

MAINSTREAMING CLIMATE AND ENVIRONMENTAL OBJECTIVES IN EU FUNDING PROGRAMMES IN THE POST-2027 PERIOD

Final report

EUROPEAN COMMISSION

Directorate-General for Climate Action
Directorate A — Strategy, Analysis & Planning
Unit CLIMA.A.3 — Climate governance, plans and mainstreaming

Contact: Melvin VAN VELTHOVEN

*E-mail: melvin.van-velthoven@ec.europa.eu
CLIMA-A03-ARES@ec.europa.eu*

*European Commission
B-1049 Brussels*

Manuscript completed in May 2025

First edition

This document has been prepared for the European Commission however it reflects the views only of the authors, and the European Commission is not liable for any consequence stemming from the reuse of this publication.

Luxembourg: Publications Office of the European Union, 2025

© European Union, 2025



The reuse policy of European Commission documents is implemented by Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Unless otherwise noted, the reuse of this document is authorised under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

For any use or reproduction of elements that are not owned by the European Union, permission may need to be sought directly from the respective rightholders.

MAINSTREAMING CLIMATE AND ENVIRONMENTAL OBJECTIVES IN EU FUNDING PROGRAMMES IN THE POST-2027 PERIOD

Final report

Framework contract CLIMA.A4/FRA/2019/0011

APRIL 2025

RAMBOLL

Bright ideas.
Sustainable change.



Authors: Thomas Neumann, Iulia Vizman, Laura van der Lingen, Matteo Filippini, Josep Pinyol Alberich, May Hobeika, Karin Attström (Ramboll); Maarten de Vries, Bettina Kampman, Joukje de Vries, Marieke Sanderse, Marieke Nauta, Martijn Blom (CE Delft); Benjamin Kupilas, McKenna Davis, Fenja Kroos, Evgeniya Elkina, Madeleine Pumberger (Ecologic Institute); Sébastien Postic, Erwann Kerrand, Ciaran Humphreys (I4CE)

Glossary and abbreviations	I
Study abstract	II
Executive summary	III
1 Introduction	1
1.1 Background to the study	1
1.2 Objective of this study	2
1.3 Structure and scope of this study	2
2 EU green spending priorities	5
2.1 Introduction	5
2.2 Defining EU added value for climate and environmental funding	5
2.3 Methodology behind the proposed green spending priorities	7
2.4 Cross-cutting green priorities	10
2.5 Green sectoral priorities	21
3 Options for improving funding for nature restoration	31
3.1 Introduction	31
3.2 Need for nature restoration	31
3.3 Nature restoration in the 2021-2027 MFF	32
3.4 Nature restoration in selected EU funding programmes	34
3.5 Challenges to nature restoration finance in the current MFF	40
3.6 Recommendations for improved funding for nature restoration	42
3.7 Summary of recommendations	48
4 Options for integrating nature-based solutions	50
4.1 Introduction	50
4.2 Financing nature-based solutions	50
4.3 Challenges to investing in nature-based solutions	51
4.4 A brochure of good-practice examples	52
4.5 Summary of recommendations	53
5 Options for improving funding for decarbonisation of industrial facilities and clean technologies	55
5.1 Introduction	55
5.2 Scoping	55
5.3 An overview of how EU funding programmes currently support industrial decarbonisation and clean technologies manufacturing	56
5.4 Analysis of the EU funding programmes: methodology	58
5.5 Main findings of the analysis	60
5.6 Summary of recommendations	76

6	Analysis of green exclusions	83
6.1	Introduction	83
6.2	Assessment of existing exclusions	84
6.3	Typology for green exclusions	89
7	Green mainstreaming tools	93
7.1	Introduction	93
7.2	The EU's green mainstreaming toolbox	94
7.3	Case study 1: Green mainstreaming tools at the project level: DNSH, Climate-Proofing, Sustainability Proofing, EIA	101
7.4	Case study 2: Green mainstreaming tools at the programme level: DNSH & SEA	108
7.5	Case study 3: Possible typology and criteria for green reforms in the next MFF	110
7.6	Case study 4: Green mainstreaming by financial institutions and third-party implementers	121
7.7	Summary of recommendations	132
8	Options to improve tracking and monitoring methodologies of green spending	135
8.1	Introduction	135
8.2	Intervention fields	135
8.3	Tracking coefficients	140
Appendix 1.	Annexes to chapter 2 "EU green funding priorities"	149
Annex 1.	Review of existing approaches to defining the notion of "EU added value" in the context of the EU budget	150
Annex 2.	Summary of interview findings per fund	154
Annex 3.	Summary of literature findings per fund	163
Annex 4.	Detailed matrix with proposed priorities	173
Annex 5.	Semi-quantitative assessment	190
Appendix 2.	Annexes to chapter 3 "Options for improving funding for nature restoration"	218
Annex 6.	Detailed analysis of EU funds	219
Annex 7.	List of References	234
Appendix 3.	Annexes to chapter 4 "Options for integrating nature-based solutions"	241
Annex 8.	Brochure "Good practice examples of nature-based solutions across sectors in the EU"	242
Appendix 4.	Annexes to chapter 5 "Options for improving funding for decarbonisation of industrial facilities and clean technologies"	243
Annex 9.	Summary of key characteristics of funds covered in the chapter	244
Annex 10.	Further elaboration of the research questions	250

Annex 11.	Illustrative overview of decarbonisation projects and ongoing projects in the EU steel indUSTRIES	254
Appendix 5.	Annexes to chapter 6 “Analysis of and proposals for green exclusions”	257
Annex 12.	Mapping of existing exclusions	258
Annex 13.	Assessment of different types of exclusions and exceptions	268
Annex 14.	Assessment of suitability of exclusions in specific contexts and/or sectors	272
Appendix 6.	Annexes to chapter 7 “Green mainstreaming tools”	274
Annex 15.	Green enabling conditions	275
Annex 16.	Examples for the proposed typology of reforms	278

GLOSSARY AND ABBREVIATIONS

CAP	Common agricultural policy
CAPEX	Capital expenditure
CBAM	Carbon border adjustment mechanism
CCS	Carbon Capture and Storage
CEF	Connecting Europe Facility
CF	Cohesion fund
CPR	Common Provisions Regulation
CSRs	Country-Specific Recommendations
DNSH	Do No Significant Harm
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIR	Environmental Implementation Review
EMFAF	European Maritime, Fisheries, and Aquaculture Fund
ERDF	European Regional Development Fund
ETS	EU Emissions Trading System
GAECs	Good agricultural and environmental conditions
GET	EBRD's Green Economy Transition approach
GHG	Greenhouse gases
Green spending	The notion of "green" in the context of this study includes climate, biodiversity and other environmental topics
IF	Intervention fields
IPCEI	Important Projects of Common European Interest
JTF	Just Transition Fund
LIFE	Programme for the Environment and Climate Action
LULUCF	Land Use, Land-Use Change, and Forestry
MDB	Multilateral development banks
MFF	Multiannual financial framework
NZIA	Net-Zero Industry Act
OPEX	Operational expenditure
RRF	Recovery and Resilience Facility
RRPs	National recovery and resilience plans
SAB	European Scientific Advisory Board on Climate Change
SEA	Strategic Environmental Assessment
SMEs	Small and medium-sized enterprises
STEP	Strategic Technologies for Europe Platform
TEN-E	Trans-European Networks for Energy
TEN-T	Trans-European Networks for Transport

STUDY ABSTRACT

English

This study examines how climate and environmental objectives can be mainstreamed under the post-2027 Multiannual Financial Framework (MFF). The 2021-2027 MFF operates on the basis of specific climate and biodiversity spending targets, a related expenditure tracking system and a number of other green mainstreaming tools such as, for some EU funding programmes, the Do No Significant Harm (DNSH) principle. This study provides evidence-based recommendations on specific climate and environment-related spending priorities under the next MFF. It also evaluates the effectiveness of existing green mainstreaming tools, such as funding exclusions, expenditure tracking systems, and other mechanisms. The study proposes ways to enhance the coherence, impact, and efficiency of green funding under the post-2027 MFF.

French

Cette étude examine comment les objectifs climatiques et environnementaux peuvent être intégrés dans le cadre financier pluriannuel (CFP) post-2027. Le CFP 2021-2027 fonctionne sur la base d'objectifs de dépenses spécifiques en matière de climat et de biodiversité, d'un système de suivi des dépenses et d'un certain nombre d'autres outils d'intégration écologique tels que, pour certains programmes de financement de l'UE, le principe « Ne pas causer de préjudice important » (Do No Significant Harm - DNSH). Cette étude fournit des recommandations fondées sur des données probantes concernant les priorités de dépenses spécifiques liées au climat et à l'environnement dans le cadre du prochain CFP. Elle évalue également l'efficacité des outils d'intégration de l'environnement existants, tels que les exclusions de financement, les systèmes de suivi des dépenses et d'autres mécanismes. L'étude propose des moyens d'améliorer la cohérence, l'impact et l'efficacité des financements verts dans le cadre du CFP post-2027.

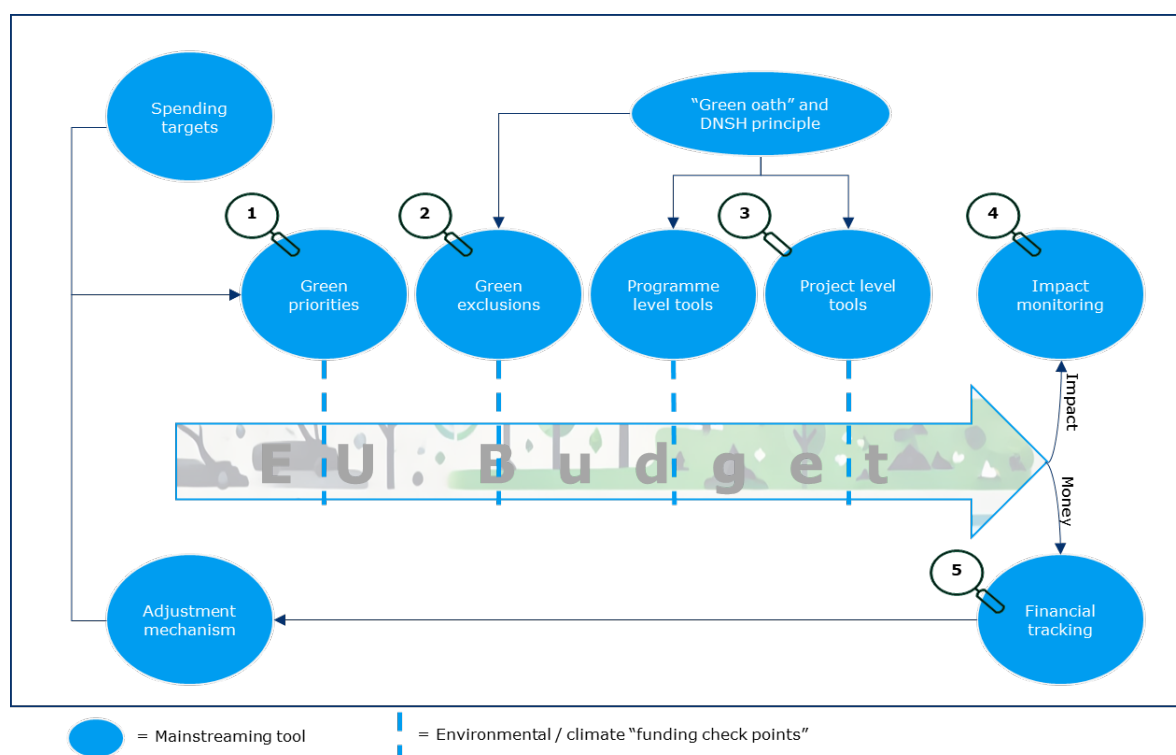
EXECUTIVE SUMMARY

Within the 2021-2027 Multiannual Financial Framework (MFF), at least 30% of the overall spending, including funds from NextGenerationEU¹, has to be allocated to climate action. This headline target has been translated into specific climate spending targets for individual programmes. Regarding biodiversity spending, the 2021-2027 MFF inter-institutional agreement² sets the ambition to allocate at least 7.5% of annual spending to biodiversity objectives in 2024 and 2025, increasing to 10% in both 2026 and 2027. To reach these targets, mainstreaming requires EU programmes across all policy areas to integrate climate and environmental priorities in their design, implementation, and evaluation phases.

According to the MFF Regulation³, the Commission is required to submit a proposal for the next MFF (post-2027) by mid-2025. This study provides suggestions for potential improvements in green mainstreaming in the next MFF, based on a thorough analysis of the current framework and additional insights.

The Figure below provides a high-level overview of the green mainstreaming architecture of the current MFF. Within the Figure, the focus points of this study are highlighted with a magnifying glass.

Figure 0.1 High-level overview of the green mainstreaming architecture under the current MFF



¹ NextGenerationEU is the EU's €800 billion temporary recovery instrument to support the economic recovery from the coronavirus pandemic and build a greener, more digital and more resilient future

² INTERINSTITUTIONAL AGREEMENT of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources. See: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222(01))

³ Council Regulation 2020/2093 of 17 December 2020 laying down the multiannual financial framework for the years 2021 to 2027. See: <https://eur-lex.europa.eu/eli/reg/2020/2093/oj/eng>



Chapter 2 of this report provides suggestions for green funding priorities in the next EU budget.

Those green funding priorities refer to the strategic allocation of financial resources toward initiatives, sectors, and projects that support the EU's climate and environmental objectives as laid down in the European Green Deal, the European Climate Law, the Fit for 55 Package, the EU Biodiversity Strategy for 2030 as well as other pieces of EU policy and legislation.

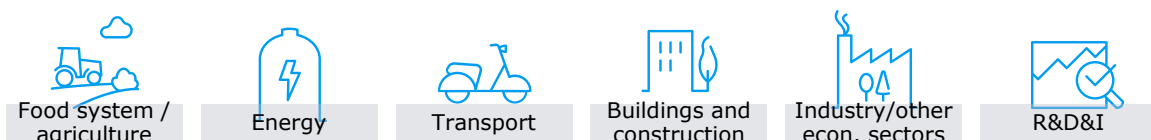
Before suggesting concrete priorities for the next MFF in chapter 2, the study begins (see section 2.2) by examining the concept of "EU added value" emphasising the need to prioritise EU funding where national and private financing falls short. By taking into account a set of criteria linked to EU added value, as well as extensive data collection and analysis, the study then provides inputs and suggestions for green spending priorities at the EU level for the next MFF (sections 2.4 and 2.5).

The data collection and analysis are shaped around cross-cutting objectives (see Figure 0.2) and economic sectors selected specifically for this study (Figure 0.3).

Figure 0.2 Green cross-cutting sectors shaping the research



Figure 0.3 Economic sectors shaping the research



Cross-cutting recommendations highlight the need for decarbonising the energy sector, enhancing carbon sequestration through land use and marine ecosystem restoration, and promoting behavioural change to reduce emissions. Climate adaptation is also a major focus, with recommendations to direct funding towards vulnerable regions, cross-border cooperation, and strengthening disaster preparedness. Water resilience is identified as a growing priority, calling for investment in water efficiency, pollution reduction, and nature-based solutions. The study stresses the importance of biodiversity protection, advocating for increased financing for ecosystem restoration and innovative funding mechanisms such as biodiversity credits. Additionally, it highlights the circular economy, zero pollution, and the need for a just transition to ensure the green transition benefits all regions and industries. Lastly, it considers the implications of EU competitiveness and enlargement, stressing the need to align candidate countries with EU climate and energy policies while addressing their specific economic and environmental contexts.

In the agriculture and food sector, the priorities include aligning the Common Agricultural Policy with sustainability goals, supporting carbon farming, and promoting water resilience and biodiversity conservation. The energy sector highlights the need for investments in renewable energy deployment, grid infrastructure, hydrogen development, and energy efficiency. In transport, EU funding could support TEN-T network completion, electrification, sustainable fuels, and smart mobility solutions. The buildings sector could focus on energy-efficient renovations, circular construction materials, and resource efficiency. For industry, the study recommends prioritising green industrial clusters, decarbonisation of energy-intensive industries, and support for clean

technologies. Lastly, in research and innovation, funding could focus on climate and biodiversity research, circular economy solutions, and bridging the gap between research and commercialisation. The study emphasises the EU added value of these investments, particularly in areas where coordination at the European level can drive economies of scale, leverage private investment, and support long-term climate and environmental objectives.

Chapter 3 of this report looks more specifically at possibilities of improving funding for nature restoration through the EU budget. The chapter shows the added value of the current biodiversity spending allocations. It also shows that technical assistance and capacity-building at Member State level are essential for mainstreaming nature restoration into EU programmes; and that tailored support through regional expert networks and one-stop-shop offices can foster cross-sector collaborations, enabling innovative financing solutions. The chapter also discusses the advantages of having dedicated nature restoration funding, which could complement mainstreaming efforts by offering targeted support for both small and large-scale projects, aligned with the Nature Restoration Regulation.

Chapter 4 of this report focuses on how to better mainstream nature-based solutions in the MFF context, with a focus on leveraging private finance alongside EU funding. It draws primarily on good-practice examples of projects that received private co-financing in addition to EU funding. The study found that nature-based solutions are often misunderstood by stakeholders, indicating a need for clear definitions and examples. Better dissemination and exploitation of project results under the EU R&I programme are necessary to enhance stakeholder engagement and uptake of nature-based solutions. The study recommends promoting policy recognition of nature-based solutions for their multifunctional benefits and integrating them into legislative frameworks. Transparency in financial aspects and impacts of nature-based solutions is lacking, hindering investment. Finally, leveraging public funding to attract private investments and enhancing financial incentives, such as taxes and fees, can support the implementation and scalability of nature-based solutions.

Chapter 5 of this report investigates ways to improve EU funding for industrial decarbonisation and clean technologies including by pursuing circular economy and zero pollution objectives. EU funding for industrial decarbonisation and clean tech is crucial to increase Europe's competitiveness, economic security and overall prosperity and to ensure the EU economy moves away from unsustainable energy consumption patterns. This also requires competitive energy prices and sufficient grid capacity. The chapter concludes that while many EU funds are available for industry, some have more impact than others. It identifies several challenges with the current funding landscape. On this basis, it presents various options for improvement. These include recommendations to increase the size of funding, but also a range of options to ensure the right focus of funding, to make more use of auctions, contracts for difference and guarantees, to improve access to funding (also for SMEs and clean tech manufacturers) and to align funding that has other key objectives (e.g. coherence, just transition, competitiveness) with climate and environmental goals.

 Following the identification of potential green spending priorities, **Chapter 6 looks into 'green exclusions'**, i.e. measures, actions and investments that are non-eligible to receive funding from a specific fund due to climate and/or environmental concerns (apart from cases where exceptions are explicitly defined). The chapter provides an overview (mapped per fund, topic, sector) of current environment and climate-related exclusions and related exceptions in EU funding programmes. The mapping of exclusions suggests there is a reasonable degree of coherence among exclusions and no major contradictions between different sectors and within fund priorities. However, the analysis suggests exclusions do not follow a single, precise logic, with the exception of some specific types of investment, mostly regarding climate change mitigation (i.e. exclusions to phase-out fossil fuels or for airport infrastructure). As a result, there is potential to improve

coherence, simplicity as well as flexibility of the exclusion system which can in turn improve the overall impact of exclusions, although there may be trade-offs. Current exclusions are then classified against a typology that has been developed specifically for this study. Based on this, the chapter discusses the advantages and disadvantages of different types of exclusions and exceptions.

3 **Chapter 7 discusses the current EU green mainstreaming toolbox, its practical use and how it may be strengthened towards the next MFF.** To this end, the chapter takes a case study approach, assessing specific sets of green mainstreaming tools, including the way they interact as well as overlaps and synergies. It argues that simplification is essential to reduce administrative burdens and enhance effectiveness, particularly for smaller projects. The chapter highlights the need for streamlined tools and methodologies, potentially by merging DNSH, climate-proofing and sustainability-proofing into a single operational tool. It also suggests monitoring and evaluation should shift focus from financial inputs to capturing investment impacts. Additionally, it proposes a typology for green policy reforms accompanying investments.

4 Finally, **chapter 8 is concerned with the tracking and monitoring of green spending in the MFF, and how to improve the current framework.** The chapter first assesses the intervention fields currently used for tracking and proposes improvements for specific sectors. It argues that current intervention fields (IF) need refinement to better capture sectors like climate adaptation, biodiversity, and clean air. Introducing more granular IF and ensuring consistency across funds could improve tracking accuracy. The study also notes that current tracking coefficients can overestimate climate-related spending and suggests introducing additional coefficients or splitting projects into different IF for more precision. Linking funding to EU Taxonomy criteria could enhance environmental impact but may introduce administrative challenges.

5 **While no specific study chapter focuses on the topic, impact monitoring is also touched upon throughout the report.** In particular, chapter 7 underlines that most of the green mainstreaming tools are used at the beginning of the budgeting cycle when plans, programmes and projects are designed; they focus on financial inputs and spending targets, while tools specifically dedicated to monitoring the actual impacts (or performance) of spending are less well developed. The chapter thus suggests that more focus should be put on performance monitoring. Chapter 3 also proposes specific ideas for a performance-based tracking system, including indicators such as "hectares of ecosystems restored," to enhance transparency and precision in monitoring progress.

1 INTRODUCTION

1.1 Background to the study

The EU stands at the forefront of global efforts to combat and adapt to climate change and protect the environment. As the impacts of environmental and climate challenges become more pronounced, the EU's commitment to addressing them has grown stronger. This can be seen in the EU policies, but also in the EU budget, which plays a crucial role in delivering environmental and climate ambitions.

The integration of environmental and climate action in EU policies and funding programmes follows Treaty obligations. Article 11 of the Treaty on the Functioning of the European Union ⁴ states that *'environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development'*.

In the current EU budget, the 2021-2027 multiannual financial framework (MFF), at least 30% of the total MFF expenditure (as well as from NextGenerationEU⁵) has to be spent on climate action. This headline target has been 'translated' into specific spending targets for individual programmes. When it comes to biodiversity spending, the 2021-2027 MFF inter-institutional agreement⁶ sets the ambition to allocate at least 7.5% of annual spending to biodiversity objectives in 2024 and 2025 and 10% in both 2026 and 2027.

To reach those targets, 'green mainstreaming' requires EU programmes in all policy areas to consider climate and environmental priorities in their design, implementation and evaluation phases. This approach was first adopted in the context of the 2014-2020 MFF. In the context of the 2021-2027 MFF, the Commission has further developed its approach to mainstreaming. This approach now consists of a multifaceted approach based on the following main pillars:

- High-Level Commitment and Spending Targets: The EU commits to allocating a minimum of 30% of its budget – including NextGenerationEU - to climate-related objectives, and 7,5% in 2024 and 10% in 2026 and 2027 to biodiversity related objectives⁷.
- Expenditure Tracking: Robust tracking methods assess how funds contribute to climate and biodiversity goals, as well as to clean air (based on legislative requirements but without a target) and water resilience, ensuring effective progress assessment. Expenditure tracking for different environmental themes can overlap which helps to identify synergies while more closely tracking specific objectives.
- Green⁸ mainstreaming: Through tools such as Do No Significant Harm (DNSH), Strategic Environmental Assessments, Environmental Impact Assessments, climate and sustainability proofing.

⁴ Treaty on the Functioning of the European Union. See: https://eur-lex.europa.eu/eli/treaty/tfeu_2012/oj/eng

⁵ NextGenerationEU is the EU's €800 billion temporary recovery instrument to support the economic recovery from the coronavirus pandemic and build a greener, more digital and more resilient future

⁶ INTERINSTITUTIONAL AGREEMENT of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources. See: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222(01))

⁷ Council Regulation (EU, Euratom) 2024/765 of 29 February 2024 amending Regulation (EU, Euratom) 2020/2093 laying down the multiannual financial framework for the years 2021 to 2027

⁸ In the context of this study, 'green', such as in 'green mainstreaming' or 'green priorities' is used to refer to climate and environment.

1.2 Objective of this study

According to the MFF Regulation⁹, the Commission needs to make proposals for the next MFF (post 2027) by mid-2025.

This study is the final report of the project “Mainstreaming climate and environmental objectives in EU funding programmes in the post-2027 period”. The study ran from January 2024 till April 2025 and was led by DG CLIMA and ENV with the support of a Steering Committee made up of relevant Commission services. It was prepared under the framework contract CLIMA.A4/FRA/2019/0011.

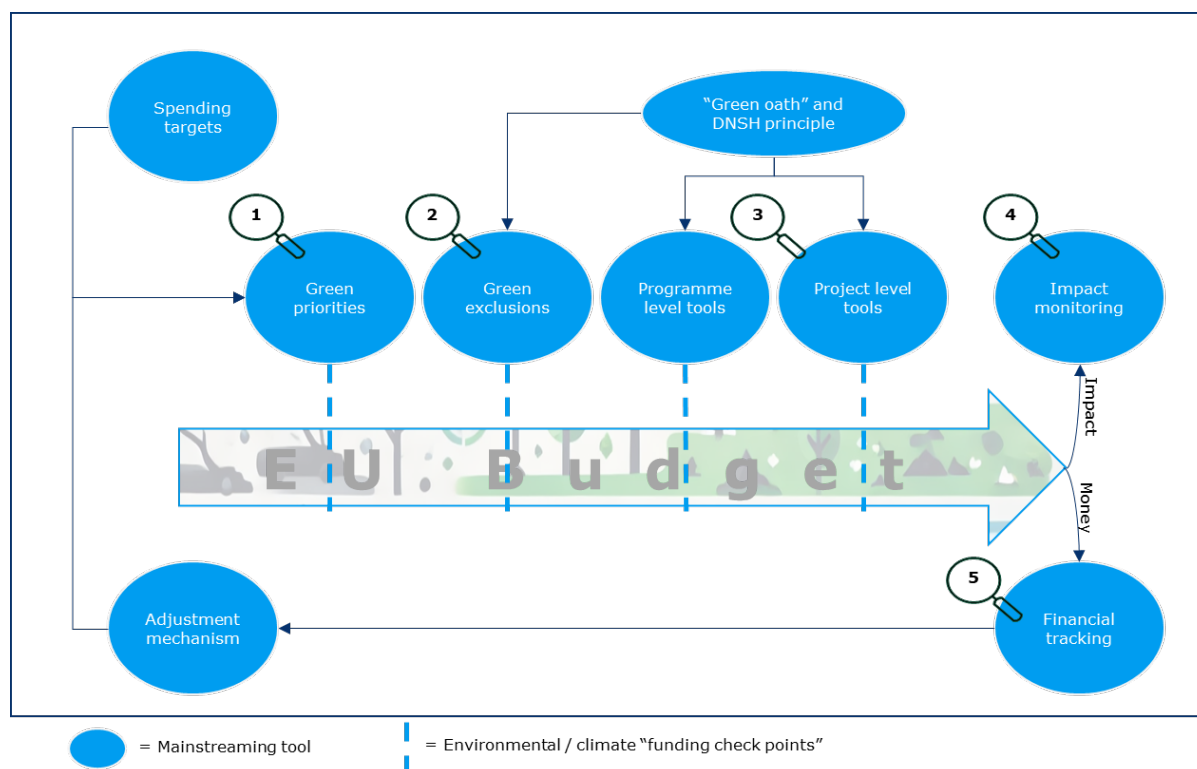
The objective of this study is to provide the Commission, and specifically DG CLIMA and DG ENV, with suggestions for potential improvements to the green mainstreaming architecture under the next MFF, based on a thorough analysis of the current framework and additional insights.

1.3 Structure and scope of this study

Mainstreaming framework structure of the study

The figure below provides a high-level overview of the mainstreaming architecture of the current MFF. The magnifying glasses in the Figure show the parts of the mainstreaming framework that the study focused on.

Figure 1.1 High-level overview of the mainstreaming architecture



⁹ Council Regulation 2020/2093 of 17 December 2020 laying down the multiannual financial framework for the years 2021 to 2027. See: <https://eur-lex.europa.eu/eli/reg/2020/2093/oj/eng>

This report is structured into chapters that address various aspects of this EU green funding framework. The chapters in the main body present the main analysis and findings per topic. For most chapters, annexes provide more in-depth information and overview of collected data.

 Chapters 2, 3, 4 and 5 (with corresponding Appendixes 1, 2, 3 and 4) all look at different aspects of green priorities.

Chapter 2 proposes green funding priorities for the forthcoming EU budget, beginning with an analysis of the "EU added value" to identify areas where EU funding is essential due to shortcomings in national and private financing. This chapter utilises extensive data collection and analysis, organised around cross-cutting objectives and specific economic sectors, to deliver recommendations across areas such as energy, agriculture, transport, buildings, industry, and research.

Chapter 3 shifts focus to specifically focusing on improving funding for nature restoration, emphasising the added value of current biodiversity allocations and the importance of technical assistance, capacity-building, and dedicated funding to support both small and large-scale projects in line with the Nature Restoration Regulation.

In Chapter 4, the report examines how best to mainstream nature-based solutions within the MFF, drawing on examples of successful projects with private co-financing, and highlighting the need for clearer definitions, enhanced dissemination of project results, and improved financial transparency to better leverage private investments.

