

MERLIN



Mainstreaming freshwater restoration requires supporting multiple economic sectors to collaborate

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Achieving the restoration of freshwater ecosystems at pace and scale depends on the active involvement of many societal groups including a range of economic sectors. We thus need to ‘mainstream’ working with nature across all sectors of society. This brief explores opportunities and challenges to achieve mainstreaming. It highlights a need to strengthen coordination and collaboration between economic sectors and shows how to enable this through existing institutions and approaches.

Target audience

- ➔ This briefing is relevant to those encouraging nature restoration at pace and scale across Europe, including (but not limited to) nature conservation charities, voluntary groups working for nature, plus policy-makers and public sector agencies focused on water, nature, climate and the environment

Key messages

- ➔ We share insights from four years of work with six economic sectors to ‘mainstream’ restoring and working with nature.
- ➔ These sectors show appetite to work with nature but also share concerns about their role: these concerns impede action.
- ➔ Multi-faceted approaches are needed, supporting immediate and longer-term change.
- ➔ Supporting collaboration within and between sectors is vital, with attention to risks and responsibility-sharing.
- ➔ Groups already working with and for nature still have a key role, using and adapting existing approaches.



1. Why did we write this briefing?

European ecosystems urgently require restoration to ensure they can underpin healthy societies and resilient economies. In response, the recent Nature Restoration Regulation (NRR) sets binding targets to restore degraded ecosystems. Such policy targets are important, but restoration cannot be achieved by the conservation sector working alone. Instead, to achieve nature restoration at pace and scale, it is crucial to achieve ‘mainstreaming’, so that working with nature becomes normal for all sectors who depend on natural systems and who influence their quality and quantity.

Many have written about the need to work with a range of economic sectors but there is not much experience reported of actually having done so. In MERLIN we have experience of working with economic sectors on freshwater restoration, so our learnings and practices can inform how others can encourage mainstreaming.

2. What is the basis of this briefing?

2.1. What is the MERLIN project?

The MERLIN project is an Horizon2020 funded Innovation Action (from October 2021 to March 2026) working to enable mainstreamed and transformative restoration of freshwater-related ecosystems across Europe to develop solutions for both nature and society – i.e. Nature-Based Solutions (see box below).

Society includes many economic sectors that use natural resources for economic development. Degraded or depleted ecosystems create risks for society and business, especially when further threatened by climate change. It is therefore important to ‘mainstream’ – to involve more economic sectors in working for and managing nature. MERLIN therefore aimed to understand and support how different organisations from multiple economic sectors can work together, drawing together insights from discussions with European-level institutions, 18 case studies of landscape scale restoration; and different economic sectors.

Nature-Based Solutions (NbS)

- ➔ NbS are “actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.” (UN, 2022)
- ➔ We recommend using NbS as a framing to encourage mainstreaming. By focusing on economic and societal benefits it can help motivate new sectors’ involvement in working with nature (Waylen et al 2024).

2.2 How did MERLIN work with economic sectors?

In MERLIN we focused on six economic sectors: Agriculture, Hydropower, Insurance, Navigation, Peat Extraction, and Water Supply and Sanitation. Each economic sector contains many different types of organisations, but all have a shared focus on producing a good or service, in ways that depend on and/or impact freshwater ecosystems.

For each sector we established pan-European Communities of Practice (CoP), who then collaborated with us and each other – e.g. using workshops, document sharing and interviews – to develop Sectoral Strategies. Those involved in the CoPs include businesses, policymakers, financial institutions and sectoral associations. These organisations came from across Europe.

The resultant strategies provide visions and action plans for integrating NbS into these six sectors’ practices, including what types of measures to prioritise, who should be involved, how and when.

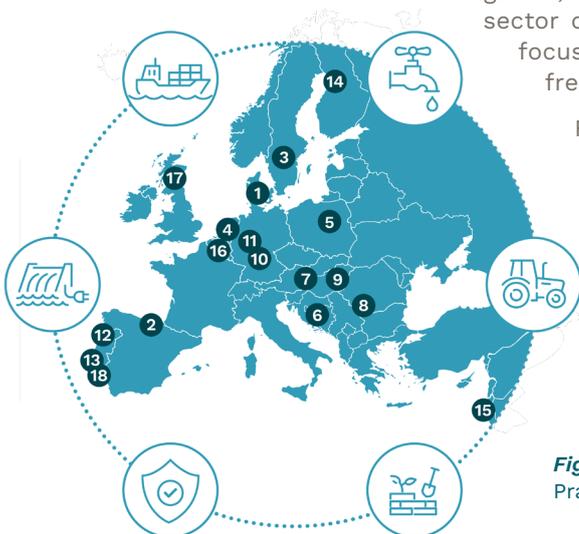


Figure 1: Visual summary of the 6 sectoral Communities of Practice and 18 case studies involved in the MERLIN project

