

The Cost of Biodiversity Inaction: What it means for the EU Economy

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Report For

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Executive Summary

This report assesses the cost of biodiversity inaction in the EU and the economic case for closing the gap between current funding and what is needed. Its central conclusions are that current public funding is insufficient to meet the EU's biodiversity targets, that increased and better-targeted public investment in biodiversity is highly cost-effective, and that existing funds can be used more effectively by reforming harmful EU public spending and crowding in private finance.

Key findings

- Delivering the EU Biodiversity Strategy for 2030 is estimated to cost about EUR 48.2 billion per year, against current spending of EUR 29.5 billion – **a gap of roughly EUR 18.7 billion per year** (EUR 186.9 billion over 2021–2030).
- An estimated **EUR 34.4–48.9 billion per year of EU spending may be actively harmful to biodiversity**, such as through promoting industrial livestock, overfishing and habitat loss. Reducing these subsidies, currently larger than the biodiversity funding gap itself, would not only reduce harm but free up funding to invest in biodiversity protection.
- Biodiversity funding can deliver a significant return on investment by avoiding future damage, reducing exposure to climate and environmental shocks, and strengthening the ecosystem services on which key sectors depend. In particular, each euro of investment is expected to deliver 8 euros of economic benefit. If extrapolated to the scale of the funding gap, this equates to **EUR 150 billion of economic benefit a year** and **an additional 560,000 jobs**.

Recommendations



1: Reform and redirect biodiversity-harmful subsidies

Prioritise reform of the most harmful fossil-fuel and agricultural subsidies, exploring where best to redirect a share towards closing the biodiversity funding gap.



2: Integrate biodiversity across economic policy

Embed biodiversity considerations across CAP reform, industrial policy, national security and infrastructure planning.



3: Strengthen biodiversity-spending data and accountability

Introduce consistent Member State tracking and more granular reporting of biodiversity spend to enable transparent accountability against EU targets, verify whether spending is closing the gap and better direct finance to where it delivers the greatest return.



4: Deepen the analysis of sectoral vulnerability to biodiversity loss

Explore exposure to different aspects of biodiversity loss at the Member State level to better understand the vulnerabilities of key economic sectors and identify spending that could meaningfully reduce the likely impacts and provide a strong return on investment.



5: Explore EU vulnerability to global biodiversity loss

Seek to quantify the EU's embedded biodiversity footprint, identify the sectors and Member States most exposed to international biodiversity loss and assess where public spending and regulation could reduce the EU's contribution and vulnerability.



6: Explore the use of public funding to catalyse private biodiversity finance

Assess how targeted public funding could be used to catalyse private finance to help close the biodiversity funding gap, while mitigating any potential risks.

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1.0 Introduction

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This report seeks to assess the long-term cost of biodiversity inaction in the EU and the scale of biodiversity-harmful subsidies, in order to provide evidence that can help unlock increased public funding for nature conservation and restoration.

For the purposes of this report, we define **biodiversity inaction** as the failure by the public and private sectors to adequately fund the protection, restoration and sustainable management of biodiversity relative to ecological or policy need. It can be considered in terms of three overlapping areas: underinvestment relative to a defined need, ineffective or poorly targeted spending, and the continuation of biodiversity-harmful subsidies. Notably, inaction is not only the lack of necessary investment, but also the presence of spending that actively degrades ecosystems.

1.1 Context

Biodiversity is not always defined consistently in the literature, as sources may conflate nature with biodiversity or apply the concept differently depending on the policy context. Biodiversity is part of nature, but refers specifically to its living, or biotic, component, rather than non-living, abiotic elements such as water, soil, air and minerals. The core and most widely accepted definition refers to the diversity of life within species, between species and across ecosystems. In economic and policy terms, however, biodiversity is often treated more broadly because it underpins ecosystem services, including provisioning services such as food and raw materials, regulating services such as climate regulation, water purification and pollination, and cultural services such as recreation and tourism.

This report treats biodiversity as a foundational component of natural capital, supporting economic activity and wellbeing across sectors. It distinguishes biodiversity from broader references to nature where possible, while noting where the two are conflated in the literature. Building on this definition, the report defines public biodiversity finance as public financial flows directed towards activities that conserve, restore or sustainably manage biodiversity and ecosystem services. In the EU context, this can occur through biodiversity mainstreaming across wider MFF funding instruments, Member State expenditure, or national co-financing linked to EU-funded programmes. Further detail on the EU policy context and relevant funding instruments is provided in Section 2.0.

Moreover, classifying expenditure as biodiversity-relevant, and especially as “biodiversity-positive”, is challenging. This is partly due to common methodological limitations in expenditure tracking, but also because it requires assumptions about the likely impact or outcome of spending. These measurement challenges matter because biodiversity loss creates material economic risks, meaning that underinvestment, ineffective spending or harmful spending can have consequences beyond environmental policy.

The World Economic Forum ranks biodiversity loss and ecosystem collapse among the top five global risks by both likelihood and impact, reflecting growing recognition that biodiversity loss is a macro-critical economic issue¹. Section 3.1 examines the cost of biodiversity inaction and the exposure of key sectors to biodiversity loss and ecosystem degradation. Finally, biodiversity

action also presents a clear economic opportunity. Investment in protection and restoration can strengthen ecosystem resilience, reduce climate and disaster risks, support food and water security, and generate benefits for health, recreation and local economies. Section 3.2 examines these benefits as well as co-benefits of biodiversity investment.

1.2 Approach

The evidence base for this report draws on a wide range of publicly available sources, including:

- EU institutions: European Commission, European Environment Agency and European Central Bank.
- International organisations: IPBES, World Economic Forum, OECD and UNDP.
- Think tanks and research institutions: IEEP, Bruegel, IIASA, Green Finance Institute, The Nature Conservancy and Bankwatch.

The analysis combines macroeconomic modelling, sector-specific studies, case studies and project-level evidence. However, these sources use different methodologies, scopes, geographies, timeframes and assumptions, meaning figures are not always directly comparable. Estimates presented in this report should therefore be treated as indicative rather than precise.

Monetary figures are generally kept in the price base and time period used in the original source to avoid adding assumptions through conversion. Where relevant, the report distinguishes between commitments, expected expenditure and actual expenditure. The relevant timeframe and price base are indicated where known.

2.0 The Current State of EU Public Biodiversity Funding

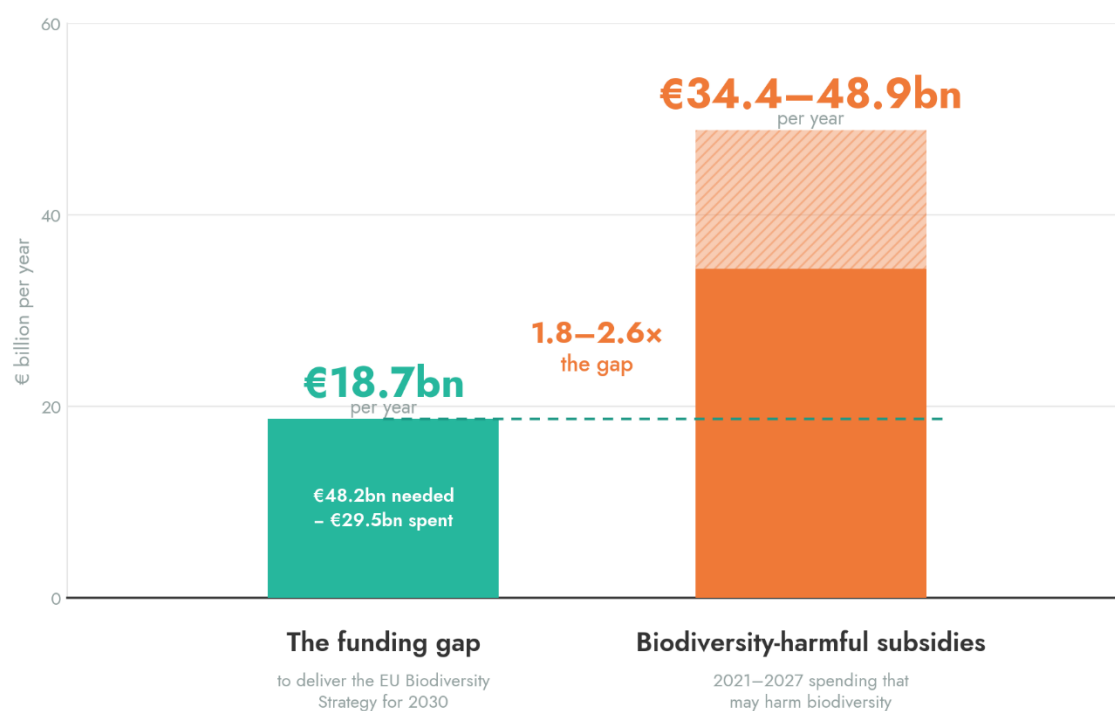
This section provides an overview of the funding available for biodiversity at EU and Member State level and examines how this has evolved over the past decade. It focuses particularly on changes across successive Multiannual Financial Framework cycles and how these have affected the way biodiversity funding is allocated, tracked and prioritised. It compares expected expenditure with the estimated funding required to meet the objectives of the EU Biodiversity Strategy for 2030, thereby identifying the financing gap. It also considers the scale of public funding currently directed towards biodiversity-harmful subsidies.

The section's central argument is illustrated in Figure 2-1. The EU faces an estimated annual biodiversity financing gap of EUR 18.7 billion, while biodiversity-harmful subsidies are estimated at between EUR 34.4 billion and EUR 48.9 billion per year. This suggests that redirecting even a portion of these subsidies towards biodiversity-positive activities could make a substantial contribution to closing the funding gap.

Figure 2-1: The EU Biodiversity Funding Gap vs Biodiversity-Harmful Subsidies

The EU spends more harming nature than the cost of closing the gap

Annual biodiversity funding gap vs biodiversity-harmful subsidies in the EU



2.1 EU Biodiversity Strategy

The EU's public funding landscape for biodiversity has evolved significantly over the past three decades, as detailed further in Appendix A.1.0. This evolution has been shaped in part by successive EU Biodiversity Strategies (to 2020 and for 2030), and by the EU's Multiannual Financial Frameworks (2014-2020, 2021-2027, and the proposed 2028-2034), which set seven-year budgetary priorities and funding structures.

The EU Biodiversity Strategy for 2030, adopted in 2020, sets out Europe's biodiversity ambition for the decade, with the headline objective of “putting Europe's biodiversity on the path to recovery by 2030.”ⁱ Its objectives include increasing protected land and sea areas to 30% of EU land and 30% of EU sea, reversing ecosystem degradation, restoring forests and freshwater ecosystems, promoting urban greening, and supporting global biodiversity action.

The 2030 Strategy is much more explicit on finance than previous EU biodiversity frameworks.² In particular, it identifies increased mobilisation of finance as central to delivery, stating that at least **EUR 20 billion per year should be unlocked for spending on nature** from EU, national and private sources.ⁱⁱⁱ In the current EU policy context, biodiversity finance is therefore largely understood in relation to the delivery of the Strategy, covering funding for activities and projects that contribute to its core objectives.

However, subsequent analysis suggests that the Strategy's funding needs are significantly higher than the EUR 20 billion annual mobilisation target. A report by IEEP and Trinomics estimated in 2022 that addressing all 41 objectives of the Strategy would require around **EUR 48.2 billion per year across 2021–2030**.^{iv} ³ This figure was calculated by costing each objective, including baseline biodiversity expenditure, administrative costs and on-the-ground implementation costs. The largest additional financing needs relate to nature restoration (29%), protected-area expansion/connectivity (25%), invasive alien species (17%), urban greening (8%), soil remediation (5%) and deforestation-related measures (5%).⁴

More recently, the 2025 Environmental Implementation Review estimated broader annual **investment needs for biodiversity and ecosystems at around EUR 65 billion**, including additional needs related to soil health.^v

It should be noted that there is limited detail available on how the EUR 20 billion figure was costed. It appears to function more as a minimum mobilisation target than as a detailed bottom-up costing, such as that developed by IEEP and Trinomics. As such, the EUR 48.2 billion annual figure is used throughout this report when referring to biodiversity funding needs. Nonetheless, the EUR 20 billion figure is still stated as it remains politically significant as the headline finance objective set out in the 2030 Strategy. Similarly, the more recent EIR estimate is also not used as the primary benchmark because it covers broader biodiversity and ecosystem investment needs rather than the Strategy's 41 objectives specifically.