Chapter 5 investigates measures to bolster EU funding for industrial decarbonisation and clean technologies, outlining the challenges of the current funding landscape and suggesting a series of improvements that include increasing funding size, ensuring appropriate funding focus, and facilitating better access for SMEs and clean technology manufacturers.

 Following this, Chapter 6 explores the concept of 'green exclusions' – the measures and investments that do not qualify for EU funding due to environmental or climate-related issues – mapping these exclusions across different funds and sectors and discussing the need for a more coherent, simple, yet flexible exclusion system. Appendix 5 contains additional background material for this chapter.

 Chapter 7 evaluates the current EU green mainstreaming toolbox through a case study approach, underscoring the administrative burdens of overlapping tools and proposing that a streamlined approach, potentially by merging various assessment systems, is essential to shift the focus from financial inputs to measurable investment impacts. More detailed background material is presented in appendix 6.

 Finally, Chapter 8 addresses the tracking and monitoring of green spending within the MFF, critiquing the existing intervention fields and tracking coefficients, and suggesting refinements—including more granular categorisation and alignment with EU Taxonomy criteria—to enhance accuracy, transparency, and the overall environmental impact assessment.

Throughout the report, there is an emphasis on the necessity of improved performance monitoring to ensure that financial inputs translate into tangible environmental and climatic benefits.

 While no specific study chapter focuses on the topic, impact monitoring is also touched upon throughout the report, in particular in chapters 7 and 3.

Funds and financial instruments

With the exception of the EU's external funding programmes (that are subject to a parallel study) all funds under the current MFF are within scope of the study. Where relevant, ETS-funded

programmes and financial instruments/programmes managed by the European Investment Bank (EIB) are also examined. However, since each chapter in this study has a different focus, the exact scope of the analysis differs per chapter.

Importantly, at the time that this study was drafted there was still uncertainty about how the future MFF will be designed. Consequently, while in many cases analysis was structured around existing funds, findings and recommendations are not formulated in relation to specific funds but “fund agnostic” and within the context of policies. This is in line with the ambition to make the next MFF “policy-driven” instead of “programme-driven”.

2 EU GREEN SPENDING PRIORITIES

2.1 Introduction

This chapter provides suggestions for EU green¹⁰ spending priorities for the next MFF.

Green spending priorities aim at the strategic channelling of EU funding toward activities, sectors, and projects that are in line with and advance the European Union's climate and environmental objectives. The proposed priorities are designed to ensure that EU spending is harmonised with the broad goals outlined, among others, in the European Green Deal¹¹, the EU Biodiversity Strategy for 2030¹², the European Climate Law and the Fit for 55 Package¹³, and in general the wider climate and environmental EU acquis. This is in line with the notion of a "policy-based budget" as proposed by Ursula von der Leyen in her *Political Guidelines for the 2024-29 Commission*¹⁴.

In the current MFF, the defined environmental and climate priorities highlight the EU's commitment to fostering a sustainable future, to combatting climate change, preserving biodiversity, and promoting green growth, which are essential components of its long-term strategic vision for environmental sustainability and resilience. The proposed green priorities in this chapter are designed to further that commitment into the next EU funding cycle.

The chapter presents synthesised findings. They are based on more detailed assessments which are presented in Appendix 1.

The chapter is structured as follows:

- The notion of "EU added value" is analysed presented in section 2.2
- Section 2.3 summarises the methodology used for developing the proposed priorities
- Sections 2.4 and 2.5 present the proposed priorities.

2.2 Defining EU added value for climate and environmental funding

Given the overall investment requirements within the EU, funding from the EU budget proper is inherently constrained. Therefore, to make the most of EU spending, funding should be used where 'EU added value' is highest. This can generally be understood as the EU budget covering needs that national public funding and private finance cannot (equally) effectively or efficiently meet alone. However, further operationalising 'EU added value' presents a challenge.

The study attempts to propose and use different 'value' criteria to assess the EU added value of funding. Those criteria have been developed based on a literature review which is presented in Annex 1 and then refined through consultations. The framework is designed to help identify concrete spending priorities in the subsequent sections of this chapter, and thus it focuses on the clearest 'EU added value' criteria that are useful for the prioritisation exercise. It should be reiterated,

¹⁰ The notion of "green" in this context includes climate, biodiversity and other environmental topics.

¹¹ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal COM/2019/640 final. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52019DC0640>

¹² COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Biodiversity Strategy for 2030 Bringing nature back into our lives COM/2020/380 final. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52020DC0380>

¹³ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality COM/2021/550 final. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52021DC0550>

¹⁴ See: https://commission.europa.eu/about/commission-2024-2029_en

however, that those criteria could be approached in many different ways, and that they may ultimately just be a starting point for discussions in EU political processes.

Table 2.1 Criteria Proposed for 'EU added value for climate and environmental EU funding'¹⁵

Criterion	Examples (not exhaustive)
Strategic priorities: Prioritise the funding of projects that align with the EU strategic priorities as part of a 'policy-driven budget' (as compared to a 'programme-driven' one).	• Sustainable competitiveness • Nature Restoration Regulation • Catalytic funding to accompany the net zero and resource-efficient transition (social implications, role of SMEs, etc.) • Electrification action plan and Clean Industrial Deal, aligned with boosting the roll out of renewable energy and energy storage, combined with demand flexibility and further implementation of the energy efficiency first principle.
Infrastructure links: Prioritise the funding of projects (including upgrades and maintenance) targeted towards critical cross-border infrastructure or networks essential for effectively achieving EU-wide climate and environmental goals.	• Creation and management of ecological corridors across borders • Cross-border energy grids/electricity interconnectors • Cross-border rail and waterway infrastructure • Nature-based solutions (e.g. coastal protection, flood prevention, water retention in soils).
Resource pooling: Prioritise the funding of large-scale projects that individual MS struggle to afford alone but which are crucial for EU strategic priorities and aligned with environmental and climate ambitions.	• Offshore wind farms, transmission networks, battery industry, large-scale heat pump industry, E-load, electric appliances for industrial heating, hydrogen infrastructure, climate and land-use earth observation • R&I projects funded under Horizon Europe • Large-scale research such as International Thermonuclear Experimental Reactor (ITER)
Coordination benefits: Prioritise the funding of projects focused on EU-wide coordination (cross-border or pan-European) of efforts where this adds significant efficiency and effectiveness benefits as compared to fragmented national efforts.	• Research and innovation in green and climate-neutral technologies • Networks to increase and share knowledge and scale up good practices • Coordination of disaster response mechanisms, environmental monitoring systems, climate adaptation strategies • Facilitation of common tools such as climate-relevant geospatial information and modelling under Copernicus (the Earth observation component of the EU Space programme).
Enabling single market benefits: Prioritise funding that maximises and leverages the opportunities provided by the single market.	• Build EU value chains for specific technologies with clear EU-wide economies of scale (green hydrogen, batteries, clean water tech, etc.) • Facilitate/de-risk the uptake of innovative measures by the private sector (e.g. nature restoration, nature-based solutions) • Common market and harmonisation of market instruments/standards on emerging technologies like carbon farming, land-use certificates, green gas, waste • Solutions that need to have been rolled out consistently across Europe before they can deliver their full benefits, e.g. the European Rail Traffic Management System (ERTMS)

¹⁵ It should be noted that other criteria have also been discussed, such as 'attract additional funding and drive private investment', or 'lack of bankability' of projects. Those are crucial criteria for public funding in general; however, the question is what the added value from EU funding would be in those cases, as compared to funding from national, regional or local authorities. Thus, in line with the above-mentioned focus on 'clear' EU added value, they have not been included. However, they could be relevant in combination with other criteria – e.g. if a strategic priority of the EU is water resilience, then within this field EU funding could focus on non-bankable projects.

Criterion	Examples (not exhaustive)
Environmental cohesion: Prioritise funding projects in regions with greater climate and environmental challenges to increase resilience, prevent or reduce pollution, reduce territorial disparities and promote cohesive environmental development, especially in areas with investment backlogs vis-a-vis targets and obligations in the environmental and climate acquis. This includes Just Transition regions that require support to transition away from fossil fuel dependency to alternative economic and social models.	• Drinking water infrastructure, wastewater collection and treatment infrastructure, nature-based solutions, and waste management infrastructure in regions and communities with insufficient access or treatment capacity • Infrastructure for climate and water resilience in regions and communities more exposed or more vulnerable to climate impacts • Investments in just transition in coal and carbon-intensive regions • Investments in biodiversity protection in regions facing economic challenges and pressure on natural resources • Improving compliance with EU environmental standards and reducing the number of infringement procedures.
Trans-border benefits: Prioritise the funding of projects that also produce positive spillovers to other Member States and are thus likely not to be fully financed or prioritised by national budgets.	• Upstream (natural) flood protection measures that have significant downstream benefits in another MS • Cross-border electricity grids, making electricity more affordable by allowing flows from cheaper renewables-based electricity to other regions facing higher prices • Fast chargers for electric vehicles (EVs) in border regions • Measures to reduce air pollution, thus also reducing cross-border air pollution.
Catalytic effect through replicability: Prioritise the funding of projects that have replication potential across the EU.	• Good practices in water resilience, nature conservation and restoration or in financing for nature. • Urban Innovative Actions (UIA), LIFE and Horizon Europe projects, e.g. the LIFE Strategic Integrated Projects (SIPs) for clean air.

The criteria for defining EU added value in green funding encompass various dimensions, some of which can apply simultaneously, while others may present potential contradictions. For instance, facilitation of common tools such as climate-relevant geospatial information under Copernicus aligns with coordination benefits by enhancing efficiency and effectiveness across Member States through shared resources. Additionally, enabling single market benefits through prioritising projects that leverage EU-wide economies of scale, like green hydrogen and clean water technology, can also contribute to the creation of EU value chains for specific technologies.

There may be instances where criteria conflict. For example, implementing resource pooling for large-scale projects crucial for EU strategic priorities might encounter challenges when attempting to balance these with more granular and localised needs for environmental cohesion or just transition efforts. Overall, while the criteria collectively strive to maximise EU added value, careful consideration and harmonisation are required to ensure that they work synergistically without causing inadvertent trade-offs or conflicts that could undermine the cohesive and strategic objectives of green funding.

2.3 Methodology behind the proposed green spending priorities

2.3.1 Description of the methodology

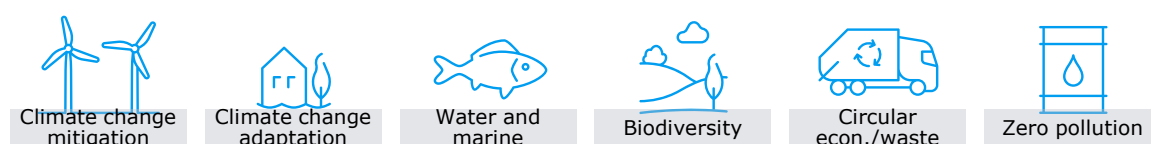
Proposing green spending priorities in an objective and systematic way is a challenging task, given the vast funding needs across many areas. To enhance objectivity, our methodology covers a wide range of elements which are listed in Box 2.1 below.

Box 2.1 Overview of methodological steps to improve the objectivity of identifying priorities

- A wide range of qualitative inputs regarding the **current green spending priorities, as well as insights into potential future spending priorities**, have been collected, analysed and used for the study outputs, including:
 - Interviews with policy officers for all funds covered by the scope of the study regarding their insights on the effectiveness and relevance of current priorities, and thoughts on future priorities. A summary of those interviews can be found in Annex 2 of this report.
 - Past evaluations and impact assessments of all funds within scope, to identify instances where current priorities have been assessed as not being relevant or especially relevant. A summary of those interviews can be found in Annex 3 of this report
 - Legal requirements in the EU acquis for allocating funds to specific objectives
- For the **identification of climate/environmental challenges and gaps**, quantitative and semi-quantitative/indicator information from the following sources has been assessed, compared and merged:
 - The latest¹⁶ European Environment Agency (EEA) State of the Environment report¹⁷
 - The latest¹⁸ monitoring report on progress towards the 8th EAP objectives, 2023 edition¹⁹
 - The results of the latest Environmental Implementation Review²⁰
 - DG Environment's internal report on the EU's environmental investment needs and financing towards the 2030 objectives, environmental investment needs, financing and gaps in the EU-27
- **Additional literature** from reputable sources and with pan-European relevance has been considered
- For some sectors, **specific consultation sessions** have been organised with topic experts to discuss draft findings regarding priorities
- Draft priorities have been reviewed by an **expert panel** which had an advisory function to the core project team.

The data collection and analysis described in Box 2.1 has been shaped around two dimensions: environmental clusters and economic sectors, as shown in the Figures below.

Figure 2.1 Environmental clusters shaping the study's research



These clusters align with the priority objectives of the 8th Environment Action Programme and the environmental objectives of the EU Taxonomy for sustainable activities.

The research has also been conducted around specific economic sectors.

¹⁶ The next report will be published in 2025 and thus not in time for this study. However, the authors of the next report have been consulted to identify potential new challenges to be taken into account.

¹⁷ EEA (2020). The European environment – state and outlook 2020. Knowledge for transition to a sustainable Europe. See: <https://www.eea.europa.eu/soer/publications/soer-2020>

¹⁸ The next assessment will likely be published in 2025. In addition, here the study team consulted with the authors responsible, to identify initial potential indications. However, due to the process involved in the development of the final reviews, no preliminary insights could be gathered.

¹⁹ EEA (2023). Monitoring report on progress towards the 8th EAP objectives 2023 edition. See: <https://www.eea.europa.eu/publications/european-union-8th-environment-action-programme>

²⁰ See: https://environment.ec.europa.eu/law-and-governance/environmental-implementation-review_en

Figure 2.2 Economic sectors shaping the study's research

Based on the collected and analysed information, and the EU added value criteria described in section 2.2 above, the project team has developed concrete priorities and mapped them in a matrix to create a clear research structure. The matrix format is shown in the figure below.

Figure 2.3 Illustration of matrix format used for structuring proposed priorities

	Cross-cutting green priorities	Economic sectors					
Env. Clusters	!	!	!	/	/	!	!
	!	/	!	!	!		/
	!	!	!	!	!	/	!
Cross-cutting sector-specific priorities		!	/	!	/	!	/

! = proposed priority

As illustrated in the above figure, the aim was not to define priorities for all combinations, but rather to map sensible priorities in the right place in the matrix. In addition, in some cases the environmental priorities did not match one of the economic sectors or vice versa; those cases have been mapped in a specific 'cross-cutting' column (for environmental clusters) and row (for economic sectors).

The full research matrix table with detailed proposed priorities is presented in Annex 4 which has been created in line with the methodology described in Box 2.1 above. The proposed priorities from that table have been amalgamated into narratives which are presented in the next sections.

2.3.2 Strengths and limitations of the methodology

As explained above, the methodology used for developing the proposed priorities has been thorough and has used several different data sources for triangulation. It has built on literature reviews and on in-depth interviews with several relevant stakeholders. As a result, we believe that the proposed priorities can be considered well-grounded in the available evidence.

This strength of the methodology is, at the same time, responsible for its main limitation – since the priorities have mostly been developed bottom-up, based on the available literature, interviews, expert consultations, etc., only inputs arising from those sources have been used. Consequently, if a potentially relevant priority did not come up sufficiently from those sources, it has not been considered in this study, leading to potential gaps. For example, forestry and maritime transport could be considered as current gaps.

In short, the suggestions presented below can be considered objective and evidence-based, but not complete. However, this can be expected, given the cornucopia of potential priorities. Thus, going forward, and in the context of the next MFF, it is to be expected that priorities will be revised and

added. To this extent, the proposed EU added value criteria should offer a valuable resource for further work.

One notable exception to the general bottom-up nature of the methodology is the 'semi-quantitative assessment', which is built on a triangulation of several comprehensive existing assessments of the challenges and needs in the context of climate and the environment, one of the bedrocks of the methodology. The methodology of the semi-quantitative assessment, as well as the detailed results, are presented in Annex 5 of this report.

2.4 Cross-cutting green priorities

2.4.1 Climate change mitigation

Achieving the European Green Deal objectives and climate neutrality by 2050 requires strategic investments across multiple sectors. The political *guidelines for the next European Commission 2024–2029*²¹, highlight the importance of decarbonising the economy, with a particular focus on industry and energy systems. Additionally, carbon sequestration, promoting behavioural change, and providing support to key players like Small and medium-sized enterprises (SMEs) are important complementary measures.

Investments in these climate change mitigation measures can bring EU added value through the creation of infrastructure links (e.g. electricity grids), resource pooling (e.g. offshore wind farms), and by enabling single market benefits (e.g. green hydrogen).

Decarbonising the energy system is central to achieving the climate neutrality objectives. As outlined in the *Impact assessment on the 2040 climate target*,²² this will require unprecedented levels of investment across segments of the energy sector: deployment of renewable energy sources, infrastructure to ensure adequate grid capacity, energy efficiency, electrification, decarbonisation of heating and cooling, flexibility (including storage) and technological development and digitalisation. More detailed priorities for the energy sector can be found in section 2.5.2.

Beyond the energy sector, achieving climate neutrality will require substantial efforts in carbon removals. This includes significant investments in carbon capture and use, and industrial removals for sectors where emissions are difficult to eliminate. Land Use, Land-Use Change, and Forestry (LULUCF) investments should focus on enhancing carbon sequestration through forest and wetland restoration, sustainable afforestation and soil health restoration. In the agricultural sector, practices that promote healthy soil and sustainable land use will play a vital role in removing carbon. Additionally, ocean-based solutions, such as marine ecosystem restoration and blue carbon initiatives, will play a crucial role in capturing and storing carbon, further supporting climate neutrality efforts.

The EU should invest more in promoting behavioural change as part of its climate change mitigation strategy. Shifting behaviour, such as reducing travel or private car use (particularly internal combustion vehicles), adopting sustainable consumption habits, improving energy efficiency leading to demand reduction, and limiting unnecessary waste can significantly reduce emissions across various sectors. These changes are often cost-effective and can complement technological innovations, helping to achieve climate goals more quickly and in broader ways. By investing in

²¹ See: https://commission.europa.eu/about-european-commission/president-elect-ursula-von-der-leyen_en

²² COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT REPORT Part 1 Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Securing our future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52024SC0063>

comprehensive behavioural change programmes—including transparent water billing, usage benchmarking, targeted pricing instruments, awareness campaigns, and financial support for water-efficient technologies—the EU can foster a more sustainable society and accelerate the transition to a climate-neutral economy.²³ These measures not only raise awareness but also create lasting behavioural shifts by reinforcing informed decision-making and incentivising sustainable practices.

EU funding has a track record of supporting SMEs, as they are often seen as the backbone of the EU economy and crucial players for achieving a climate-neutral economy.²⁴ At the same time, the *Impact assessment on the 2040 climate target*²⁵ (see its Annex 4) highlights the need to support SMEs through SME-specific programmes, but also through sector-specific measures, as part of a just transition. Under the recommended 90% greenhouse gas (GHG) reduction target for 2040 (likely to be translated into law in the near future), the impact assessment points to high investment needs in novel technologies during the 2031–2050 period. The next MFF could play an important role in mobilising this investment funding, reaching this target in a just manner and accelerating the transition to ensure the target is achieved on time.

2.4.2 Climate change adaptation

Climate change adaptation requires significant investments.²⁶ The urgency to step up action in this area is reflected in the *Guidelines for the next European Commission 2024–2029*²⁷.

Climate change could widen territorial disparities²⁸ if not properly addressed; adverse events and their impact on people and the economy, as well as people's capacity to cope with them, are unevenly distributed across Europe, and some regions that are already poorer than the EU average are more vulnerable and disproportionately affected. Thus, in line with the environmental cohesion criterion, as well as the focus on solidarity, adaptation funding targeting regions that are especially at risk, whether in terms of exposure, vulnerability or developed response mechanisms (e.g. the Mediterranean, southern Europe), could be considered a priority for EU funding.

Some hazards are projected to increase widely across several EU countries (e.g. hazards leading to heat stress or flooding). Systemic climate risks such as flooding, fires and extreme drought do not end at national borders. These risks pose particular challenges, especially when risks are transmitted across sectors and international boundaries. Consequently, investments in strengthening cross-border links and coordination (e.g. through Interreg) could be prioritised, ensuring that adaptation solutions take into account cross-border impacts and interdependencies. Examples include facilitating joint procurement and/or shared infrastructure, coordination mechanisms, as well as cross-learning across the EU, for example by providing disaster risk management training exercises, exchanging best practices, lessons learned, guides, or innovative pilot projects.

²³ Based on our assessment.

²⁴ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS An SME Strategy for a sustainable and digital Europe. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0103>

²⁵ COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT REPORT Part 1 Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Securing our future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52024SC0063>

²⁷ See: https://commission.europa.eu/about-european-commission/president-elect-ursula-von-der-leyen_en

²⁸ See, for example, 9th Cohesion Report: https://ec.europa.eu/regional_policy/information-sources/cohesion-report_en

Although many MS, regions and local governments have adaptation strategies in place now, many still suffer from a lack of operationalisation. EU funding could focus on providing funding for the operationalisation of these plans.

- For adaptation, there is limited administrative and technical capacity, especially in local and regional governments (where most of the adaptation work needs to be implemented) and thus the need for technical assistance and capacity-building remains very pertinent in this sector, which could be facilitated through the same means as described in the bullet point above.
- At national level, given that national adaptation plans are a legal requirement, expanding funding for improving the quality and implementation of national adaptation plan measures (currently being financed under LIFE²⁹) could be considered.

If adaptation measures are directly funded from the EU budget (e.g. when linked to national adaptation plans, or in line with the 'environmental cohesion criterion'), prioritising the following measures could be considered:

- Measures for risks identified as being most urgent in the first European Climate Risk Assessment (EUCRA)³⁰ (or its next iterations); here, priorities with EU-wide implications include:
 - Mainstreaming of adaptation and improved policy cohesion in EU policies related to biodiversity and ecosystems, and food and agriculture, could significantly enhance Europe's resilience against multiple climate risks. Mainstreaming adaptation into policies related to critical infrastructure and civil protection is also important.
 - Current adaptation investments related to these risks must account for the long lead times and decision horizons to avoid lock-ins into unsustainable pathways.
 - The importance of prioritising prevention and preparedness mechanisms³¹ or linking reconstruction support with the Building Back Better (BBB) approach to post-disaster recovery that reduces vulnerability to disasters and builds community resilience to address physical, societal, environmental and economic shocks and vulnerabilities.
 - Measures linked to water resilience and food security (see chapters 5, 6 and 11 of EUCRA)
- Areas identified as priorities in the mission letters for the next Commission:³²
 - Measures to support water resilience / underpin an upcoming 'European Water Resilience Strategy'
 - Measures to support the new 'Climate Adaptation Plan', the circular economy act, the new bioeconomy strategy or the future nature credits.
 - Measures to support the Preparedness Union Strategy, which also covers climate risks.

More systematic climate-proofing of investments to ensure assets financed with EU funds withstand exposure to extreme weather events. While reconstruction investments, e.g. through the EU Solidarity Fund, will still be necessary, it is important to prioritise investments in preparedness where possible, in contrast to disaster reconstruction. For the latter, the 'build back better principle' should be introduced to ensure that reconstruction efforts build in resilience measures to prevent future damages (as mentioned in the RESTORE proposal amending the European Regional

²⁹ See example of a LIFE Integrated project: [The LIFE-IP AdaptInGR project](#).

³⁰ Ecosystems	Coastal ecosystems, marine ecosystems, biodiversity/carbon sinks due to wildfires (southern Europe)
Food	Crop production (southern Europe)
Health	Heat stress – general population, population/built environment due to wildfires (southern Europe)
Infrastructure	Pluvial and fluvial flooding
Economy/finance	European solidarity mechanisms

³¹ Also outlined also in the Report by Sauli Niinistö, former President of the Republic of Finland: 'Safer Together. Strengthening Europe's Civilian and Military Preparedness and Readiness'. See: https://commission.europa.eu/document/5bb2881f-9e29-42f2-8b77-8739b19d047c_en

³² See: https://commission.europa.eu/about-european-commission/towards-new-commission-2024-2029/commissioners-designate-2024-2029_en

Development Fund (ERDF)/Cohesion Fund and the European Social Fund Plus (ESF+) fund-specific regulations).

In general, nature-based solutions should be prioritised due to their notable cost effectiveness and high potential for synergies, namely to mitigate and adapt to climate change, while supporting biodiversity and ecosystem restoration. To make nature-based solutions effective, specific expertise is still needed, and EU funding should continue to be used for research and capacity-building in this field. This built capacity on implementing effective nature-based solutions can also be applied in projects funded by other sources.

The *2024 SAB report on climate neutrality*³³ points out that LULUCF sinks are increasingly under pressure from human activities and natural disturbances, exacerbated by climate change, a trend that is projected to worsen in the future. This highlights the need for sustained investment to ensure the long-term resilience of carbon sinks, which play a crucial role in reducing atmospheric CO₂ through increased carbon removals and long-term storage in terrestrial biomass. To achieve climate neutrality, it is essential to both enhance the resilience of these carbon sinks and to adapt sectoral activities to climate hazards. A specific example given in the SAB report is the shift from conifer monocultures to mixed species or broadleaf forests, which not only strengthen adaptation efforts but also synergistically contribute to increasing biodiversity.

2.4.3 Water and marine

Water security is mentioned as a priority in the *Guidelines for the next European Commission 2024–2029*²⁷ (July 2024), in light of the mounting pressures on that resource. These guidelines call for a new European Water Resilience Strategy. According to the mission letter to Commissioner Jessika Roswall,³⁴ ‘this strategy will address water efficiency, scarcity, pollution and water-related risk (...) [and] aim to enhance the competitive innovative edge of our water industry, develop clean tech, take a circular economy approach and include proposals to digitalise water management, cycles and utilities’. Given current trends in climate change, but also in water abstraction and use, it is likely that this topic will only become more important in the future. EU-wide initiatives, as well as EU funding, are justified by the importance of water for EU nature, food security and competitiveness, but also in view of the cross-border nature of the hydrological cycle and some key water resources. The exact funding priorities should be aligned with the Water Resilience Strategy, which is expected to be published in 2025.

The EU has a comprehensive body of water and marine legislation that establishes an integrated model for water resources management (the Water Framework Directive, WFD), regulates the main pollution sources (industry, urban wastewater, agricultural pollution), and sets quality standards for different uses (drinking water, bathing water and water reuse in agriculture), and regulates groundwater quantity. In addition, flooding is addressed through flood risk management (Floods Directive). The protection of the marine environment is addressed through the Marine Strategy Framework Directive (MSFD), which complements the WFD within and beyond coastal waters by introducing an ecosystem-based approach to the sustainable use of the seas. However, gaps in implementation and funding mean that the EU remains far from reaching its environmental objectives for clean and healthy freshwater and marine ecosystems.

In 2021, only 39.5% of the EU’s surface waters achieved good ecological status or potential, which is only slightly more than the same Member States reported under the 2nd river basin management

³³ European Environment Agency: European Scientific Advisory Board on Climate Change, *Towards EU climate neutrality – Progress, policy gaps and opportunities – Assessment report 2024*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2800/216446>

³⁴ Ursula von der Leyen, [Mission Letter](#) to Jessika Roswall, Commissioner for Environment, Water Resilience and a Competitive Circular Economy, 1 December 2024.

plans (RBMPs) (39.1%). Regarding pollution, 86% of groundwater bodies – but only 26.8% of surface water bodies – had good chemical status, which is a slight improvement for the former as compared to the last reporting, but a downward trend for the latter³⁵. The main pressures on surface water bodies are hydro-morphological pressures (for instance, channelled rivers), diffuse sources of pollution (particularly nitrates and pesticides from agriculture, not captured/untreated urban sources) and atmospheric deposition, particularly mercury, followed by point sources and water abstraction.

Despite progress in the implementation of legislation for the collection and treatment of urban wastewater, many MS still face challenges with inadequate treatment or a lack of proper facilities, resulting in effluents that fail to meet quality requirements for discharge into freshwater or marine environments. The EU has played an important role in the implementation of the Urban Wastewater Treatment Directive, because of its pan-European relevance, as illustrated by the national policy failure to combat downstream pollution,³⁶ among other reasons. In addition, the recast Urban Wastewater Treatment Directive that entered into force on 1 January 2025, implies additional investment needs³⁷ with stricter requirements, to address remaining pollution and novelties such as integrated urban wastewater management plans, quaternary treatment, energy neutrality and resource recovery, to be implemented with a staged approach for many requirements, and by 2045.

Floods and droughts are increasingly common disaster risks. The most severe and prolonged droughts in Europe took place over the last 10 years, with the drought of 2023 being the worst in 500 years. About 20% of the European territory and 30% of Europeans are affected by water stress during an average year.³⁸ Water scarcity is more common in southern Europe, where about 30% of the population lives in areas with permanent water stress and up to 70% of the population in areas with seasonal water stress during summer.³⁹ Climate change will exacerbate water scarcity.