3. What did we find out about mainstreaming?

This briefing highlights key cross-cutting issues that span all six sectors, as explained in our summary of the Strategies (Bérczi-Siket et al, 2025) and our cross-sectoral Routemap (Blackstock et al, 2025).

3.1. Many sectors are relevant to mainstreaming NbS

Whilst working with our six sectors, we identified a total of nineteen sectors as having roles to play in mainstreaming freshwater NbS. Efforts for mainstreaming must encompass a wide variety of sectors, to ensure responsibilities and risks are seen to be fairly shared.



Figure 2: Visual summary of a range of NbS measures in a landscape and the benefits for society and economies. For more information about the 19 sectors that we identified as having roles to play in this andscape please see <https://storymaps.arcgis.com/stories/a21460ac063c495698693dbfddd80dd2e>

3.2. Many are interested to do more to support restoration and work with nature

Across our six CoPs we found organisations, activities and ideas that already represented good practice in working with nature. For example, some peat extraction companies in Finland have managed post-extraction sites by creating wetland habitats¹. Across the CoPs we also found widespread recognition of the challenges of climate change. For example, prolonged droughts threaten goals ranging from food production to the navigability of waterways: thus, a failure to respond is a threat both to organisations and livelihoods of individuals. However, each sector is diverse and may contain only a few pioneers working differently: more are needed. For example, the navigation sector has launched pilot projects² to reduce environmental harms whilst safeguarding navigability but they cover only a small fraction of Europe's waterways. Sharing positive and pioneer examples could help encourage learning and wider adoption, to complement regulatory or other drivers.

¹ For more information see the peat extraction strategy at https://project-merlin.eu/files/merlin/downloads/sectoral_strategies/MERLIN_sectoral_strategy_Peat_Extraction_sector.pdf

² See the Navigation sector strategy at https://project-merlin.eu/files/merlin/downloads/sectoral_strategies/MERLIN_sectoral%20strategy_Navigation_sector.pdf

Restoration supporting potential commercial opportunities in the Romanian Danube (MERLIN case study 08)

- ➔ In the lower Danube, between 'Iron Gates II' to Hârşova, there is low connectivity between the river and its floodplains, used for agriculture and forestry. Amongst the planned interventions, dried-up fish ponds have been identified as offering potential to support aquaculture whilst also supporting flood risk mitigation and nature conservation in Natura2000 sites. This is expected to provide a new revenue from eco-tourism and support land-managers' income diversification.
- ➔ For more information about this case, visit its case study portal <https://project-merlin.eu/cs-portal/case-study-08.html>; and for other examples of businesses benefiting from ecosystem restoration see Table 1 in [MERLIN_D4.7_Routemap_and_Annex_Nov2025.pdf](#)

3.3 A variety of concerns and challenges can impede change

There were concerns that changing sectoral practices to invest more in nature, might lead many organisations to be at a competitive disadvantage versus their peers. This could be due to higher operational costs, by providing benefits that are free to others, or by exposure to new liabilities e.g. if alterations are deemed to exacerbate risks e.g. of downstream flooding. It is important to recognise these concerns. There are also underlying concerns about justice and fairness in what different sectors are asked to do, who benefits and who bears the costs. In short, mainstreaming NbS uptake is often a 'collective action' challenge.

3.4 Mainstreaming needs even more collaborative working

Managing water and nature is already often associated with collaborative teamwork. Expanding and strengthening these approaches can address many challenges. Coordinating sectoral-wide approaches can help. For example, in Sweden, central coordination has led to hydropower companies planning together and providing jointly-held funds for removal of obsolete barriers³. In other cases, policies may need adjustment, e.g. to ensure land-managers are eligible for subsidies⁴, to adjust approaches to evaluating investments⁵, or to underwrite risk-sharing⁶. It is also important to acknowledge and ideally coordinate the roles of different sectors in managing nature.

