilience together

Member States should use National Restoration Plans to identify measures that deliver clear biodiversity and ecosystem recovery while also strengthening resilience to climate, water and land-use risks. Restoration of wetlands, peatlands, rivers, grasslands and coastal habitats can support water retention, drought and flood resilience, wildfire prevention, carbon storage, pollinator recovery and rural livelihoods. Prioritising measures with multiple benefits can help build political support and improve the public value of restoration investment.



Move from isolated projects to landscape-scale restoration planning

Restoration should be planned beyond individual sites. Many of the strongest examples show the importance of restoring ecological processes and connectivity across wider landscapes: river continuity, wetland hydrology, grassland mosaics, pond networks, ecological corridors and functioning peatland systems. National Restoration Plans should therefore identify priority landscapes and river basins where measures can reinforce each other and address the pressures that caused degradation in the first place.



Build stakeholder engagement into delivery from the start

Restoration is more likely to succeed when landowners, farmers, local communities, municipalities, scientists, civil society and public authorities are involved early and meaningfully. Member States should establish transparent and well-facilitated stakeholder processes for National Restoration Plans, while also supporting local delivery partnerships around concrete restoration areas. Engagement should not only seek acceptance of pre-defined measures, but help shape practical solutions, long-term management and fair implementation.



Secure long-term financing and management, not only one-off project funding

The cases show that restoration often depends on a combination of EU funds, national funding, land purchase or leases, public-private cooperation, payment-for-ecosystem-services models, agri-environment support, and local or community contributions. Member States should clearly identify financing needs and sources in their National Restoration Plans, including how restored areas will be maintained over time. The European Commission should support this by helping Member States use existing EU funding effectively and by safeguarding predictable EU-level funding for restoration, including through LIFE or equivalent dedicated funding lines.



Use science, monitoring and adaptive management to improve results

Good restoration starts from clear ecological objectives and a robust evidence base, but it also requires monitoring to track whether measures are working. National Restoration Plans should include clear baselines, expected outcomes and monitoring approaches for priority ecosystems and measures. Monitoring should not be treated only as a reporting obligation, but as a tool for adaptive management, allowing authorities and practitioners to adjust measures as conditions change.



Make implementation easier by sharing knowledge and removing practical bottlenecks

Many restoration approaches are already well understood, but scaling them requires practical support. The Commission should facilitate structured peer learning between Member States, authorities and practitioners, using examples such as those in this briefing to share methods, governance models and lessons learned. It should also provide targeted guidance where administrative, legal or technical barriers slow implementation, including for river barrier removal, peatland rewetting, stakeholder consultation, financing, and restoration across borders or shared ecosystems.

Endnotes

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