In light of the expected increase in pressures on water bodies and resources (see above), leading to water stress and drought spells increasing in frequency and severity, consideration should be given to putting a funding focus on investing both in the protection and restoration of the water cycle, including the deployment of natural water retention measures and nature-based solutions, as well as in water efficiency, including combating leakage from drinking water infrastructure and promoting water reuse, as well as other circular use measures such as resource recovery (including the critical raw material phosphorus) and sewage sludge investments. Flood protection and prevention, water storage and non-conventional water resources are also key investment areas. For example, investments into wastewater infrastructure (see above) could be considered, conditional on parallel measures for water reuse where applicable, which would also ensure strong synergies between water, climate change adaptation and renewable energy. The importance of further water pollution abatement and remediation should also be noted, as water pollution reduces the volume of available freshwater while increasing the costs of water treatment.

³⁵ REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT on the implementation of the Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC) Third river basin management plans Second flood risk management plans. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2025%3A2%3AFIN&qid=1738746144581>

³⁶ This can be seen as the classical example of the Coase theorem where country X (upstream) is the polluter and country Y (downstream) the receptor. Cross-border coordination can solve the lack of property rights and define 'collective rights' to address the pollution. An example is the PFAS pollution bio-accumulating in all kinds of ecosystems, such as aquatic fauna with high damage costs to health.

³⁷ E.g. stricter threshold for scope of Directive from 2,000 p.e. to 1,000 p.e.; new standards for IAS; higher treatment standards.

³⁸ EEA (2021) Water resources across Europe – confronting water stress: an updated assessment.

³⁹ European Environment Agency (2021), [Water resources across Europe – confronting water stress: an updated assessment](#), EEA Report No 12/2021, p. 84.

The relative novelty of water resilience as a focal point of action may merit more advisory facility for investments in this domain, offered by European and national Promotional Banks and Institutions.

The *BBNJ Agreement* on Marine Biological Diversity of Areas Beyond National Jurisdiction was adopted in June 2023 and is open for signature by all states and relevant organisations from September 2023 to September 2025, entering into force 120 days after the date of the sixtieth ratification. While the adoption of the agreement was a major milestone in a very long process, many details are still open and need to be further developed, piloted and implemented. It is expected that the EU, already a frontrunner in the BBNJ High Ambition Coalition, will continue to lead by example in the implementation and further development of the agreement, given the dire state of the ocean and the important role this agreement can play.

The EU Biodiversity Strategy for 2030 sets a target of protecting 30% of EU land and sea by 2030. One third of this – areas of very high biodiversity and climate value – should be under strict protection. EU funding should continue to help MS develop a coherent, transnational network, and facilitate cross-border coordination, including for transnational inland water, wetlands and marine protected areas.

EU funding could be leveraged for maritime spatial planning to map and protect ecosystems, especially blue corridors that ensure species have sufficient protected space from pressures from fishing, shipping and other threats. This would support the *conclusions on the blue economy from the Council of the EU in May 2021*, which include leveraging blue corridors to improve the functional connectivity of ecological networks and to ensure sustainable fisheries and navigation in marine ecoregions.⁴⁰

2.4.4 Circular economy

Creating a single market for waste with a view to promoting the use of secondary raw materials is a political priority highlighted in the *Guidelines for the next European Commission 2024–2029*. It has the potential to enhance efficiency through economies of scale and improved logistics. It will support higher recycling rates by enabling the flow of recyclable materials to the best equipped facilities and can attract investment in advanced waste management infrastructure and novel technologies like chemical recycling. Given the competition between virgin and recycled materials or resources, and given the increasing globalisation of waste markets, the harmonisation of support policy measures is much needed, to avoid distortion of national waste markets resulting in waste ending up in the least eco-friendly processing MS. Thus, we conclude there is a clear EU added value for investments in achieving this goal which, in addition to policies, could also include funding for research, early uptake of technologies and new circular business models or coordination.

As shown in the latest *Waste Early Warning Report*,⁴¹ there is a need to finance projects higher up the waste hierarchy, including in waste prevention, reuse and recycling. This includes soft measures, such as promoting behavioural changes for prevention and reuse, as well as new business models that promote eco-design, alongside investments in circular industry infrastructure and waste infrastructure, especially considering the landfill reduction targets beyond 2027 and the need to enhance recycling and the EU's circularity rate. Repairing and reusing products involves

⁴⁰ General Secretariat of the Council, Brussels, 26 May 2021. Council conclusions on a sustainable blue economy: health, knowledge, prosperity, social equity.

⁴¹ REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS identifying Member States at risk of not meeting the 2025 preparing for re-use and recycling target for municipal waste, the 2025 recycling target for packaging waste and the 2035 municipal waste landfilling reduction target. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A304%3AFIN&qid=1686220362244>

supporting individual companies to develop viable circular business models, including reverse logistics within the internal market, and encouraging local communities to establish value-added services. Such initiatives, particularly focused on repairing and reusing products, would also need to enable access to affordable goods for people with low purchasing power, contributing to a more inclusive and sustainable circular economy. Promoting circularity under the new Clean Industry strategy will be essential; this would possibly include investments in infrastructure that promotes circular industry symbiosis; or supporting the refurbishing/upgrading of traditional industry infrastructure to become clean and circular. Good waste prevention and waste handling would also reduce the burning of waste, for example for domestic heating, which results in serious ambient and indoor air pollution and health hazards. This would bring added value through the catalytic effect and replicability potential.

Early results of the forthcoming *ex post evaluation of the 2014-2020 Cohesion Policy* suggest that investments in 'new solutions' tend to be less prioritised in programmes and spending. That would apply, for instance, to circular solutions in water (water reuse, sludge re-use, water circularity in agriculture) and circular solutions in SMEs. To promote the use of such 'new solutions', alongside financial support for investments in the relevant infrastructure, awareness-building initiatives would also play a role. This would strengthen understanding and improve the effectiveness of their implementation. Improved uptake of such solutions could also yield energy savings and an increased share of 'green energy'. Regarding EU added value, there is a strong rationale for EU investment complementing MS or private sector funding. By explicitly prioritising these areas within funding programmes, their adoption could be more effectively supported across the EU. Additionally, such funding aligns directly with broader EU policy priorities.

The same *evaluation* argued that EU funding should prioritise waste prevention through circularity and circular design over waste management. Currently, measures supporting a more sustainable waste management are more prominent and visible under Cohesion Policy programmes than measures aimed at waste prevention. To speed up the green transition of the economy, more emphasis on waste prevention is needed. This requires a more pro-active approach to supporting eco-design and business model innovation, for example from a 'design – outsource manufacturing – sale' model, to a 'design – manufacturing – leasing – repair – leasing again – take-back – resale or reuse of parts' model. EU added value would be created through alignment with EU priorities, including raw material supply security and reshoring manufacturing / repair capacities.

The evaluation also found that considering waste from a national perspective prevents the identification of cross-border opportunities for managing waste close to the source. EU funding could thus be provided for cross-border waste management projects, or to support potential new MS, where it would provide clear EU added value.

Awareness-raising activities to enhance citizens' participation in moving towards more sustainable consumption and decreasing waste generation is a soft solution to improve separate collection of municipal waste.⁴² The EU action would have added value because of its potential catalytic effect and universal relevance.

Expanding effective capacity for separate collection and treatment/recycling of biowaste and packaging waste⁴³ is an infrastructure type of action considered a priority, because of the need to increase re-use and recycling rates. EU action would have added value because increasing these rates is a strategic priority and has potential for environmental cohesion.

⁴² See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023DC0304>

⁴³ See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023DC0304>

Enhancing compliance and monitoring of waste management practices is a reform type of measure, driven by discrepancies in waste management performance data as shown by the semi-quantitative analysis. EU action would add value by increasing environmental cohesion.

2.4.5 Zero pollution⁴⁴

Air pollution is the biggest environmental health risk. In the EU, it results in by far the highest number of premature deaths and days of sickness related to environmental problems. Therefore, the EU acquis requires funding for clean air and related reporting on the uptake of EU funds for this objective. This objective could be supported by more awareness of synergy and co-benefits and a systematic application of results indicators for clean air, even if funding or investment does not have clean air as its primary objective, e.g. in energy, transport, agriculture or industry.

Noise pollution is the second biggest health hazard, but it receives relatively little attention in EU funding. Particularly in EU funding related to transport infrastructure and rolling stock or vehicles, noise should be mainstreamed as a criterion.

EU should also prioritise addressing the environmental and health risks of forever chemicals such as per- and polyfluoroalkyl substances (PFAS) and perfluorooctanoic acid (PFOA) through targeted investments in their phase-out and the remediation of contaminated sites. These substances, known for their extreme persistence and bioaccumulation in organisms and ecosystems, represent a growing global challenge, with scientists advocating for a dedicated planetary boundary for PFAS. EU funding could play a role in promoting innovation, supporting effective remediation practices, and enabling coordinated action to tackle this issue at scale, aligning with the EU's leadership in promoting global environmental solutions.

Deteriorating trends prevail in chemical pollution and risks to human health and well-being, as highlighted in the semi-quantitative analysis (Annex 5). To address this, the EU should prioritise enhancing regulations on chemicals, such as through the REACH framework, to reduce pollution at the source. Specific focus areas could include tightening restrictions on pesticide use, improving waste management practices, and advancing technologies and processes that reduce chemical discharges. Additionally, EU coordination is essential, given the cross-border nature of pollution, enabling knowledge sharing, R&D on new materials, and the development of cleaner, more sustainable technologies, and developing and implementing better monitoring and modelling. Strengthening these efforts would not only protect human health but also support the EU's commitment to a safer, healthier, and more sustainable future.

The importance of further water pollution abatement and remediation must be noted, as water pollution reduces the volume of available freshwater while increasing the costs of water treatment. Hence, on this issue, the zero pollution and water resilience / climate adaptation domains interact.

2.4.6 Biodiversity⁴⁵

Ecosystems throughout the EU would greatly benefit from significant improvements, as their degradation continues to be a problem. As noted in *EU biodiversity financing reports*,⁴⁶ the current financing model has so far failed to deliver the necessary financial resources to fully implement the Natura 2000 network and EU biodiversity-related objectives and targets. This is due to constraints on public budgets and competing claims for them, as well as the lack of bankability of such

⁴⁴ For an assessment of future priorities related to **water** pollution, please refer to section 2.1.3 on Water and Marine.

⁴⁵ Please refer to Section 2.1.3 for recommendations on priorities for marine biodiversity, and to section 2.2.6 for research and innovation related to biodiversity.

⁴⁶ IEEP and the N2K Group (2022) Financing Natura 2000. EU funding opportunities 2021–2027. Final report under EC Contract ENV/D.3/SER/2019/0016

investments, which lack the solid revenue streams that are especially relevant to meeting private finance needs. More efforts are required to tackle the drivers of biodiversity loss, and in particular to shift the financial flows contributing to this loss towards more sustainable investments. This entails a phasing out or repurposing of subsidies that contribute to biodiversity loss, and to innovative financing approaches, notably through blending, which help integrate biodiversity objectives into traditional sector investments, as committed to in Target 18⁴⁷ and Target 19⁴⁸ of the Kunming-Montreal Global Biodiversity Framework.

Early results of the forthcoming *ex post evaluation of the 2014-2020 Cohesion Policy* found that the Cohesion Policy's potential for supporting biodiversity had not been fully used in the 2014–2020 financing period due to a lack of prioritisation of nature investments. This may be linked to a second point in the evaluation, which found that due to the broad scoping of nature and biodiversity-relevant interventions (e.g. including investments in tourism and visitors' infrastructure), their actual contribution to biodiversity objectives in many cases remained unclear. To address this, clear and enforceable biodiversity mainstreaming objectives and targets should be implemented in the next MFF. These should be aligned with international biodiversity commitments, such as the Kunming-Montreal Global Biodiversity Framework Target 19, which calls for a doubling of current biodiversity spending, ensuring dedicated and focused funding for biodiversity. There is a clear EU added value for funding in this topic, given its urgency and strategic priority, to tackle the global – and European – drivers for biodiversity degradation, as reflected by the biodiversity strategy. The EU plays a leading role in achieving international targets, such as Kunming-Montreal Global Biodiversity Framework. The *Political Guidelines for the next European Commission 2024–2029*⁴⁹ include the commitment that "We will focus on incentives and on equitable and efficient implementation, notably to ensure we reach our international biodiversity commitments, such as those taken in the Kunming Montreal Agreement."

It should also be pointed out that an ad hoc survey conducted during a plenary meeting of the ENEA-MA⁴⁹ as part of this project showed that the stakeholders considered biodiversity and climate change adaptation as the two sectors in which EU funding would provide largest added value in the eyes of participants of this meeting. However, it is crucial to acknowledge the potential trade-offs and synergies between these areas, particularly in relation to investments in carbon sinks that may impact biodiversity. Ensuring coherence and applying the DNSH criteria for investments will be vital, to avoid undermining long-term biodiversity benefits while addressing climate change adaptation goals. Further discussion on those results revealed that those are the topics perceived by the recipients as not being sufficiently prioritised due to difficult businesses cases, lack of direct economic benefits of the projects, and higher perceived risk. Targeted funding could help to alleviate these challenges.

The EU could support innovative financing approaches which provide EU added value by addressing the lack of bankability of biodiversity-related projects and support biodiversity across all ecosystems, not just within protected areas. This includes agricultural, urban, freshwater, marine, and forested ecosystems, which are critical for achieving the EU's broader biodiversity and climate targets, such as those set under the Nature Restoration Regulation. To scale up investment, the EU could attract financing from a wider range of sources, including public sector budgets at Member

⁴⁷ Target 18 of the post-2020 Global Biodiversity Framework (GBF) proposes to eliminate and/or repurpose incentives harmful for biodiversity, reducing them by at least USD 500 billion per year, while ensuring that incentives, including public and private economic and regulatory, are either positive or neutral for biodiversity. Organisations such as IUCN and the OECD are working towards the implementation of that target.

⁴⁸ Target 19 calls for mobilising USD 200 billion per year for biodiversity from all sources, including USD 30 billion per year by 2030 through international finance from developed countries.

⁴⁹ Commission's expert group on the European Network of Environmental Authorities - Managing Authorities for the Cohesion Policy. See: <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&do=groupDetail.groupDetail&groupID=510>

State level and private sector investments. Potential market-based mechanisms could include product markets, corporate sponsorship, grants, blending, visitor payback schemes, payment for ecosystem services, and the creation of biodiversity markets.

Payment for ecosystem services projects and biodiversity credit markets were found to be important, as highlighted by the interviews and literature review analysis. They represent a good option for dealing with the trade-off between farmers' livelihoods and the protection of ecosystems and their services through their stewardship of their land. New economic prospects for farmers could facilitate the transition of food, land-use, and water systems, which are essential to drastically reducing climate impact and restoring biodiversity currently under pressure from the agricultural sector. Aligning with EU political priorities, the promotion of healthy ecosystems can enhance resilience, thereby supporting the competitiveness of the sector. For example, maintaining healthy soils in the agricultural sector not only improves productivity but also contributes to the EU's broader goals of climate neutrality, biodiversity restoration, and sustainable resource management, reinforcing the importance of nature-based solutions in securing long-term economic viability.

To support the growth of nature-based markets, it is considered important to develop a comprehensive financial toolbox that includes three key components: (i) advisory services to guide stakeholders in designing, implementing and managing projects, ensuring effective outcomes through technical support and best practice sharing; (ii) diverse funding sources, such as the Payment for Ecosystem Services, facilities with blended financing combining guarantees, loans and equity, to attract a broad range of investors and meet the varied needs of nature-based initiatives; and (iii) investment platforms that connect investors with high-impact projects, enhancing transparency and helping to match financing with suitable opportunities.

LIFE projects have proven very effective in piloting new and innovative approaches to building networks and initiatives that are later supported by other funding sources, and or rolled out to other sectors or regions. Ongoing work on the mid-term evaluation of the LIFE programme shows that these projects, which deliver multiple benefits for biodiversity, ecosystem services and people, would find it very challenging to survive without LIFE funding. The EU added value of such investments is therefore clear and increased for projects funded jointly with non-EU countries (e.g. green infrastructure projects focused on cross-border terrestrial or marine protected areas). Strategic nature projects can also mainstream biodiversity objectives into sectoral programmes that can then create and maintain green infrastructure.

The experience of the Natural Capital Financing Facility (jointly funded by the EIB) should be taken into account when developing instruments to support innovative biodiversity finance, such as regulatory support and capacity-building for ecosystem services and biodiversity offsets. To enhance its effectiveness, any future innovative finance scheme should build up on lessons learnt. For example, it should be accessible to a wider range of projects, including those below €15 million, which is typically the ticket size for the EIB. It should also be accessible to Member States' National Promotional Banks and Institutions, enable blending with grants, and provide more robust de-risking mechanisms to attract private investment.

Prioritising actions towards protecting common species and reversing their decline would bring EU added value through their cross-border relevance. For example, one in three bee and butterfly species are in decline. As shown by the semi-quantitative analysis, deteriorating trends are projected to dominate until 2030. Furthermore, it is unlikely that the decline in populations of common birds (NRL Art.11) will reverse

EU funding has added value for large-scale ecosystem restoration projects. They deliver green infrastructure for biodiversity and nature-based solutions for climate change adaptation and/or disaster risk reduction, economy and ecosystem services, in line with the EU Nature Restoration

Regulation,⁵⁰ and EU Biodiversity Strategy⁵¹ for 2030. Examples of investments in this field include ecosystem restoration for carbon sequestration (e.g. peatland restoration), projects aimed at protecting and managing river basins through nature-based solutions (e.g. involving natural flood protection measures and green infrastructure for water purification); and restoration of contaminated or degraded land to create green infrastructure.⁵²

A key priority should be to strengthen and streamline the provision of advisory services and capacity-building opportunities for project developers, particularly smaller organisations, to help them mature their projects. This can be achieved by enhancing technical and financial support. To improve accessibility, technical assistance tools and guidance, such as those described in the *Natura 2000 financing handbook*⁵³ and the *2024 Guide on supporting the environment under the 2021–2027 multiannual financial framework* and NextGenerationEU⁵⁴, should be consolidated on a single platform (e.g. the EU Business and Biodiversity platform). This would simplify access to funding and reduce administrative burdens, ultimately helping smaller organisations navigate the application processes more effectively.

2.4.7 Other relevant cross-cutting priorities

Ensuring a fair and just transition could be considered as one of important cross-cutting funding priorities. As emphasised in the *2024 Strategic Advisory Board (SAB) report on climate neutrality*,⁵⁵ since ‘the perceived fairness of EU climate policies will determine whether they are implemented successfully, EU policies need to address regressive social impacts of climate policy measures’. In other words, a fair and just transition is needed, including by underpinning funding. In particular, climate adaptation policy should also be firmly guided by just transition considerations with due attention for vulnerable groups, workers and companies, including SMEs, exposed to the effects of climate change. The importance of a just transition is also highlighted in the *9th Cohesion Report*,⁵⁶ which emphasises that the green transition has the potential to reduce regional inequalities, for example by co-financing investments in renewable energy, energy efficiency, clean and circular technologies, carbon-free vehicles and the corresponding infrastructure, as well as retraining and education. The report argues that the EU added value of such funding is particularly high in less developed regions, which tend to be less prepared for the transition to a climate-neutral economy and to have more difficulty in reaping the potential benefits. EU funding (such as the current just transition fund or social climate fund) is appropriate here, due to its pan-European relevance, and supports the acceptability of the transition needed.

Ensuring a just transition is not only essential in connection with climate change but also in relation to restoring and protecting nature. The transition to a more nature-positive economy requires

⁵⁰ Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869 (Text with EEA relevance).

⁵¹ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. Bringing nature back into our lives – EU 2030 Biodiversity Strategy.

⁵² IEEP and the N2K Group (2022) Financing Natura 2000. EU funding opportunities 2021-2027. Final report under EC Contract ENV/D.3/SER/2019/0016.

⁵³ European Commission: Directorate-General for Environment, *Financing Natura 2000 – EU funding opportunities in 2021-2027 – Revised report May 2022*, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2779/724345>.

⁵⁴ [Find your EU funding programme for the environment - Publications Office of the EU](#), 2024.

⁵⁵ European Environment Agency: European Scientific Advisory Board on Climate Change, *Towards EU climate neutrality – Progress, policy gaps and opportunities – Assessment report 2024*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2800/216446>.

⁵⁶ Ninth Report on Economic, Social and Territorial Cohesion. See: https://ec.europa.eu/regional_policy/information-sources/cohesion-report_en.

transforming key sectors that significantly contribute to nature loss. Such transformation must be accompanied by efforts to ensure that the benefits and costs of the transition are fairly distributed, particularly in relation to employment, livelihoods, and access to essential resources like water, natural areas, and clean air. Given that environmental degradation and biodiversity loss will be exacerbated by climate change and that climate change will be exacerbated if natural carbon sinks are not preserved, it is essential to create positive synergies between climate and environmental policies. This integrated approach will not only safeguard natural resources within ecosystems and the services they provide, but also help prevent further inequalities, particularly in regions that are more vulnerable to both climate and biodiversity challenges.

Furthermore, in setting future green priorities for EU funding, it is important to consider the growing political emphasis on EU competitiveness, economic resilience and job creation, to ensure that the green transition strengthens Europe's industrial and economic leadership. The *Political Guidelines for 2024–2029* highlight the need for a strategic approach to innovation, investment and green industrial policy to maintain Europe's position as a global leader in clean technologies. Similarly, the Draghi Report outlines how the EU's static industrial structure, low investment rates, and lagging technological innovation have put it at a disadvantage compared to major global competitors such as the United States and China. To address these challenges, future EU funding could prioritise scaling up clean technologies industries, accelerating the commercial deployment of climate solutions and reducing dependency on critical raw materials. The EU added value of such funding includes supporting strategic priorities at pan-European level, to leverage the benefits of a single market and support replication. Such funding should adhere to the European Green Deal principles, including, DNSH and ensure the transparency and accuracy of reporting on the climate and environmental impacts of EU spending.

Lastly, the potential enlargement of the EU presents both an opportunity and a challenge in defining future green priorities for EU funding. The new Commission has identified accelerated integration of candidate countries as a clear priority, with a strong focus on aligning them with the EU acquis and key policy objectives, including the climate and energy transitions.⁵⁷ However, many candidate countries have significantly different starting points regarding their energy mix, levels of climate action, and vulnerabilities to climate change. For example, any investments in clean energy, climate adaptation and infrastructure modernisation should be tailored to the specific needs of new Member States while ensuring alignment with the EU's overall climate neutrality objectives. Moreover, it should be accompanied by capacity-building activities, regulatory support, and financial mechanisms that facilitate a just transition.

2.5 Green sectoral priorities

2.5.1 Food system, agriculture

The Political Guidelines for 2024–2029 highlighted that “We must (...) reward farmers working with nature, preserving our biodiversity and natural ecosystems and helping to decarbonise our economy on the way to net-zero by 2050”.

This is echoed in the Communication *The road to the next Multiannual Financial Framework*⁵⁸ which stresses that “Food security and nature protection sustain Europe's quality of life but are facing specific difficulties.” These challenges include, among others, unfair global competition, rising energy prices, and climate change, which exacerbate the food system's vulnerability to risks and

⁵⁷ European Commission (2024). EUROPE'S CHOICE POLITICAL GUIDELINES FOR THE NEXT EUROPEAN COMMISSION 2024–2029 Ursula von der Leyen, Candidate for European Commission President.

⁵⁸ See: https://commission.europa.eu/document/download/6d47acb4-9206-4d0f-8f9b-b10cad7b1ed_en?filename=Communication%20on%20the%20road%20to%20the%20next%20MFF_en.pdf

affect farmers, fishers, and rural areas. Furthermore, a Common Agricultural Policy must promote positive environmental and social outcomes through rewards and incentives for ecosystem services.

*A Vision for Agriculture and Food*⁵⁹ further details the EU approach towards a thriving farming and agri-food sector. Overall, the Vision looks into the essential components of a policy response aimed at creating an agri-food that is “economically, socially and environmentally sustainable, and thus attractive, competitive, future-proof and fair for current and future generations”. The agricultural sector is crucial to the transition towards a low-carbon economy. It highlights the need to reduce greenhouse gas emissions from agriculture and promote carbon removals. To incentivise environmentally/nature friendly practices, farmers who adopt such methods should be rewarded. In line with this, the Communication mentions the need to address nutrient pollution (including increasing their circularity) and reduce the use of harmful pesticides, with the Commission proposing to accelerate the access of biopesticides to the EU market. Additionally, a voluntary 'on-farm sustainability compass' benchmarking system will be developed to assist farmers in assessing and enhancing their sustainability performance at the farm level. Furthermore, a Water Resilience Strategy will be developed to tackle the urgent need for more efficient water usage.

The consideration of the EU Nature Restoration Regulation in the agriculture context would further underscore the need for targeted restoration measures, such as organic farming, landscape feature reintroductions, and pollinator-friendly practices. Moreover, reducing emission-intensive agricultural practices and encouraging measures like organic farming could result in big co-benefits for cleaner air and water, as emissions of ammonia and nitrates, in particular, would decrease. The *2024 SAB report on climate neutrality*⁶⁰ calls for CAP support to shift away from emission-intensive agricultural practices, including livestock production, and towards lower-emitting products, environmental services and economic diversification. EU funding could provide added value by leveraging the single market and coordination benefits to promote behavioural change towards sustainable food consumption through initiatives aiming at healthier food habits, or at prioritising local and seasonal produce. This could include health and awareness campaigns, reinforcing sustainability standards, mandatory labelling on the source of products and nutrition facts, and implementing tax incentives so that the price better reflects climate and environmental-related costs.

Another promising approach to achieving these sustainability objectives is carbon farming,⁶¹ which offers a way to sequester carbon in agricultural soils while improving land management practices.

2.5.2 Energy

Achieving EU climate targets for 2030 and beyond will require significant investment along the whole of the energy value chain, from research and development of new technologies, scaling up deployment of existing technologies, investments in grid infrastructure, to improving energy efficiency. EU resources can be deployed to help transform the energy system by filling gaps that other spending will not reach and catalysing additional investment by the private sector and Member States. In general, limited EU funds should be used where 'EU added value' is highest.

⁵⁹ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS *A Vision for Agriculture and Food Shaping together an attractive farming and agri-food sector for future generations*. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52025DC0075>

⁶⁰ European Environment Agency: European Scientific Advisory Board on Climate Change, *Towards EU climate neutrality – Progress, policy gaps and opportunities – Assessment report 2024*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2800/216446>

⁶¹ Regulation (EU) 2024/3012 of the European Parliament and of the Council of 27 November 2024 establishing a Union certification framework for permanent carbon removals, carbon farming and carbon storage in products. See: <https://eur-lex.europa.eu/eli/reg/2024/3012/oj/eng>

Concrete priorities for energy-related EU expenditure at different points of the value chain include the following:

- New technologies are required to meet climate targets, necessitating significant research and pilot projects. The high risk associated with research projects means public grant funding is often required. Examples include new battery technologies, carbon capture, various clean hydrogen production technologies, among others. The transition to a clean, secure and competitive energy system is a pan-European challenge that individual Member States cannot address effectively on their own. By pooling resources through programmes like Horizon Europe and the Innovation Fund, the EU accelerates technological breakthroughs, reduces market fragmentation, and enhances energy security.
- Emerging clean energy solutions, such as green hydrogen, advanced batteries, and floating offshore wind, face high initial investment costs and market barriers that private investors may be unwilling to bear alone. EU support through instruments like the Innovation Fund and InvestEU helps to de-risk investments, mobilise private capital, and create economies of scale. Examples include the need to scale up renewable fuel of non-biological origin for transport fuels. In addition, EU expenditure makes it possible to take advantage of a larger market while reducing risk for any single Member State. For example, the European Hydrogen Bank de-risks early investments in green hydrogen by providing a guaranteed market for future production at a guaranteed price. Supporting European interventions such as the establishment of a platform to buy and sell green hydrogen can stimulate both supply and demand from the private and public sectors alike.
- Increasing the share of renewable sources in gross final energy consumption will be needed to achieve the EU 2030 target, as shown by the *semi-quantitative analysis*. This includes both manufacturing capacity and the installation of renewable energy production plants.
- It is a priority to strengthen the EU's Net Zero technology manufacturing capacity to reduce high import dependence for key net zero technologies while guaranteeing affordable, reliable and sustainable clean energy, as identified in the respective EU needs assessment⁶² as part of the Net Zero Industry Act legislative proposal.⁶³ EU actions include the authorisation of State Aid for manufacturing capacity and the expansion of the skills required to ramp up critical energy manufacturing, such as through the European Battery Academy. Supporting efforts include the promotion of recycling of (critical) raw materials to reduce negative environmental impacts and reduce dependency on imports for critical net zero technologies.
- Increasing the deployment of renewables, including offshore and onshore wind and solar, as well as (accompanying) technologies such as green hydrogen and batteries, is essential to meeting climate targets. In addition, in many cases, these are Important Projects of Common European Interest that are best undertaken in cooperation among multiple countries. This is the case, for example, for the development of offshore wind production in the North Sea (as well as the accompanying grid – see next paragraph).