ⁱ The 2030 Strategy follows earlier EU biodiversity frameworks that did not fully achieve their objectives, including the EU Biodiversity Strategy to 2020, adopted in 2011, and the 2001 Biodiversity Action Plans. These earlier frameworks aimed to halt biodiversity loss, reduce ecosystem degradation, and strengthen the protection and restoration of habitats and natural ecosystems. Their limited success has increased pressure on the EU to deliver the objectives of the 2030 Strategy.

² This latest Strategy is also consistent with the Kunming Montreal Global Biodiversity Framework agreed at COP15, which called for the mobilisation of at least USD 200 billion per year for biodiversity by 2030.

³ This funding figure is undiscounted. The report also provides a discounted present value estimate of EUR 40.3 billion in 2021 euros.

⁴ The EUR 48.15 billion figure includes EUR 26.4 billion in baseline biodiversity expenditure. Additional financing needs are therefore around EUR 21.8 billion. This latter figure was used to calculate the percentages.

Box 1: Legal and planning frameworks for biodiversity delivery

Two other frameworks are important for understanding the EU biodiversity finance landscape: Natura 2000 and the Nature Restoration Regulation (NRR). Together, they create ongoing and future funding needs for the EU's biodiversity protection and restoration objectives. Their associated planning mechanisms — Prioritised Action Frameworks (PAFs) and, in future, National Restoration Plans (NRPs) — provide key lenses for assessing biodiversity funding requirements and gaps.

Natura 2000 is the older of the two frameworks. Established in 1992 under the Habitats Directive, and building on the earlier Birds Directive, it is the EU's protected-area network, covering around 18% of EU land area and 10% of its marine territory.^{vi} The ongoing funding needs for these sites, including site management, habitat restoration, species protection and monitoring, are identified through PAFs, which are prepared by Member States or regions. Current estimates place required funding for Natura 2000 at around EUR 10.2 billion per year.^{vii} Its importance is reinforced by the 2030 Strategy's EUR 20 billion finance objective, which explicitly identifies Natura 2000 as a funding priority.^{viii}

More recently, the EU enacted the NRR, which operationalised the 2030 Strategy's restoration ambition by setting binding EU-level targets for the restoration of degraded ecosystems. It requires Member States to prepare NRPs setting out the measures needed to meet these targets, including expected costs and financing sources.^{ix} The NRPs should provide a stronger basis for estimating restoration costs, but draft plans are not due until 2026. In addition, the Commission's report on funding needs, gaps and resources, expected in 2025, has not yet materialised.^x

However, a draft Commission report reportedly estimated that implementing the NRR would require between EUR 11.8 billion and EUR 13.1 billion per year until 2030.^{5 xi} This is almost double the IEEP and Trinomics estimate of nature restoration-specific need (29% of the additional financing needs, or EUR 6.41 billion annually). However, the IEEP and Trinomics estimate was produced before the Regulation was adopted and therefore reflects the 2030 Strategy's restoration ambition rather than the final legal obligations under the NRR.

It is important to note that Member States are not required to provide new or additional funding specifically for the implementation of their NRPs and may therefore simply reshuffle funds from existing commitments. There are also concerns that the Regulation and the accompanying templates used to prepare NRPs may not impose sufficiently strong requirements concerning integrated planning, financing and the involvement of relevant economic sectors. Combined with the possibility that some Member States may submit their plans late, this could result in less ambitious plans and delayed action, leading to higher future costs associated with inaction.

2.2 MFF Cycles and Biodiversity Expenditure Tracking

The MFF is the EU's long-term budget plan, setting commitment appropriations and spending ceilings across all EU-level budget categories. Prior to 2014, biodiversity, and even climate, were funded in practice but were not explicitly mainstreamed within the MFF. Since then,

⁵ According to the draft report, current funding from the existing MFF and Member State budgets amounts to around EUR 9.4 billion annually, resulting in an annual gap of EUR2.4–3.7 billion through 2027.

across the 2014–2020, 2021–2027 and proposed 2028–2034 MFF cycles, biodiversity's visibility has evolved with each iteration, alongside changes in spending ambitions and in the methodology used to track biodiversity-relevant expenditure.

Table 2-1 below summarises how biodiversity has been reflected across successive MFF cycles, comparing biodiversity commitments, expenditure-tracking methodologies, and estimated expenditures.

Table 2-1: Evolution of Biodiversity Mainstreaming across MFF Cycles (Figures shown in 2025 prices)^{xii}

MFF Cycle	Background	Biodiversity Commitments	Estimated Biodiversity Expenditure	Tracking Methodology
2014–2020 ^{xiii}	Biodiversity mainstreaming became more visible, but unlike climate, it lacked a formal target and was reported ex post.	N/A	€112bn (€16bn annually), approx. 8% of EU budget.	Adapted OECD Rio markers: principal 100%, significant 40%, non-relevant 0%.
2021–2027 ^{xiv}	Biodiversity was strengthened through non-binding targets, but its budget share fell partly due to NGEU*.	€129bn (€18.4bn annually) , approximately 5.8% of EU budget. Targets: 7.5% of EU budget in 2024, 10% in 2026–2027.	2024 target met at 7.6%; projected 7.9% in 2025; off track for 10% in 2026–2027. ^{xv}	Activity-based tracking using EU biodiversity coefficients: 0%, 40%, 100%.
2028–2034 proposed ^{xvi}	Biodiversity folded into broader climate/environment objectives. Funding consolidated under larger instruments, notably NRPPs* and ECF*. No dedicated biodiversity spending target means no guaranteed minimum allocation for biodiversity.	Proposed 35% climate/environment target, with no separate biodiversity target. Estimated climate/environment commitments of €587–635bn or 33%–36% of the proposed budget. ^{xvii}	N/A	Shift towards plan-based tracking through NRPPs rather than programme-level aggregation, to simplify reporting and reduce double counting.

*NGEU = NextGenerationEU (the EU's COVID-19 recovery instrument); NRPP = National and Regional Partnership Plans; ECF = European Competitiveness Fund

Note: commonly reported EU headline figures are in current/original prices; constant 2025 prices apply a 2% compound uplift, converting EUR 85.8bn to ~EUR 112bn for 2014–2020 and EUR 112.7bn to ~EUR 129bn for 2021–2027.^{xviii}

As shown in the table above, biodiversity expenditure tracking within the MFF has become more systematic and harmonised over time. However, because it still relies largely on ex ante tagging, biodiversity mainstreaming figures generally reflect planned allocations or commitments rather than actual payments. This leaves room for overcounting, as spending is counted based on expected biodiversity relevance rather than verified outcomes, with no

negative marker to capture spending that may harm biodiversity^{xix}. In addition, OECD markers, and more recently EU coefficients, have reportedly been applied broadly in some funds, meaning that a 100% coefficient does not always indicate that biodiversity was the sole or primary objective of the spending^{xx}. Double counting can also arise where EU funds are combined with Member State co-financing or where the same measure is tagged against multiple environmental objectives.^{xxi xxii}

Successive MFFs have made biodiversity more visible within the EU budget and have introduced higher spending ambitions over time, but overall funding has remained well below the level needed to meet the EU's biodiversity objectives, as discussed further in Section 2.6. However, concerns remain that the proposed 2028–2034 MFF could make biodiversity less visible by folding it into broader climate and environmental objectives. Without biodiversity-specific funding targets, there is a risk that biodiversity will be crowded out by competing priorities, and that it will become harder to track spending and verify biodiversity-positive outcomes.^{xxiii}

2.3 Key Funding Sources for Biodiversity

As described above, EU biodiversity funding is not delivered through a single dedicated biodiversity fund. Instead, it is largely mainstreamed through the MFF across wider EU programmes, particularly those linked to agriculture, regional development, recovery, research and environmental protection. Key funding sources include:

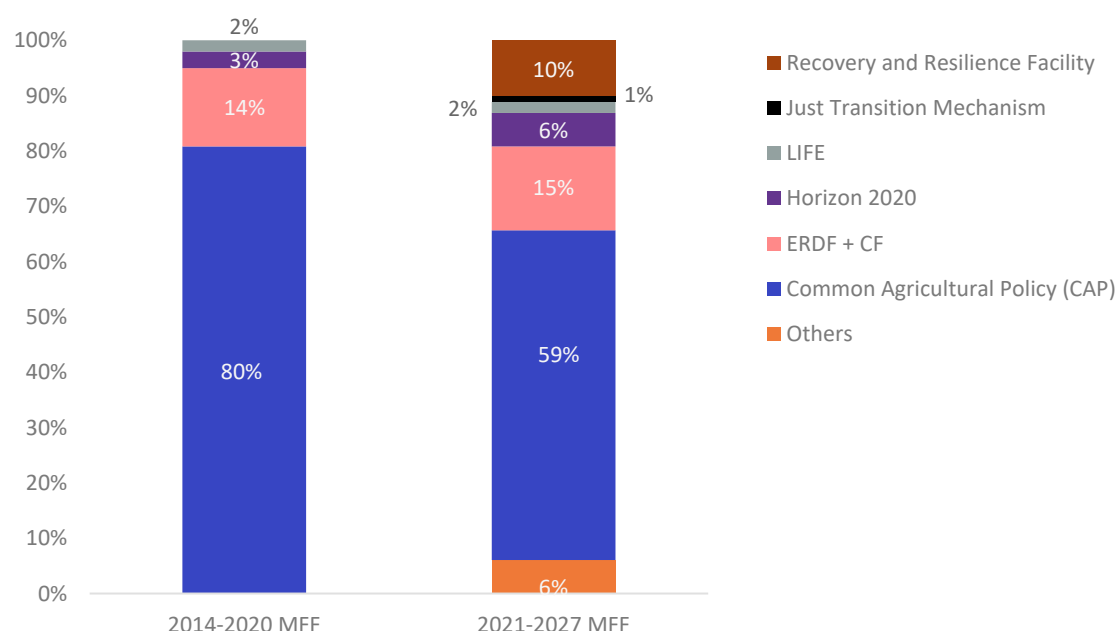
- **Common Agricultural Policy (CAP):** CAP is the largest source of biodiversity-relevant EU budgetary support. Its central role reflects the importance of agricultural and forested land for biodiversity, as well as the contribution of agricultural intensification to biodiversity loss and ecosystem degradation. However, it is also one of the most contested sources of funding, as its contribution to biodiversity is difficult to assess owing to gaps in monitoring data, the broad application of biodiversity coefficients and its role in supporting activities that may be harmful to biodiversity (see Section 2.5).^{xxiv} These harmful impacts are particularly significant given the agricultural sector's dependence on healthy soils, water systems, pollinators and resilient ecosystems.
- **European Regional Development Fund (ERDF) and Cohesion Fund (CF):** Together these are the second-largest contributors to EU biodiversity-relevant funding. They are particularly important at regional and local level, supporting green infrastructure, ecosystem restoration, Natura 2000 management and nature-based climate resilience measures.
- **Horizon Europe:** Supports biodiversity mainly through research and innovation, improving the evidence base for policy and implementation through funding for monitoring, data, modelling, policy tools and nature-based innovation.
- **LIFE Programme:** The most targeted EU funding instrument for biodiversity, supporting conservation, restoration, governance, capacity-building and demonstration projects, including Natura 2000, species protection and habitat restoration. Under the proposed 2028–2034 MFF, LIFE is not expected to continue as a standalone programme.
- **Recovery and Resilience Facility (RRF):** A temporary source of biodiversity-relevant funding during the 2021–2027 MFF cycle, requiring Member State recovery plans to allocate at least 37% of spending to the green transition. Biodiversity-relevant measures can include nature restoration, ecosystem resilience and green infrastructure. However, subsequent analysis estimated that biodiversity-related activities accounted for as little as 2% of total RRF funding.^{xxv}

Further detail on these funding sources is provided in Appendices A.2.0–A.3.0.