Existing organisations such as catchment and landscape partnerships may be able to support collaboration and coordination, if they have appropriate competences and are endorsed to act in the interests of all involved. Formal transboundary mechanisms such as the Joint statement "Development of Inland Navigation and Environmental Protection in the Danube River Basin" support essential coordination across borders.

Enabling cross-sectoral working with new partners in the Forth Basin, UK (MERLIN case study 17)

- ➔ The Forth Rivers Trust has taken a long-term approach to building relationships, whilst also exploring new frameworks and guidance for connecting with local business partners in the landscape.
- ➔ Over the 4 years of MERLIN they repeatedly met with a wide range of potential partners, ranging from individual land-managers, to energy and transport infrastructure companies. As a result, the Trust has started to unlock new sources of funding and support for nature restoration that come from beyond the public sector.
- ➔ For more information on this case see <https://project-merlin.eu/cs-portal/case-study-17.html> or section 4.1 in [MERLIN_D4.7_Routemap_and_Annex_Nov2025.pdf](#).

³ For more information see the Hydropower sectoral strategy https://project-merlin.eu/files/merlin/downloads/sectoral_strategies/MERLIN_sectoral_strategy_Hydropower_sector.pdf

⁴ For more information see the Agriculture sectoral strategy https://project-merlin.eu/files/merlin/downloads/sectoral_strategies/MERLIN_sectoral_strategy_Agriculture_sector.pdf

⁵ For more information see the Water Supply and Sanitation sectoral strategy https://project-merlin.eu/files/merlin/downloads/sectoral_strategies/MERLIN_sectoral_strategy_Water_Supply_and_Sanitation_sector.pdf

⁶ For more information see the Insurance sectoral strategy https://project-merlin.eu/files/merlin/downloads/sectoral_strategies/MERLIN_sectoral_strategy_Insurance_sector.pdf

3.5 Mainstreaming needs multiple approaches

Promoting the involvement of multiple sectors needs multiple approaches. Our ‘RouteMap for Mainstreaming’ (Blackstock et al. 2025) identifies five interconnecting areas that need attention: law & regulation, values and attitudes, knowledge and innovation, funding and financing, and collective action. We identify where existing actions and approaches are helpful and should be maintained, as well as where new approaches would be beneficial or where actions should be adjusted or removed. For example, agri-environment schemes under the Common Agricultural Policy should be adjusted to pay for sectoral priorities that produce public benefits. Some of these changes would produce quick visible results – e.g. changing conditions on permits for peat extraction, whilst others – such as promoting cultural change – would have effects that are slower but are just as important to enable widespread and long-lasting change.

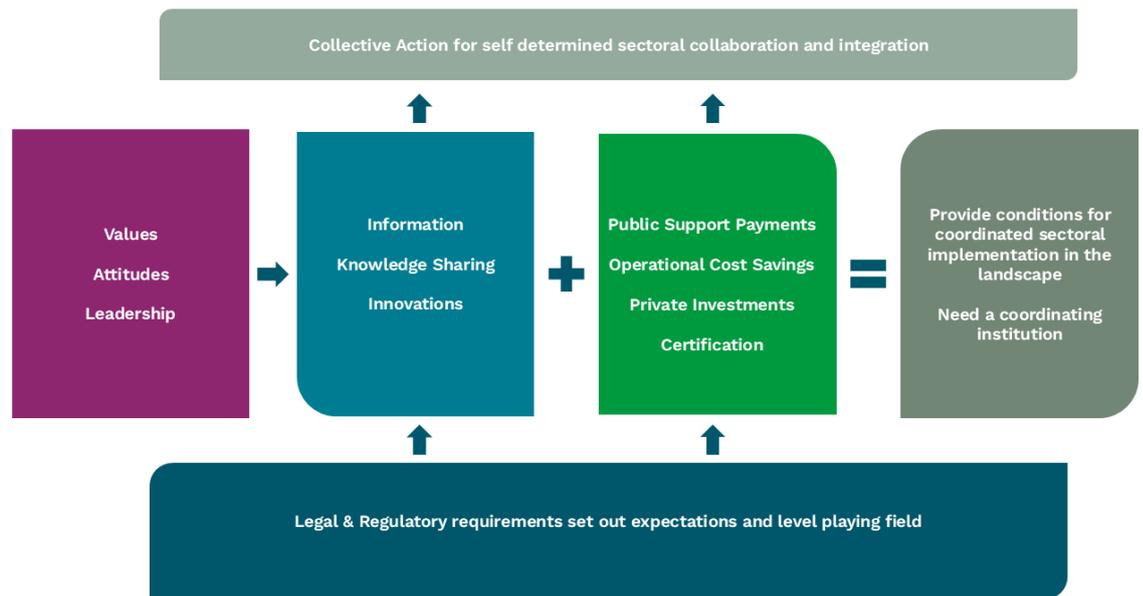


Figure 3: Approaches needed to foster mainstreaming, from the MERLIN Cross-Sectoral Strategy