⁶² European Commission (2023). COMMISSION STAFF WORKING DOCUMENT. Investment needs assessment and funding availabilities to strengthen EU's Net-Zero technology manufacturing capacity

⁶³ Technologies covered by the NZIA include: Solar photovoltaic and solar thermal technologies; Onshore and offshore renewable technologies; Battery/storage technologies; Heat pumps and geothermal energy technologies; Hydrogen technologies, including electrolyzers and fuel cells; Sustainable biogas/biomethane technologies; Carbon capture and storage (CCS) technologies; Grid technologies; Nuclear fission energy technologies, including nuclear fuel cycle technologies; Sustainable alternative fuels technologies; Hydropower technologies; Other renewable energy technologies; Energy system-related energy efficiency technologies, including heat grid technologies; Renewable fuels of non-biological origin technologies; Biotech climate and energy solutions; Other transformative industrial technologies for decarbonisation; CO₂ transport and utilisation technologies; Wind propulsion and electric propulsion technologies for transport; Other nuclear technologies.

- EU energy grids including power and hydrogen will help ensure energy security, market integration, and the EU's green transition. For example, the TEN-E network (and the funding instrument Connecting Europe Facility (CEF) for Energy) is crucial. By connecting national grids, it reduces dependence on single suppliers, enhances cross-border energy flows, and eliminates isolated energy markets. Improved grids facilitate the integration of renewable energy sources, helping to reduce greenhouse gas emissions. Expansion of technologies such as smart grids/digitalisation and the roll out of increased grid storage will also support the integration of renewables into the power system. In addition to electricity grid networks, hydrogen infrastructure is also essential to promoting climate goals and ensuring all MS have access to hydrogen. These investments promote the single market, contribute to climate goals and are also cross-border projects. They can also contribute towards economic cohesion by ensuring broader access to cleaner energy.
- Energy efficiency is a key priority for the EU through the 'energy efficiency first' principle. In addition, the *2024 SAB report on climate neutrality* and a recent progress report on climate action⁶⁴ highlight that energy efficiency is the one area where EU progress has been insufficient. Energy efficiency will reduce the need for energy imports and reduce costs for consumer and businesses, helping to tackle energy poverty and boost competitiveness, and reduce emissions.
- *The 2024 SAB report on climate neutrality*⁶⁵ recommends (in chapter 9) limiting the promotion and use of bioenergy towards end use sectors with limited alternative mitigation options to reduce the risk that aggregate demand will exceed sustainably available supply. This limitation could also be considered as a condition for accessing EU funds. This recommendation would also limit the serious problem of air pollution associated with, notably, the combustion of solid bioenergy.

2.5.3 Transport

Based on current EU policies, initiatives and strategies to improve the sustainability and decarbonisation of the transport sector, the following funding areas could be prioritised during the next MFF.

Infrastructure

A fully functioning and decarbonised TEN-T *network* remains crucial for creating a seamless, efficient and multimodal transport infrastructure across the EU, enhancing economic growth, connectivity and sustainability.⁶⁶ . More broadly, EU funding has a continued role to play in supporting the completion of essential transport links by facilitating a) efficient multimodal transport, allowing a greater role for low or zero-carbon, efficient modes, including public transport expansion and soft mobility options like cycling infrastructure and walkable urban planning; and b) improvement of existing transport modes, such as rail networks and intermodal freight transport, through electrification and other zero-emission technologies. These investments support climate, clean air and mobility objectives and should be continued in the next MFF, for example in urban contexts, where many people benefit from lower emissions and where authorities are supported in developing and implementing Air Quality Plans.

⁶⁴ [Climate Action Progress Report 2024](#)

⁶⁵ [Towards EU climate neutrality: progress, policy gaps and opportunities](#)

⁶⁶ While the core network, which includes the major connections between major cities and nodes, must be completed by 2030, and for which post-27 MFF funding would not therefore be relevant, funding would still be relevant for the extended core network and the comprehensive network.

To improve the sustainability of infrastructure investments, these should be subject to the highest sustainability standards.⁶⁷ Among these, the stringent application of environmental impact assessments and climate-proofing (including mitigation measures such as creating ecoducts and reforestation) should continue to be a priority for EU investments infrastructure. The mitigation pillar of the climate-proofing of infrastructure under CEF transport calls⁶⁸ advocates the *Energy Efficiency First (EE1) principle*,⁶⁹ which guides EU energy policy and investment decisions to prioritise energy efficiency, reducing energy production and production costs.

Alternative fuels, efficiency and electrification

Decarbonising the transport sector involves encouraging the use of renewable fuels (e.g. hydrogen, biofuels) and supporting vehicle efficiency standards to ensure that transport modes use energy more efficiently. It also involves incentivising the adoption of low-emission vehicles and EVs, including charging infrastructure, while supporting fleet renewal programmes for buses, trucks, and public vehicles ensures that more energy-efficient models replace older, high-consumption ones,

Despite recent developments in decarbonising the EU maritime and aviation sectors (e.g. through the ReFuelEU Aviation and FuelEU Maritime regulations), decarbonising air and maritime transport remains a key challenge, as highlighted by stakeholder discussions in this study.

The EU's Sustainable Aviation Fuel production has grown significantly, yet fossil fuels will likely remain part of the fuel mix beyond 2050, so there is a need to balance short-term competitiveness with long-term sustainability goals. While disruptive technologies are needed for long-term decarbonisation, it is important to note that zero-emission technologies for long-haul flights are not yet viable, making it necessary to support renewable and low-carbon fuels in line with EU climate policies and to ensure EU aviation remains competitive.

For maritime transport, stakeholders agree that renewable e-fuels are the long-term goal but are not yet cost-effective or available at scale. While the sector is committed to green initiatives, a balanced approach is needed, incorporating transitional fuels (e.g. LNG, RED-compliant biofuels) and dual-fuel systems. However, concerns remain about their emissions, path dependencies, and potential greenwashing. Biodiversity impacts and air pollution from combustion-based fuels must also be considered.

A clear long-term transitional strategy is necessary, prioritising batteries, renewable hydrogen-based fuels and e-fuels, while gradually phasing out fossil fuel support. However, maritime infrastructure plays a strategic role beyond just green initiatives, including energy security and competitiveness.

Smart Traffic and Digital Solutions

EU funds can drive intelligent transport systems that optimise traffic flow, reducing congestion and unnecessary fuel use. Technologies like dynamic traffic management and smart logistics improve energy efficiency across urban, rail and freight transport networks, such as the European Rail Traffic Management System and digital capacity management tools. Rolling out these systems system-

⁶⁷ See, for example, . recent guidance on the decarbonisation of transport infrastructure construction carried out for the European Commission https://transport.ec.europa.eu/document/download/982f3916-d1e7-427a-93cd-4e8ccfdff6c_en?filename=decarbonised_construction.pdf.

⁶⁸ See: Commission Notice – Technical guidance on the climate-proofing of infrastructure in the period 2021-2027, OJ C 373, 16/09/2021; and Corrigendum to Commission Notice - Technical guidance on the climate-proofing of infrastructure in the period 2021-2027, OJ C 246, 29/06/2022.

⁶⁹ Commission Recommendation (EU) 2021/1749 of 28 September 2021 on Energy Efficiency First: from principles to practice – Guidelines and examples for its implementation in decision-making in the energy sector and beyond.

wide will yield substantial capacity gains – enabling more trains to run on existing tracks – and should therefore be prioritised similarly to physical infrastructure investments. These systems will also have additional environmental and social benefits, including climate mitigation through reduced emissions.

2.5.4 Buildings and construction

Energy efficiency and performance

The EU Industrial Strategy⁷⁰ aims to enable a swift green and digital transition of EU industry and its ecosystems. The transition pathway for the building sector developed under this process⁷¹ recommends that the EU funding priorities in this sector (building block 5) should entail reforms (e.g. streamlining regulatory and administrative processes) as well as investments (e.g. subsidies for energy efficiency renovations).⁷² A large share⁷³ of related funding during the current MFF period comes from the Recovery and Resilience Facility (RRF),⁷⁴ where building investments could be part of the national recovery and resilience plans (RRPs), the centrepiece of NextGenerationEU, but other funds such as the ERDF and the CF were also used to directly finance investments in buildings. Continued EU funding in the sector for direct investments in energy efficiency could be justified from a just transition (or cohesion) angle, as is currently done in the Social Climate Fund and JTF. Improving the energy efficiency of buildings has also proven a successful and popular driver in many Air Quality Plans, for example in combination with big LIFE Strategic Integrated Projects for clean air. Often, such large-scale investments also resulted in cross-border air quality benefits and cooperation.

Increasing the energy performance of buildings is a current priority of the EU, as set out in the Energy Performance of Building Directive,⁷⁵ together with promoting the use of renewable energy. By introducing life cycle assessment measurement obligations, this encourages the reduction of whole-life carbon. As part of the 'Fit for 55' package, the Commission is newly revising the Energy Performance of Building Directive so that all new buildings in the EU are zero emission as of 2030, while all new public buildings must be zero emissions as of 2027. In the next MFF this should still be considered a priority.

Across the whole EU this requires massive investments that far surpass the EU budget volume. EU funding is *not* the default option for financing investments – rather, it should focus on EU priorities wherever there is a shortfall due to limits in private financing and financial support from national governments and development banks. There is an incentive, since energy efficiency investments lowers energy bills, and often do not require a very high level of support. Thus, instead of directly funding all types of energy efficiency measures in buildings through grants, the EU budget could focus on pushing innovative solutions which could then be rolled out across the EU (catalytic effect), de-risking investments and making more extensive use of various financial solutions that facilitate private financing of such measures, also increasing leverage for the use of EU funds (e.g. through LIFE CET projects, the ELENA Facility and the EU City Facility).

⁷⁰ See: https://single-market-economy.ec.europa.eu/industry/strategy_en

⁷¹ See: https://single-market-economy.ec.europa.eu/sectors/construction/construction-transition-pathway_en.

⁷² The report contains more detailed recommendations which are not repeated here.

⁷³ According to an analysis by DG GROW, 41% of the total funding available in the RRF is dedicated to construction-related measures.

⁷⁴ See: https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en.

⁷⁵ Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast).

In the cases where energy efficiency renovations are directly funded through the EU budget, the following should be considered:

- Any energy efficiency renovations should make best use of the many possible synergies with adaptation measures in buildings, circular economy principles (e.g. use of locally/EU-sourced, recycled or bio-based materials), and clean air policy objectives.⁷⁶
- Deep renovations should be prioritised in order to reduce the risk of lock-ins and improve the cost efficiency of funding support.
- Buildings funded by EU money should use at least one of the more impactful strategies identified in a recent DG GROW study on whole-life greenhouse gas emissions reduction and removal strategies for buildings.⁷⁷ The study also defined baseline values of life cycle GHG emissions for different buildings (types, locations), which are still updated; these could be used to define thresholds at a chosen percentile depending on ambition, with exceptions for special building purposes like defence.

One-stop-shops for energy efficiency renovations (e.g. as currently financed under the LIFE CET programme) have been found to be very effective at establishing smooth customer journeys for building owners and for ensuring effective energy efficiency renovations. While those one-stop-shops are to a large extent locally context-dependent, there is EU added value in supporting their establishment in regions and MS with reduced capacity (as is done through the Cohesion Policy), as well as in funding cooperation mechanisms to ensure cross-learning, identify and promote best practices. The use of energy performance contracts and third-party financing (e.g. in some projects financed under the Horizon 2020 and LIFE CET programmes) are also very effective solutions that have proven to work well and could be replicated at larger scale.

Resource efficiency

The construction sector is very resource intensive. Increasing resource efficiency, using renewable building materials and applying circular economy principles in the building and civil engineering sectors are actions identified as critical by key global assessments, with a focus on steelmaking and cement production.⁷⁸ It is a reform solution, driven by its high improvement potential as revealed by the semi-quantitative analysis. This EU action would add value by fostering innovation and replicability and benefiting from EU-wide coordination in the integration of new sustainability practices. There are also strong links between the built environment, land take and soil sealing, which impact biodiversity and nature. Solutions exist to reduce biodiversity impacts, such as green roofs, the use of bio-based materials, and soils with high water absorption capacity.

The Waste Framework Directive,⁷⁹ already regulates practices to ensure that construction and demolition waste is managed in an environmentally sound way and to contribute to the transition to a circular economy. The EU Construction and Demolition Waste Protocol and Guidelines (2018) propose a set of non-binding guidelines on how to properly handle this waste stream, including insulation materials.⁸⁰

⁷⁶ See, for example, here <https://www.eea.europa.eu/publications/cooling-buildings-sustainably-in-europe> or here <https://op.europa.eu/en/publication-detail/-/publication/7cca7ab9-cc5e-11ed-a05c-01aa75ed71a1/language-en>.

⁷⁷ See: <https://www.sciencedirect.com/science/article/pii/S0301479724029013#ack0010>.

⁷⁸ See: https://www.resourcepanel.org/sites/default/files/documents/document/media/gro24_full_report_1mar_final_for_web.pdf.

⁷⁹ Consolidated text: Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

⁸⁰ See: https://single-market-economy.ec.europa.eu/news/eu-construction-and-demolition-waste-protocol-2018-09-18_en.

Other areas

The New European Bauhaus (NEB) initiative was announced by the European Commission in 2020 as an extension of the European Green Deal and aims at facilitating and steering the transformation of our societies in alignment with the values of sustainability, aesthetics and inclusion. NEB projects thus have the potential to generate very synergetic benefits. As reported in the 2023 New European Bauhaus Progress Report,⁸¹ €106 million was set aside for the delivery of the NEB in 2021 and 2022 through different funds. Given the new nature of the initiative, prioritising this at EU level would have clear coordination benefits, as well as a catalytic effect through replicability.

2.5.5 Industry

General points of attention for the green transition in industry concern (i) **climate mitigation**: the further decarbonisation of manufacturing industry without carbon emissions leakage to outside the EU; (ii) **zero pollution**: the development of clean technologies, both as regards production technology and abatement and remediation technologies; (iii) **water resilience**: addressing the “double materiality” of industrial plants’ water consumption, namely the impact water consumption has on water bodies and ecosystems and, conversely, the dependency of the industrial plants on having assured access to freshwater to continue production. The production of green hydrogen is a case in point, as it concerns a very water-intensive production technology. Alongside verifying whether investments serve one of these environmental objectives, the condition of EU support should include DNSH for the other environmental objectives.

As mentioned in the report *The future of European competitiveness – In-depth analysis and recommendations*,⁸² the EU should prioritise the establishment and support of green regional industrial clusters. By fostering industrial symbiosis and sharing energy, by-products and services such as carbon capture, these clusters can enhance energy efficiency, resource use and circularity. This is a strategic priority linked to competitiveness but also brings added value through resource pooling.

The same report recommends prioritising decarbonisation in energy-intensive industries. They are relevant because they include hard-to-abate industries (like cement, glass, steel, chemicals and plastics), which face challenges in reducing GHG emissions due to their reliance on fossil fuels or feedstock. Decarbonising the hard-to-abate industries necessitates a comprehensive transformation of assets and processes, requiring significant investment that would contribute to the strategic priority set by the new Commission. This could also contribute to the objectives of the Ambient Air Quality and the Industrial Emissions Directives.

*The 2024 SAB report on climate neutrality*⁸³ (chapter 5) highlights that promising technologies are under development for reducing the GHG intensity of key GHG-intensive materials⁸⁴ and that their development (and upstream and downstream deployment) needs to be scaled up, but that support for early deployment is lacking (see also input under R&D&I in this table). EU funding could play a crucial role by pooling resources to enhance effectiveness and efficiency. This should also address Scope 3 emissions, which are significant for many industries due to emissions associated with sourcing critical raw materials, and integrate climate adaptation, water resilience, circular economy and zero pollution considerations to ensure comprehensive progress towards sustainability.

⁸¹ See: https://new-european-bauhaus.europa.eu/about/progress-report_en.

⁸² https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en.

⁸³ European Environment Agency: European Scientific Advisory Board on Climate Change, *Towards EU climate neutrality – Progress, policy gaps and opportunities – Assessment report 2024*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2800/216446>.

⁸⁴ For example, iron and steel, cement, and chemicals, together accounting for half of the EU industrial GHG emissions.

The transposition of the requirements applicable to industrial installations is delayed, as highlighted by the semi-quantitative analysis. Providing support to MS to improve transposition of the Industrial Emissions Directive and the Seveso-III Directive is a technical assistance measure that could bring added value through environmental cohesion.

The EU should prioritise investments in SMEs with businesses focused on nature-based solutions and sustainable practices, to support upscaling and replication (e.g. through LIFE Close to Market projects). This includes enterprises producing sustainable food, biomass products and engaging in activities such as paludiculture on rewetted peatlands, sustainable aquaculture, tourism, and related services. These efforts should extend beyond Natura 2000 sites, leveraging expertise in nature-based solutions and nature-based enterprises to enhance competitiveness and drive sustainable economic growth.

2.5.6 Research and innovation (R&I)

The EU research policy in 2021–2027 is implemented through Horizon Europe, the EU's 9th framework programme for research & innovation. Within this framework, Pillar II (Global Challenges and European Industrial Competitiveness) plays a crucial role in supporting research and innovation (R&I) on climate and environmental challenges. As per the legal basis of the Horizon Europe programme, at least 35% of its overall expenditure must contribute to climate objectives.

This pillar is structured into six clusters, with three directly relevant to climate and environmental priorities:

- Cluster 4 - Digital, Space and Industry
- Cluster 5 - Climate, Energy and Mobility
- Cluster 6 - Food, Bioeconomy, Natural Resources, Agriculture and Environment, which includes specific intervention areas on biodiversity and the circular economy.

The EU can leverage mission-oriented R&I to drive investment-led growth across the region. Currently, four out of five Mission Areas are directly linked to the Union's climate and environmental objectives. Future Missions should continue to focus on these areas, integrating both technological advancements and social sciences (e.g. governance models and civil society participation). The humanities also play a role in fostering favourable market conditions for innovative solutions.

The *Align, Act, Accelerate* report⁸⁵ provides strategic recommendations on maximising the impact of EU Research and Innovation programmes in the future. Key recommendations include scaling up research in competitiveness and technological development while also addressing societal challenges that remain underfunded, such as climate change, biodiversity loss, and planetary boundaries. This aligns with the Draghi Report, which highlights the EU's stagnant industrial structure, low investment rates, and limited innovation compared to global competitors like the United States. As a response, the EU's future R&I strategy under the next MFF is expected to include the introduction of an Industrial Competitiveness and Technology Council and a Societal Challenges Council, investing in disruptive innovation programmes, and increasing the capacity to attract more private co-investment.

For the EU to remain a global leader in climate and clean tech action and innovation investments in climate-related R&I, with collaboration from both the public and private sector, are crucial. The same applies to other European Green Deal-related R&I funding, which has fallen short of the 3% GDP target that was set in 2010 and reiterated in 2021. Additionally, since innovation cycles have long time horizons, the development of new technologies should not be used as a reason to delay

⁸⁵ European Commission: Directorate-General for Research and Innovation, *Align, act, accelerate – Research, technology and innovation to boost European competitiveness*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/9106236>

immediate action or overlook social innovations that can deliver near-term emissions reductions. Key recommendations for future R&I priorities are as follows:

- Bridging the 'Valley of Death' in Climate Innovation: More funding is needed for the demonstration and commercial deployment of climate technologies (e.g. batteries, hydrogen, advanced renewables). Since many renewable energy sources are inherently variable, the expansion of R&I in energy stabilisation technologies (e.g. advanced storage, grid flexibility solutions) is an urgent priority. The cost of the energy transition remains a challenge, particularly as basic technologies are replaced by critical raw material (CRM)-intensive electric components. The EU must prioritise research into cost-competitive, sustainable technologies with high recycling and reconditioning potential.
- Advancing Material Efficiency & Circular Economy: The International Resource Panel⁸⁶ has identified material efficiency as a key enabler of GHG reduction, with additional benefits for water resilience, biodiversity and pollution control. Scaling up circular economy solutions requires more research into affordability, recyclability, water resilience, and the phasing out of hazardous pollutants (e.g. PFAS). Expanding R&D&I in eco-design, repair and reuse business models will enhance sustainability while reducing costs and driving social value creation.
- Enhancing Air Quality Monitoring & Compliance: Targeted R&I investments in air quality monitoring, modelling, and technological solutions will be crucial to enforcing the new EU Ambient Air Quality Directive. Moreover, integrating sensor-based networks, AI-powered air pollution tracking, and real-time data analysis will improve the effectiveness of policy enforcement.
- Strengthening Biodiversity Research & Monitoring: The EU's future biodiversity R&I priorities should align with the EU Biodiversity Strategy for 2030 and the EU Nature Restoration Regulation to ensure that scientific advancements support ecosystem resilience and conservation efforts. The Europa Biodiversity Observation Network User and Policy Needs Assessment⁸⁷ has identified major gaps in national biodiversity monitoring, including a lack of coordination and inadequate financial/technical resources. High-quality, standardised biodiversity data are essential for achieving the EU's 2030 Biodiversity Strategy goals. Given the cross-border nature of biodiversity challenges, the EU should coordinate funding at a pan-European level to establish a European Biodiversity Monitoring System.

⁸⁶ IRP (2022). Making Climate Targets Achievable: Improving Wellbeing through Reduced Absolute Resource Use. Potočník, J., Teixeira, I. A think piece of the International Resource Panel Co-Chairs. See: <https://www.resourcepanel.org/reports/making-climate-targets-achievable>.

⁸⁷ See: [EuropaBON User-and-Policy-Needs-Assessment_Final-March2022.pdf](#).

3 OPTIONS FOR IMPROVING FUNDING FOR NATURE RESTORATION

3.1 Introduction

Chapter 3 examines the financing of nature restoration. It begins with defining the concept and need for restoration and then moves to an overview of major EU funds and programmes that support nature-related objectives under the current MFF (section 3.3), including an analysis of their contributions to nature restoration and nature-based solutions (section 3.4, Appendix 2). The discussion then transitions to a synthesis of key insights on the challenges associated with nature restoration financing (section 3.5). Building on this foundation, the chapter provides targeted recommendations for improving funding mechanisms to support nature restoration efforts (section 3.6), finishing with a concise summary of these recommendations (section 3.7). Further details and supplementary analysis are provided in the annexes to complement the chapter's findings.

Findings in this chapter have been derived from a qualitative assessment of EU funding programmes and insights derived from stakeholder consultation workshops, expert interviews, and an extensive literature review. The analysis began with the identification and selection of key EU funds deemed to significantly contribute to biodiversity and nature restoration objectives under the current MFF. An analytical framework was developed, incorporating a pre-defined set of criteria, including policy objectives, eligibility requirements, funding allocation, earmarking, and the potential for leveraging private financing. A full list of references that informed this chapter can be found in Appendix 2.

While this chapter primarily focuses on improved funding for nature restoration, chapter 3.6.3 contains useful conclusions for climate resilience financing as well, e.g. in terms of leveraging private investments in a field traditionally reliant on public funding. At the same time, some climate resilience projects include and enable nature restoration. Recognising these overlaps can help with optimising funding approaches, foster synergies between biodiversity and climate policies, and improve the overall resilience of ecosystems and societies.

3.2 Need for nature restoration

Biodiversity is declining at an unprecedented rate, threatening ecosystems and their ability to provide essential ecosystem services such as pollination, carbon sequestration, enhanced resilience against climate change, soil fertility, pest control, and water purification. The Kunming-Montreal Global Biodiversity Framework, adopted at the UN Convention on Biological Diversity COP15 in 2022, outlines 23 global targets to halt and reverse biodiversity loss by 2030, including restoring at least 30% of degraded ecosystems (target 2) and conserving at least 30% of terrestrial, inland water, and marine and coastal areas (target 3). Achieving these objectives requires significant financial investment, and the Kunming-Montreal Global Biodiversity Framework emphasised the importance of mobilising at least \$200 billion (ca. €190 billion) annually for biodiversity protection and restoration (target 19).⁸⁸ Addressing the biodiversity financing gap was a central theme at the UN Convention on Biological Diversity COP16 in 2024 in Cali, Colombia.

The EU's Biodiversity Strategy for 2030 aims to put Europe's biodiversity on a path to recovery. To achieve the strategy, an estimated €48 billion annually is required between 2021 and 2030.⁸⁹ However, government and EU contributions currently fall short by approximately €18 billion per

⁸⁸ Convention on Biological Diversity (n.d.). 2030 Targets (with Guidance Notes). [2030 Targets \(with Guidance Notes\)](#).

⁸⁹ European Commission: Directorate-General for Environment, Nesbit, M., Whiteoak, K., Underwood, E., Rayment, M., Hart, K., Aubert, G., Kollenda, E., Lóránt, A., Kopsieker, L., Cziebiński, M., Petsinakis, F., Gerritsen, E., Beznea, A., Cihlarova, P., Frapaise, L., Finesso, A., Forestier, O., & Nicholls, G. (2022). Biodiversity financing and tracking: final report, Publications Office of the European Union. <https://data.europa.eu/doi/10.2779/950856>.

year. The Nature Restoration Regulation, which entered into force in August 2024, is a key component of the EU Biodiversity Strategy for 2030 and is designed to complement existing EU environmental policies and actively contribute to the EU's climate mitigation and adaptation objectives, food security enhancement, and international environmental commitments. It sets legally binding targets for restoring various ecosystems across Europe, including terrestrial, marine, freshwater, and urban areas.⁹⁰ Under Article 21(7) of the Nature Restoration Regulation, the European Commission is required, in consultation with Member States, to present a report to the Parliament and the Council on available financial resources and funding needs to implement nature restoration, together with an analysis of funding gaps and measures to address them.

Box 3.3.1 Definition of restoration according to the Nature Restoration Regulation⁹⁰

Restoration under the Nature Restoration Regulation is defined in Article 3(3) as 'the process of actively or passively assisting the recovery of an ecosystem in order to improve its structure and functions, with the aim of conserving or enhancing biodiversity and ecosystem resilience, through improving an area of a habitat type to good condition, re-establishing favourable reference area, and improving a habitat of a species to sufficient quality and quantity in accordance with Article 4(1), (2) and (3) and Article 5(1), (2) and (3), and meeting the targets and fulfilling the obligations under Articles 8 to 12, including reaching satisfactory levels for the indicators referred to in Articles 8 to 12'.

The need to protect and restore biodiversity is underlined in the *Political Guidelines*⁹¹ for the *European Commission 2024-2029* (July 2024). The guidelines state the importance of protecting our natural world, our forests and woodlands, our wetlands and our grasslands, and mentions incentives to ensure we reach our international biodiversity commitments. A healthy environment is fundamental to achieving the EU's political priorities, including competitiveness. Ecosystems provide vital services that underpin key economic sectors such as agriculture, water management, forestry, fisheries and tourism. These services – ranging from carbon sequestration and climate resilience to water purification, soil fertility and pollination – are essential for Europe's economic stability and growth. As global markets increasingly prioritise sustainability, investing in nature-positive solutions strengthens Europe's competitiveness in emerging green sectors, fosters sustainable growth, and supports its leadership in the global transition to a nature-positive economy.⁹²

3.3 Nature restoration in the 2021-2027 MFF

EU funding programmes are implemented through the MFF, with each fund being governed by specific regulations and sometimes also additionally through common provisions applicable to several funds, e.g. the Common Provisions Regulation (CPR).⁹³

Contributions to biodiversity financing in the current MFF amount to €112 billion (Figure 3.1). The EU pursues its biodiversity objectives by 'mainstreaming' biodiversity expenditure, i.e. integrating

⁹⁰ Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1991&qid=1722240349976>.

⁹¹ European Commission (2024). President-elect Ursula von der Leyen. https://commission.europa.eu/about-european-commission/president-elect-ursula-von-der-leyen_en.

⁹² For a definition and work on the concept of nature positive, visit the EU-funded project GoNaturePositive! (Grant Agreement No. 101135264): <https://www.gonaturepositive.eu/>.

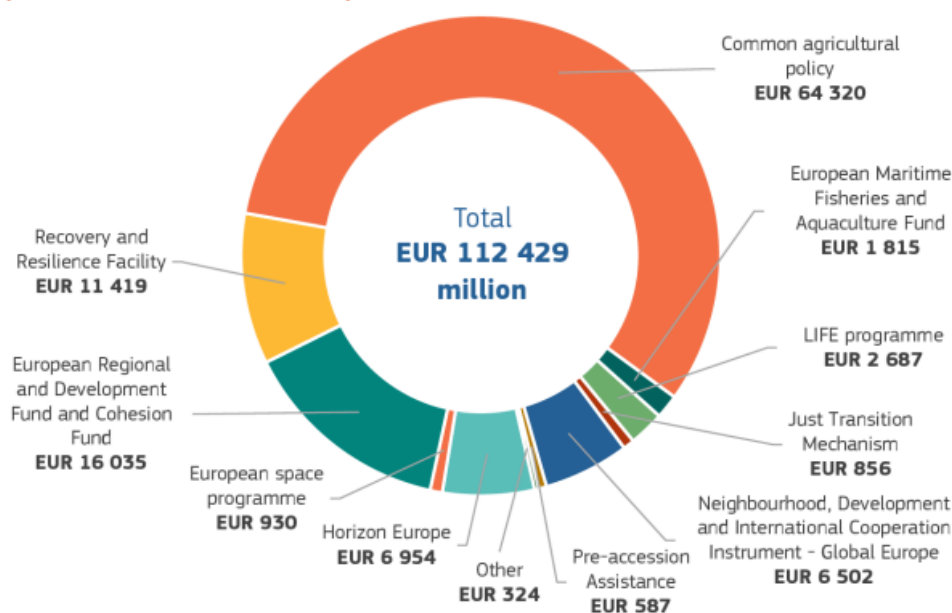
⁹³ Regulation (EU) 2021/1060, Common Provisions Regulation. Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy..

biodiversity financing into a variety of funding instruments across sectors and policies. Such instruments are primarily designed to advance other EU policy priorities, such as agriculture, regional development and infrastructure. Figure 3.1 illustrates the contributions of major EU funding programmes to biodiversity financing.

