



D6.6 POLICY BRIEF 1

Policy recommendations collecting evidence from RESTOREID



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1. Executive Summary

An analysis of more than 30 international and national restoration policies reveals a strong and consistent emphasis on ecological and socio-economic benefits, including biodiversity recovery, carbon storage and climate resilience. However, RESTOREID analysis found that potential unintended consequences of restoration interventions, such as impacts on human and animal health, land-use conflicts or changes in human - wildlife interactions, are rarely addressed explicitly. Health authorities and public health institutions are largely absent from restoration planning and current monitoring frameworks prioritise ecological indicators while overlooking social and health outcomes.

Case studies from Europe and beyond demonstrate that restoration can deliver lasting ecological and societal benefits when designed and governed holistically. Successful initiatives highlight the importance of early and meaningful stakeholder engagement, cross-sectoral coordination, alignment of restoration goals with local livelihoods and flexible, ecosystem-specific approaches. These examples underline that social acceptance, equity and trust-building are not ancillary considerations, but prerequisites for durable restoration outcomes under the NRR.

Building on these insights, this Policy Brief puts forward a set of policy-relevant recommendations to support effective NRR implementation. Central among these is the adoption of a One Health perspective, ensuring that restoration planning and implementation consider interactions between environmental, animal, and human health.

In conclusion, this brief underscores that achieving the ambitions of the Nature Restoration Regulation requires moving beyond a narrow focus on ecological targets. Restoration policies that integrate social and health dimensions, anticipate risks, empower communities, and promote cross-sectoral and cross-border coordination will be better positioned to deliver resilient ecosystems and tangible benefits for European societies.

These recommendations will be integrated in the BiodivRestore KH Policy Brief on “Avoiding risky restoration: Key pitfalls in restoration and how to mitigate these risks”. This brief will have a global methodological approach, emphasizing how the risk of zoonotic pathogen spillover can be reduced through effective restoration actions.

2. Introduction

RESTOREID's D6.6 Policy Brief stems from various field activities and literature reviews within the project, and especially builds further on D1.2 Policy Review that focused on critically reviewing international and national ecosystem restoration policies, as well as on recommendations stemming from the Literature Review done in Task 1.1.

Our extensive Policy Review showed that ecosystem and landscape restoration have become central pillars of international and national environmental policy, driven by urgent needs to halt biodiversity loss, mitigate climate change and restore degraded ecosystems. Global initiatives such as the UN Decade on Ecosystem Restoration and the Kunming–Montreal Global Biodiversity Framework have accelerated commitments to reforestation, wetland restoration, agroecology and nature-based solutions worldwide. While these policies rightly emphasise ecological recovery, climate resilience and socio-economic benefits, their implications for human and animal health remain insufficiently addressed.

Evidence shows that land-use change and ecosystem alteration are among the primary drivers of emerging infectious diseases, with over 60% of such diseases being zoonotic in origin. Restoration activities can influence disease dynamics in complex and context-dependent ways: well-designed interventions may reduce spillover risks by restoring ecological buffers and biodiversity, while poorly planned or narrowly implemented actions can inadvertently increase human–wildlife contact, expand vector habitats, disrupt livelihoods, or exacerbate existing social vulnerabilities. Despite these risks, most restoration policies reviewed do not explicitly consider zoonotic disease prevention, One Health integration, or the potential unintended health and equity consequences of restoration efforts.

RESTOREID policy review underpinning these brief highlights a systematic gap across international and national frameworks. Fewer than one-third of restoration policies explicitly reference zoonotic or infectious disease risks, and only a small minority operationalise One Health through cross-sectoral governance, surveillance systems, or health impact assessments. Public health actors are often marginally involved, monitoring frameworks focus almost exclusively on ecological indicators and equity considerations - particularly for Indigenous peoples, rural communities, and lower-income regions - are frequently acknowledged in principle but weakly implemented in practice.

Complementing this analysis, RESTOREID Literature Review and recommendations stemming from it underscore the need for a strategic shift in how restoration is governed and financed. They call for stronger investment in under-researched and high-risk regions, explicit integration of One Health into restoration policies, greater attention to socio-economic drivers of zoonotic risk and improved evidence on how different restoration strategies affect disease spillover pathways. Together, these findings point to a critical opportunity: embedding health, equity, and prevention considerations into restoration policy can significantly enhance both ecological outcomes and long-term public health resilience.

This policy brief builds on this combined evidence base to outline actionable recommendations for aligning ecosystem restoration with global health and equity objectives, ensuring that restoration efforts contribute not only to environmental recovery, but also to the prevention of future zoonotic disease risks and the protection of vulnerable communities.

3. Insights from the Global Policy Appraisal

Our analysis of over 30 international and national restoration policies across tropical, subtropical, and European contexts found that:

- Nearly all policies emphasize the ecological and socio-economic benefits of restoration, such as carbon storage, biodiversity gains, and climate resilience.
- However, fewer than 10% explicitly consider potential unintended consequences or safeguards such as human–wildlife contact, changes in disease ecology, or community displacement.
- Health sectors and public health institutions are rarely involved in restoration planning.
- Monitoring and reporting frameworks focus on ecological indicators (biodiversity, vegetation cover, carbon) but lack social and health-related metrics.