As there is no dedicated fund, biodiversity must compete with other priorities within these funds and depends on how Member States choose to implement programmes at national and regional level.^{xxvi} As a result, while significant public funding opportunities are available to support biodiversity, this does not always translate into actual or effective expenditure. For instance, many funds dedicate only a small fraction of their available financing to biodiversity-related activities (typically between 5% and 15%), while more targeted funds, such as LIFE, are relatively small in absolute terms (EUR 1.7 billion across 2014–2020). A breakdown of biodiversity-tracked expenditure by EU fund for the period 2014–2020 is provided in Appendix 3.0.

As shown in Figure 2-2, the distribution of biodiversity-relevant funding commitments across programmes has evolved between the 2014–2020 and 2021–2027 MFF cycles. The largest change is the decline in the share attributed to the Common Agricultural Policy, which fell from around 80% of tagged biodiversity commitments in 2014–2020 to 59% in 2021–2027. This reflects, in part, changes in CAP programme design, increased biodiversity-relevant spending in other parts of the EU budget, and the introduction of new instruments such as the Recovery and Resilience Facility and the Just Transition Mechanism.

Figure 2-2: Distribution of EU biodiversity-tracked commitments by EU fund, 2014–2020 MFF vs 2021–2027 MFF



Source: European Parliament's Impacts of 2028–2034 MFF report, Figure 6

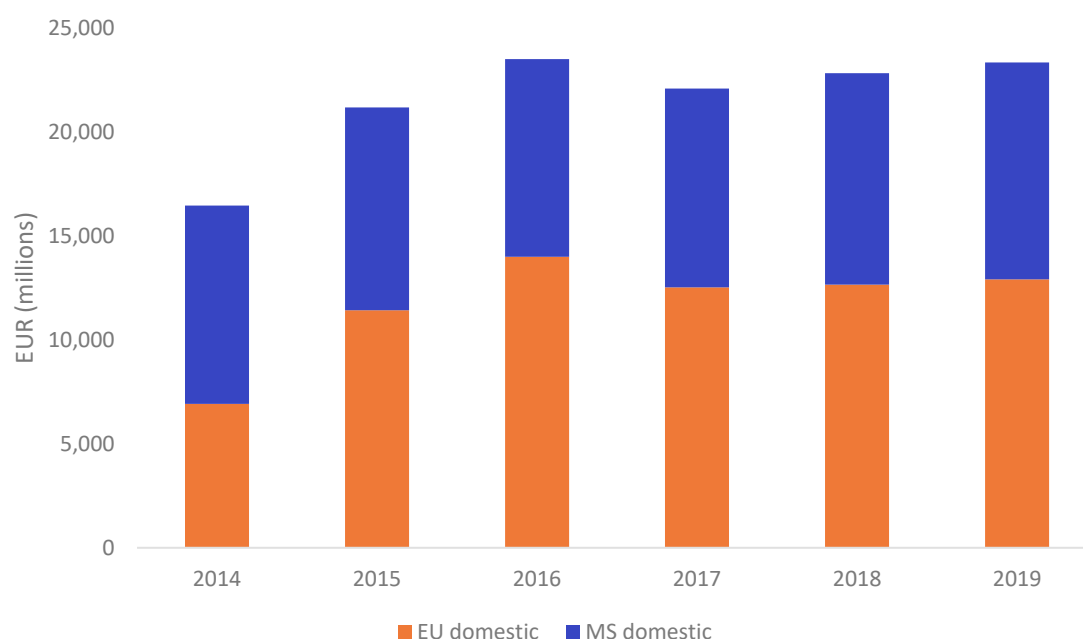
2.4 Member State Contribution

Quantifying individual Member State contributions is challenging because biodiversity funding combines national budgets, national co-financing and EU funds implemented under shared management. This is particularly evident for Natura 2000-related spending identified in PAFs, where EU and national funding sources are often combined and vary significantly across Member States. Where EU funds pass through Member State budgets, there is a risk of double counting when EU and national expenditure are aggregated.^{xxvii}

In addition, there is no consistent and comprehensive EU-wide dataset on Member State biodiversity contributions. Available data tends to focus narrowly on direct biodiversity spending, which can miss expenditure recorded under broader sectors such as agriculture, rural development or water management.^{xxviii} Most reporting on Member State contributions,

including the data from the IEEP and Trinomics 2022 report used in Figure 2-3 below, relies on Eurostat COFOG 05.4, which captures direct government expenditure on biodiversity and landscape protection.^{xxix}

Figure 2-3: EU and Member State domestic biodiversity-tagged expenditure, 2014-2019



Source: IEEP and Trinomics' Biodiversity and Financing Report, Table 28

As shown in Figure 2-3, total biodiversity-tagged expenditure increased from EUR 16.5 billion to EUR 23.3 billion between 2014 and 2019. This was driven by a notable uplift in EU domestic spending after 2014 when the 2014–2020 MFF cycle was first starting to come into effect and biodiversity funding became more consistently mainstreamed. Over the period, the balance also shifted from Member State-led to EU-led expenditure, with the EU share rising from around 42% to 55% of the combined total.

In contrast, Member State domestic expenditure was relatively flat, increasing by less than 10% over the period. It also remained highly concentrated in a small number of countries, with the top five, **Italy, France, Germany, Spain and the Netherlands**, accounting for around 75% of total Member State domestic expenditure. By comparison, countries such as Bulgaria, Cyprus, Latvia, Malta, Romania and Slovenia recorded low levels of expenditure. This may reflect lower prioritisation of biodiversity, but it may also reflect differences in reporting practices or the fact that biodiversity-relevant spending is recorded under other categories, such as agriculture, rural development or water management.

For a further breakdown of year-on-year changes in expenditure, see AppendixA.4.0.

2.5 Biodiversity-Harmful Subsidies

In addition to biodiversity-positive funding under the MFF, a significant portion of public funding could be classified as biodiversity-harmful subsidies (BHS). BHS are a subset of environmentally harmful subsidies, which the OECD defines as government actions that confer an advantage on consumers or producers and lead to higher levels of environmental damage than would otherwise occur.^{xxx} In the case of BHS, this refers to support that directly or indirectly incentivises activities contributing to species decline, habitat degradation or ecosystem damage.

Examples include agricultural subsidies that encourage unsustainable farming practices, or forestry subsidies that promote unsustainable logging.^{xxx}

In a 2024 report, WWF estimated that between **EUR 34.4 billion and EUR 48.9 billion of spending under the 2021–2027 MFF could be classified as biodiversity-harmful**.^{xxxii} CAP-related spending accounted for the largest share, partly because of the size of the fund, with around 60% of CAP funding, estimated at EUR 31.4–32.1 billion annually, considered to have a negative impact on biodiversity. While CAP dominates in absolute terms, other funds linked to forestry, fisheries, transport and water infrastructure also contribute to BHS. For example, WWF estimates that 7–11% of ERDF and Cohesion Fund activities could be classified as biodiversity-harmful where they support infrastructure projects that negatively alter water ecosystems.

Estimating BHS is challenging, and figures should be treated with caution due to limited funding data and the difficulty of assessing biodiversity impacts across broad spending categories. In addition, the WWF methodology focuses primarily on direct subsidies, meaning it may not fully capture indirect support that enables further biodiversity degradation, such as tax breaks benefiting extractive industries.

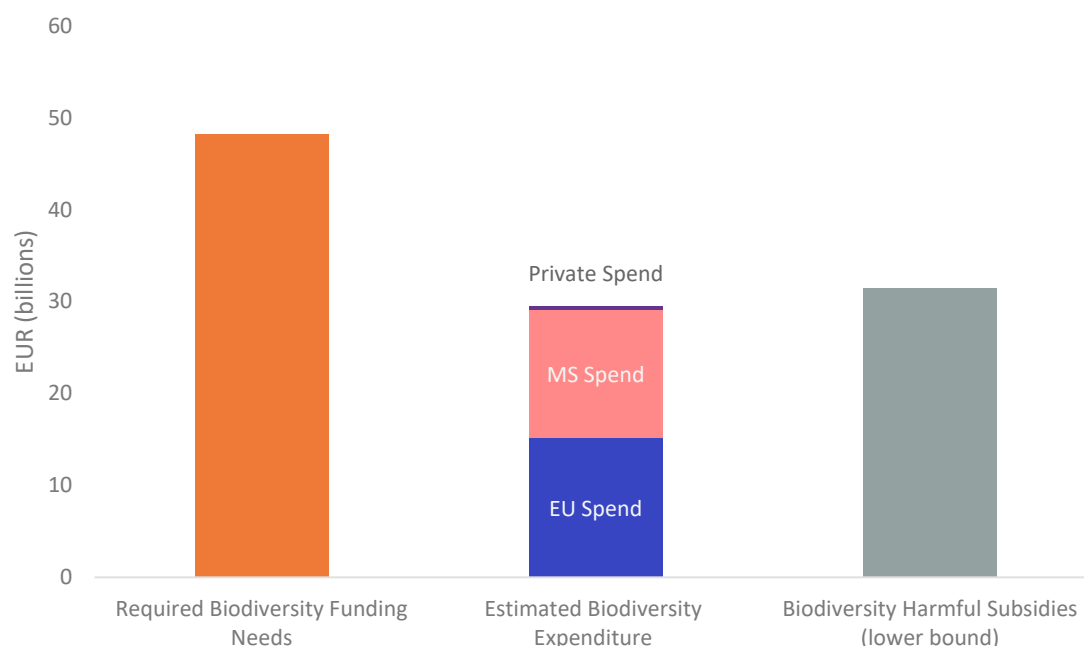
2.6 Biodiversity Spending Gap

The most comprehensive and methodologically rigorous estimate identified for the EU biodiversity financing gap comes from the 2022 IEEP and Trinomics report, outlined in Section 2.1. In particular, the authors used a bottom-up methodology to estimate:

- The expenditure required to address the 41 objectives of the EU Biodiversity Strategy for 2030: **EUR 48.2 billion per year across 2021–2030**.^{xxxiii}
- Current expected biodiversity expenditure for 2021–2030: **EUR 29.5 billion per year**. This comprises EUR 15.2 billion from the EU budget, EUR 13.9 billion from Member State public expenditure and around EUR 0.4 billion from private finance. These projections were based on historic and forecast EU and Member State expenditure, plus extrapolation from limited private finance data, including philanthropy, NGOs and green bonds.

As shown in Figure 2-4, this leaves an annual **financing gap of around EUR 18.7 billion**, or EUR 186.9 billion over the decade, meaning expected biodiversity spending would need to increase by approximately 63% to meet estimated needs. One potential way to help close this gap would be to repurpose biodiversity-harmful subsidies under the MFF towards biodiversity-positive activities, as discussed further in Section 4.0.^{xxxiv}

Figure 2-4: EU Biodiversity finance gap and harmful subsidies, annual costings 2021-2027



Source: IEEP and Trinomics' Biodiversity and Financing Report & WWF and Trinomics' Harmful Subsidies Report

Although substantial, the estimated annual biodiversity financing gap of EUR 18.7 billion is relatively modest when compared with expenditure in other policy areas. For context, it is equivalent to around 4.5% of EU Member States' defence spending in 2025^{xxxv} and approximately 17% of the amount provided through fossil-fuel subsidies in the EU in 2023.^{xxxvi}

Other Funding Gap Estimates

Other studies have also attempted to estimate the biodiversity financing gap, using different methodologies and often narrower scopes. Aside from the IEEP and Trinomics estimate described above, two other commonly cited gap figures come from the JRC's proposed biodiversity financing indicator and the Commission's 2025 Environmental Implementation Review (EIR).