3.6 Mainstreaming still needs existing actors and approaches

To date, much nature restoration has been led by not-for-profit and governmental organisations focused on environmental issues. The continued commitment of these actors is needed, targeted to unlock involvement from more economic actors. This is especially important where policy goals for nature are not accompanied by high levels of public sector funding, as for the NRR. European, National and local government actors – whose resources and rules have shaped much action for nature in past decades – can continue to drive change. Its leadership can encourage sectors to transition to work with nature differently and give confidence that collective action will be achieved. Stability in rules and regulations, and enforcement by regulators can also help organisations commit to mainstreaming NbS. Strengthening support also reinforces the need for policy coordination, e.g. between those working to implement the NRR with other policy areas that influence water, inland navigation, nature and landscapes. For example, there are opportunities to clarify how conflicts between transport and water quality goals should be resolved.

4. Conclusions and next steps

Restoring and managing nature for people cannot happen without cross-sectoral support and involvement. In MERLIN, our experiences of working with economic sectors produce useful insights about achieving this.

Safeguarding nature must be framed as a necessity, not a burden, since all sectors ultimately depend on it. However, efforts to upscale nature restoration must also respond to the potential constraints and concerns of organisations and sectors that are not already involved. For example, pioneer organisations who adopt an NbS approach may not be widely copied by peers in their sector, if doing so is not seen as strengthening their own business cases. It is therefore important to discuss how risks, responsibilities and benefits will be fairly shared within and between sectors.

Mainstreaming NbS should be planned as a process depending on competences, partnerships and collaborations that go far beyond individual organisations or sectors. Addressing many concerns requires multi-faceted approaches to support cross-sectoral sharing and landscape-based collective action, capitalising on existing institutions and initiatives already working for nature. MERLIN's Cross-Sectoral Routemap sets out more specific implications for European, national and regional-to-local actors, e.g.

- ➔ For recommendations regarding legal and regulatory actions related to the Water Resilience Strategy see section 6.2.2, for Nature Restoration Regulation see 6.2.3, and for CAP strategic plans see 6.2.4.
- ➔ For recommendations regarding influencing values and attitudes, see section 6.3; knowledge and innovation (section 6.4), funding and financing (section 6.5), and collective action (section 6.6).

These insights are relevant beyond MERLIN, beyond the cases and sectors that we directly worked with. We invite all organisations involved in nature restoration to consider how they can work differently, to broaden and deepen the range of sectors involved.

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Further reading

- ➔ Bérczi-Siket, A., Blackstock, K. and Nyíró, F. (2025). Focus Sectoral Strategies for mainstreaming freshwater restoration. EU H2020 research and innovation project MERLIN deliverable D4.5. <https://project-merlin.eu/deliverables.html>
- ➔ Blackstock K.L., Bérczi-Siket, A., Nyíró, F., Gray, R., Matthews, K.B., Wardell-Johnson, D., Kelly, K., Waylen, N., Neary, C., Provan, N, Kok, S, Kainer, P, Scricciu, Puiu, I, Ionescu, C, Birk, S., and Hering D. (2025) Cross-Sectoral RouteMap for Mainstreaming Freshwater Nature-based Solutions in Europe. MERLIN Deliverable D4.7 84 pages. Deliverable D4.7 - MERLIN project.
- ➔ United Nations (UN) (2022). Resolution adopted by the United Nations Environment Assembly on 2 March 2022: Nature-based solutions for supporting sustainable development. Environment. <https://digitallibrary.un.org/record/3999268>
- ➔ Waylen, K. A., Wilkinson, M. E., Blackstock, K. L. and Bourke, M. (2024). Nature-based solutions and restoration are intertwined but not identical: Highlighting implications for societies and ecosystems, Nature-Based Solutions, 5, 100116. <https://doi.org/10.1016/j.nbsj.2024.100116>