4. Best Practices and Lessons Learned from Restoration policies

Several countries and initiatives are pioneering integrative approaches:

- Rwanda’s Forest Landscape Restoration Strategy incorporates equity and livelihood indicators in monitoring frameworks.
- Belize’s Landscape Restoration Strategy emphasizes community-led planning and benefit-sharing.
- Sao Tome and Principe’s Enhancing National Commitment to FLR highlights native species reforestation and legal frameworks for long-term forest health.
- Actualisering van de Belgische Nationale Biodiversiteitsstrategie voor 2030 integrates biodiversity objectives across policy sectors; linking restoration, climate adaptation, and health through clear targets, participatory governance, and alignment with EU frameworks.

Such strategies demonstrate that restoration can deliver both ecological recovery and social well-being when managed holistically.

5. Key Policy Recommendations for Implementing the NRR

1. EMBED HEALTH AND SOCIAL SAFEGUARDS IN RESTORATION DESIGN

- Restoration planning should apply a One Health lens to assess how interventions may influence environmental, animal, and human well-being across affected ecosystems, sectors, and population groups, including potential co-benefits and unintended risks. Embed health and social safeguards into restoration planning and implementation in line with Articles 5–10 of the NRR, by integrating health considerations into ecosystem-specific targets.

- Actively involve national public health and veterinary authorities in the development, implementation, and review of restoration targets under Articles 5–10, to ensure that health and social considerations are systematically reflected in restoration design.
- Apply regionally tailored restoration strategies by identifying endemic disease landscapes and adapting restoration design to local host ecology, land-use history, and climate context.

2. STRENGTHEN MONITORING AND REPORTING FRAMEWORKS

- Enhance monitoring and reporting frameworks under Articles 14 and 15 of the NRR to complement biodiversity and carbon indicators with measures of social and health outcomes, including community co-benefits, land-use conflicts, and changes in human–wildlife interactions, to better reflect the full impacts of restoration interventions.
- Encourage use of existing EU data platforms (EEA, EIONET, Copernicus) and open-access tools for tracking restoration outcomes.

3. FOSTER TRANSBOUNDARY COORDINATION

- Strengthen transboundary coordination mechanisms under Article 11 of the NRR to address restoration challenges that extend beyond national borders, such as wildlife migration corridors and shared water catchments, thereby benefiting neighbouring Member States, regional authorities, and downstream ecosystems.
- Regional cooperation mechanisms (e.g., Alpine, Baltic, and Danube frameworks) should include joint monitoring and early-warning systems for ecological and health-related risks, in line with Article 14 on ecosystem monitoring, to support coordinated and adaptive restoration action.

4. ENSURE INCLUSIVE GOVERNANCE AND CAPACITY BUILDING

- Strengthen inclusive governance and capacity-building arrangements in line with Articles 10 and 11 of the NRR, by ensuring meaningful stakeholder engagement and cross-sectoral coordination, thereby benefiting local communities, land managers, implementing authorities, and public health and environmental institutions.
- Move beyond generic notions of “community participation” by establishing clear, transparent mechanisms for consultation, grievance redress, and benefit-sharing, ensuring that affected stakeholders can meaningfully influence restoration planning and implementation.
- National capacities should be strengthened through targeted technical guidance, training programmes, and institutional partnerships between environment, agriculture, and health ministries, to support coherent, well-coordinated delivery of restoration objectives.

5. PROMOTE POSITIVE COMMUNICATION AND DATA ACCESSIBILITY

- Ensure that national restoration plans, progress reports, and stakeholder engagement processes include clear signposting to relevant data sources, analytical tools, and technical guidance, and provide practical support for their uptake.
 - Data sources (for baseline setting, monitoring, and reporting):

Platforms such as GBIF and EEA biodiversity datasets can support species distribution mapping, habitat condition assessment, and progress tracking under ecosystem-specific targets, while WHO–FAO–WOAH One Health resources can inform assessments of health-related co-benefits and risks associated with restoration activities.

- Tools (for planning, analysis, and decision support):
Tools including the Biodiversa+ Knowledge Hub, the MOOD platform, and the UN Restoration Barometer can be used to synthesise evidence, support scenario analysis, track implementation progress, and facilitate cross-country learning within and across Member States.
- Strategic reports and guidance (for policy alignment and target setting):
Frameworks and guidance such as the IPBES Nature Futures Framework and CBD Target 2 implementation guides can help align national restoration objectives with long-term biodiversity, sustainability, and societal goals, and support coherent translation of global commitments into NRR-compliant actions.

Addressing these gaps requires cross-sectoral collaboration, shared data infrastructures, and targeted investment in monitoring and evaluation.