The current MFF has a target of 7.5% of annual spending going to biodiversity in 2024, increasing to 10% in 2026 and 2027.⁹⁴ However, estimates by the European Commission show that the 10% target for 2026 and 2027 is at risk, as it is forecasted to only reach 7.8% and 7.9% respectively.^{95,96} The Common Agricultural Policy (CAP) and Regional Policy (i.e. European Regional and Development Fund and Cohesion Fund) are the main sources of biodiversity funding, with CAP being the main contributor, representing around 50% of the total MFF contribution (see Figure 3.1). It is important to note that the EU does not operate a standalone fund for biodiversity in general, or for nature restoration.

Figure 3.1 Biodiversity contribution in 2021 to 2027 (million EUR)^{97 98}

Biodiversity contribution in the 2021-2027 period (million EUR)



⁹⁴ Interinstitutional Agreement between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources Interinstitutional Agreement of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020Q1222%2801%29>.

⁹⁵ European Commission (n.d.). Green budgeting. https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/horizontal-priorities/green-budgeting_en.

⁹⁶ European Commission (2024). Statement of estimates 2025. https://commission.europa.eu/publications/statement-estimates-2025_en.

⁹⁷ European Commission (2024). 300 - June 2024: Draft General Budget of the European Union. [440301ce-9d87-4884-ad7f-33658e99b6d3_en](https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/horizontal-priorities/green-budgeting/biodiversity-mainstreaming_en).

⁹⁸ European Commission (n.d.). Biodiversity mainstreaming. https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/horizontal-priorities/green-budgeting/biodiversity-mainstreaming_en.

The EU budget supports biodiversity and nature restoration through overarching climate and biodiversity objectives as well as specific intervention fields under each EU programme. However, one of the challenges is that the biodiversity target of the current MFF – because it came late during the Interinstitutional Agreement negotiation process in 2020, and because the biodiversity target was not part of the 2018 COM proposal – was never reflected in sectoral regulations linked to these MFF funds. Instead, it appears only as a recital in most cases, with no biodiversity percentage allocated, as was done for climate. There are also differences between the methodology for CAP climate tracking and biodiversity tracking that need to be factored in when making any comparison.

3.4 Nature restoration⁹⁹ in selected EU funding programmes

A selection of funds and financial instruments were reviewed in this study, as outlined in Table 6.1 below. These funds have been determined to be the main contributors to biodiversity funding under the MFF and are seen as having the highest potential to be used for supporting nature restoration,¹⁰⁰ aiming towards full mobilisation of any unused budgets. However, the list is not exhaustive, with other programmes such as the European Space Programme and React-EU also having small contributions.

Table 6.1 Selection of key funds relating to nature restoration

EU funds	Focus area in the context of nature restoration	Relation to targets of the NRL
LIFE Programme	It supports protecting and restoring the environment and halting biodiversity loss via dedicated environment sub-programme (Nature and Biodiversity); appropriate use of the Strategic Nature Projects as a tool to support the Nature Restoration Regulation.	Art. 4, 5, 9, 10, 11, 12, 13
Common Agricultural Policy (CAP) (EAGF)	European Agricultural Guarantee Fund (EAGF): The focus and scale of contribution to restoration efforts in agricultural ecosystems are reflected in the national CAP Strategic Plans through eco-schemes that provide funding for environmental, climate and animal welfare practices. Direct payments contribute indirectly to nature restoration through conditionality. European Agricultural Fund for Rural Development (EAFRD): Emphasises the restoration of Natura 2000 and High-Nature Value sites funding through CAP's rural development interventions such as agri-env-climate payments, Natura 2000 payments.	Art. 4, 10, 11, 12
Cohesion Fund (CF) and European Regional Development Fund (ERDF), including Interreg	It supports green investment and green transition by enhancing the protection and preservation of nature, biodiversity and green infrastructure.	Art. 4, 5, 9, 11, 12

⁹⁹ Results are also relevant for nature-based solutions more generally (Chapter 4), and are incorporated into this chapter. Outcomes presented in chapter 4 focus on the development of a brochure to communicate key findings and recommendations on nature-based solutions in different sectors.

¹⁰⁰ The results for nature-based solutions (chapter 4), are incorporated into this chapter. Outcomes presented in chapter 4 focus on the development of a brochure to communicate key findings and recommendations on nature-based solutions in different sectors.

EU funds	Focus area in the context of nature restoration	Relation to targets of the NRL
European Maritime Fisheries and Aquaculture Fund (EMFAF)	It provides opportunities to finance conservation and restoration measures of the marine and coastal environment, including inland water.	Art. 5
Recovery and Resilience Facility (RRF)	It is a Centrepiece of NextGenerationEU; further source of funding for the protection and restoration of biodiversity and ecosystems. MS put forward a variety of restoration measures in the RRF.	Art. 4, 5, 8, 9, 11,12, 14-19
Horizon Europe (HE)	It supports research and innovation to improve knowledge on biodiversity loss and to develop innovative solutions to tackle this challenge. Cluster 6, and particularly the topics on biodiversity and ecosystem services, provide support to R&I on biodiversity according to the Horizon Europe specific programme and to Horizon Europe Strategic Plan 2025–2027. Mainstreaming is ensured in most parts of Clusters 6, in other clusters and pillars and in the following Horizon Europe Missions: A Soil Deal for Europe, Restore our Ocean and Waters, Climate adaptation, Cities. Some co-funded Partnerships under Cluster 6 are particularly relevant for biodiversity (e.g. Biodiversa+, Water4All, Agro-ecology partnership).	Art. 4, 5, 8, 9, 10, 11, 12, 14-21
Just Transition Fund (JTF)	It provides support to territories facing serious socio-economic challenges arising from the transition towards climate neutrality and supports the economic diversification and reconversion of the territories concerned, including environmental rehabilitation.	Art. 4, 12
InvestEU	It aims to back investments by international and national financial partners. Biodiversity is addressed in particular under the 'Sustainable infrastructure' window, one of the four priority areas supported. ¹⁰¹ Within the sustainable infrastructure window, 60% of investments supported by the InvestEU fund are aimed at contributing to climate and environmental goals.	In particular, Art. 8, 11

A detailed overview for each EU funding programme is presented in Appendix 2, including an overview of the funds (i) Objectives, Priorities and Earmarking; (ii) Eligibility Requirements/Selection Criteria; (iii) Funding Allocation; (iv) Monitoring and Evaluation; and (v) Leverage for Private Financing). Several overarching conclusions have been extracted from these detailed analyses, and are presented as follows:

Programme for the Environment and Climate Action (LIFE)¹⁰²

LIFE is the only EU programme dedicated exclusively to the environment, nature conservation and climate action with a budget of €5.4 billion for the period of 2021–2027; €2.1 billion of this budget

¹⁰¹ European Commission (n.d.). Knowledge Centre for Biodiversity. https://knowledge4policy.ec.europa.eu/biodiversity/eu-action-biodiversity-financing_en#:~:text=under%20InvestEU%20%28the%20new%20EU%20investment%20programme%20for,next%2010%20years%2C%20based%20on%20public%2Fprivate%20blended%20finance.

¹⁰² [LIFE - European Commission](#)

is contributing to the biodiversity sub-programme (see below). Established in 1992, LIFE has co-financed over 6,000 projects across the EU and beyond. The programme is structured into four sub-programmes, including the sub-programme on Nature and Biodiversity, which focuses on the protection and restoration of Europe's natural ecosystems and on halting biodiversity loss. It supports projects that implement best practices, pilot innovative approaches, and demonstrate solutions for nature conservation, particularly concerning biodiversity, habitats and species. Continued funding and efforts are needed in the upcoming MFF to support biodiversity initiatives, as this programme not only fosters cross-border collaboration and knowledge exchange but also enables projects that might not otherwise happen without EU co-financing.

The Multiannual work programme for 2021–2024 was adopted in July 2021. Types of activities funded under LIFE include grants such as action grants (Standard action projects, Strategic Nature Projects, Strategic Integrated Projects, Technical Assistance, and other actions – including Coordination and Support Actions and operating grants).¹⁰³ Other forms of funding include procurement and support to investments. The co-financing rate is a maximum of 60% for the majority of the projects, with some exceptions (projects on clean energy transition projects targeting specific nature and biodiversity priorities, etc.).

Common Agricultural Policy (CAP)

The CAP accounts for nearly one third of the total EU's budget, with biodiversity recognised as one of its ten 'Specific Objectives' – SO6 ('contribute to halting and reversing biodiversity loss, enhance ecosystem services, and preserve habitats and landscapes'). It operates under shared management between the European Commission and Member States, each of which must prepare a CAP Strategic Plan outlining how their interventions align with CAP objectives, including the objective on biodiversity. Over time, the CAP has undergone numerous changes to improve its environmental performance, which already allowed some of the most environmentally harmful practices to be reduced.¹⁰⁴ The current 2023–2027 CAP represents the most environmentally advanced version of the policy.

The CAP budget is divided between the European Agricultural Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD). The EAGF primarily supports farmers through income subsidies, eco-schemes and market measures, while the EAFRD focuses on rural development, including natural resource management. To receive EU area- and animal-related support, farmers must comply with 'conditionality' rules, including good agricultural and environmental conditions (GAECs). Non-compliance with these rules can lead to penalties. Nature needs to be properly reflected under the EAGF/eco-schemes (at least 25% of direct payments) and under EAFRD/agri-env-climate interventions, as well as other measures (Natura 2000 payments, forestry interventions, non-productive investments). Furthermore, Member States must commit a minimum of 35% of EAFRD funding to interventions that support the three specific objectives for the environment, climate (mitigation/adaptation, natural resources management, nature/landscapes) and animal welfare.

The CAP funding accounts for over half of the EU's total biodiversity expenditure under the current budget. In the past, the European Court of Auditors raised concerns about the effectiveness of the CAP's biodiversity contributions. A 2020 report, mostly focusing on the 2014–2020 programming period and to a lesser extent on the 2007–2013 period, highlighted flaws in the Commission's CAP

¹⁰³ CINEA (2021). The new LIFE Programme, the sub-programmes and types of projects funded. <https://assets.gov.ie/199801/3d059cc8-d4b3-44d6-9ad3-895c1d2c7a17.pdf>

¹⁰⁴ Baldock, D. & Bradley, H. (2023) 'Transforming EU land use and the CAP: a post-2024 vision', Policy Paper, Institute for European Environmental Policy. <https://ieep.eu/wp-content/uploads/2023/09/Transforming-EU-land-use-and-the-CAP-a-post-2024-vision-paper-IEEP-2023.pdf>.

tracking methodology, which overestimated some of the biodiversity spending.¹⁰⁵ The Commission changed the methodology to take into account the European Court of Auditors' criticism and the new methodology already applies to the new CAP plans. Member States are already using the CAP to support measures that are considered restoration measures under Annex VII of the Nature Restoration Regulation, for instance organic agriculture, agroforestry, reduction of pesticides and fertilisers, etc.

Reforms to the CAP aim to address existing challenges. However, the European Commission's 2024 proposal for a Delegated Regulation, allowing greater flexibility (in compliance with GAECs, in response to farmers' protests), has raised concerns. Environmental organisations warn that these changes risk weakening the CAP's environmental ambitions, raising doubts about its ability to meaningfully contribute to biodiversity conservation and restoration.^{106, 107}

The CAP Green Architecture shows positive signs and holds significant potential for contributing to biodiversity conservation. However, some of the implementation choices made by Member States in their specific CAP Strategic Plans have prevented it from being fully utilised. At its core, the focus of the funds is still on income support rather than on paying for the delivery of public goods. Some of the interventions in CAP plans involve minor changes rather than ambitious and measurable changes in farming practices, compared to similar measures in the 2014–2022 CAP. Exceptions under conditionalities attached to income support do not make full use of this instrument. In addition, some voluntary eco-schemes are not ambitious enough, even though they represent a significant share of allocated environmental funds in most countries. Some Member States may not always use this instrument as intended, directing funds towards activities that align with their economic priorities but which may not fully deliver the outcome originally promoted under the CAP.¹⁰⁸ Eco-schemes also often support existing practices which are crucial for their maintenance but which may result in insufficient additional benefits in the long term.¹⁰⁹ As a result, given the urgency and scale of nature restoration required in the EU's more intensively farmed areas, the allocated funds and targets appear insufficient in certain cases. The actual impact of CAP Strategic Plans on nature will need further evaluation once their implementation has progressed further.¹¹⁰

European Maritime, Fisheries, and Aquaculture Fund (EMFAF)

The EMFAF provides a high degree of flexibility to achieve priorities by outlining supported activities, intervention fields (Annex IV) and core performance indicators (Annex I). The EMFAF's priorities support biodiversity mainstreaming with €1.8 million, through priority 1, but also indirectly through priorities 2–4. However, the EMFAF does not include an obligation to restore natural ecosystems, but instead only elaborates on how restoration processes can contribute to achieving the priorities of the funding programme. The fund generally has a greater emphasis on nature restoration than on nature-based solutions.

¹⁰⁵ ECA (2020). Biodiversity on farmland: CAP contribution has not halted the decline. ECA. https://www.eca.europa.eu/Lists/ECADocuments/SR20_13/SR_Biodiversity_on_farmland_EN.pdf

¹⁰⁶ ClientEarth (2024). MEPs weaken EU's agriculture policy in undemocratic move that threatens people and farming – ClientEarth. <https://www.clientearth.org/latest/press-office/press-releases/meps-weaken-eu-s-agriculture-policy-in-undemocratic-move-that-threatens-people-and-farming-clientearth/>.

¹⁰⁷ EEB (2024). Letter to MEPs on the European Commission proposal to weaken CAP conditionality. <https://eeb.org/wp-content/uploads/2024/04/Letter-to-BUDG-committee-CAP.pdf>.

¹⁰⁸ WWF (2024) *Can Your Money Do Better? Redirecting Harmful Subsidies to Foster Nature & Climate Resilience*, Wide Fund For Nature. https://wwfeu.awsassets.panda.org/downloads/wwf---harmful-subsidies-report_full-report.pdf.

¹⁰⁹ ECA (2024). Common Agricultural Policy Plans Greener, but not matching the EU's ambitions for the climate and the environment. ECA. https://www.eca.europa.eu/ECAPublications/SR-2024-20/SR-2024-20_EN.pdf.

¹¹⁰ European Commission: Directorate-General for Agriculture and Rural Development, Chartier, O., Folkeson Lillo, C., Valli, C., Jongeneel, R. et al., *Mapping and analysis of CAP strategic plans – Assessment of joint efforts for 2023–2027 – Executive summary*, Chartier, O.(editor) and Folkeson Lillo, C.(editor), Publications Office of the European Union, (2023) <https://data.europa.eu/doi/10.2762/12295>.

Just Transition Fund (JTF)

The JTF does not provide strict earmarking for nature restoration, given the specific scope of the fund: the JTF directly helps to deal with the negative social, economic, environmental, demographic and health impacts of the climate transition, and funding is targeted at regions most negatively affected by transition. While not solely focused on nature restoration, the JTF provides support for the decontamination and regeneration of sites that were once used by carbon-intensive industries, including for extraction activities (e.g. lignite/coal mines and peatlands). At present, the amount allocated to the regeneration of sites (including the repurposing of brownfields) in JTF programmes is around €1.8 billion, representing 9% of the total budget (EU amount – €19.7 billion).¹¹¹

Cohesion Fund (CF) and European Regional Development Fund (ERDF), including Interreg

The CF and ERDF support nature restoration through a specific objective (specific objective 2.7) aimed at enhancing the protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, as well as reducing all forms of pollution. In addition, nature-based solutions are promoted across all policy objectives, with a specific emphasis under specific objective (specific objective 2.4): 'Promoting climate change adaptation and disaster risk prevention and resilience, taking into account ecosystem-based approaches'. Thanks to thematic concentration, 30% of the funding from the ERDF needs to be allocated to policy objective 2 which, among other specific objectives, supports nature restoration and nature-based solutions. This can be considered a means of ring-fencing or earmarking. Moreover, the ERDF delivers territorially targeted support under policy objective 5, which supports integrated economic, social and environmental development (via integrated territorial and local development strategies). These can include nature restoration and nature-based solutions, emphasising a functional area approach to foster multi-sectoral and multi-level governance and strengthening urban-rural links.

An enabling condition for funding for specific objective 2.7 is that it must align with the priorities set out in the national Prioritised Action Framework. For interventions supporting nature conservation measures in connection with Natura 2000 areas within the scope of Council Directive 92/43/EEC, a priority action framework pursuant to Article 8 of Directive 92/43/EEC is in place and includes all elements required by the template for the priority action framework for 2021–2027 agreed by the Commission and the Member States, including identification of the priority measures and an estimate of financing needs. On average, biodiversity allocations in partnership agreements and cohesion policy programmes are close to 6%, which is an improvement from the 3.9% level during the 2014–2020 programming period. However, at MFF level, the political ambition has been set at 7.5-10% for 2021–2027. The specific planned allocations for this period vary by fund and between Member States.

Recovery and Resilience Facility (RRF)

The Recovery and Resilience Facility (RRF), introduced in February 2021, is a temporary instrument and serves as the cornerstone of the EU's NextGenerationEU recovery instrument. It was established to mitigate the socioeconomic impacts of the COVID-19 pandemic. The RRF has a total budget of €650 billion, of which €359 billion is available as grants and €291 billion as loans.¹¹²

A key feature of the RRF is its focus on the green transition. This is supported by the requirement to allocate at least 37% of the national Recovery and Resilience Plans to measures supporting

¹¹¹ European Commission (n.d.). Just Transition Fund: leaving no region behind in the climate transition. [JTF: Leaving no region behind in the climate transition | Cohesion Open Data](#).

¹¹² European Commission (n.d.). Recovery and Resilience Facility. https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en

climate objectives – this also includes nature protection and restoration. The recital 24 of the RRF regulation¹¹³ states that reflecting the importance of tackling the dramatic loss of biodiversity, the Regulation should contribute to the mainstreaming of biodiversity action in Union policies and Article 18.4.e states that “the recovery and resilience plan shall [...] in particular set out [...] a qualitative explanation of how the measures in the recovery and resilience plan are expected to contribute to the green transition, including biodiversity, or to addressing the challenges resulting therefrom...”. Despite this emphasis, only 1% of the RRF’s total budget is earmarked directly for biodiversity (reaching 1.6% if also accounting for contributions from measures covering climate adaptation and risks, wastewater and industrial site remediation). While some Member States have demonstrated stronger commitments to biodiversity, the overall contribution of the RRF to nature conservation and restoration is relatively limited.

The mid-term evaluation of the RRF highlighted that binding targets exist only for climate-related investments, and not for biodiversity or nature restoration. This potentially does not incentivise Member States to prioritise these areas. Most green funding under the RRF has been directed towards sustainable mobility and energy efficiency. While the RRF offers potential for supporting biodiversity (and therefore nature restoration and nature-based solutions), its impact in this area remains limited.

InvestEU

InvestEU has no direct earmarking/ring-fencing for nature restoration through the sustainable infrastructure window. Here, nature (restoration) and biodiversity are both eligible funding areas. However, there is no earmarking in place and no sufficient regulatory/financial framework that addresses the needs for nature restoration processes. The level of uptake has been somewhat slow under InvestEU, partly because there was no earmarking for biodiversity.

Support for sustainable investment is focused on four key areas: sustainable infrastructure, research, innovation and digitalisation, small and medium-sized companies, and social investment and skills. A total of €9.9 billion is allocated to sustainable infrastructure, with 60% specifically earmarked for climate and environmental initiatives. It is anticipated that research, innovation and digitalisation will receive €6.6 billion, while €6.9 billion is set aside to support small and medium-sized enterprises (SMEs). Social investment and skills development are allocated €2.8 billion.

Additionally, efforts build upon lessons learned from the Natural Capital Financing Facility through the LIFE programme’s contribution to the InvestEU Programme to enhance green investments, including investments in nature restoration and biodiversity conservation. For this purpose, €50 million has been earmarked and already partly committed: €20 million tops up the Sustainable Infrastructure Advisory (SIA), and €30 million is allocated to the Green ASSIST initiative.

Horizon Europe

Horizon Europe’s second pillar (global challenges and European industrial competitiveness) is the main part supporting R&I on biodiversity, particularly Cluster 6 (food, bioeconomy, natural resources, agriculture and environment). According to Horizon Europe’s specific programme and Strategic Plan 2025–2027, substantial support is given to R&I on biodiversity and ecosystem services, including for nature restoration and nature-based solutions, notably under the intervention area ‘biodiversity and natural resources’. It is estimated that over €755 million was allocated to

¹¹³ Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0241>

nature-based solutions-related projects between 2015 and 2024.¹¹⁴ These address issues like urban resilience, water security, ecosystem restoration, and sustainable urban regeneration, and have fostered cross-sectoral collaborations and supported practical tools to scale nature-based solutions' implementation across urban and rural areas. Demonstration projects have been funded under the missions part of the Work Programme, with significant funding dedicated to nature-based solutions, for example under the EU Mission on adaptation to climate change. More basic research on the biodiversity crisis is also funded under Cluster 6. Biodiversity is mainstreamed in other parts of HE, for instance in Cluster 5 in the intervention areas on climate science and on renewable energy. The first pillar of Horizon Europe (excellence in science), particularly the European Research Council, is supporting frontier research of high interest to global challenges such as biodiversity research. The Strategic Plan 2025–2027 provides that 10% of HE expenditure between 2025 and 2027 should be dedicated to biodiversity R&I. However, limitations have been encountered in mainstreaming in more 'technological' clusters, given the description of their intervention areas in HE's specific programme.

Continued funding for biodiversity R&I will be crucial in the future to sustain research capacity, to advance research, disseminate and exploit research results, scale up innovations, and in particular to support the ambitious EU nature restoration objectives and the widespread implementation of nature-based solutions.

3.5 Challenges to nature restoration finance in the current MFF

This sub-chapter focuses on challenges that have been identified around the financing of nature restoration. To gather in-depth qualitative data, in addition to a literature review, horizontal interviews, and an online expert consultation on 21 November 2024, semi-structured interviews were also conducted. This approach allowed for a balance between the flexibility of open-ended interviews and the consistency of structured interviews and facilitated the exploration of participant perspectives, while enabling the interviewer to probe for more detailed responses and ensure that key topics were covered.¹¹⁵ The interviews were structured along the developed interview guide, ensuring that all relevant areas were addressed while allowing for natural conversation flow. The interviews were recorded and transcribed (considering privacy and GDPR), ensuring accuracy in capturing participants' responses for the subsequent thematic analysis. The interviewees represented a diverse group of experts, including experts from different DGs, beneficiaries and specialists from EU-funded research projects, experts from the EU Business & Biodiversity Platform, NGOs, and a representative from a private asset management company. Additionally, an online consultation with a focus group was conducted in November 2024, bringing together several experts.

The interviews revealed a number of challenges to financing nature restoration. First, the substantial financing gap, outlined in the introduction, was highlighted (to achieve the 2030 EU Biodiversity Strategy, an estimated €48 billion annually is required¹¹⁶ but national and EU contributions currently fall short by around €18 billion per year¹¹⁷). This gap shows the urgent need to better understand

¹¹⁴ European Commission: European Research Executive Agency, Nature-based solutions – EU-funded NBS research projects tackle the climate and biodiversity crisis, Publications Office of the European Union (2024) <https://data.europa.eu/doi/10.2848/8542246>

¹¹⁵ Kallio et al. (2016), Systematic methodological review: developing a framework for a qualitative semi-structured interview guide.

¹¹⁶ European Commission (n.d.) Biodiversity financing. [Biodiversity financing - Environment - European Commission \(europa.eu\)](https://data.europa.eu/doi/10.2848/8542246).

¹¹⁷ European Commission: Directorate-General for Environment, Nesbitt, M., Whiteoak, K., Underwood, E., Rayment, M., Hart, K., Aubert, G., Kollenda, E., Lóránt, A., Kopsieker, L., Cziebiński, M., Petsinakis, F., Gerritsen, E., Beznea, A., Cihlarova, P., Frapaise, L., Finesso, A., Forestier, O., & Nicholls, G. (2022). Biodiversity financing and tracking: final report, Publications Office of the European Union. <https://data.europa.eu/doi/10.2779/950856>.

how public and private financing can be blended effectively,¹¹⁷ and the need to increase the attractiveness of nature restoration and investment in nature-based solutions for the private sector (see below).

One reason for the financing gap is competing priorities within the MFF¹²⁹ and within countries. In this context, it is important to note that there is currently no standalone fund for nature restoration, and there is insufficient earmarking of funds for biodiversity in many EU programmes.¹¹⁸ Financing that is available often favours climate mitigation over nature-focused projects (because they are more mature and easier to implement),¹¹⁷ prioritises funding for areas such as energy and transport,¹¹⁹ or falls short in reality regarding biodiversity benefits as compared to what benefits are promised on paper.¹²¹ This discrepancy underscores a need for more effective allocation of funds combined with mandatory mechanism(s) incentivising funding for biodiversity. One of the challenges is also that the biodiversity target of the current MFF – because it came late during the Interinstitutional Agreement negotiation process in 2020, and because the biodiversity target was not part of the 2018 COM proposal – was mostly not reflected in sectoral regulations linked to all these MFF funds. Instead, it only appears as a recital in most cases, with no biodiversity percentage allocated as was done for climate. For Horizon Europe, a target has been introduced in the Strategic Plan 2025–2027. While an adjustment mechanism exists for climate, enabling the Commission to take compensatory action to address possible gaps in achieving the climate spending targets of individual EU spending programmes, by ensuring that the deficit is addressed either within the same programme in the subsequent years of its implementation or by other programmes – this does not exist for biodiversity.

Finally, there is an inherent difficulty in aligning policies with conflicting interests, such as, for example, forestry expansion versus peatland restoration targets.¹²⁰ Within this context, the risk of greenwashing due to inadequate reporting and monitoring should be noted.¹²⁰

An additional reason for the financing gap is insufficient private sector investment, due to a lack of attractiveness for investors. Private sector investments represented only 2% of all biodiversity investments in the EU in 2020.¹¹⁷ While the private sector increasingly sees the long-term benefits of adaptation investment, the short-term monetary benefits may be discouraging. The limited monetisation of the benefits of nature restoration or nature-based solutions, which are often implemented on public goods, and the natural capital contained therein, as well as the associated challenges in generating revenue, were highlighted as a primary barrier to private sector investment,¹²¹ as this leads to uncertain cashflows and high transaction costs. Biodiversity investments in particular are seen as being less appealing due to delayed visible benefits, limited profitability, and higher perceived risk (not least as compared with climate-focused projects)¹¹⁷ – largely due to lack of familiarity and knowledge. Furthermore, projects focusing on nature-related targets are typically small and complex, with long timeframes and nature-based solutions in particular are often site or context-specific, not easily replicable, and require a high level of technical expertise.¹²¹

Yet while a range of funding is already available, a further challenge is in accessing available EU and private sector funding. Barriers to accessing EU funds like CAP and InvestEU often include high administrative burdens and complexities, especially for smaller projects or projects involving multiple stakeholders,¹¹⁸ as well as a lack of capacity-building opportunities or technical assistance offers for applicants.¹²¹ Interviewers also shared some examples where farmers were paid in advance of assessments, leading to trust issues when refunds were sought because farmers did not

¹¹⁸ Interview IV.IV.

¹¹⁹ Interview IV.I.

¹²⁰ Interview IV.II.

¹²¹ Interview IV.III.

deliver the results.¹²¹ Stringent requirements, such as needing to form local action groups or meeting co-funding obligations, represent an additional challenge. As to the latter, there is often a difficulty in securing regional co-funding for biodiversity projects and challenges with bankable projects.¹¹⁷ Insufficient human resources and lacking technical expertise further hinder the development and implementation of nature-based solutions projects, with further capacity-building being necessary at the local and national levels to help combat the inherent complexities of implementing landscape-level approaches with multiple stakeholders, vested interests, and varied economic impacts across countries, regions or districts. These types of barriers particularly affect community groups and small NGOs, deterring them from applying for available funds.¹¹⁷ Finally, additional legal and administrative complexities were highlighted as a difficulty in aligning private sector financing with national policy frameworks.

3.6 Recommendations for improved funding for nature restoration

This section provides recommendations for overcoming the identified challenges, building on the literature, stakeholder workshop, and expert interviews, and focusing on: (1) Improving tracking methodologies; (2) Providing technical assistance and capacity-building opportunities at Member State level; (3) Developing a comprehensive financial toolbox; (4) Leveraging expertise from good practices; (5) Dedicating funding for nature restoration; (6) Shifting the narrative around nature-based solutions implementation; (7) Using the political momentum of the Nature Restoration Regulation.