- The JRC gap figure comes from its attempt to monitor progress against the EU's EUR 20 billion per year commitment.^{xxxvii} The proposed indicator identifies around EUR 17.2 billion per year over 2021–2027 across the three components it tracks: EU funding for internal action, Member State co-financing and finance mobilised through InvestEU. This leaves an annual gap of around EUR 2.8 billion against the EUR 20 billion per year commitment, equivalent to a cumulative gap of around EUR 19.77 billion over 2021–2027. However, this estimate is narrower than the IEEP and Trinomics estimate. It only captures funding flows that can be consistently monitored through the three components included in the indicator, and it measures the gap against the Strategy's minimum EUR 20 billion per year finance commitment rather than against the full estimated cost of delivering the Strategy's objectives.
- The EIR has a different focus from the other estimates. In particular, it estimates the investment required to close the implementation gap for relevant EU biodiversity law and policy, including the EU Biodiversity Strategy for 2030 and related nature legislation, especially the Birds and Habitats Directives, Natura 2000, the Nature Restoration Regulation, the Invasive Alien Species Regulation, and complementary soil and forest strategies. It estimates that this would require around EUR 37.4 billion per year.^{xxxviii} This

estimate is broader than the IEEP and Trinomics figure in the sense that it covers implementation needs across a wider set of EU biodiversity-related laws and policies. However, it is also narrower in another respect, as it focuses specifically on closing the implementation gap rather than costing the full delivery of all 41 objectives of the EU Biodiversity Strategy for 2030.

Despite differences in methodology and in the calculation of the final funding gap, all three estimates point to the same broad conclusion; that the EU faces a multibillion-euro annual shortfall in financing biodiversity.

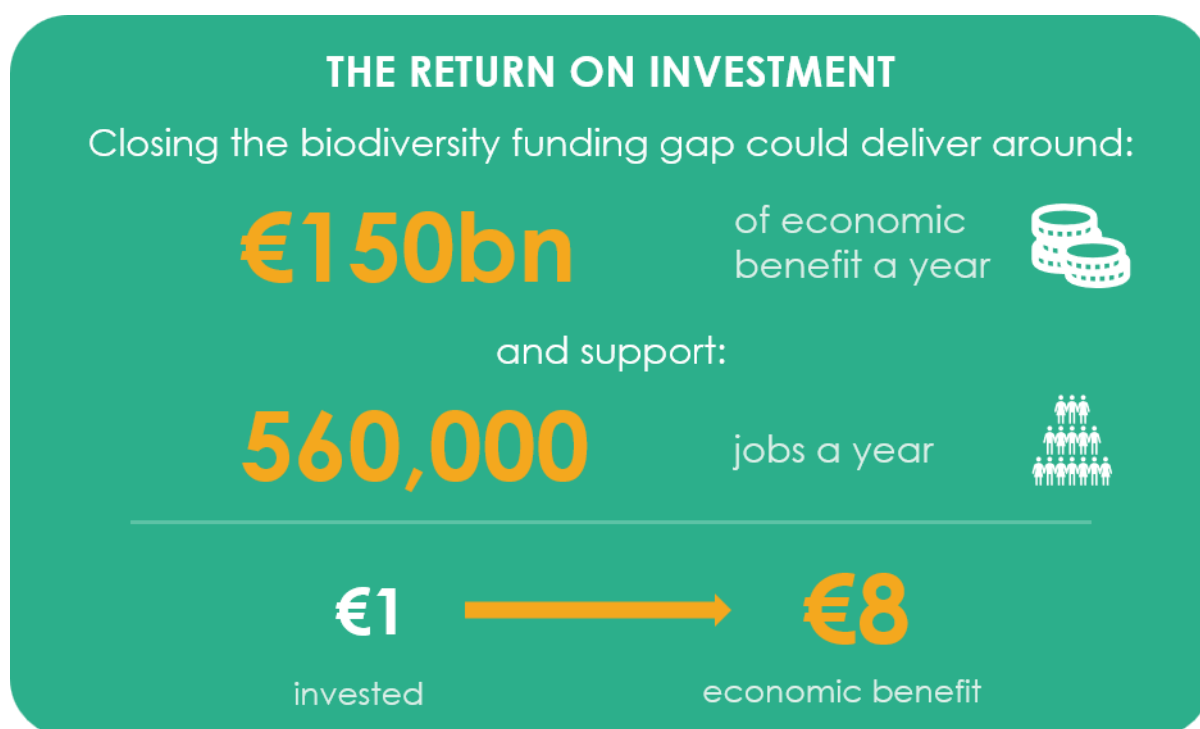
3.0 The Economic Case for Biodiversity Investment

This section sets out the economic case for increased EU action on biodiversity. It summarises the available evidence on the economic costs of biodiversity inaction (Section 3.1), the returns from increased investment (Section 3.2) and presents specific evidence for the sectors most vulnerable to biodiversity loss (Section 3.3).

Ultimately it finds that biodiversity loss should be understood as a systemic risk across the EU economy, rather than a problem confined to isolated sectors. In particular, while some sectors, such as agriculture, forestry, fisheries, food production and water management, are particularly exposed because of their direct dependence on biodiversity, they are also critical to wider supply chains, regional economies and economic resilience. Failure to invest in biodiversity therefore creates macroeconomic risks as well as environmental loss.

Moreover, biodiversity funding can deliver a significant return on investment by avoiding future damage, reducing exposure to climate and environmental shocks, and strengthening the ecosystem services on which key sectors depend, with each euro of investment expected to deliver 8 euros of economic benefit, as estimated by the European Commission ^{xxxix}. If extrapolated to the scale of the funding gap presented in Section 2.6, this equates to **EUR 150 billion of economic benefit a year**. Investment on this scale would also be expected to support substantial employment across the EU, both directly and indirectly, and is expected to provide an estimated **560,000 additional jobs** ^{xl}.

Figure 3-1: The Return on Biodiversity Investment



3.1 The Cost of Biodiversity Inaction

Biodiversity inaction is expected to cause large, systemic, and accelerating economic costs. The strongest quantified estimates come from global modelling studies, which integrate ecosystem service losses across multiple sectors and time horizons. Under a business-as-usual trajectory, global annual losses from land-based ecosystem services could reach approximately EUR 14 trillion by 2050, equivalent to around 7% of global GDP ^{xli}. Furthermore, even partial ecosystem collapse scenarios indicate global GDP losses of around 2.3% (approximately EUR 2.4 trillion annually) by 2030, with much larger impacts under more severe degradation ^{xlii xliii}. These figures reflect both direct losses in ecosystem services and indirect macroeconomic impacts, including reduced productivity, supply chain disruption, and financial instability.

EU-specific evidence is less comprehensive but strongly supports these conclusions. While there is no single consolidated estimate of the total economic cost of biodiversity loss in Europe, available evidence points to substantial and growing impacts across multiple sectors. For instance, scaling from the global figures above on the basis of the EU's share of global GDP – taking EU GDP at approximately EUR 18.8 ^{xliv} trillion in 2025, gives an indicative range of a potential **EUR 0.4–1.3 trillion annual loss associated with biodiversity inaction**. This figure should however be treated as illustrative only, as the underlying global estimates relate to different time horizons (2030 and 2050) and it assumes that EU biodiversity-related economic losses are proportional to the EU's share of global GDP, which is unlikely to hold in practice given the uneven global distribution of biodiversity pressures and economic activity.

These biodiversity-related costs propagate through economic and financial systems, with supply chains acting as a key transmission channel. Disruptions to water, agricultural commodities, or raw materials can cascade across industries and geographies ^{xlv}. These disruptions are often amplified by global trade linkages which are particularly important in the EU, where economies are highly integrated into global supply chains ^{xlvi}.

Although direct comparisons between inaction and high-ambition scenarios remain limited, the available evidence consistently indicates that delayed action leads to higher total costs, particularly where ecosystem degradation becomes irreversible or triggers systemic risks ^{xlvii}. Similarly, although the evidence is generally conceptual or only partially quantified, biodiversity loss is characterised by non-linear dynamics and tipping points, where gradual degradation can trigger abrupt and irreversible changes, beyond which recovery is difficult or impossible, leading to large economic impacts ^{xlviii}. For example, a collapse of the Amazon rainforest, which may occur at 20-25% deforestation, would disrupt global rainfall patterns, affecting regional ecosystems and therefore impacting local economic systems such as agriculture across Europe ^{xlix}. More broadly, biodiversity risks are described as involving cascading and compounding effects across interconnected systems, including food, water, and climate ^{i, ii}.

Moreover, a key implication of these dynamics is the risk of economic lock-in. In particular, as ecosystems degrade, the cost of restoration is expected to increase significantly, and recovery may not always be possible ^{iii, liii}. This creates a non-linear trajectory of costs, where delayed intervention not only increases damage but reduces future policy options, reinforcing the economic case for early action. Quantitative modelling of tipping points at the EU level remains limited however and many estimates do not fully capture these dynamics, suggesting that current cost projections may underestimate risks.

3.2 The Economic Returns and Co-benefits of Biodiversity Investment

There is however much more consistent evidence that investment in biodiversity generates substantial economic returns, often significantly exceeding the costs of investment. Benefit-cost ratios typically range from around 4:1 to 38:1, i.e. a return of EUR 4–38 for each EUR 1 invested ^{liv}. This is consistent with a recent European Commission study that estimated that **implementing restoration targets across the EU could yield EUR 1,860 billion in benefits by 2050, compared to EUR 154 billion in costs, an overall ratio of 8:1** ^{lv}. Applying this return on investment to the scale of the funding gap presented in Section 2.0 equates to **EUR 150 billion of economic benefit a year**.

In some cases, the magnitude of returns is considerably higher. For example, one widely cited global estimate suggests that large-scale ecosystem protection and restoration can generate annual benefits exceeding EUR 3.8 trillion relative to costs of approximately EUR 39.4 billion, a return on investment of approximately 100:1, reflecting the high value of ecosystem services ^{lvi}. This level of return is comparable to, and often exceeds, typical benefit-cost ratios for major areas of public spending such as infrastructure, health, and transport, indicating that biodiversity investment performs strongly relative to conventional investment categories ^{lvii}.

These positive returns are primarily driven by avoided losses, improved ecosystem function, and spillover effects across sectors. There is also growing evidence that integrated approaches linking biodiversity, climate, and land use policy can generate significant efficiency gains, reducing costs by up to 40% whilst also increasing environmental and economic benefits ^{lviii}. This highlights the importance of policy coherence in maximising returns on biodiversity investment.

Moreover, conventional economic measures may underestimate the total value of biodiversity investment, given that a significant share of the benefits arises from ecosystem services that are not traded in markets, including regulating and cultural services such as climate regulation, air quality, and recreation. These services are nonetheless economically significant: at the EU level for example, ecosystem services contribute hundreds of billions of euros per year, with individual services such as recreation valued at around EUR 50 billion annually ^{lix}. Valuation challenges remain substantial, however, and many services, particularly non-use values and long-term resilience benefits, are not fully captured in economic metrics, leading to an underestimation of the returns from biodiversity investment. Furthermore, as explored in Box 3, public biodiversity funding if used strategically can catalyse and crowd in private investment, leading to potentially even greater benefits.

3.3 Sector-specific Costs and Returns

This section examines the economic sectors most vulnerable to biodiversity loss and the pathways through which they are affected, building on the system-level impacts outlined above. In particular it summarises the evidence on both the cost of biodiversity inaction and the returns from greater investment for the following economic sectors:

- Agriculture and food systems
- Climate regulation and disaster risk mitigation
- Construction and infrastructure
- Energy
- Finance and insurance
- Fishing
- Forestry
- Health
- Manufacturing
- Tourism
- Water
- Broader macroeconomic and societal impacts

Agriculture and food systems

Biodiversity loss is expected to lead to direct agricultural productivity decline and increased vulnerability to external shocks by impacting the following ecosystem services:

- Declining pollination: as reductions in pollinator populations limit crop reproduction, leading to lower yields, reduced output stability, and increased price volatility in food markets.
- Degrading soil fertility and structure: as loss of soil biodiversity weakens nutrient cycling and water retention, increasing reliance on inputs and reducing productivity.
- Reduced water availability regulation: as loss of vegetation and ecosystem function diminishes infiltration and storage, increasing exposure to drought and flooding.
- Lower resilience to pests, diseases, and climate variability: as reduced ecosystem diversity weakens natural controls and increases vulnerability to shocks and extreme events, heightening the risk of food insecurity and lowering dietary diversity.