Appraisal of case studies from https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-regulation/success-stories_en

Case study	Factors promoting best practice	Best practice demonstrated	Implications for NRR implementation	Relevant NRR Article(s)
Living Bog Project (Ireland)	Early and continuous engagement of local communities, land-users, and peatland stakeholders; transparency around hydrological changes and land-use impacts	Extensive stakeholder involvement in planning and implementation enabled acceptance of drain blocking and water-level restoration across multiple sites	Demonstrates that meaningful participation and trust-building are prerequisites for successful large-scale restoration; highlights the need for formalised consultation and coordination mechanisms in National Restoration Plans	Article 11 (Coordination and synergies); Article 10 (National Restoration Plans)
Skjern River Restoration (Denmark)	Collaboration with farmers; willingness to reverse previous engineering; long-term vision	Nature-led restoration , integrating ecological recovery with agricultural transition	Shows that allowing ecosystems to recover naturally can deliver biodiversity,	Articles 5–10 (Ecosystem-specific targets); Article 10

	allowing natural river dynamics to re-establish		economic, and social benefits simultaneously; supports flexible, ecosystem-specific target implementation rather than rigid engineering solutions	
Sigma Plan II (Belgium)	Multidisciplinary co-design involving scientists, economists, sociologists, planners, local authorities, and communities; strong public-sector coordination	Integrated, multi-sectoral design combining restoration and flood protection with positive cost–benefit outcomes	Illustrates the value of cross-sectoral governance and evidence-informed design; supports stronger institutionalised collaboration across disciplines in restoration planning	Article 11; Article 10
Green Heart of Cork (Portugal)	Financial incentives aligned with conservation goals; engagement of private landowners through payments for ecosystem services	Alignment of restoration with livelihoods through economic incentives	Highlights the importance of coupling restoration targets with socio-economic instruments to ensure uptake and long-term sustainability, particularly in privately managed landscapes	Article 12 (Financing and support); Article 10

6. Gaps and Limitations

Several gaps persist that risk limiting the effectiveness, equity, and long-term resilience of restoration efforts if not explicitly addressed. A prevailing “win–win” narrative may obscure real-world trade-offs, particularly in regions with high biodiversity value and socio-economic vulnerability. Key gaps include:

- There is insufficient, systematic evidence connecting restoration actions to biodiversity gains alongside human and animal health outcomes, including zoonotic and One Health dimensions. While Articles 14 and 15 establish monitoring and reporting obligations, they do not explicitly require systematic tracking of human health, equity, or One Health outcomes alongside biodiversity indicators, resulting in fragmented evidence on co-benefits and trade-offs.
- Restoration planning and implementation often lack meaningful integration of social scientists, public health professionals, and veterinary experts, reducing the ability to anticipate social conflict, health risks, or unintended consequences. Although Articles 10 and 11 encourage coordination, they provide limited guidance on formal inclusion of social scientists, public health authorities, or veterinary services, constraining cross-sectoral risk assessment during planning and implementation.
- Restoration initiatives may introduce risks such as monoculture tree planting, large-scale hydrological alterations, habitat simplification, or invasive species introduction, as well as changes in human–wildlife interfaces near settlements that can affect livelihoods or public health. Restoration targets (Articles 5-10) focus on achieving ecological thresholds but do not sufficiently require ex ante assessment of unintended consequences, such as monoculture planting, invasive species risks, hydrological disruption, or altered human–wildlife interactions near settlements.
- Existing monitoring frameworks prioritise ecological indicators but rarely track unintended social or health impacts, nor do they clearly define adaptive management mechanisms when negative effects emerge. Article 14 (Monitoring of ecosystems) and Article 15 (Reporting) of NRR prioritise progress toward targets, with limited emphasis on detecting negative or unintended social, health, or ecological impacts, and insufficient clarity on adaptive management responses when such impacts are identified.
- Rapid restoration implementation without robust, transparent local consultation can lead to land-tenure conflicts, restricted access to resources, or reduced community acceptance, undermining long-term sustainability. While stakeholder involvement is referenced (Articles 10 and 11), the NRR provides limited operational detail on consultation procedures, grievance mechanisms, or benefit-sharing, increasing the risk of land-tenure conflicts and reduced social acceptance.
- Significant disparities exist among Member States in technical, institutional, and analytical capacities to design and apply risk-sensitive, cross-sectoral restoration approaches. Differences in national technical and institutional capacity (Articles 11-12) constrain the ability of some Member States to implement risk-sensitive, cross-sectoral restoration, potentially widening disparities in NRR delivery.
- Many ecosystems span national boundaries, yet transboundary coordination is inconsistently addressed, posing challenges where ecological, social, or health-related risks propagate across borders. Although Article 11 recognises coordination needs, transboundary ecosystems and cross-border risk pathways (including health-related risks) are inconsistently addressed in practice.

- While economic cost–benefit analyses are sometimes included, metrics capturing health, and One Health outcomes remain absent or under-reported, limiting comprehensive appraisal of restoration impacts. Economic assessments, where included, tend to focus on financial or ecological efficiency, with health, equity, and One Health metrics rarely incorporated into appraisal or reporting processes in Article 15.

7. Conclusion

Restoration is an essential pillar of Europe’s sustainability transition. Ensuring its success means looking beyond ecological targets to include the social and health dimensions of resilience.

Policies that anticipate and mitigate unintended consequences while empowering communities and coordinating across borders will secure the promise of restoration of healthy landscapes for both nature and communities.