3.6.1 Improve tracking methodologies

Tracking and reporting play an important role in demonstrating the potential of mainstreaming nature restoration activities and nature-based solutions. Some of the current methodologies for tracking biodiversity spending often tend to overestimate contributions to biodiversity. Besides the fact that the spending target for biodiversity is generally lower compared to that for climate, the current system of three possible coefficients (0%, 40% or 100%), based on the Rio Markers, can be disadvantageous for biodiversity, as projects may often provide a relatively low contribution to biodiversity that may not be considered in the current system. Considering the introduction of a coefficient for smaller contributions (e.g. 10%) might better reflect the biodiversity contributions of projects that have their core objectives in other areas. Other methodologies were also recently updated precisely to overcome this shortcoming as identified by the European Court of Auditors (e.g. the CAP biodiversity tracking methodology).⁹⁶ Here, performance-based indicators can complement existing methods to better track and ensure the quality of biodiversity projects. An example of such an indicator could be 'hectares of ecosystems protected or restored'. Improved monitoring and reporting can help to address greenwashing by increasing the transparency and accountability of funded projects.¹²¹

3.6.2 Provide technical assistance and capacity-building opportunities at MS level

The mainstreaming of nature restoration and nature-based solutions in MFF programmes requires knowledge of application procedures under, for example, EAFRD, CF, ERDF and LIFE, and support for Member State and Candidate Countries' authorities and stakeholder/beneficiaries to mobilise these funds,¹²² as they are often quite complex to handle. This includes familiarity with financing mechanisms, as well as the programming, disbursement and oversight of public funds. Improved technical and financial assistance, simplified access to funding and reduced administrative burdens

¹²² Freisinger, T., Thomson, D., Ratfelders, R., Rakovska, K., Höfferle, P., & Radovanović, H. (2023). *Biodiversity on the brink: What's holding back financing for nature in the EU?* EuroNatur.
<https://www.euronatur.org/fileadmin/docs/umweltpolitik/Biodiversitaet/Biodiversity-on-the-brink.pdf>

can help to overcome the lack of political prioritisation in programming, and re-programming towards other priorities during the MFF implementation phase. Advisory and capacity-building are especially important in biodiversity projects, as the knowledge is not as advanced as, for example, in climate-related projects, given that more experience may already exist in this area. Biodiversity is often also more complex and challenging to incorporate. This complexity means that we are missing biodiversity pipeline projects, i.e. projects that can easily be set up and implemented.

The first overarching recommendation is the provisioning of advisory services and capacity-building opportunities through platforms (like available currently via InvestEU, Green Assist, and the EU Business and Biodiversity platform) to help project developers mature their projects and facilitate learning.¹²⁰ In particular, enhanced technical and financial support for smaller organisations is needed, to navigate application processes and reduce administrative burdens.¹²¹ Available technical assistance tools and guidance (such as the Natura 2000 financing handbook for 2021–2027 and the 2022 Vademecum 'find your EU funding programme for the environment' report¹²³) could be promoted and united on one platform to simplify access (e.g. EU Business and Biodiversity platform). Additional EU-level guidance is recommended, including the development of similar handbooks and reports on biodiversity and nature restoration for the post-2027 MFF, as well as opportunities to share best practices among Member States to align efforts and enhance effectiveness.¹¹⁷ Finally, it is recommended that the experiences of the 23 Natura 2000 financing workshops in the Member States and the 2022–2023 Vademecum conferences in a number of Member States are built on, and that similar workshops are conducted.

Regional contact points (experts) can be established or activated to support these ambitions.¹²¹ Many countries already have established expert networks for nature restoration¹²⁴ that could – in addition to technical guidance on restoration – be utilised to provide this envisioned training and support. One approach could be the one-stop-shop offices in Member States, such as the ones that have been established for energy efficiency. Outside consultants can also be useful to provide technical assistance and tailored capacity-building services to help Member States and stakeholders access biodiversity funding.

Additionally, it is critical to simplify funding processes¹²¹ and access to funding – including the option of complementary use of different financial instruments. Improvements such as reducing administrative burdens associated with EU funds are key to increasing absorption, possibly by appointing dedicated European funding officers within regions to streamline processes and ensure that funds are utilised effectively.¹¹⁷ Inspiration could be taken from the INTERREG small project funds (SPFs), i.e. simplified and efficient management structures for the benefit of recipients with reduced management costs for (small) beneficiaries. As outlined in the next section, financial support for smaller-scale projects is also needed and can be attracted through, for example, pooling projects together. Here it is recommended that relevant stakeholders and synergies are mapped across sectors to foster collaborative projects and innovative financing.

3.6.3 Develop a comprehensive financial toolbox with innovative finance

Given the substantial influence of private actors on resource usage and land-use decisions through their investments and activities, they have the potential to significantly complement public sector efforts in advancing global nature restoration and mainstreaming nature-based solution endeavours. This section briefly introduces the potential of introducing a market in both areas and outlines a number of associated recommendations, building on the challenges outlined earlier.

¹²³ European Commission. (2022). [Find your EU funding programme for the environment](#).

¹²⁴ Kupilas, B., et al. (2024): Compilation of existing guidance on ecosystem restoration. Ecologic Institute, Berlin. <https://www.ecologic.eu/19738>.

Nature restoration is gaining traction among corporations as a means to address carbon emissions and achieve net zero emission reduction objectives. Carbon credits traded in the voluntary market surpassed US\$1 billion in 2021, with Forestry and Land-Use credits accounting for 61% of this value. Furthermore, there is a growing recognition that unsustainable practices can lead to reputation risks, particularly for companies with consumer-facing brands, while increasing public concern for environmental issues underscores the marketing benefits of sustainable actions. Despite this increasing interest, private sector financing for restoration often remains limited.

At the same time, the European market for nature-based solutions is viewed as being in its early stages by investors and project developers.¹²⁵ According to the 2021 UNEP State of Finance for Nature report,¹²⁶ investment in nature-based solutions has reached €113 billion (mostly from public sources), with Europe accounting for €27 billion, or 24% of the total. However, less than 1% of water management financing and only 1% of biodiversity conservation financing globally is allocated to nature-based solution projects.¹²⁷ In response to the outlined challenges, an overarching recommendation is to develop a comprehensive financial toolbox including three key components:

- Different funding sources (blended financing via guarantees/loans/equity),
- Advisory services (see also section 3.6.2),
- Platforms connecting investors with projects.¹¹⁷

Firstly, a more systematic approach for blending EU funds with other sources of funding is needed to leverage private investments, using a mix of concessional loans, guarantees, and other financial tools to support different types of projects.¹¹⁷ The introduction of mechanisms to blend grants and loans could reduce risks for investors.¹¹⁷ The interventions that are currently implemented under the cohesion funds could, for example, be blended with guarantees and loans under the successor to InvestEU. These actions could come together as a nature restoration blending facility under the successor programme of InvestEU, building upon the Natural Capital Financing Facility. However, the Natural Capital Financing Facility components that have worked less well could be addressed, for example the facility should also be able to finance projects below €15 million (the usual ticket size for the EIB), be accessible to Member States' National Promotional Banks and Institutions, enable blending with grants, and go further in terms of de-risking investments. This action is seen as being complementary to several pieces of EU legislation which already directly address actions or markets involving nature-based solutions, offering provisions to encourage consideration of these solutions without imposing mandatory requirements.

In this context, blended finance mechanisms could prioritise investments meeting stringent pre-defined criteria indicating financial viability and positive ecological and social impacts, with continuous monitoring and verification of outcomes. Here, outstanding questions include: (1) How do we ensure financial viability by blending different sources of funding/financing?; and (2) What should the characteristics of blending facilities be, to ensure their efficiency? Enhancing investor disclosure on financial performance and impacts can boost market development, mitigate risks, and demonstrate the commercial viability of nature-related investments.¹²⁸

¹²⁵ European Investment Bank. (2023). *Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe*. European Investment Bank. <https://doi.org/10.2867/031133>.

¹²⁶ United Nations Environment Programme (UNEP). (2021). *State of Finance for Nature 2021*. Nairobi. <https://www.unep.org/resources/state-finance-nature-2021>.

¹²⁷ European Investment Bank. (2023). *Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe*. European Investment Bank. <https://doi.org/10.2867/031133>.

¹²⁸ Va Van Raalte, D. & Ranger, N. (2023). *Financing Nature-Based Solutions for Adaptation at Scale: Learning from Specialised Investment Managers and Nature Funds*. Global Center on Adaptation and Environmental Change Institute, University of Oxford. https://www.eci.ox.ac.uk/sites/default/files/2023-12/Financing_NbS_for_Adaptation-GCAOxford2023-finalv2.pdf.

At the same time, restoration and nature-based solutions projects must offer a clear return on investment (ROI) profile and business case to attract investment finance, as this is crucial for both impact investors and conventional asset managers. In particular, insurance companies (disaster risk reduction) and pension funds (long-term financing) could be more strongly involved and approached for nature-related investments. Increasing (cross-border) awareness and generating comparable evidence are crucial for this work, requiring continued investment in data, tools and methodologies – including standardised metrics – to consistently quantify the value of benefits and therewith stimulate demand for investments and foster the emergence of new market-based innovations.

In response to the challenges often associated with the small size and long timeframes of delivering benefits from nature-based solutions and nature restoration projects, a further recommendation is to ensure the bankability of smaller projects. This can be done by pooling smaller projects to de-risk and increase return – for example pooling projects based on region, thematic, sector and type of ecosystem service provided, to increase the bankability of such projects, and cross-border pooling could be encouraged and provide EU added value. This could be best done for regional funds such as cohesion and the respective successor fund. Furthermore, public funds could be utilised as seed money in the early stages of some projects until they mature to a stage where they can attract private financing¹²⁰ and larger investments. EU funds could specifically dedicate some funding for these early stages of biodiversity projects. In parallel, direct grants and concessional finance could be encouraged from entities like the EIB to facilitate early-stage projects.

To enhance nature restoration financing, Member States could introduce tax incentives for private landowners who voluntarily engage in conservation activities. This approach would diversify funding sources and encourage private sector participation. In this context, the European Commission could ensure compliance with EU rules (e.g. state aid).

At COP16, the EU presented its work on the exploration of innovative financial instruments, including biodiversity certification and nature credits. These tools are designed to diversify funding sources, assist companies in setting nature-positive goals, and reward stakeholders – such as farmers, foresters, fishers, and Indigenous Peoples and Local Communities – who actively protect and restore natural ecosystems. Current pilot projects are intended to make a positive contribution to nature, not to offset or compensate for the destruction of biodiversity. The risks of commodifying biodiversity and offsetting practices need careful mitigation. A recommendation is that pilot projects could be further explored and replicated, but stakeholders agree that such market instruments should not replace public funding and that nature/biodiversity credits should be seen as a separate or additional element to existing funding streams and would need to be voluntary at EU level. Here, the EU could support such endeavours with innovation (seed) capital, justified through scalability and demonstration effect.

3.6.4 Leverage expertise from good practices

Learning from the array of good practices around financing can be key for successfully upscaling restoration activities and nature-based solutions across the EU. There are a number of potential ways to accomplish this, with several outlined below, based on the UK Nature Impact Fund Blended Capital, the LIFE Programme, and Peatland Finance Ireland (PFI).

First, the establishment of a dedicated blending facility (see also 3.6.3) could be useful. Inspiration could be taken from existing practices in the EU (e.g. <https://www.cassini.eu/cassini-initiative>) or the UK Nature Impact Fund. The latter has a structure of technical assistance, blended financing, and matchmaking platform, and serves as a strong model for establishing a dedicated blending facility for biodiversity, nature restoration and nature-based solutions under the successor to InvestEU – as recommended under 3.6.3. Consideration could be given to creating a vehicle

specifically focused on biodiversity investments, which are currently underrepresented in InvestEU. Here, regulatory support to incorporate private sector incentives and navigate regulatory challenges to facilitate smoother implementation and investor confidence. Programmes could consider private sector incentives that align with environmental goals, as exemplified by the H2020 Waterlands project and Nestlé's landscape-level approach in Scotland. This can encourage greater private investment in biodiversity projects.

Furthermore, strategies to attract institutional investors to participate in biodiversity financing can be impactful, such as pension funds and sovereign wealth funds. This could be achieved by structuring projects to meet the investment criteria of these entities. Complementary actions to reduce perceived risks through models like Peatland Finance Ireland's rotating fund and biodiversity projects can attract risk-averse investors. Effective risk management strategies are essential to encouraging private sector participation in environmental investments, and the development of pricing mechanisms, tax incentives, and other financial instruments can make nature restoration projects more profitable and attractive to private investors.

3.6.5 Dedicating funding for nature restoration

In addition, the success of the LIFE programme and slow uptake under InvestEU indicates the challenges faced when there is no earmarked funding for biodiversity investments and underscores the importance of dedicated funding for supporting and promoting biodiversity and nature restoration projects. Such dedicated funding can offer specialised support and is more likely to deliver targeted results compared to broader initiatives.

Many interviewed stakeholders argued for dedicated funding for nature restoration – for example as a sub-programme/window/priority under a successor to LIFE (which is a catalyst for biodiversity projects). The option to establish targeted funding for nature restoration could compliment improved sectoral mainstreaming of nature restoration across available funds, offering significant opportunities for effective investment to support biodiversity and to implement the Nature Restoration Regulation. However, such a mechanism also presents substantial administrative, political and practical challenges that would require careful consideration and planning.

Targeted funding dedicated to nature restoration could include the following specifics: (i) provision of public seed money for small-scale projects as well as funding for large-scale ecosystem restoration projects; and/or (ii) provision of long-term financial support for nature restoration projects to lower the risk around investments and manage restored areas; (iii) national envelope systems to support the implementation of national restoration plans.

A combination of improved mainstreaming of nature-related projects and a targeted funding could deliver a number of benefits. The pros and cons of such an approach have both been addressed previously,¹²⁹ but are outlined briefly below. A dedicated mechanism would bring an array of potential benefits and is felt by some to be necessary to ensure the success of the Nature Restoration Regulation. Among these are advantages such as showing long-term commitment, building stakeholder trust,¹¹⁷ and emphasising the importance of transparency in funding sources and motivations.¹¹⁸ These in turn bring associated tangible benefits, such as ensuring long-term impacts and leveraging political commitments to secure more robust (and long-term) financial support for biodiversity.^{121,117} The framework would also require Member States to co-fund and commit to the objectives and could strengthen land management and restoration efforts, ensuring a stronger collective effort.

¹²⁹ IEEP (2023). Exploring policy options for funding nature restoration in the next MFF. <https://ieep.eu/publications/exploring-policy-options-for-funding-nature-restoration-in-the-next-mff/>.

In addition to these benefits, dedicated funding would represent a cohesive strategy for mainstreaming biodiversity funding, integrating biodiversity, water quality, air quality and carbon goals¹¹⁷ and support alignment with the Nature Restoration Regulation, which refers to dedicated funding under Article 21.7. Building on the LIFE programme (including Strategic Nature Restoration Projects), with competitive applications, expert review and rigorous monitoring, could increase the success rate and impact of funded projects. However, competition and a complex application process could limit absorption.

It is important to note that one-off or short-term payments might not meet the long-term needs of nature restoration projects, which often require sustained investment over decades.

3.6.6 Shifting the narrative around nature-based solutions' implementation

An innovative approach to mainstreaming nature-based solutions involves shifting the burden of proof for infrastructure projects. Instead of placing the burden solely on nature-based solutions proposers to demonstrate their effectiveness, costs and benefits, proposers of traditional grey infrastructure projects could be required to conduct a comparative assessment. This would include demonstrating how their projects align with environmental goals relative to nature-based solutions (going beyond DNSH and towards the creation of additional nature). Such assessments would not aim to prove the absence of environmental harm – a principle often unfeasible in procedural law – but instead focus on comparing potential impacts and benefits between grey infrastructure and nature-based solutions.

To reduce administrative burden and streamline processes, this framework could be implemented through environmental assessment, which could be expanded (e.g. via guidance and/or legislative requirements) to ensure that all infrastructure planning explicitly evaluates nature-based solutions as an option. Specific exemptions for nature-based solutions could be introduced, comparable to those for renewable energy technologies, reducing unnecessary procedural hurdles for environmentally positive projects. This reframing would aim to assist developers in aligning their projects with sustainability ambitions, positioning the shift as a facilitative rather than bureaucratic measure.

A legislative example of such an approach is Norway's policy, which requires public authorities to evaluate nature-based solutions in municipal and regional planning. If nature-based solutions are not adopted, authorities must provide a clear and transparent justification for the decision, ensuring accountability and fostering consideration of sustainable alternatives.

These recommendations offer a pathway to promoting nature-based solutions without imposing excessive administrative burdens, supporting the EU's broader goals of sustainability and innovation in infrastructure planning.

3.6.7 Use the political momentum of the Nature Restoration Regulation

The adoption of the EU Nature Restoration Regulation provides a historic opportunity to ensure necessary financing and political traction for nature-related funding. In addition, the knowledge and innovative solutions emerging from Horizon Europe projects on the bankability of nature-based solutions, the Nature Positive Economy, and on unlocking financial flows towards reversing biodiversity loss more generally, as well as upcoming related calls and activities such as Biodiversa's BiodivRestore Knowledge Hub on Nature Restoration provide an opportunity to (i) further strengthen the existing knowledge base and (ii) further draw attention to the topics – including funding options under MFF and leveraging private financing. Finally, looking beyond 2030, there is an opportunity to enhance the long-term competitiveness of the EU and strengthen the narrative around the role of biodiversity, resilience, and healthy ecosystems for a competitive Europe. For

example, healthy soils and pollination are required for agricultural production. It is worth mentioning that the scientific community more recently highlights the need to rethink continued economic growth, for example by moving to a post-growth society (<https://www.realpostgrowth.eu/>) and/or transition to a Nature Positive Economy (<https://www.gonaturepositive.eu/>).

3.7 Summary of recommendations

Improving tracking methodologies

Ecosystem-specific performance-based indicators, such as ‘hectares of ecosystems restored’, could complement current tracking to improve focus on results, accuracy and transparency (currently, the tracking largely focuses on financial expenditure).

Provide technical assistance and capacity-building opportunities at MS level and for other actors under specific instruments

To mainstream nature restoration in MFF programmes, enhanced advisory services, capacity building, and technical guidance and support are critical. Platform/s like InvestEU, Green Assist, and Business & Biodiversity Platform could assist smaller organisations in particular in navigating complex funding processes. Available technical assistance tools and guidance like the Natura 2000 financing handbook and the Vademecum ‘find your EU funding programme for the environment’ report and biodiversity funding guides could be promoted and brought together on one platform, including the development of similar guidance on biodiversity finance for the post-2027 MFF. Regional expert networks and one-stop-shop offices can provide tailored support. Simplifying funding processes, reducing administrative burdens and enabling complementary use of financial instruments are essential. Initiatives like INTERREG’s small project funds offer inspiration. Promoting stakeholder mapping and cross-sector synergies can foster collaborative biodiversity projects and innovative financing solutions. In addition to guidance on how to access biodiversity finance, guidance and technical support could also focus on how to mainstream biodiversity objectives into programmes. The provision of specific incentives is also critical to address the additional complexity and cost of integrating biodiversity considerations.

Develop a comprehensive financial toolbox with innovative finance

A comprehensive financial toolbox is recommended, combining technical assistance, financing (e.g. blended finance via guarantees, loans and grants), and a matchmaking platform linking investors with projects. Establishing a nature restoration blending facility under the successor programme to InvestEU and building upon the Natural Capital Financing Facility could improve private investment mobilisation, address smaller projects, and de-risk investments. It would be useful that criteria ensuring ecological, social and financial impacts guide funding. Pooling smaller projects by theme or region enhances bankability, and supporting early-stage ventures with seed capital or tax incentives can catalyse scalable and impactful biodiversity projects. Biodiversity credits and nature certification, as currently explored, offer innovative tools but must remain voluntary and supplementary to public funding, without promoting offsetting. Enhanced data and metrics are critical for upscaling, as well as the inclusion of lessons from carbon markets to avoid pitfalls.

Leverage expertise from good practices

To upscale restoration activities and nature-based solutions, a dedicated blending facility, combining technical assistance, financing and matchmaking. This serves as a strong model for establishing a dedicated blending facility under the successor to InvestEU. Consideration should be given to

creating a vehicle specifically focused on biodiversity investments, which are currently underrepresented in InvestEU. Models like Peatland Finance Ireland's rotating fund can minimise risks and attract private finance. Strengthened matchmaking platforms and collaborative networks with governments, NGOs and private entities are vital for scaling and sustaining biodiversity projects.

Dedicated funding for nature restoration

Dedicated nature restoration funding could complement improved mainstreaming efforts. The mechanism could provide seed money for small projects, long-term financial support for large-scale restoration, and national envelopes for national restoration plans. Benefits include demonstrating commitment, building trust, securing robust financing, and ensuring long-term impacts aligned with the Nature Restoration Regulation. A clear framework and co-funding obligations could streamline uptake and strengthen the role of Member States. Challenges such as competition between sectors, political resistance and restrictive criteria require careful planning.

Shifting the narrative around nature-based solutions' implementation

There is a need to promote nature-based solutions as efficient solutions for climate and environmental action. Mainstreaming nature-based solutions in infrastructure planning could be advanced by shifting the burden of proof to planners or project developers of grey infrastructure, requiring comparative assessments of environmental impacts relative to nature-based solutions. For example, expanding environmental assessments to mandate evaluation of nature-based solutions and introducing procedural exemptions for environmentally positive projects could be one of the approaches worth considering. Drawing on examples from Norway's policy, authorities would have to justify decisions against the adoption of nature-based solutions to ensure transparency.

Use the political momentum of the Nature Restoration Regulation

The EU Nature Restoration Regulation offers an opportunity to secure financing and political support for nature restoration. Leveraging insights from Horizon Europe projects and initiatives like Biodiversa's BiodivRestore Knowledge Hub can strengthen the knowledge base and spotlight funding options under the MFF while attracting private financing. In general, the results of R&I funded by Horizon Europe should be better disseminated and exploited. Beyond 2030, integrating biodiversity and ecosystem health into the EU's competitive narrative – e.g. emphasising the role of healthy soils in agriculture – can align sustainability with economic growth. Embracing a growth-enhancing regulatory framework while considering scientific calls for post-growth approaches supports a resilient, nature-positive economy and long-term competitiveness for the EU.

4 OPTIONS FOR INTEGRATING NATURE-BASED SOLUTIONS

4.1 Introduction

This chapter focuses on how to better mainstream nature-based solutions under the next MFF EU funding, with a focus on leveraging private finance alongside EU funding. It draws primarily on good practice examples from projects that received EU co-financing. The core deliverable for this work is a separate brochure (also included in Annex 8 of this report). The work in this chapter is closely linked to the work in chapter 3 and the research was done in parallel. Results for this chapter are therefore also incorporated into chapter 3. The main outcomes presented in this chapter focus on the development of a brochure to communicate key findings and recommendations on nature-based solutions in different sectors, as well as some overarching recommendations. First, this chapter will give a brief overview of financing nature-based solutions and challenges related to their financing. This is followed by an exemplary list of financing instruments in different sectors (please note that this list is not exhaustive and simply serves the purpose of providing an overview of possible financial instruments). This is followed by an overview of good practice examples (for the full list of project examples, see Annex 8). Finally, the chapter concludes by presenting a comprehensive list of recommendations for incorporating nature-based solutions into EU funding (in addition to the recommendations provided in chapter 3, which are also relevant here).

While this chapter primarily focuses on nature-based solutions, it contains useful conclusions for climate resilience financing as well, for example in terms of leveraging private investments in a field traditionally reliant on public funding. At the same time, some climate resilience projects include and enable nature-based solutions. Recognising these overlaps can help optimise funding approaches, foster synergies between nature-based solutions and climate policies, and improve the overall resilience of ecosystems and societies.

To identify relevant projects, a systematic screening process was undertaken, focusing on projects with EU co-financing. The selection process was carried out in close collaboration with the contractor. The background research for this chapter largely overlapped with the research conducted for chapter 3.

4.2 Financing nature-based solutions

Nature-based solutions were defined by the United Nations Environment Assembly in 2022 (UNEA-5) as: '[...] actions to protect, sustainably manage, and restore natural or modified [...] ecosystems, that address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.' The definition further recognises that nature-based solutions respect social and environmental safeguards, especially those for local communities and indigenous people, and can be implemented in line with local, national and regional circumstances and managed adaptively. Whether implemented independently or as part of a diversified portfolio, nature-based solutions offer numerous advantages such as cost effectiveness, reduced long-term maintenance and enhanced adaptability to climate change, while delivering the mentioned co-benefits.

Improved financing of nature-based solutions is essential to address the interlinked crises of biodiversity loss and climate change, aligning with international frameworks such as the Kunming-Montreal Global Biodiversity Framework. Despite their potential to deliver cost-effective, multifunctional benefits, current investments fall short, with an annual funding gap of hundreds of

billions of dollars.¹³⁰ While public funding constitutes the bulk of current nature-based solutions financing, the private sector's contributions remain modest, highlighting the need to further explore the use of innovative market-based mechanisms (e.g. green bonds, blended finance) to scale investments.^{131,132} Regulatory approaches like Biodiversity Net Gain in England and the integration of nature-based solutions into infrastructure projects demonstrate pathways for leveraging private capital within structured frameworks.^{133,134}

4.3 Challenges to investing in nature-based solutions

Investing in nature-based solutions still faces many barriers, including the complexity of valuing ecosystem services and addressing market failures associated with biodiversity loss.¹³² High initial costs, regulatory uncertainties, and the absence of standardised metrics for measuring environmental and financial outcomes deter private investment, particularly in projects with long timelines and public good characteristics.^{130,134} In this context, DNSH provisions may be necessary in some cases: for example, urban green can reduce the urban heat island effect and promote urban biodiversity, but it can also result in more emissions of biogenic ozone precursors from the new vegetation, resulting in increased numbers of severe ozone peaks and, if planted along streets, urban vegetation can reduce natural ventilation, resulting in higher concentrations of air pollutants. Additionally, both, the reliance on site-specific data and the lack of harmonised reporting frameworks, complicate the monitoring and evaluation of investments in nature-based solutions.

Structural barriers such as nature-negative financial flows and limited early-stage financing (see chapter 3 on project bankability) further constrain efforts to redirect resources toward nature-based solutions.¹³⁰ Overcoming these obstacles requires robust policy frameworks, de-risking mechanisms and innovative financing models to make nature-based solutions projects more viable and attractive to investors.^{131,133} Table 4.1 provides a list of funding and finance types relevant to selected sectors.

Table 4.1: Examples of different types of funding and finance relevant to selected sectors

Sector	Examples
Agriculture	Biodiversity-positive grants (e.g. grants for agroecological practices), loans for pesticide-free practices. ¹³²
	Payment for Ecosystem Services programmes to foster sustainable land management.
	Sustainable/green bonds and insurance products supporting regenerative agriculture. ¹³⁰
Fisheries	Tradable permits such as Individual Transferable Quotas for sustainable fisheries management. ¹³² Payment for Ecosystem Services programmes focused on marine and coastal ecosystems.
	Financial guarantees and impact funds to offset risks and promote responsible practices.

¹³⁰ United Nations Environment Programme (UNEP) (2023). State of finance for nature: The big nature turnaround – Repurposing \$7 trillion to combat nature loss. Nairobi. <https://doi.org/10.59117/20.500.11822/44278>.

¹³¹ Convergence (2024). State of blended finance: Climate edition. Convergence Report. <https://www.convergence.finance/resource/state-of-blended-finance-2024-climate-edition/view>

¹³² Organisation for Economic Co-operation and Development (OECD) (2024). Tracking economic instruments and finance for biodiversity 2024. <https://www.oecd.org/content/oecd/en/data/insights/data-explainers/2024/10/Tracking-Economic-Instruments-and-Finance-for-Biodiversity-2024.html>.

¹³³ Green Finance Institute (2024). Revenues for nature guidebook series – Biodiversity net gain, England. <https://hive.greenfinanceinstitute.com/wp-content/uploads/2024/10/R4N-GUIDEBOOK-BNG-ENGLAND.pdf>.

¹³⁴ Asian Infrastructure Investment Bank (AIIB) (2024). Investing in nature as infrastructure – The opportunity. <https://www.aiib.org/en/news-events/media-center/blog/2024/Investing-in-Nature-as-Infrastructure.html>.