At the EU level, biodiversity loss is already impacting agricultural production. In particular, soil erosion, as a result of reduced biodiversity and other land pressures, is currently estimated to cause approximately **EUR 1.25 billion in agricultural productivity losses annually**^{lx}. Moreover, the continued reduction in insect pollinators could lead to a 25-32% reduction in total crop production^{lxi, lxii}. With a total value in 2024 of EUR 267.7 billion,^{lxiii} this equates to around **EUR 66.9-85.7 billion of crop production potentially at risk**.

Biodiversity investment, however, is expected to deliver substantial economic returns in agriculture largely through these avoided losses and additional productivity gains. Modelling evidence indicates that biodiversity-positive scenarios can increase global agricultural production by EUR 31-158 billion through improved yield stability and resilience^{lxiv} delivering additional gains in food security and system stability that are only partially captured in these economic metrics. This equates to about 1-5% of global agricultural production value^{lxv} or **EUR 5-25 billion in potential gains** for the EU on a pro-rata basis. This EU figure should however be treated as illustrative as it assumes that benefits scale in the EU as they do globally, which may not hold given differences in cropping systems, biodiversity baselines and ecological context. A robust EU figure would require modelling calibrated to European conditions.

Climate regulation and disaster risk mitigation

Biodiversity loss also contributes to climate-related risks and disasters through multiple pathways, including:

- Reduced carbon sequestration: as degradation of forests, soils, and ecosystems limits their ability to absorb and store carbon dioxide, increasing atmospheric concentrations.
- Increased flood risk: as degradation of wetlands and natural vegetation reduces water storage and slows infiltration, leading to higher runoff and more frequent and severe flooding.
- Reduced coastal protection: as loss of ecosystems such as saltmarshes and mangroves weakens natural barriers, increasing exposure to storm surges, erosion, and coastal damage.

Degradation of these systems reduces their regulatory capacity, increasing both the frequency and severity of climate-related damages.

In Europe, observed economic losses highlight the scale of these impacts. Weather- and climate-related damages totalled EUR 738 billion between 1980 and 2023, with annual losses in recent years more than double those of previous decades ^{lxvi}. While biodiversity's precise contribution cannot be directly attributed, flood damages alone are projected to reach nearly EUR 1 trillion per year by 2100 without additional investment ^{lxvii}.

Investment in ecosystem restoration can, however, generate high returns through avoided damages from climate-related risks. Nature-based interventions can significantly reduce exposure to hazards, and floodplain restoration in the EU has been shown to reduce flood risk by up to 70% and generate around EUR 2 billion in avoided damages ^{lxviii}. Similarly, coastal ecosystem restoration across Europe can deliver cost savings of approximately EUR 312 million compared to engineered alternatives, demonstrating that natural infrastructure can be both effective and cost-efficient ^{lxix}.

These benefits are significant given existing exposure: climate-related losses in Europe totalled EUR 738 billion between 1980 and 2023 ^{lxx}. In addition to avoided damages, ecosystem restoration contributes to mitigation, with up to 286 MtCO₂e per year of carbon sequestration potential in Europe, reducing long-term climate costs ^{lxxi}.

Construction and infrastructure

Construction and infrastructure are exposed to biodiversity loss through their dependence on ecosystem services that reduce physical risks and protect built assets. Biodiversity loss contributes to construction and infrastructure related economic risks through multiple pathways, including:

- Increased flood risk: as degradation of wetlands, floodplains and natural vegetation reduces water storage and flow regulation, increasing the frequency and severity of flooding.
- Increased erosion and landslide risk: as loss of vegetation and ecosystem stability weakens natural protection of soils, slopes and coastlines.
- Greater infrastructure vulnerability: as degradation of natural buffers increases exposure of transport networks, buildings and utility infrastructure to extreme weather events, meaning higher maintenance and replacement costs as more frequent

environmental damage increases repair, adaptation and resilience spending requirements.

Whilst there is limited data on the specific costs to the construction sector, evidence from Europe highlights the scale of these risks. For instance, weather and climate related damages totalled approximately EUR 738 billion between 1980 and 2023, with annual losses increasing significantly in recent decades ^{lxxii}. Looking ahead, flood damages alone are projected to reach up to EUR 1 trillion annually by 2100 in the absence of additional adaptation measures ^{lxxiii}. While biodiversity loss is not the sole driver of these impacts, degradation of ecosystems such as wetlands, forests and coastal habitats reduces natural protection against flooding, erosion and extreme weather, thereby increasing overall economic exposure.

Investment in biodiversity can therefore generate substantial economic benefits through avoided infrastructure damage and reduced disaster recovery costs. Nature-based solutions such as wetland restoration, floodplain restoration and coastal habitat protection can complement or replace engineered infrastructure while enhancing long-term resilience and reducing lifecycle costs. For example, floodplain restoration has been shown to reduce flood risk by up to 70% and generate around EUR 2 billion in avoided damages, while coastal ecosystem restoration can deliver cost savings of approximately EUR 312 million compared with engineered alternatives ^{lxxiv}.

Energy

Energy systems are dependent on biodiversity and ecosystem services through their reliance on water availability, climate regulation and ecosystem stability. Biodiversity loss contributes to energy-related economic risks through multiple pathways, including:

- Reduced water availability: as degradation of wetlands, forests and freshwater ecosystems reduces water storage and flow regulation, affecting hydropower generation and water availability for cooling systems.
- Increased exposure to flooding and erosion: as the loss of natural buffers increases physical risks to energy infrastructure, including power plants, transmission networks and associated assets.
- Greater weather variability: as ecosystem degradation reduces climate regulation services, contributing to more volatile weather patterns that can disrupt energy generation and distribution, increasing vulnerability to climate-related shocks, operational disruptions and asset damage.

Evidence from Europe highlights the importance of water-related risks: under severe drought scenarios, up to 24% of economic output is exposed to surface water scarcity, rising to around 30% when groundwater impacts are included ^{lxxv}. While these figures apply to the wider economy rather than the energy sector alone and are caused by issues wider than solely biodiversity loss, they illustrate the scale of exposure facing water-dependent activities such as hydropower generation and thermal power plant cooling. Investment in biodiversity can therefore improve the resilience of energy systems by supporting water regulation, reducing flood risk and strengthening natural climate regulation.

Finance and insurance

Financial institutions are indirectly dependent on biodiversity and ecosystem services through their exposure to ecosystem-dependent sectors and broader economic stability. Biodiversity loss contributes to financial and insurance-related risks through multiple pathways, including:

- Asset devaluation: as biodiversity loss reduces the value and profitability of ecosystem-dependent businesses and assets.

- Credit risk: as impacts on agriculture, energy, water, manufacturing, and other sectors weaken borrower performance and increase the risk of default.
- Insurance losses: as ecosystem degradation increases exposure to flooding, droughts, and other environmental shocks, raising claims and underwriting risks.
- Macroeconomic instability: as biodiversity loss contributes to supply-chain disruption, commodity price volatility, inflationary pressures, and reduced economic resilience.

These impacts can propagate through lending, investment, and insurance portfolios, creating risks that extend beyond directly affected sectors. Because financial institutions are interconnected with the wider economy, biodiversity-related shocks have the potential to amplify and transmit risks across markets and geographies. European financial systems are highly exposed, with approximately 72% of firms and 75% of bank lending in the euro area highly dependent on ecosystem services ^{lxvii}. These indirect impacts can often exceed direct ecosystem service losses in scale.

While no direct quantitative link was identified in the published literature, investment in biodiversity is expected to reduce these risks by strengthening the resilience of ecosystem-dependent sectors, helping to stabilise supply chains and reduce exposure to climate- and nature-related shocks, and ultimately reducing systemic vulnerabilities.

Fishing

Fishing is highly dependent on marine biodiversity, habitat quality, and ecosystem balance. Biodiversity loss contributes to fisheries-related economic risks through multiple pathways, including:

- Declining fish stocks: as overexploitation, habitat degradation, and biodiversity loss reduce the abundance, reproductive capacity, and catch stability of commercially important species.
- Reduced ecosystem resilience: as degradation of marine ecosystems weakens their ability to recover from environmental shocks and fishing pressure.
- Indirect impacts on food systems and livelihoods: as declining fisheries productivity affects employment, incomes, food security, and coastal communities that depend on marine resources.

These impacts can reduce revenues, increase operating costs, and undermine the long-term sustainability of the sector. Because fisheries depend directly on wild species and functioning marine ecosystems, there are limited opportunities to substitute for lost natural capital, making the sector particularly vulnerable to biodiversity decline. There is, however, limited quantified evidence on the economic impacts of nature-related risks in the fishing sector, nor on the economic opportunities of positive investment in marine biodiversity.

Forestry

Forestry is highly dependent on biodiversity and ecosystem services through its reliance on healthy soils, water availability, species diversity, and resilient ecosystems. Biodiversity loss contributes to forestry-related economic risks through multiple pathways, including:

- Reduced timber productivity: as ecosystem degradation weakens forest growth, regeneration, and overall forest health.
- Increased exposure to pests and diseases: as declining biodiversity reduces ecosystem resilience and weakens natural controls on forest pests and pathogens.

- Greater vulnerability to extreme weather: as degraded forests become less resilient to droughts, storms, wildfires, and other climate-related shocks.
- Loss of ecosystem functions: as biodiversity decline reduces the capacity of forests to provide wider services such as carbon sequestration, water regulation, and soil protection.

These impacts can reduce timber yields, increase management costs, and create greater volatility in forest production. Because forests provide both commercial products and critical ecosystem services, biodiversity loss affects not only the forestry sector itself but also industries and communities that depend on the broader benefits forests provide.

Although quantitative evidence on direct economic losses in the sector is limited, the broader economic significance of forests is demonstrated by their contribution to ecosystem services. For example, restoration of terrestrial ecosystems could sequester up to 286 MtCO₂e annually in Europe, highlighting the sector's importance for climate regulation and long-term economic resilience^{lxxvii}. Investment in biodiversity can therefore strengthen forest resilience by supporting ecosystem diversity, improving resistance to pests and diseases, and maintaining forest ecosystem functions.

Health

Biodiversity loss further contributes to health impacts through multiple pathways, including:

- Increased air pollution: as loss of vegetation reduces natural filtration, leading to higher exposure to harmful pollutants.
- Declining water quality: as degraded ecosystems reduce natural purification, increasing contamination and water-borne risks.
- Increased heat stress: as loss of urban green space reduces cooling effects, raising temperatures and associated health risks.
- Increased disease transmission: as ecosystem disruption alters species interactions, increasing the likelihood of zoonotic and vector-borne diseases.

These effects translate into significant economic costs through healthcare expenditure, reduced labour productivity, and mortality. In Europe, environmental pollution is already associated with approximately 500,000 premature deaths annually, while heat-related mortality represents an increasing risk^{lxxviii}. The economic cost of pollution alone is estimated at EUR 600 billion per year, equivalent to around 4% of EU GDP^{lxxix}.

Biodiversity investment can provide significant co-benefits for public health such as improved air and water quality, temperature regulation, and disease mitigation. For instance, the IEEP estimated that increasing green infrastructure in European cities could generate approximately EUR 364 billion in reduced cooling costs and EUR 221 billion in avoided heat-related impacts^{lxxx}. These benefits arise through reduced energy demand, lower mortality, and improved quality of life. Additional benefits include reductions in air pollution and associated healthcare costs, as well as improvements in mental health and productivity. While these effects are often difficult to monetise, they represent significant contributions to economic welfare and labour market outcomes.

Manufacturing

Manufacturing is indirectly exposed to biodiversity loss through its dependence on ecosystem-dependent supply chains, including raw materials, water, energy, and agricultural inputs. Biodiversity loss contributes to manufacturing-related economic risks through multiple pathways, including:

- Resource scarcity: as ecosystem degradation reduces the availability and reliability of natural resources used in production processes.
- Water-related disruptions: as declining water availability and quality affect industrial operations, cooling processes, and manufacturing supply chains.
- Supply chain disruption: as biodiversity loss affects agricultural production, forestry, fisheries, and other ecosystem-dependent sectors that provide inputs to manufacturing.
- Input price volatility: as environmental degradation increases resource scarcity and supply uncertainty, contributing to higher production costs and price instability.

Evidence suggests that exposure is largely indirect but widespread across manufacturing value chains; approximately 72% of euro-area firms are highly dependent on at least one ecosystem service, with manufacturing identified as one of the sectors exposed through supply-chain dependencies and water-related risks ^{lxxxi}. These risks are amplified by global trade dependencies, where environmental degradation in producer regions can lead to supply shortages, higher input costs, and increased volatility in international markets.

Investment in biodiversity can help strengthen supply-chain resilience by maintaining ecosystem services that support resource availability, water security, and stable production systems. While the benefits are often difficult to isolate for manufacturing alone, they contribute to reduced operational risk, improved resource security, and greater resilience across industrial value chains.

Tourism

Biodiversity loss contributes to tourism-related economic risks through multiple pathways, including:

- Reduced attractiveness of destinations: as degradation of natural landscapes, habitats and wildlife reduces the appeal of nature-based tourism destinations and protected areas.
- Declining recreational opportunities: as ecosystem degradation limits activities such as wildlife watching and nature tourism as well as hiking and other outdoor recreation.
- Lower resilience of local tourism economies: as regions dependent on biodiversity-based tourism become more vulnerable to environmental degradation and economic shocks.

In the EU, Natura 2000 sites generate an estimated EUR 200–300 billion in annual economic benefits and support millions of visitors and jobs, highlighting the substantial economic value associated with biodiversity and ecosystem quality ^{lxxxii}. Biodiversity loss therefore threatens a significant stream of economic activity, particularly in rural and coastal regions that depend heavily on nature-based tourism.

Investment in biodiversity can therefore generate substantial economic returns through tourism and recreation by maintaining the natural assets on which visitor demand depends. These benefits are often complemented by wider co-benefits for local employment, regional development, public wellbeing and cultural services, many of which are only partially captured in conventional economic metrics. To the authors' knowledge, no published estimates exist for the return on investment from biodiversity-related spending on tourism in the EU. However, given the scale of the EU tourism sector and the established role of natural and semi-natural landscapes in attracting visitors, the associated benefits are likely to be substantial, even if the magnitude cannot currently be quantified.

Water

Biodiversity loss contributes to water-related economic risks through multiple pathways, including:

- Reduced water storage: as degradation of wetlands and soils lowers their capacity to retain water, reducing availability during dry periods.
- Disrupted water flows: as loss of vegetation and natural landscapes increases surface runoff and reduces flow regulation, leading to more frequent and severe flooding.
- Declining water quality: as weakened ecosystem filtration processes reduce the removal of pollutants, increasing contamination and treatment requirements.
- Reduced system resilience: as loss of habitat diversity destabilises hydrological cycles, increasing vulnerability to climate variability and extreme events.

In Europe, under severe drought scenarios, up to 24% of economic output in the euro area is exposed to surface water scarcity, rising to around 30% when groundwater impacts are included ^{lxxxiii}. Degradation of wetlands and freshwater ecosystems reduces natural purification capacity, requiring costly artificial substitutes and increasing vulnerability to shocks ^{lxxxiv, lxxxv}.

Investment in biodiversity also generates substantial benefits in water management by enhancing natural regulation of water quantity and quality. Moreover, nature-based water management can be highly cost-effective, with watershed protection projects having demonstrated that ecosystem-based approaches can deliver water purification services at lower cost than traditional treatment systems ^{lxxxvi}. In the EU, water-related ecosystem services form a significant component of total ecosystem service value, estimated at EUR 234 billion annually ^{lxxxvii}. By improving water availability and quality, biodiversity investment reduces treatment costs, supports industrial productivity, and lowers exposure to drought-related economic losses.

Broader macroeconomic and societal impacts

Beyond sector-specific impacts, greater biodiversity loss could have macroeconomic consequences affecting productivity, growth, and economic stability. Additional societal impacts include increased migration, geopolitical instability, and conflict, particularly where ecosystem services underpin livelihoods ^{lxxxviii, lxxxix}. These effects further amplify economic costs and create long-term development challenges.

Economic vulnerability is shaped by both domestic and global dependencies. EU economies are exposed not only to domestic biodiversity loss but also to degradation in other regions through trade and supply chains. For example, dependence on imported agricultural products, raw materials and energy means that ecosystem degradation in producer regions abroad can affect EU production and prices. This creates a complex network of interdependencies, where local biodiversity loss interacts with global environmental changes ^{xc}. Systemic vulnerability arises from the combination of sectoral exposure and

interconnections across economic systems. As a result, biodiversity loss has the potential to generate widespread economic disruption, even in sectors that are not directly dependent on ecosystem services.

Vulnerabilities are concentrated in primary sectors such as agriculture, forestry, and fisheries, which are directly dependent on ecosystem services, and which are explored above and summarised in Table 3-1 below. However, risks propagate across supply chains, distribution networks, and financial systems, affecting manufacturing, services, and the wider economy. For example, banks, insurers, and investors are exposed to biodiversity loss through lending and investment portfolios linked to ecosystem-dependent activities. This dual role, as both an exposed sector and a transmission mechanism, means that biodiversity loss can propagate rapidly through financial systems, amplifying risks and potentially contributing to systemic instability ^{xc_i}, ^{xc_{ii}}. In the euro area, approximately 72% of firms and around 75% of bank lending are dependent on ecosystem services, indicating substantial systemic exposure ^{xc_{iii}}. This dependence means that biodiversity loss can translate directly into financial risks, including credit losses, asset devaluation and reduced profitability. As a result, biodiversity loss should be considered both a systemic economic risk and a sector-specific issue.

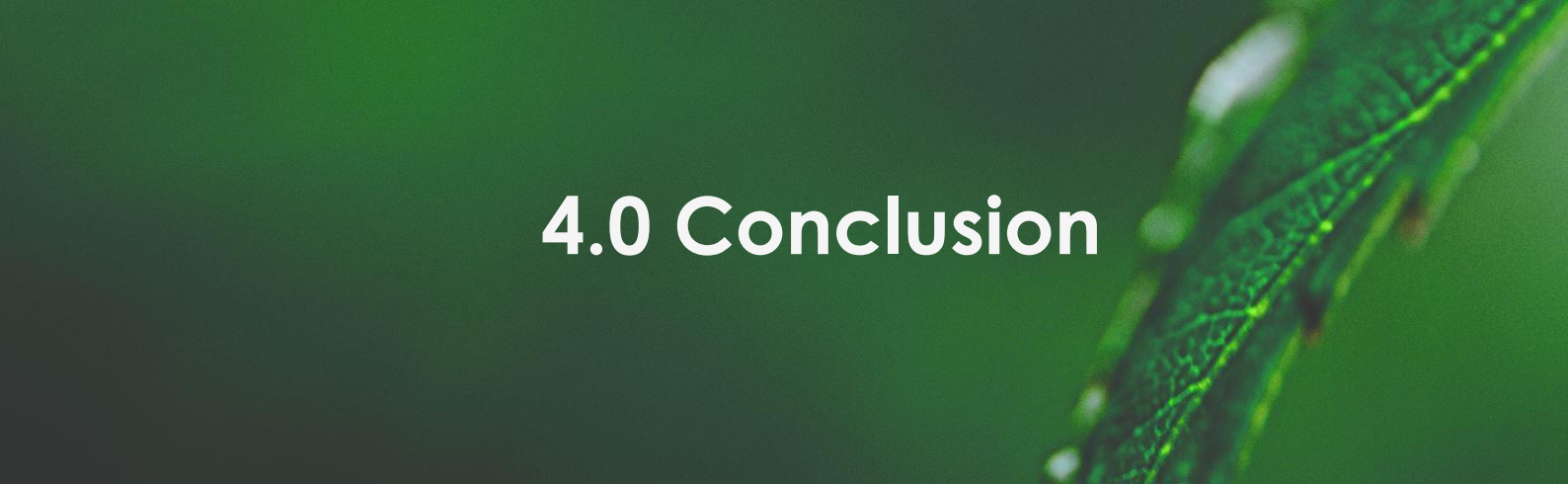
Biodiversity investment generates substantial employment benefits and has relatively strong economic multipliers. Nature-based activities are typically labour-intensive, generating higher employment per unit of investment than many capital-intensive sectors ^{xc_{iv}}. These effects are concentrated in rural and economically disadvantaged regions, supporting regional development and economic diversification. For instance, Natura 2000 alone supports approximately 11.8 million jobs in Europe ^{xc_v}, while every EUR 1 billion invested in Natura 2000 management is estimated to support around 30,000 jobs, both directly and indirectly. For illustration, applying this multiplier to the EU biodiversity funding gap of approximately EUR 18.7 billion per year suggests that closing the gap could support on the order of 560,000 jobs. This estimate is broadly consistent with Bankwatch's finding that increased nature restoration investment could create up to 500,000 additional jobs by 2050 ^{xc_{vi}}.

Table 3-1: Summary of Economic Impacts of Sector Dependencies on Biodiversity and Ecosystem Services

Sector	Dependency on biodiversity and ecosystem services	Key Impacts
Agriculture	Highly dependent on pollination, soil fertility, water regulation and pest control. Biodiversity underpins crop productivity, resilience to shocks, and ecosystem stability. Loss of these services directly reduces yields and increases vulnerability to drought and pests.	• Pollination services alone contribute €14–153 billion annually in Europe ^{xc_{vii}}. • Yield reductions of up to 8–15% in biodiversity collapse scenarios ^{xc_{viii}}. • Up to 38% of agricultural output exposed to drought in parts of the euro area ^{xc_{ix}}. • Soil degradation causes ongoing economic losses (~€1.25 billion/year) ^c. • Risks extend to food prices, trade and food security.
Construction and infrastructure	Relies on ecosystem services for protection against physical risks such as flooding, erosion and landslides. Loss of natural buffers increases exposure and long-term costs.	• Climate-related damages in Europe already €738 billion (1980–2023) ^{ci}. • Flood damages projected to reach up to €1 trillion annually by 2100 ^{cii}.

		Increased insurance costs, maintenance costs and public expenditure.
Energy	Dependent on water availability (hydropower, cooling systems) and climate regulation. Ecosystem degradation increases variability in water supply and weather patterns, affecting energy production and infrastructure reliability.	- Up to 24–30% of euro area economic output exposed to water scarcity risk, affecting energy systems ^{ciii}. - Additional risks from flooding and erosion increase infrastructure costs and operational disruptions.
Finance and insurance	Banks, insurers and investors are exposed to biodiversity loss through lending, insurance and investment portfolios linked to ecosystem-dependent sectors. Biodiversity degradation can affect asset values, borrower creditworthiness, insurability and wider financial stability through cascading impacts across the economy.	- Approximately 72% of firms and 75% of bank lending in the euro area are dependent on ecosystem services ^{civ}. - Biodiversity loss can lead to asset devaluation, credit losses and reduced profitability through impacts on ecosystem-dependent sectors.
Fishing	Strong dependence on marine biodiversity, habitat quality and ecosystem balance. Overexploitation and degradation reduce fish stocks and long-term productivity, with limited substitution options.	While EU-level quantified estimates are limited, global evidence shows significant reductions in productivity and impacts on livelihoods and food systems.
Forestry	Dependent on soil quality, water availability, and biodiversity for growth and resilience. Ecosystem degradation increases exposure to pests, diseases and extreme weather, affecting timber yields and stability.	- Quantification is limited, but impacts include reduced timber productivity and increased volatility. - Forestry also underpins wider ecosystem services (e.g. carbon sequestration), so losses extend beyond the sector to climate and economic stability.
Health	Human health depends on biodiversity through ecosystem services that support air and water quality, climate regulation and disease regulation. Biodiversity loss can increase exposure to pollution, heat stress and infectious diseases, creating significant economic and societal costs.	- Environmental pollution is associated with approximately 500,000 premature deaths annually in Europe ^{cv}. - Pollution-related damages are estimated at approximately €600 billion per year, equivalent to around 4% of EU GDP.
Manufacturing	Indirectly dependent via supply chains (raw materials, water, ecosystem inputs). Ecosystem degradation leads to resource	Exposure largely indirect but widespread.

	scarcity, input cost increases and supply disruptions.	• EU financial analysis shows significant firm-level exposure through supply chains.
Tourism	Highly dependent on ecosystem quality, natural landscapes and biodiversity (especially coastal and nature-based tourism). Degradation reduces attractiveness and demand.	• Natura 2000 sites generate €200–300 billion annually in benefits and support millions of jobs ^{cv}. • Biodiversity loss directly threatens tourism revenues and regional economies.
Water	Highly dependent on ecosystems that provide water storage, filtration and flow regulation. Wetlands, forests and freshwater ecosystems help maintain water quality, reduce flood risk and support reliable water supply for households, agriculture and industry.	• Up to 24% of euro area economic output is exposed to surface water scarcity under severe drought scenarios ^{cvii}. • Water-related ecosystem services contribute an estimated €234 billion annually in ecosystem-service value ^{cviii}.