Sector	Examples
Tourism and conservation	Biodiversity-positive fees such as entrance fees for protected areas and national parks, to fund ecosystem management. ¹³²
	Biosafety fees and ecological fiscal transfers to align tourism revenues with conservation goals.
Forestry	Green bonds and natural capital assets to finance conservation and reforestation projects. ¹³⁰
	Carbon and biodiversity credits to generate revenues and incentivise forest restoration. ¹³⁰
Infrastructure and built environment	Blended finance instruments, including credit guarantees, to support nature-based solutions in infrastructure. ¹³⁰
	Sustainability-linked loans (SLLs) tied to environmental performance outcomes. ¹³⁴
Urban ecosystems/green infrastructure	Loans, blended finance and grants to support urban green infrastructure projects. ¹³⁵
	Revenue streams from increased land values, reduced insurance claims and tax revenues linked to nature-based solutions. ¹³⁵

4.4 A brochure of good-practice examples

The brochure in Annex 8 (also available as a standalone product of this work) provides exemplary cases of nature-based solutions in various sectors that simultaneously tackle environmental, climate and social challenges. Rather than providing an exhaustive list of nature-based solution types and benefits, it offers a selective overview to inspire stakeholders by highlighting multifunctional nature-based solutions applications and encouraging broader adoption across Europe. The nature-based solutions projects described received funding from different EU programmes and additional financing (e.g. philanthropic contributions). They provide successful examples of implementing nature-based solutions and could serve as good practice examples for upscaling. The multifunctional nature of nature-based solutions enables them to address multiple sectoral goals simultaneously, as is showcased in this brochure.

The brochure is structured to provide sector-specific insights into how nature-based solutions can help meet challenges within the water, urban environment, agri-food, energy, transport, and marine and coastal sectors. Each section begins with an overview of challenges specific to the sector, followed by an exploration of how different types of nature-based solutions can address these issues through the benefits they offer. Finally, each chapter features sector-specific project examples of practical Nature-based solutions implementation funded by various EU sources. The sectors covered include water, urban environment, agri-food, energy, transport and the coastal and marine environment. The brochure is intended to work as a tool to highlight the multifunctional applications of nature-based solutions across sectors and promote successful case studies as templates for replication.

¹³⁵ NextGreen (2024). *Business models and investments for nature*. EU Business and Biodiversity Platform Report. https://nextgreen.nl/wp-content/uploads/2024/09/Business-models-and-investments-for-nature_EU-BB-Platform_Report_20240924.pdf.

4.5 Summary of recommendations

There is some overlap between the recommendations presented in this section and those outlined in Chapter 3 on nature restoration, with certain suggestions being mutually relevant.

Explain the core features of nature-based solutions (a definition) and illustrate with clear examples

Experience shows that authorities, beneficiaries and other stakeholders still have difficulty understanding the core features of nature-based solutions. For example, when asked to share their good practices, they often refer to any nature-related projects such as the construction of environmental education centres with some biodiversity elements (organic farming practices) or cycling paths within natural areas to serve recreational needs. Whereas definitions of nature-based solutions often contain, as a core element, the recovery of living nature (biodiversity) and natural processes that provide environmental and socio-economic benefits.

Ensure better dissemination and exploitation (D&E) of project results funded under the EU R&I framework HE programme

D&E aims to ensure that research results are effectively shared, transferred and applied beyond projects and this activity should go beyond communicating with brochures and knowledge hubs. D&E should start from the design of projects, which should involve stakeholders, practitioners and civil society more proactively from the beginning, to more specifically address the current needs, ensure greater uptake of results across sectors and maximise impact. In general, it is recommended that particular emphasis is placed on facilitating knowledge sharing and dissemination, as presented in the brochure (Annex 8), to encourage broader stakeholder engagement in the adoption of nature-based solutions.

Promote (policy) recognition of nature-based solutions

Continue increasing policy awareness about the multifunctional nature of nature-based solutions, their (cost) effectiveness, and their evidence-based benefits to achieve policy targets across sectors. This is particularly relevant in sectors where nature-based solutions compete for land with other economic activities. Building on the EU Taxonomy, which already laid a foundation for recognising the benefits of nature-based solutions for environmental and climate goals, awareness-raising efforts also need to be intensified.¹³⁷ A unified taxonomy and transparent reporting can enhance the tracking and credibility of nature-positive investments needed to establish confidence among investors.^{134,136}

Shift the narrative around nature-based solutions' implementation

Mainstreaming nature-based solutions in infrastructure planning can be advanced by shifting the burden of proof to promoters of grey infrastructure, requiring comparative assessments of environmental impacts relative to nature-based solutions (see in particular chapter 3.6.6 for more details). A positive legislative precedent exists in Norway, where public authorities are mandated to consider nature-based solutions in municipal and regional planning. This approach could be further assessed and scaled up.

¹³⁶ Invest for Nature (2024). *Mapping the financial landscape for nature-based solutions*. <https://invest4nature.eu/2024/10/31/mapping-the-financial-landscape-for-nature-based-solutions/>.

Promote transparency as regards the impacts and financial aspects of nature-based solutions

Currently, quantitative measures of the effects of nature-based solutions, including data on ecosystem services or nature's contributions to people, are often lacking. Critical information on the performance of implemented nature-based solutions, including interest rates (which often serve as a reference for financial returns in private financing) and investment size, remains scarce. This reflects a lack of transparency in financing and poses challenges in monitoring, reporting and verifying the impacts of each particular nature-based solution¹³⁷ and hinders wider investment by private investors.

Leverage public funding to crowd in private investments

Public funding remains the primary source for nature-based solutions and their potential upscaling across the EU, due to the predominantly public nature of the goods they delivered, the financial undervaluation of numerous benefits, and dispersed beneficiaries.¹³⁷ As outlined in chapter 3, blending public funds to de-risk private investments can support Nature-based solutions implementation.¹³⁸ Public grants should be able to help projects generate income and cover not only establishment costs in early stages of implementation, but also site management expenses and ensure long-term financial sustainability.¹³⁷ Entities like the EIB and other financial institutions have the potential to play an important role in mobilising capital, blending investments and demonstrating the feasibility of investing in nature-based solutions while addressing structural barriers.¹³⁹

Enhance the use of financial incentives for nature-based solutions

Further explore instruments like taxes, fees, and tradable permits to align public and private activities with biodiversity goals. The instruments listed in Table 8.1. can help deliver on conservation targets while generating revenue to attract private investment.^{137,138} Another recommendation is to tie sustainability-linked loans to clear environmental key performance indicators, such as emissions reduction or biodiversity restoration.¹³⁵

Support finance at local and regional level and remove institutional barriers

Simplify access to funding for nature-based enterprises, i.e. companies using nature as a main element of their portfolio, and small-scale or community-driven projects by streamlining processes and promoting the use of local tax incentives and green bonds. Foster cross-border collaboration and facilitate the replication of successful projects (such as outlined in the brochure) through cross-sectoral collaboration and knowledge transfer using established platforms like Oppla and Urban Governance Atlas (see also: proGIREg project;¹⁴⁰ LIFE UrbanStorm project¹⁴¹).

¹³⁷ McDonald, H., Seeger, I., Lago, M., & Scholl, L. (2023). Synthesis report on sustainable financing of the establishment of ponds and pondscapes. PONDERFUL Project (EU Horizon 2020 GA no. ID869296), Deliverable 1.4.

¹³⁸ Smith, J., Kochar, R., Baker, K., Canas da Costa, L., Goedicke den Hertog, R., & Blin, A. (2024). *Input paper for G20 Sustainable Finance Working Group: Recommendations for scaling finance for NbS*. UNEP Finance Initiative. <https://g20sfwg.org/wp-content/uploads/2024/06/P4-G20-SFWG-UNEP-Recommendations-for-designing-regulatory-frameworks-to-scale-finance.pdf>.

¹³⁹ Gonon, M., Svartzman, R., & Althouse, J. (2024). *Bridging the gap in biodiversity financing: A review of assessments of existing and needed financial flows for biodiversity, and some considerations regarding their limitations and potential ways forward*. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2024-14). <https://www.ucl.ac.uk/bartlett/public-purpose/WP2024-14>.

¹⁴⁰ ProGIREg. (n.d.). ProGIREg. <https://progireg.eu/>, CORDIS (2024). Productive Green Infrastructure for post-industrial urban regeneration. <https://cordis.europa.eu/project/id/776528>.

¹⁴¹ UrbanStorm. (n.d.) UrbanStorm. <https://urbanstorm.viimsivald.ee/?lang=en>. CINEA. (n.d.). LIFE UrbanStorm. https://cinea.ec.europa.eu/featured-projects/life-urbanstorm_en.

5 OPTIONS FOR IMPROVING FUNDING FOR DECARBONISATION OF INDUSTRIAL FACILITIES AND CLEAN TECHNOLOGIES

5.1 Introduction

This chapter starts with a definition of the research scope (section 5.2), followed by an overview of the current funds and funding landscape contributing to mitigation of industry GHG emissions and the manufacturing of clean technologies (section 5.3). Section 5.4 goes on to describe the methodology that was used to assess the current EU funding programmes. The main conclusions of the analysis are included in section 5.5. These form the basis for the list of potential options for improvements, in section 5.6.

More background information on the various funds and the research methodology can be found in Annex 9 and Annex 10. Annex 11 provides more background information on national and EU funding of a selection of projects on decarbonisation of the EU steel industry, which is one of the two case studies conducted.

5.2 Scoping

The selection of funds and financial instruments that were included in this study is presented in the table below.

Table 5.1 Overview of chapter scope

Innovation Fund (IF)
Modernisation Fund (MF)
Just Transition Fund (JTF)
InvestEU
European Regional Development Fund (ERDF)
Cohesion Fund (CF)
Interreg (supported by the ERDF and external financing instruments)
Connecting Europe Facility (CEF)
Horizon Europe (including the European Innovation Council)
Recovery and Resilience Facility (RRF)
LIFE Programme

Furthermore, the following types of investments within these programmes were considered to be within scope:

- Investments directly contributing to industrial decarbonisation;
- Investments contributing to clean technology manufacturing;
- Relevant infrastructure investments.

We define these three topics (roughly) as follows:

- **Industrial decarbonisation:** Primarily, we define this topic as mitigation of direct greenhouse gas emissions in the industry sector (i.e. Scope 1). However, when relevant, Scope 2 and 3 greenhouse gas (GHG) emissions reductions are also included. In particular, Scope 3 emissions, i.e. emissions from the products that industry produces, may be very significant, but these are monitored and reported under other sectors. For example, the reduction of fossil feedstock from

refineries or the chemical industry will lead to GHG mitigation in the transport and waste sectors.

- **Clean technology manufacturing:** We use the clean technology definition laid out in the Green Deal Industrial Plan (COM(2023) 62 final): 'the net zero technologies and products required to meet Europe's ambitious climate targets'. These technologies were further specified in the Net Zero Industry Act. Examples are batteries, windmills, heat pumps, solar, electrolyzers, sustainable alternative fuels, carbon capture and storage technologies.
- **Relevant infrastructure:** Even though most infrastructure is not part of the industry sector, investments in infrastructure for industry are a crucial precondition for industrial decarbonisation. This includes infrastructure for electricity, climate-neutral gases (e.g. green hydrogen, biomethane) and heat. For some industries, CO₂ and Carbon Capture and Storage (CCS) infrastructure may also be key. Transport infrastructure (roads, ports, airports, etc. and provision of electricity including smart grids and charging points) are, of course, also necessary for industry, but generally not specifically developed to further industrial decarbonisation or clean tech.

Skills-related investments fall outside the scope of this chapter.

5.3 An overview of how EU funding programmes currently support industrial decarbonisation and clean technologies manufacturing

The first step was data gathering. For each of the funds listed above, the relevant regulations and documents were analysed in order to develop a concise overview of various funds and their key characteristics.

5.3.1 Key characteristics of the funds

Annex 9 contains an overview of a selection of the results of this exercise. Please note that this information is by no means complete or comprehensive – the aim is to distil the essence of the funds to provide an overview of the key characteristics of the various funding opportunities for industry and clean tech. We have summarised the main features and characteristics in the following paragraphs, and further analysis can be found in the subsequent sections.

Two funds (the Innovation Fund and the Modernisation Fund) are financed through the EU ETS – their funding stems from revenues from auctioning ETS allowances. They are not part of the MFF but governed through the ETS Directive. However, the Innovation Fund is directly managed by the Commission. The other funds are (at least partly) part of the MFF or/and NextGenerationEU.

The Innovation Fund is the only fund that is primarily aimed at supporting and speeding up decarbonisation of industry and clean technologies manufacturing. A comprehensive procedure and methodology are in place to manage and allocate these funds, taking into account criteria such as effectiveness of GHG mitigation and emissions of air pollutants, the degree of innovation and maturity, scalability and cost efficiency. Funding is mostly through grants, partly through auctions.

From the Innovation Fund 2023 and 2024 Auction and Grant calls onwards, there is also the possibility of Member States to provide additional support for national projects using the Innovation Fund selection process. This "As-A-Service" scheme helps Member States to reduce administrative burden, align with the Innovation Fund methodology and streamline state-aid notification processes.

Other funds have pillars, policy objectives or focus areas, some of which explicitly focus on supporting and speeding up decarbonisation of industry and clean technologies manufacturing. Most notable are the following:

- InvestEU: The main aim of InvestEU is to mobilise private investment for various objectives, including decarbonisation. With a focus on improving the competitiveness and sustainability of industry and SMEs, the fund aims to support investments in sustainable infrastructure, as well as R&D and innovation that can benefit, among other things, decarbonisation and clean tech.
- The Recovery and Resilience Facility (RRF) addresses, among many other policy areas, the decarbonisation of industry. The 'green transition' pillar is especially relevant in this respect.
- Horizon Europe (HE): innovation and R&D for industry is one of the focus areas of the programme, mainly in pillars II and III.
- LIFE Programme: 3 of the 4 subprogrammes of this programme are relevant for industrial decarbonisation.
- Modernisation Fund: includes the generation and use of renewable energy and energy storage.

The JTF, ERDF and Cohesion Fund also explicitly aim to fund industrial decarbonisation and clean technologies manufacturing projects, mainly through policy objectives PO1 (more competitive and smarter Europe) PO2 (greener, low-carbon transitioning), and the specific objective for the JTF (mitigate the social, employment, economic and environmental impacts of the climate-neutral transition). However, since the objectives of these funds are broad, and not only related to decarbonisation and clean tech, but the funds can also be allocated to projects that focus on other aspects within these objectives

In many of these funds (JTF, ERDF, CF, RRF), Member States play a strong role in selecting the projects and allocating the funds, within the eligibility rules and thematic priorities. Because of their broad scope, MS have a lot of flexibility in determining to what extent these projects are aimed at industry, energy infrastructure or other sectors. In contrast, the Innovation Fund, InvestEU, CEF, Horizon Europe and LIFE Programme directly support companies, consortia and/or investors. The IF, Horizon Europe and LIFE allocate funds through grants or auctioning (Innovation Fund), via regular calls for proposals with specific scopes and objectives. Part of this funding requires co-funding by the beneficiary, but not all. InvestEU provides loans and guarantees, with a strong focus on leveraging private funding through their projects. Finally, CEF provides funding through a mix of grants (via regular calls for proposals), procurement and financial instruments.

Cross-border energy infrastructure is mainly funded through CEF-Energy, which supports Projects of Common and Mutual Interest under the Trans-European Networks for Energy (TEN-E) policy. Since the revision of the TEN-E in 2022, all PCIs and PMIs should contribute to the decarbonisation of the EU's energy system. This will also benefit industry, as one of the end users of the energy.¹⁴² Infrastructure projects may also receive EU funding support through some of the more general funds such as ERDF, and funds with related objectives such as JTF and InvestEU. Still these funds not only support infrastructure for decarbonisation, as their objectives are broader, including further interconnection of Member States (CEF), regional cohesion (ERDF/CF), crowding-in of private investments (InvestEU) and alleviating the socio-economic impacts of the green transition (JTF).

All funds have monitoring and reporting procedures in place, through dedicated websites and data portals such as the Cohesion open data platform,¹⁴³ the Just Transition Platform,¹⁴⁴ the EIB project

¹⁴² CEF Transport projects are typically less relevant for industrial decarbonisation or clean tech, they have other objectives

¹⁴³ [Open Data Portal for the European Structural Investment Funds - European Commission | Cohesion Open Data](#) and [21-27 Cohesion policy: tracking climate action and decarbonisation | Cohesion Open Data](#).

¹⁴⁴ [Inforegio - Just Transition Fund](#).

database,¹⁴⁵ the Innovation Fund¹⁴⁶ and InvestEU¹⁴⁷ programme, as well as project overviews and the CINEA dashboard.¹⁴⁸ However, many have a broad scope and use pillars and tracking categories that do not always match the scope of this chapter (industrial decarbonisation, clean technologies or industry-relevant infrastructure). It is therefore not immediately clear from the available data how much budget from the MFF as a whole is spent on these topics, and what the combined effect is (or will be) on these three topics.¹⁴⁹

5.3.2 The Strategic Technologies for Europe Platform (STEP)

In addition to these individual funding programmes, it is also worth mentioning that there are EU-level efforts to align and coordinate industry funding in many of the funds listed above (and more). This recently resulted in the launch of the Strategic Technologies for Europe Platform (STEP). The aim of this EU action is to support industry and boost investments in critical technologies.

Three target investment areas are identified:

- Clean and resource-efficient technologies
- Digital technologies and deep-tech innovation
- Biotechnologies

The first area in particular, but also the second, are relevant to both the decarbonisation of industry and to clean technologies manufacturing.

The STEP regulation was published in February 2024, and details are developed further. Its main objectives are to support key industries and critical technologies in the EU in order to strengthen European competitiveness and sovereignty for an estimated investment potential of up to €50 billion across the EU. STEP is not a new fund, however, but rather pools resources from existing EU funding programmes and foster synergies among them, including the Cohesion Policy funds and the RRF.

5.4 Analysis of the EU funding programmes: methodology

The analysis in this chapter primarily aims to answer the following question:

How can (increased) EU funding for industrial decarbonisation under the next MFF best be used to decarbonise the EU's industry, including by supporting clean technologies investments, while keeping/making it economically competitive?

To answer this question, the current funding landscape and its individual programmes and funds will be analysed on a number of specific topics, in order to identify potential opportunities for improvement, best practices (what works well) and potential gaps in the current funding landscape.

In the following paragraphs, we will first introduce the various topics that were analysed, followed by a more in-depth assessment to further develop specific research questions for each of these topics. This was the basic framework used for stakeholder interviews and further literature analysis. Since both the funding landscape and the EU industry are very broad, we complemented the general analysis with a deeper dive/case study for two specific industries. These are introduced in section 5.4.2.

¹⁴⁵ [All projects - finance and global impact worldwide.](#)

¹⁴⁶ [Innovation Fund projects - European Commission.](#)

¹⁴⁷ [InvestEU - Performance - European Commission.](#)

¹⁴⁸ [CINEA Project Portfolio - Welcome | Werkblad - Qlik Sense.](#) This platform covers all projects managed by CINEA, including CEF, Horizon Europe and LIFE.

¹⁴⁹ A detailed assessment and evaluation of industry spending is out of scope of this report

5.4.1 Assessment methodology: the main topics and questions

The starting points for the assessment were the following topics/questions:

- ‘Market compatibility’ of support provided by the funding programmes. This includes an assessment of the extent to which the funding programmes distort the EU internal market, and whether market compatibility could potentially be increased under the next MFF so that there will be fewer issues with receiving state aid.
- Leveraging private investments. Two aspects were assessed here:
 - Is the design of the instrument aimed at leveraging private funding; and
 - How much actual leverage has happened so far, to see if this potential is being realised in practice.
- Interaction/interplay with national funding. Given the resource limitations, this was only a high-level assessment, based on existing evaluations, and the conclusions we draw from the interviews we will conduct with experts (see below). A more in-depth assessment at national level falls outside the scope of this chapter.
- Potential synergies with other sustainability objectives: how funding EU industrial decarbonisation and clean technologies can lead to environmental benefits by looking for synergies with, notably, air pollution (AAQD, NECD, IED) and the circular economy. Can this be improved?
- The funding landscape and interaction/interplay across funding programmes (see for example the STEP regulation), focusing on whether support provided by different EU funding programmes is consistent and whether the current mix of funding programmes is optimal.

The objective was to define options for improving the current funding programmes and landscape. This assessment will therefore not aim to answer these questions in any detail – these questions and topics are intended as guidance for the research into improvement options (and for the interviews).

Questions 1–4 are mostly aimed at the level of the individual funds, while the last topic takes a broader view and is mainly relevant for the assessment of the overall funding landscape. Where relevant, the assessment will differentiate between the three key aspects of EU industrial decarbonisation that we mentioned earlier:

- CO2 mitigation of EU industry
- Clean technology
- Infrastructure for industrial decarbonisation and clean technology

The five key assessment topics were developed further into a comprehensive research methodology, which then provided a sound basis for the expert and stakeholder consultations, as well as for further literature analysis. This result is included in Annex 10.

5.4.2 Two case studies

Given the combination of a broad scope of this chapter and the large number of funding programmes, it was decided to also carry out two case studies to illustrate and assess the value and practicalities of EU and national funding for two different industry sectors.

- Decarbonisation of the EU steel industry. Various steel manufacturers have received EU and/or national funding to decarbonise or are currently in the process of securing funding. The low-carbon technologies are relatively mature.
- Developing battery manufacturing in France. This is an example of how EU funding can support building a manufacturing industry for a clean technology that is a key part of the future EU energy system (including end use sectors such as mobility and industry).

5.5 Main findings of the analysis

5.5.1 General conclusions

Before we discuss each assessment topic and the results of the two case studies separately, we will start with a number of more general conclusions that can be derived from our analysis.

There is a strong need for EU funding for industrial decarbonisation and clean technology

Before diving into an analysis of the current funding framework, it is worth confirming that there is a strong need for funding in industry in the next MFF period, to achieve the climate goals and to meet the EU's clean technologies manufacturing ambitions.

Decarbonisation of EU industry and the related technologies to achieve a net zero transition are currently high on the political agenda. The discussion focuses on the following three topics (see, for example, the report on the future of European competitiveness by Draghi,¹⁵⁰ and the IEA report on Energy Technology Perspectives¹⁵¹)

- To increase Europe's competitiveness, economic security and overall prosperity;
- To ensure decarbonisation speeds up;
- To ensure energy prices are competitive and grid capacity is sufficient.

Focusing on the topics of this report – industrial decarbonisation and clean technologies manufacturing – there is a strong policy framework in place that acts as a driver towards reducing GHG emissions in existing industry and increasing demand for clean technologies. With the 2023 EU ETS revision, the cap under the EU ETS will continue its downward trajectory in the coming years. The impact of future revisions of the ETS are still uncertain, but with the EU's 2050 target of climate neutrality enshrined in the European Climate Law¹⁵² and the European Commission's recommendation to reduce the EU's net greenhouse gas emissions by 90% by 2040¹⁵³ (relative to 1990), it is clear that GHG emissions need to be reduced significantly during the next MFF period and beyond, including industrial emissions. Industry currently accounts for around 685 Mton CO₂eq, which represents about 20% of total EU greenhouse gas emissions (including international transport, based on data for 2022).¹⁵⁴ Around three quarter of these emissions originate from the four most energy-intensive industries: chemicals, basic metals, non-metallic minerals, pulp, paper and printing.¹⁵⁵

Total industry emissions have reduced over time, as shown in the figure below, but there is still a significant challenge ahead. Natural gas, oil and petroleum products, solid fossil fuels and non-renewable waste combined directly accounted for over half (almost 51%) of final energy consumption in the industry in 2020 (source: Eurostat). One of the main challenges is therefore the transition from a high reliance on fossil energy to an industry fuelled by renewable energy – in a globally competitive market.

¹⁵⁰ The future of European competitiveness, M. Draghi, 2024.

¹⁵¹ Energy Technology Perspectives 2024, International Energy Agency, 2024

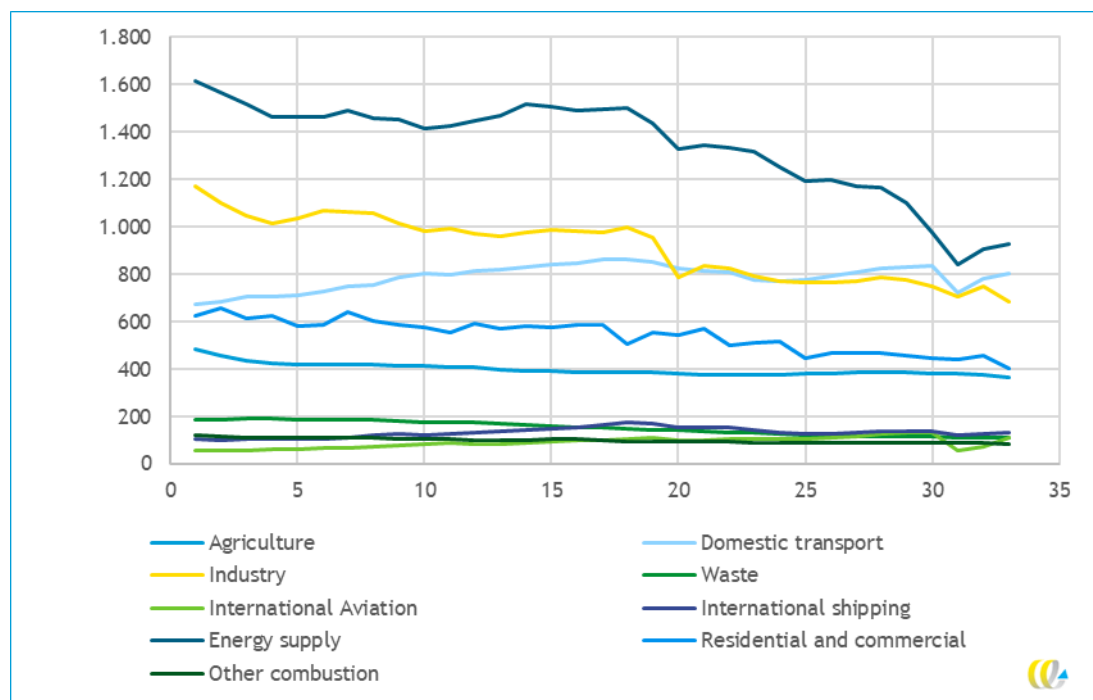
¹⁵² Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')

¹⁵³ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Securing our future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society

¹⁵⁴ See: [EEA greenhouse gases – data viewer | European Environment Agency's home page](#)

¹⁵⁵ Demarcation used in The future of European competitiveness Part B, M. Draghi, 2024.

Figure 5.1 GHG emissions of various sectors over time, in Mton, for EU 27 countries (from 2020).
Source: Eurostat



Policies and strategies on net zero industry or clean technologies have recently been adopted to strengthen EU competitiveness, achieving EU climate goals and enhancing the resilience of supply chains for strategic materials and products. With the climate targets and EU ETS firmly in place, there is broad awareness of the need to ensure that the necessary investments are made to ensure the transformation of the current EU industry, which is heavily based on fossil energy and feedstock, to an equally competitive but climate-neutral industry.

A number of recent estimates of the investment needs in EU industry can provide some insight into the extent of the challenge. For example, the Draghi report¹⁵⁶ estimates that the objectives needed in the hard-to-abate industries amount to Euro 500 billion over the 2025–2040 period (estimate based on the 2040 Climate Target Plan). The investment needs associated with boosting EU clean technologies manufacturing capacity were determined in the context of the Net Zero Industry Act (EC, SWD(2023) 68 final). The investments needed to build EU-based manufacturing capacity for five key net zero technologies (wind, solar PV, electrolyzers, batteries and heat pumps) are estimated at around €92 billion over the 2023–2030 period (with a range between €52 and €119 billion, depending on the scenario), and approximately €23 billion for the decade from 2031 to 2040. Two thirds of total investments are for battery manufacturing, one fifth to one quarter are for manufacturing of wind technologies and electrolyzers, while solar PV and heat pumps each represent between 2 and 6% of the total.

A number of financial risks can be identified, and which can be reduced with targeted EU funding. For example:

- Industrial decarbonisation often requires setting up new value chains,¹⁵⁷ with many different actors and stakeholders involved. Investing in the supply side of a new or adapted value chain

¹⁵⁶ The future of European competitiveness; Part B | In-depth analysis and recommendations, Draghi, 2024.

¹⁵⁷ See also the 'EU added value' criteria in section 2.2 above.

will require an expectation of future demand for the low-carbon products (e.g. investments in green hydrogen production).

- Scaling up innovative technology is inherently risky. Technology may need to be developed further, costs may be higher than expected, etc.

There is also still a strong need for R&D&I in technologies to decarbonise EU industry – for example for climate-neutral production of chemicals and plastics, for high temperature heat pumps, and for efficient and cost-effective electrification of production processes.

Industrial decarbonisation also requires a significant increase in grid capacity and other low-carbon infrastructure such as H₂ and CO₂ networks, as well as in the availability of sufficient renewable or climate-neutral energy, most notably renewable electricity, green hydrogen-derived fuels and other climate-neutral energy carriers at cost level, maintaining competitive capacity compared to other world regions. The growth of renewable energy has, however, not been primarily driven by EU funding, but rather by the EU Renewable Energy Directive, and national funding programmes as well as private sector investments.