4.0 Conclusion

4.1 The Case for Increased Public Biodiversity Funding

This report has shown that biodiversity loss should be understood as a systemic risk across the EU economy, rather than a problem confined to isolated sectors. In particular, while some sectors, such as agriculture, forestry, fisheries, food production and water management, are particularly exposed because of their direct dependence on biodiversity, they are also critical to wider supply chains, regional economies and economic resilience. Failure to invest in biodiversity therefore creates macroeconomic risks as well as environmental loss.

The case for biodiversity investment is therefore not just about preventing environmental damage; it also makes strong economic sense. Increased action can deliver a significant return on investment by avoiding future damage, reducing exposure to climate and environmental shocks, and strengthening the ecosystem services on which key sectors depend. Biodiversity investment should therefore be viewed as a necessary and productive form of public investment that can support long-term economic resilience and one that compares favourably with more traditional infrastructure spending. In particular, each euro of investment is expected to deliver 8 euros of economic benefit.

Despite the strong economic case for action, current biodiversity funding remains below the estimated need. Of the estimated EUR 48.2 billion per year cost of delivering the objectives of the EU Biodiversity Strategy for 2030, only EUR 29.5 billion per year is being spent. This leaves an annual financing gap of approximately EUR 18.7 billion, or EUR 186.9 billion over 2021–2030. Closing this gap would be expected to deliver EUR 150 billion of economic benefit a year.

Addressing the funding gap also requires reducing expenditure that undermines biodiversity objectives. Harmful subsidies can weaken the impact of positive biodiversity funding by supporting activities that contribute to habitat loss, ecosystem degradation or pressure on species. WWF estimates that EUR 34.4–48.9 billion of 2021–2027 MFF spending could be biodiversity-harmful, a scale that is larger than the estimated annual biodiversity financing gap. Redirecting these subsidies, or a proportion of them, towards nature-positive activities would therefore be one of the most important levers for improving the effectiveness of EU public finance.

Public funding also has an important role in catalysing private finance. Many ecosystem services are not currently marketable, meaning private finance alone is unlikely to deliver investment at the scale required. Public finance can help address this by creating demand, reducing project risk and supporting early-stage project development. The objective should therefore not be to replace public biodiversity funding with private finance, but to use public funding more strategically to crowd in additional investment while ensuring that core public responsibilities for nature protection and restoration remain adequately funded.

4.2 Recommendations

Building on the evidence set out in this report, the following recommendations identify the priority actions needed to close the biodiversity financing gap and ensure that EU public funding delivers the greatest economic and environmental return:

1. **Reform and redirect biodiversity-harmful subsidies:** prioritise reform of the most harmful fossil-fuel and agricultural subsidies, redirecting a share towards closing the biodiversity funding gap. With an estimated EUR 34.4–48.9 billion of 2021–2027 MFF spending potentially biodiversity-harmful, larger than the annual financing gap itself, redirecting even a proportion is one of the most powerful levers available to EU public finance. To support this aim, it is recommended to invest in capacity, within the Commission and Member State ministries, to identify harmful subsidies at the EU and national level and better understand how best to redirect the funding to both reduce harm and maximise the return on investment. Box 2 presents broad steps that can be taken to reform subsidies.

Box 2: Repurposing biodiversity-harmful subsidies

Repurposing biodiversity-harmful subsidies does not necessarily mean ending them altogether. Depending on their purpose and impacts, subsidies may be phased out, reduced, redesigned to incorporate biodiversity safeguards, or redirected. Where a subsidy achieves an intended socioeconomic outcome but also harms nature, it can be reformed so that the intended outcome is maintained while its impact becomes nature-neutral or nature-positive.

Drawing on guidance from UNDP BIOFIN^{cix} and the OECD,^{cx} governments can follow six broad steps to identify, assess and repurpose biodiversity-harmful subsidies:

1. **Establish responsibility and define the scope.** Create a cross-government team involving finance, environment and relevant sector ministries, and agree on which sectors and forms of government support will be examined. The review should consider not only direct expenditure but also tax concessions, price support, concessional finance and other indirect forms of government support.
2. **Identify and screen subsidies.** Map subsidies in priority sectors and screen them for possible links to biodiversity loss. This involves considering whether they encourage activities associated with land-use change, pollution, overexploitation of natural resources, climate change or other pressures on nature.
3. **Build the evidence base.** For each potentially harmful subsidy, record its financial value, intended objective, beneficiaries, eligibility conditions, responsible institutions and relevant legislation. Identify how it affects production or consumption and the pathway through which it may harm biodiversity. Standardised subsidy “fact sheets” can help make measures comparable.
4. **Assess impacts and set priorities.** Assess the scale and likelihood of biodiversity harm alongside the subsidy’s economic and social benefits. Prioritisation should consider the severity of the harm, fiscal cost, availability of alternatives, feasibility of reform and likely effects on different groups.
5. **Develop and compare reform options.** For priority subsidies, develop alternative scenarios, which may include phasing out the subsidy, reducing its value, changing

eligibility conditions, introducing environmental safeguards or redirecting support toward nature-positive practices. Options should be assessed against environmental, economic, social and political-economy considerations. Where reform could adversely affect low-income households, workers or small producers, governments should provide targeted and time-bound transitional support.

6. **Implement, monitor and adjust.** Assign institutional responsibilities, establish a timetable and track fiscal, social and biodiversity outcomes. Reforms can initially be piloted or introduced gradually, with results used to correct unintended consequences and strengthen subsequent rounds of subsidy reform.

2. **Integrate biodiversity across economic policy:** embed biodiversity considerations across CAP reform, industrial policy, national security and infrastructure planning, reflecting the report's finding that biodiversity loss is a systemic, economy-wide risk rather than a problem confined to isolated sectors. In particular, this could include:
 - a. Defining a robust methodology to track biodiversity spending and securing a distinct, ring-fenced biodiversity-specific sub-target within the European Commission's 35% climate and environment target. This should help ensure that biodiversity is accurately monitored and not crowded out by climate and industrial spending under a single combined figure.
 - b. Embedding biodiversity requirements in the sectoral chapters of the National and Regional Partnership Plans – particularly for agriculture and fisheries where biodiversity-relevant and biodiversity-harmful spending is high.
 - c. Applying a robust check on new EU spending (such as the 'do no significant harm' principle) during both development and implementation to highlight and help prevent the funding of biodiversity-harmful activity.
3. **Strengthen biodiversity-spending data and accountability:** introduce consistent Member State tracking and more granular reporting of biodiversity spending to enable transparent accountability against EU targets, verify whether spending is closing the gap and better direct finance to where it delivers the greatest return.
4. **Deepen the analysis of sectoral vulnerability to biodiversity loss:** explore in greater depth the vulnerabilities of the economic sectors presented in Section 3.3 to build buy-in from the key actors in those sectors. In particular, the research should examine specific exposure to different aspects of biodiversity loss at the Member State level and identify spending that could meaningfully reduce the likely impacts and provide a strong return on investment. These issues are expected to be covered in a future EuroNatur report.
5. **Explore EU vulnerability to global biodiversity loss:** build on existing studies to quantify the EU's embedded biodiversity footprint, identify the sectors and Member States most exposed to international biodiversity loss as well as assess where public spending and regulatory action would most cost-effectively reduce both the EU's contribution and its own vulnerability.
6. **Explore the use of public funding to catalyse private biodiversity finance:** assess how targeted public funding could be used to drive additional private finance to help close the funding gap (see Box 3), while mitigating any potential risks. Private finance currently only contributes around EUR 0.4 billion of the EUR 29.5 billion spent annually in the EU – just 1.4% (Section 2.6), so there is considerable scope for meaningful contribution.

Box 3: Catalysing Private Biodiversity Finance

Public funding can be used to catalyse and “crowd-in” private-sector biodiversity finance, increasing the total amount available and helping to close the funding gap (see Section 2.0). This private finance should complement rather than substitute for public responsibility and should not license continued damage to nature. While the direct links between public and private finance are difficult to evidence, and not without potential risks, the following interventions, among others, would be expected to increase private biodiversity investment in the EU:

- **De-risking private investment:** public money can be used to absorb financial risk, through first-loss capital and concessional lending, to provide increased confidence and crowd in private investors at a scale greater than public budgets allow. For instance, the EU’s dedicated natural-capital initiative under InvestEU intends to mobilise at least EUR 10 billion over ten years via public/private blended finance^{cx}. Moreover, public money can be used to provide price guarantees to project developers, assuring them of a revenue stream and reducing the risk of undertaking an intervention without finding a private funder. This is anticipated to accelerate market activity by giving nature project developers the confidence to act and provide investors with assurance of a return on investment. For instance, the UK Forestry Commission’s Woodland Carbon Guarantee offered^{cxii} eligible woodland planting projects the option to sell Woodland Carbon Units to the government at a guaranteed price, while remaining free to sell into the voluntary market if they could find a better offer. These types of schemes could be applied across the EU to cover a range of habitats and environmental benefits.
- **Supporting early-stage projects:** public money can fund early-stage nature recovery work to bring projects to the point of attracting private finance. For instance, public funding could be spent to undertake feasibility studies and revenue modelling, share knowledge and develop scientifically credible codes or regulatory frameworks. Examples include the UK’s Natural Environment Investment Readiness Fund (NEIRF)^{cxiii} and the Facility for Investment Ready Nature in Scotland (FIRNS), which together have supported more than 180 early-stage projects^{cxiv}. The EU equivalent of this pipeline-building function is the technical-assistance arm of the EIB’s Natural Capital Financing Facility^{cxv}, which offered grants of up to EUR 1 million per project for preparation, implementation and monitoring.
- **Establishing consistent standards:** effective nature markets require common standards to reduce transaction costs, deter greenwashing and give buyers and investors confidence that the environmental benefits they pay for are real, measurable and permanent. Examples include the UK’s BSI nature investment standards and the EIB/IDB guidance on outcome-oriented result metrics^{cxvi}. Framed around the integrity of “nature-positive” investment, explicitly not as trading infrastructure for offset or compensation markets, these standards are expected to boost confidence and drive greater investment into nature.
- **Mobilising institutional investment:** public money can be spent to explore and implement policies that require institutional investors to allocate a proportion of their capital to “nature-positive” investment. For instance, by mandating employee pension providers to offer their customers access to savings schemes which invest a minimum percentage in nature-based projects. A key example of this mechanism in practice is

in France where, since 2008, companies are obligated to offer savings schemes to their employees where between 5% and 10% of the collected funds are invested in accredited 'solidarity-based enterprises of social utility'^{cxvii}. The same mandated-allocation model could be adapted to direct a minimum share of savings towards biodiversity.

- **Creating demand for nature investment:** similarly, public money can be spent to explore and implement policies that create demand by requiring or incentivising biodiversity-harming sectors to avoid and minimise their impacts on nature, as well as to invest in nature restoration, as opposed to relying on corporate goodwill. Crucially, this demand should be met through additional investment in nature rather than offsets, which permit harm in exchange for improvements elsewhere. Examples include polluter-pays charges reinvested in restoration (as with France's water agencies), obligations to restore damaged sites in situ, and public results-based payments for restoration outcomes. These mechanisms must nonetheless be designed carefully to avoid functioning as de facto offsets. In particular, charges levied under the polluter-pays principle should not, in effect, become 'permits to pollute'. The emphasis should therefore remain on avoiding and minimising impacts in the first instance, with restoration and payment mechanisms complementing rather than substituting for that objective. Demand can also be created indirectly by requiring companies and financial institutions to identify and manage their nature-related dependencies and impacts through corporate disclosure (for example using the Taskforce on Nature-related Financial Disclosures (TNFD) framework), directing private capital towards "nature-positive" activity and away from harmful activity.

Appendices

A.1.0 Policy Context for EU Biodiversity Funding

The EU's public funding landscape for biodiversity has evolved significantly over the past three decades. Since the 1990s, funding mechanisms have been available to support biodiversity protection and recovery, notably through programmes such as LIFE, launched in 1992, and through broader instruments such as the Common Agricultural Policy (CAP). However, biodiversity funding has generally been mainstreamed across wider EU programmes rather than delivered through a single dedicated or ring-fenced biodiversity fund. In earlier periods, there were also no formal EU-wide biodiversity spending targets and no fully systematic methodology for tracking biodiversity-related expenditure across the EU budget.

While biodiversity has gained greater prominence in EU policy and public commitments, its political priority has varied and it currently ranks relatively low under the present European Commission mandate. There has also frequently been a gap between stated objectives and the financial, administrative and technical resources available to achieve them. Nevertheless, the policy and budgetary framework for biodiversity finance has become more developed. This development has been shaped in part by successive EU Biodiversity Strategies (to 2020 and for 2030), which set the Union's objectives for nature protection, restoration and recovery, and by the EU's Multiannual Financial Frameworks (2014-2020, 2021-2027, and the proposed 2028-2034), which set seven-year budgetary priorities and funding structures.

Within these frameworks, the EU has introduced biodiversity spending ambitions and more formalised mechanisms for tracking biodiversity-related expenditure. For example, under the proposed 2028–2034 framework, the Council's partial negotiating mandate provides for biodiversity expenditure tracking through the Performance Regulation, including biodiversity coefficients in Annex I.^{cxviii} However, it does not currently include a separate biodiversity spending target. This means biodiversity-related expenditure could be measured without requiring a fixed share of the EU budget to be allocated to biodiversity.

Meeting the EU's biodiversity objectives will require the mobilisation of EU-level funding, Member State public funding and private finance. However, given the focus of this report, and the challenges involved in compiling comprehensive and consistent private finance datasets, the following analysis focuses on public funding sources. Where possible, this report excludes public funding for international biodiversity initiatives⁶ and focuses instead on EU and Member State funding for biodiversity within the EU. However, this distinction is not always possible due to data limitations.

⁶ While this report focuses on domestic EU funding, as noted in Section 3.0, biodiversity impacts are transboundary and recommended as an issue for further research in Section 4.2.

A.2.0 Summary of EU Biodiversity Funds

Although there are over ten relevant funding streams, the most important in terms of financial contribution and relevance to biodiversity expenditure are the Common Agricultural Policy, cohesion policy funds, the Recovery and Resilience Facility, Horizon Europe and the LIFE Programme. Each of these key funds is briefly described below.

Common Agricultural Policy (CAP): The Common Agricultural Policy remains the largest source of biodiversity-relevant budgetary support in the EU, contributing around 80% of tagged biodiversity commitments in the 2014–2020 cycle and 59% in the 2021–2027 cycle.^{cxxix} Its central role in biodiversity financing reflects the importance of agricultural and forested land for biodiversity, as agricultural intensification is one of the main drivers of biodiversity loss and ecosystem degradation in Europe.^{cxx} CAP can contribute to biodiversity funding through both the European Agricultural Guarantee Fund (EAGF), which provides direct payments to farmers and funds eco-schemes, and the European Agricultural Fund for Rural Development (EAFRD), which can support agri-environment-climate measures, organic farming, Natura 2000 payments, rural development and landscape management.^{cxxi}

However, CAP is also one of the most contested funding sources from a biodiversity perspective, as its contribution to biodiversity outcomes is difficult to assess. A 2020 report from the European Court of Auditors found that an overall assessment of CAP's impact on biodiversity was not possible due to a lack of suitable monitoring data.^{cxxii} The ECA also criticised the broad application of 100% biodiversity coefficients to measures where biodiversity was not the primary objective and noted that Member States do not make sufficient use of CAP instruments to protect natural features.

European Regional Development Fund (ERDF) and Cohesion Fund (CF): The Commission tracks funding for the ERDF and Cohesion Fund together. Combined, they are the second-largest contributors to biodiversity after the CAP.^{cxxiii} These funds are implemented through operational programmes developed by Member States and agreed with the Commission, making them particularly important at regional and local levels.^{cxxiv} They can support biodiversity through green and blue infrastructure, Natura 2000 management, ecosystem and wetland restoration, land rehabilitation, nature-based solutions, and climate resilience projects with biodiversity co-benefits. However, because biodiversity funding depends heavily on national and regional programming choices, the actual availability of funds depends on Member State prioritisation.

Recovery and Resilience Facility (RRF): The RRF introduced an additional temporary source of biodiversity-relevant funding during the 2021–2027 MFF cycle. It is the main funding instrument within NextGenerationEU, the EU's temporary post-COVID-19 recovery package, and requires at least 37% of each Member State's Recovery and Resilience Plan to support the green transition.^{cxxv} However, the European Court of Auditors found that the RRF's climate-tracking methodology relied on broad coefficients and a high level of approximation, creating a risk that the climate contribution of some measures was overstated.^{cxxvi}

Biodiversity-relevant measures can include nature restoration, ecosystem resilience and green infrastructure. However, a 2023 analysis found that biodiversity received only 2% of RRF funding, while survey respondents accompanying the analysis were not confident that the RRF would contribute meaningfully to the EU Biodiversity Strategy.^{cxxvii}

Horizon Europe: Horizon Europe supports biodiversity primarily through research and innovation rather than direct conservation.^{cxxviii} It funds projects that improve biodiversity knowledge, data, monitoring, modelling, policy tools and innovative approaches related to ecosystem restoration, sustainable agriculture, marine and freshwater ecosystems, climate adaptation and nature-based solutions.

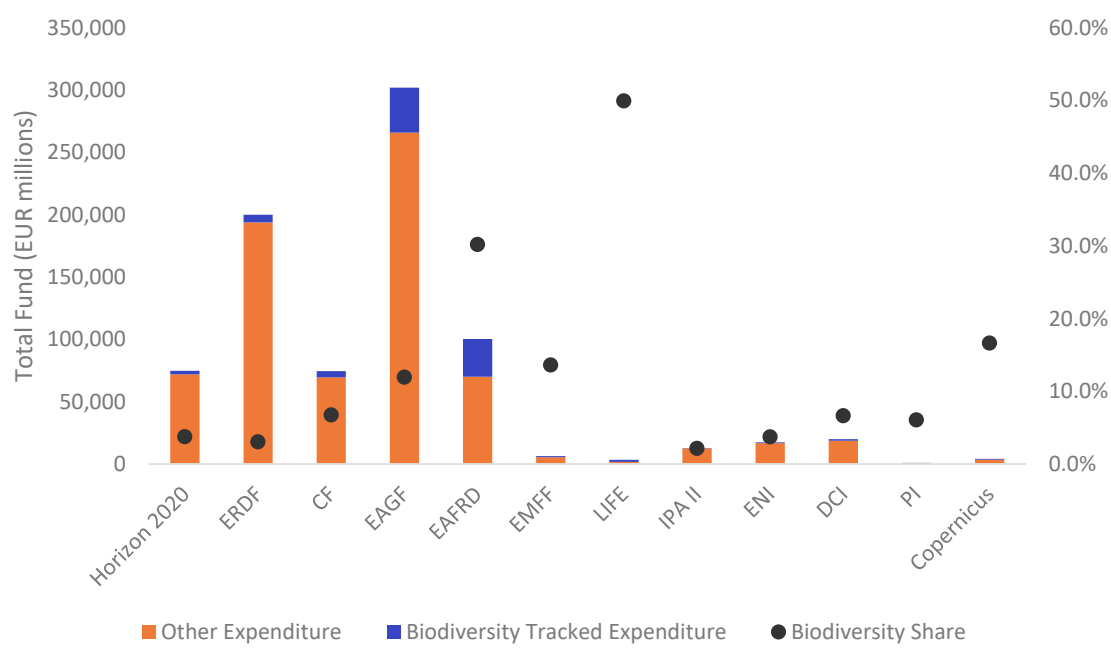
LIFE Programme: LIFE is the most targeted EU instrument for biodiversity objectives.^{cxxix} It supports conservation, restoration, governance, capacity-building and demonstration projects, including projects linked to Natura 2000, species protection, habitat restoration and the implementation of environmental

plans and strategies. It also has an important cross-border dimension, enabling cooperation on species, habitats and ecosystems that extend across national boundaries — an element often missing from nationally focused biodiversity programmes.

Although LIFE is small compared with larger programmes such as CAP and Cohesion Policy, it is strategically important because it has the highest biodiversity relevance as a share of its own programme budget, at around 50%.^{cxxx} Under the proposed 2028–2034 MFF, LIFE would no longer continue as a standalone programme, with its activities expected to be integrated into broader funding instruments.^{cxxxi}

A.3.0 Key Funding Sources for Biodiversity

Figure A-1: Biodiversity-tracked expenditure by EU fund, 2014–2020



Source: IEEP and Trinomics' Biodiversity and Financing Report, Table 14

A.4.0 Member State Contribution to Biodiversity

Table A-1: Member State Domestic Biodiversity Expenditure in EUR millions, 2014–2019

Member State	2014	2015	2016	2017	2018	2019	Total
Austria	63.8	72.4	81.8	74.7	79.5	82.7	454.9
Belgium	292.9	211.3	252.5	260.9	219.6	271.9	1,509.1
Bulgaria	0.0	4.5	0.8	6.6	3.8	5.9	21.6
Croatia	52.4	70.6	75.2	71.0	68.4	75.5	413.1
Cyprus	0.0	1.2	1.1	1.0	1.3	2.0	6.6
Czechia	449.2	391.1	350.8	402.6	493.2	487.1	2,574.0
Denmark	563.5	542.9	561.2	539.3	573.8	544.3	3,325.0
Estonia	24.7	24.5	23.2	47.7	22.9	29.4	172.4
Finland	89.0	81.0	70.0	67.0	74.0	80.0	461.0
France	1,829.0	1,886.0	1,712.0	1,719.0	1,871.0	1,971.0	10,988.0
Germany	1,412.0	1,446.0	1,492.0	1,615.0	1,672.0	1,772.0	9,409.0
Greece	11.0	4.0	4.0	4.0	4.0	4.0	31.0
Hungary	78.2	83.0	61.8	66.0	70.6	92.8	452.4
Ireland	269.9	285.9	273.3	270.7	297.7	283.4	1,680.9
Italy	2,201.0	2,290.0	2,121.0	1,978.0	2,034.0	2,081.0	12,705.0
Latvia	5.0	6.3	6.2	8.5	10.5	7.6	44.1
Lithuania	23.7	15.0	8.0	14.7	24.5	23.3	109.2
Luxembourg	53.9	50.9	53.6	55.1	56.9	66.9	337.3
Malta	18.4	18.2	19.1	22.7	28.4	41.9	148.7
Netherlands	620.0	666.0	845.0	822.0	1,000.0	1,044.0	4,997.0
Poland	82.6	95.4	100.5	115.1	101.0	97.5	592.1
Portugal	148.2	164.8	138.1	169.8	161.7	171.2	953.8
Romania	0.3	4.6	5.9	0.4	0.5	0.5	12.2
Slovakia	39.1	74.5	39.2	31.8	40.9	56.6	282.1
Slovenia	24.5	23.9	24.3	27.7	37.3	21.1	158.8
Spain	1,053.0	1,086.0	979.0	970.0	994.0	945.0	6,027.0
Sweden	129.3	147.2	203.7	194.1	222.5	167.0	1,063.8
TOTAL	9,534.6	9,747.2	9,503.3	9,555.4	10,164.0	10,425.6	58,930.1

Source: IEEP and Trinomics' Biodiversity and Financing Report, Table 16

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