However, funding is only one of the many aspects that attracts investments in decarbonisation and clean technologies manufacturing

The latter illustrates that while there is a strong need for EU support, EU funding is not always the main defining factor. The EU ETS, in combination with the introduction of the carbon border adjustment mechanism (CBAM), creates a strong market-based incentive for industry to invest in decarbonisation, through the CO₂-price and the outlook of a decreasing cap. Permissions under the National Emissions reduction Commitments Directive (NECD) based on stricter Best Available Techniques Reference Documents will also drive industry investment in clean technology with lower emissions of air pollutants. Likewise, there are a wide range of other barriers to investments in decarbonisation and clean technologies manufacturing that may not be resolved by increasing or improving EU funding. As outlined in the Draghi report, other factors that determine whether industry invests in the EU include, for example:

- Energy cost (including taxation) in the EU relative to other regions,
- The availability of raw materials,
- Regulatory burdens,
- Size of the market,¹⁵⁸
- Project lead times (including permitting), also relative to other regions,
- EU investments also depend on developments in other countries, which is demonstrated by the success of government funding programmes in other countries – notably in China and in the USA.

Nevertheless, it can be argued that there is a place for public financial support in these developments (in its many forms – grants, carbon contracts for difference, loans, bank guarantees, etc.), to overcome market barriers. These barriers include the financial risks mentioned above, which are especially relevant given that the decarbonisation and clean technologies goals and ambitions require very large-scale up-front investments (CAPEX). Current market developments illustrate that, despite the carbon pricing/EU ETS and CBAM, there is currently still not a sufficiently viable business case for large-scale investments in decarbonisation for at least part of the energy-intensive industry.

Given the overall framework of climate targets and the continuous reduction in the CO₂ emissions cap of the EU ETS, it is important that funding is directed at the sustainable breakthrough

¹⁵⁸ The Draghi report finds that, despite the internal market, the EU has a relatively fragmented market compared to the USA and China.

technologies that are compatible with climate neutrality. Supporting investments in technologies that are not compatible with these targets and policies can create a lock-in in high emissions and carry a high risk of stranded assets.¹⁵⁹

Many funds are available for industry, but some have more impact than others

The Innovation Fund is currently the only EU funding instrument solely targeted at decarbonisation of industry, and in part also for clean tech. It has a clear, relatively narrow focus – funding of innovative CO₂ mitigation projects in EU ETS industries – and a well-defined methodology for targeting cost-effective and long term strategically important investments in industrial decarbonisation. The fund's various funding mechanisms, including tools such as the Hydrogen Bank and Carbon Contracts for Difference, are aimed at ensuring a level playing field and market-based approach.

Funds that focus on loans, guarantees and other financial tools and de-risking are most important for clean technology manufacturing and start-ups. At EU level this is most notably InvestEU, but stakeholders also mention the value of other funds such as the RRF, the funds under the Cohesion Policy and LIFE (including for capacity-building).

In terms of potential impact on industrial decarbonisation, it can be argued that CEF-Energy may be as important as the industry-focused funding programmes. Even though CEF-E does not directly fund industry, decarbonisation of EU industry is to a large extent dependent on the timely expansion and building of new infrastructure for electricity, hydrogen, and CO₂ (for Carbon Capture and Storage/Use).

For R&D, Horizon Europe is the key EU funding instrument, with a strong representation of calls for research into and development of technologies for industrial decarbonisation and clean technology. It is an important part of the STEP initiative under Pillar II on Global Challenges & EU Industrial Competitiveness and Pillar III on Innovative Europe/EIC. However, a closer connection to the EU industrial strategies could further strengthen the impact of Horizon Europe. Particularly in areas related to enabling technologies, a stronger focus could be beneficial.

Without concrete data on the size and impact of industry funding through many of the EU funds and programmes, such as the RRF, Cohesion funds and InvestEU, it is difficult to assess their effectiveness in detail. Their objectives are much broader than industrial decarbonisation and clean technologies and, in many cases, monitoring is quite general, using a broad categorisation. Details on GHG emission reduction of specific industry projects, for example, are often lacking.

It can therefore be argued that since a large part of the EU funds are allocated at national level rather than at EU level, including most of the revenues of the EU Emissions Trading System, there is only limited EU-wide coordination regarding which industry sectors or clean technologies area the funding focuses on (with some exceptions, such as the LIFE Clean Energy Transition sub-programme). This limits the economies of scale that can be achieved.

5.5.2 Market compatibility of support

The direct EU-level funding for companies and investors (IF, CEF-E, Horizon Europe, InvestEU, parts of LIFE) is open to all market actors in the EU, and compatible with the EU internal market regulations and objectives. The compatibility of cohesion policy and national government support for industry with the EU internal market is governed by the EU State aid rules and the IPCEI (Important Projects of Common European Interest) process.

¹⁵⁹ See: https://www.agora-industry.org/fileadmin/Projekte/2021/2021-06_IND_INT_GlobalSteel/A-IND_324_Low-Carbon-Technologies_WEB.pdf.

During our research (literature and interviews), we encountered the following potential issues or barriers related to market compatibility in the current funding system that could be improved.

Complex, inflexible and restrictive application processes

Various stakeholders and experts comment that the application processes for industry funding, state aid and IPCEI approval are complex, with lengthy forms and procedures, and extensive documentation and proof required. It was also mentioned that there is limited flexibility in the process; a mistake or a criterion not met can lead to dismissal of the proposal. The applicant can then resubmit their revised proposal in a next round, whereas a process to correct or improve a proposal may be more effective and faster. Especially when it comes to some clean technologies, such as the build-out of industrial scale electrolyzers for hydrogen, it is also mentioned that the criteria can be restrictive, as the inherent uncertainty in future cost, potential for efficiency improvements, effectiveness of the technology and projected market size may be a reason to reject a proposal.

These issues create a barrier for all applicants but perhaps most of all for SMEs and start-ups, due to a lack of in-house capacity and expertise with these processes but also because of the relatively high uncertainty in their projects. This mainly affects clean technologies manufacturing but can also hamper decarbonisation projects in the incumbent industry, which is also dependent on new and innovative technologies that are facing uncertainties.

Long lead times of funding procedures

A related but different issue concerns lead times, and the timing in general, of the funding procedures. With ambitious climate targets in sight, there is a need to speed up investments in industry and related energy and infrastructure projects. Furthermore, companies need to align their internal funding processes with the timeline of EU funding. It would therefore be beneficial to limit the duration of funding procedures.

Especially for SME and start-ups, it can also be important to receive the funding up-front, rather than only after certain milestones have been achieved.

5.5.3 Leveraging private investments

A key objective (and, for most funds, also a requirement) of the EU funding for industry is to leverage private sector investments through public funding. Given the large volume of investments needed for the transition towards a climate-neutral and competitive EU economy, this is also a necessity – the funding needs by far outweigh the public funding available for this sector. The Net-Zero Industry Act (NZIA) background document SWD(2023) 65 estimates that on average about 17–20% of the investments are public funding in energy and climate interventions, meaning that more than 80% would need to be sourced through private funding. This ratio can be expected to vary between different types of projects and funds. The InvestEU Fund, for example, aims to mobilise €372 billion of public and private investment through an EU budget guarantee of €26.2 billion, which amounts to a share of 93% private funding of the total investments. However, this figure represents InvestEU as a whole, not only the topics focused on in this chapter.

To ensure these private investments are indeed realised, a range of conditions needs to be fulfilled. For this study, the most relevant would be:

- A viable business case. EU funding can directly contribute to the business case through grants or other types of tenders that lower CAPEX cost, with tenders such as Carbon Contracts for Difference to lower OPEX cost, or by lowering financing cost via loans or guarantees. The

Innovation Fund and, for some Member States, the Modernisation Fund are examples of funds that aim to improve the business case of projects.

- De-risking. Especially in clean technologies manufacturing, risks are relatively high due to the uncertain results of innovation and uncertainty in future market demand. These projects often benefit significantly from de-risking funds and tools such as loans and guarantees. Furthermore, differences in financing risks between Member States can also lead to an imbalance in the geographical distribution of funding. InvestEU is a good example of a de-risking programme, as it is strongly aimed at de-risking projects to mobilise investments. It offers a budget guarantee for investments of the EIB Group and others with specific attention to SMEs and scale-ups.

This typically requires support to be tailored to the type of technology and stage of market maturity. In addition, related funding tools such as project assistance support may also help in converting project ideas and ambitions to a final investment decision.

It should also be noted that, as mentioned before, funding is certainly not the only driver for securing private funding. Other types of EU policies can also be crucial to unlocking private investments in decarbonisation and clean tech. Business cases can be improved by reducing uncertainties in future market demand, for example by:

- Ensuring a stable and ambitious policy framework,
- Setting future targets for both GHG emissions (incl. in the EU ETS) and demand (e.g. zero-emission cars),
- Pricing tools such as the CO₂ prices in the EU ETS, or fiscal measures such as tax differentiation between products with high or low carbon footprint.
- Speeding up developments in power grids and other energy infrastructure (to enable electrification of processes, and availability of green hydrogen)
- Ensuring a global level playing field, through the CBAM and trade policies.

5.5.4 Interaction/interplay with national funding

As mentioned before, EU industry is supported through national and EU funding programmes. It is not uncommon for industrial decarbonisation and clean technologies projects to receive both national and European funding support, and many EU funds explicitly allow for funding from multiple sources and funds, under certain conditions.

Wide range of different application procedures and quality seals

Both levels of funding are considered useful, but some market actors indicate that the interplay could be improved through a better harmonisation of the application process between various funds. Currently, each fund – national and EU – has its own procedure, rules and regulations, forms, assessment criteria, etc. There are also different seals, accreditations and other evidence that companies may need to submit to be eligible for a fund, such as the EIC Accelerator and the EIC Transition activities Seal of Excellence¹⁶⁰ (quality labels awarded to project proposals submitted by start-ups and SMEs under Horizon Europe, if the project was deemed eligible for funding but did not get it due to budget limits, to help these proposals find alternative funding); the STEP 'Sovereignty Seal'¹⁶¹ (awarded to high-quality projects in, for example, the Horizon Europe and Innovation Fund contributing to the STEP objectives, to give them visibility and help attract alternative or additional public and private investments) and Cohesion policy rules.

¹⁶⁰ [Seals of Excellence - European Commission](#)

¹⁶¹ [STEP seal](#)

This wide range of different procedures and seals creates additional work for companies or investors that want to apply for more than one fund at the same time, or that want to resubmit an application that was rejected by one fund to another fund that may be better suited to their project and needs. This is exacerbated by the fact that many funds cover similar sectors at similar technology readiness levels, making the choice of which fund to apply to more complex. This can create a barrier for potential applicants and cause a delay in the funding process. Better streamlining and harmonisation of these application procedures may lower the cost and effort needed for the applications and improve access to the available funds. Furthermore, clarifying the demarcation between the technology readiness level covered by a fund can make the landscape more decipherable for applicants. Finally, expanding the use of instruments such as the “As-A-Service” scheme implemented as part of the Innovation Fund grant and auctions calls would allow applicants to potentially access either European funding or Member State funding through a single application. This reduces the burden on applicants and harmonises funding criteria.

Potential benefits of EU-level allocation of funding versus Member State allocation

In the current MFF, the national governments have a strong role in allocating funds to industry. A national approach to funding industrial decarbonisation and clean technologies is likely to result in a lack of coordination between Member States for industry investments. Companies may decide to invest in locations where they can receive the most state aid and other forms of national or regional government support, at the expense of other locations elsewhere in the EU that might have advantages in other aspects – for example lower renewable energy costs in the long term, being closer to future sources of sustainable feedstock, etc. This creates the risk of a subsidy race between EU Member States, as mentioned earlier.

Furthermore, a national approach to funding industrial decarbonisation and clean technology may not benefit from the economies of scale that can be achieved with a more EU-wide approach – both regarding the size of the funding and regarding EU-wide scale-up of the low-carbon technologies and production processes.

Strengthening EU coordination of the allocation of funds can ensure that the EU funds are spent on the industries, production processes and clean technologies that are key for the future EU economy (as, for example, laid out in the NZIA, the STEP regulation, etc.). It can also contribute to EU-wide optimisation of investments, by taking into account specific regional or national characteristics and comparative advantages such as existing value chains, production sites, resources and skills. Assessing EU industry funding decisions at EU level can therefore increase the efficiency of the funding and may be crucial to achieving the EU’s objectives. This is currently the case for the IF, CEF-E and Horizon Europe, the EU funding instruments specifically targeted at industrial decarbonisation and clean technology. For Cohesion Policy funds, Cohesion Policy Partnership Agreements also provide a means to ensure the funds are directed at the relevant EU priorities, i.e. the policy objectives of the funds and the specific objective of the JTF (Article 11 CPR (REGULATION (EU) 2021/1060)).

However, there is also a risk to stronger EU coordination of funding allocation. It relies on the EU putting the focus on the ‘right’ topics and technologies, and making the right funding decisions for the whole of the EU. This approach does, therefore, require a sound procedure on how these decisions are made. This risk can be minimised further by avoiding very technology-specific choices, and instead maintaining a more high-level perspective. Given the uncertainties in the future development of EU industry and the technology it needs, it can also be argued that diversity in the range of technologies and value chains that should be supported is crucial to allow for innovation to proceed on many different fronts. A funding landscape for clean technologies and industrial decarbonisation that is driven at EU level therefore needs to set clear guidelines for the characteristics of sectors eligible for support (such as their contribution to decarbonisation or

resilience objectives), while refraining from a prescriptive or overly narrow selection of technologies, which may limit the future flexibility of the architecture.

It is difficult to assess the effectiveness for the current balance between EU and Member State funding for industrial decarbonisation and clean tech. A large share of the current EU funds, as concluded earlier, are allocated by Member States, and it was not feasible within the scope of this project to assess their impact and effectiveness in any detail, and compare them with the funds that are allocated at EU level. The case studies below will provide an illustration of how both the EU and national funding works in practice.

5.5.5 Potential synergies with other sustainability objectives

Many of the clean technologies and industrial decarbonisation technologies will also reduce air pollution, since they replace a combustion process (based on fossil fuels) with a cleaner process based on electrification and in some cases green hydrogen. This will reduce emissions of air pollutants such as Nox and PM10. There can also be synergy with the circular economy, if production processes are increasingly based on recycled materials or biomass as feedstock (see the steel industry case study below).

However, there may also be a risk of trade-offs with other sustainability objectives, for example due to increasing demand for biomass (as alternative to fossil feedstock and energy sources). The EU biomass sustainability criteria defined in the Renewable Energy Directive can reduce these risks, but they do not (yet) apply to feedstock for industry. Other potential trade-offs may be due to the future expansion of renewable energy generation and energy infrastructure, and perhaps also for new industries such as increased recycling. This may impact objectives such as biodiversity, both on land and offshore.

5.5.6 Funding landscape and interaction/interplay across funding programmes

Some of our main findings on the funding landscape have already been addressed in the general conclusions at the beginning of this section. In the following paragraphs, we provide further information on the funding landscape for clean technologies specifically.

On the topic of interaction across EU funding programmes, we did not come across any particular issues, except for the lack of harmonisation in the application process and procedures, as was mentioned earlier. Many funds allow projects to receive support from other EU funds as well, under certain conditions. For example, projects that receive support from CEF-E may also apply for funding from the Innovation Fund, provided that the contributions do not cover the same cost.

Barriers to investments in clean technologies without EU funding

The clean technologies sector is necessary to supply other industries and sectors, including the energy system, with renewable energy sources and low-carbon production processes. The EU has been, and in many areas still is, a leader in clean technologies innovation, as recently outlined in Draghi's report on The Future of European competitiveness.¹⁶² However, transforming and scaling innovations into manufacturing capacities is limited. The same report describes a clear gap to the scale-up of local production based on the innovation, which was confirmed by some of the stakeholders that were consulted.

¹⁶² European Commission, Mario Draghi (2024): The future of European competitiveness. In-depth analysis and recommendations. Available at: https://commission.europa.eu/document/download/ec1409c1-d4b4-4882-8bdd-3519f86bbb92_en?filename=The%20future%20of%20European%20competitiveness_%20In-depth%20analysis%20and%20recommendations_0.pdf

Several elements create barriers to investments in this area.

The technologies summarised as 'clean tech' are often highly complex and demanding in terms of the manufacturing equipment needed, as well as raw material inputs, for many of which China is a major supplier or competitor. This creates capital-intensive processes, especially in the ramp up of manufacturing capacity.

In a situation of global trade and competition, economies of scale are an important factor for the successful scale-up of manufacturing. Successful innovation at small scale is not sufficient to compete with the large sites and projects in other regions. This is particularly applicable when innovation, demonstration and market entry are carried out in a fragmented manner across sectors, technologies and Member States without a coherent strategy. On this level, Europe has been outpaced by other regions. In recent years, global competition, especially from China and the US, represents an important challenge to European manufacturing. China's heavy investments and subsidies, including cheap loans and protection of its domestic markets, have given it a competitive edge. The US Inflation Reduction Act's (IRA) wide range of financial support to clean technologies, has also incentivised a significant increase in private investment in these sectors since 2022.¹⁶³

In this context, the economic risks of financing clean technologies manufacturing are significant and have limited private investments within the EU. Access to private financing remains a significant barrier for scaling up clean technology innovations in the EU. As the Draghi report describes, the EU venture capital market is underdeveloped, particularly for later-stage financing. For this reason, EU companies rely heavily on non-European capital markets for high-volume financing rounds and mergers, which often results in headquarters or operations being relocated outside of Europe. This makes it difficult for the EU to fully reap the benefits of its innovation.

Overall, this creates a gap between innovation and commercialisation. This challenge is recognised in recent policy documents and initiatives. The recitals to the NZIA underline the need for additional effort to support the scale-up of manufacturing capacity. As a concrete instrument, the Strategic Technologies for Europe Platform (STEP) creates synergies between existing funding programmes for critical technologies, including clean technologies as one of three sectors.

5.5.7 Case study: Steel industry

The current status of EU funding in this sector

This case study was chosen as an illustration of a sector that has been part of the EU's energy-intensive industry for generations, and where decarbonisation is currently high on the agenda.

The steel industry – in its historically conventional production route of blast oxygen furnaces (BF-BOF) – is one of the sectors with the largest individual emission sources and the highest GHG emissions per unit of product. From a technical perspective, the decarbonisation pathway is relatively well defined – the number of steel plants in the EU is limited (compared to, for example, producers of plastics) and the most promising low-carbon technologies have been identified.¹⁶⁴ Many of these technologies are relatively mature (EAF, DRI), although some need further development towards large-scale deployment (such as, for example, the use of hydrogen for DRI). However, as the report by Draghi concludes, and many reports on the steel industry confirm (CE Delft, 2024; Agora Industry, 2024; Eurofer), the transition to these new technologies requires a far-reaching transformation of assets, processes and value chains, which calls for significant investments. With the current carbon price, policy framework and market conditions, they are not

¹⁶³ [The Clean Investment Monitor](#).

¹⁶⁴ See, for example, Agora Industry, [Low-carbon technologies for the global steel transformation, 2024](#)

economically viable without government support. Eurofer, the European Steel Association, estimates that €31 billion of CAPEX and €54 billion for operating expenditure is currently needed by 2030 in order to cut carbon emissions by 55% in 2030 compared to 1990 levels and begin the transition towards a climate-neutral steel industry.¹⁶⁵

Many EU steel companies have recently published plans for decarbonisation, and some have started to invest in more sustainable production routes. A map with examples of currently ongoing low-carbon emissions projects in the EU steel industry can be found on the website of Eurofer.¹⁶⁶ A selection of decarbonisation plans, and the level of government subsidies/funding granted is included in Annex 11 (status as at June 2024).¹⁶⁷ Note that a number of projects are currently in the grant application process and are not included.

Three of the projects included in this overview receive funding from the Innovation Fund: two large-scale projects in Sweden (H2 Green Steel and HYBRIT, both based on green hydrogen) and one small-scale project in Italy (CUSTARD, a project with an innovative CCU technology). The rest of the subsidies included in this overview are funded by national governments, in some cases combined with regional funding. The table in the Annex focuses on investment grants, but some of the other EU funds also support decarbonisation efforts in this sector. JTF funding, for example, supports projects such as training programmes for steel workers.¹⁶⁸ EIB also provides support to projects in the steel industry; for example, Voestalpine receives a loan for R&D into innovative green steel production.¹⁶⁹ Almost all projects are aimed at converting conventional blast furnaces with a steel production process based on electrification (EAF) or natural gas or green hydrogen (DRI). There are only a few exceptions where funding is aimed at investments in CO2 capture and use (CCU).

The overview illustrates that large government funds are currently directed towards the sector, to support the transition to green steel production and enable the sector to contribute significantly to the 2030 EU climate target. It also demonstrates that these projects are currently not viable without subsidies. We are not aware of an EU steel plant that is in the process of transitioning to greener production routes without government support.

In addition, it can be argued that some of the hydrogen-related projects that are funded through the Innovation Fund¹⁷⁰ may eventually benefit the decarbonisation of the EU steel sector, since it is expected that the DRI process will eventually have to be fuelled by large volumes of green hydrogen (rather than natural gas) to meet future climate goals. A similar argument can be made for the CO2 capture and storage projects supported through the Innovation Fund.

Market compatibility of support

As the overview in Annex 11 illustrates, a significant share of funding for investments in decarbonisation of this sector is currently from national governments, with only a limited number of projects receiving EU support through the Innovation Fund, the Cohesion policy, the Just Transition Fund and the EIB. The state aid rules and IPCEI process apply to the national funding, with the latter focusing on the development of the hydrogen value chain.

This funding landscape creates attractive opportunities to speed up decarbonisation of this sector and the support the EU steel industry in a competitive global market. However, the large number

¹⁶⁵ [Map of key low-CO2 emissions projects in the EU steel industry \(eurofer.eu\)](https://eurofer.eu/map-of-key-low-co2-emissions-projects-in-the-eu-steel-industry)

¹⁶⁶ [Map of key low-CO2 emissions projects in the EU steel industry \(eurofer.eu\)](https://eurofer.eu/map-of-key-low-co2-emissions-projects-in-the-eu-steel-industry)

¹⁶⁷ Largely based on: [CE Delft, Analysis of Tata Steel's future plans \(in Dutch\), 2024](#)

¹⁶⁸ [Subsidie van Just Transition Fund voor Groen Staal opleidingsprogramma's.](#)

¹⁶⁹ [VOESTALPINE STEEL INNOVATION RDI.](#)

¹⁷⁰ See [Innovation Fund projects - European Commission](#)

of projects that rely on national funding also creates a risk of competition between Member States. This may distort the internal market and create differences between Member States – in opportunities for investors and for steel plants to reduce their CO₂ emissions and transform to a producer of green steel.

Furthermore, there is a risk that these subsidies also distort the global market. From a climate policy point of view, this may not lead to the most cost-effective solution, but this can, of course, be a deliberate strategy to support EU industry competitiveness and self-sufficiency and protect the EU steel industry from subsidies schemes or overproduction outside the EU.

Leveraging private investments

The decarbonisation projects in the steel industry that are currently funded through the EU Innovation Fund and Cohesion policy support also all require private investments, in line with the IF funding procedures and methodology.

However, leveraging private investments for the far-reaching transformation of the steel sector requires attractive business cases, in combination with a favourable market outlook for the demand for EU-produced low-carbon steel. EU funding can provide support to enhance the business case, but the cost gap with conventional steel production is significant (both in terms of investments and operational cost). Furthermore, steel production in the EU is relatively costly compared to other regions.

Eurofer, Draghi and others have stressed the importance of maintaining the competitiveness of the EU steel industry in the global steel market, and the potential need to maintain current levels of steel production in the EU from strategic perspective (security of steel supply), to protect jobs and the economy. Increasing support for investments in the transition to green steel is one of the measures they mention, but many other areas are also identified, including trade policy/defence, tariffs, CBAM, the cost of low-carbon electricity, creating lead markets for green steel made in Europe, secure access to critical raw materials for steelmaking, including steel scrap, and social policies including reskilling and upskilling of workers to adapt to new technologies.¹⁷¹ This illustrates that supporting investments through EU funding is only one of the many measures that need to be taken to speed up the decarbonisation of the sector.

At the same time, the EU steel industry is facing increasing global competition, to a large part due to rising cost of steel production in the EU compared to US, China and India.¹⁷² EU steel production has declined significantly in recent years. Among the drivers of these developments are higher costs of energy and raw materials in the EU, as well as subsidies or other state support to steel manufacturing in other regions of the world.

Recent announcements and decisions by EU steel producers illustrate the market challenges the sector is currently facing. For example, ArcelorMittal announced that final investment decisions for lower carbon emissions 'hydrogen ready' DRI-EAF facilities to replace several blast furnaces across their European business were postponed, despite national funding being approved.¹⁷³ Reasons provided for this decision are lack of viable business cases (in part due to high cost of both green hydrogen and natural gas-based DRI production), weaknesses in the CBAM¹⁷⁴ and trade protection

¹⁷¹ See: <https://www.eurofer.eu/press-releases/eu-steel-action-plan-now-steel-industry-and-steel-workers-unite-to-demand-urgent-action-to-restore-the-sectors-competitiveness-and-save-thousands-of-jobs-before-it-is-too-late>

¹⁷² The future of European competitiveness; Part B | In-depth analysis and recommendations, Draghi, 2024.

¹⁷³ [ArcelorMittal provides update on its European decarbonisation plans | ArcelorMittal](#).

¹⁷⁴ ArcelorMittal specifically points to the potential risk that CBAM may allow steel imports from countries that circumvent protection by selling into Europe from a few 'clean' installations while selling their higher emissions steels into other markets [Steel Thoughts: Europe must make a choice on the steel industry | ArcelorMittal](#). The Draghi report also identifies a number of key risks in CBAM (Part B, page 103) that should be closely monitored and improved.

measures (especially towards overcapacity and resulting low cost import from China) and lack of demand for low-carbon emissions steel. Other steel manufacturers have also announced measures to reduce cost and lower production capacity.¹⁷⁵

The transition in the steel sector towards low-carbon production can therefore illustrate the importance of having a comprehensive policy package in place, in which funding may be a decisive factor but other policies may be equally important to ensuring the necessary private investments are viable and realised.

Interaction/interplay with national funding

As the list of projects included in Annex 11 illustrates, it is not uncommon for decarbonisation projects in this sector to receive both EU and national funding. The up-front investments in this sector are very significant, and combining different types of funding can then be a means of arriving at a viable business proposition. This illustrates the potential benefits of streamlining and harmonising the application processes for the different funding programmes that were mentioned earlier.

Whether the funding is from national governments or from the EU is not likely to be a decisive factor in these developments. The technologies are already relatively mature – typically TRL 7 or 8 – and the number of new technologies needed is relatively limited. This reduces the need for EU coordination to achieve the necessary economies of scale. Since all projects throughout the EU are aimed at three different key technologies (DRI, EAF, CCU), it is to be expected that this automatically results in economy of scale, irrespective the size of the individual project.

Potential synergies with other sustainability objectives

Decarbonisation of the steel industry can be expected to have significant positive impacts on air pollution and the development towards a circular economy.

The current technologies for steel production cause significant amounts of air pollution and health effects, as shown, for example, in the EEA report on the costs of industrial air pollution in Europe.¹⁷⁶ Transitioning to the low-carbon technologies can significantly reduce these emissions. In a comparison of the impacts of various decarbonisation plans for Tata Steel IJmuiden in the Netherlands, for example, it was concluded that these plans could reduce the total cost of air pollution from this steel plant from the current €406 million/year (from (EEA, 2024), expressed in VOLY; data for 2022) to €250 million, €150 million or even €40 million per year, depending on the steps taken.¹⁷⁷ However, it should be noted that there is also a risk of leakage of air pollution to other sites in some of these plans. Importing intermediate products rather than iron ore may lead to shift of parts of the production processes elsewhere. The net effect then depends on the location (especially population density) and the technology used for production of these products.

Some of the decarbonisation technologies for this sector require increasing rates of recycling of steel, reducing the demand for primary steel.

These examples clearly indicate that decarbonisation of this sector can achieve significant synergies with other sustainability objectives, most notably with air quality and the circular economy. Focusing attention on realising this synergy, for example by requiring that decarbonisation projects in the

¹⁷⁵ See ThyssenKrupp [press release](#) from 25.11.2024

¹⁷⁶ See: [https://www.eea.europa.eu/publications/the-cost-to-health-and-the#:~:text=During%20the%20last%20ten%20years,year%20\(see%20Table%201\).](https://www.eea.europa.eu/publications/the-cost-to-health-and-the#:~:text=During%20the%20last%20ten%20years,year%20(see%20Table%201).)

¹⁷⁷ [CE Delft, 2024. Analyse toekomstplannen Tata Steel \(in Dutch\)](#)

sector should at least adhere to DNSH, and to the other environmental objectives such as pollution control and water resilience, may strongly improve performance in these domains as well.

Funding landscape and interaction/interplay across funding programmes

Decarbonising EU steel production requires significant up-front investments – in the steel production plants itself but also in the related assets such as CCS assets and infrastructure, electrolyzers for green hydrogen production and hydrogen infrastructure, the expansion of renewable energy generation and power grids etc. Furthermore, production cost are also expected to increase significantly, the low-carbon production routes are expected to increase costs by 35-100% per tonne of steel by 2050 (source: Eurofer, 2019; CE Delft, 2024 Agora), for a large part due to the investments needed (CAPEX) and the higher energy and feedstock cost (most notably electricity and green hydrogen, OPEX). To be effective, the funding landscape should reflect this need for investments in new assets, as well as in the development of new value chains.

In their response to the Draghi Report,¹⁷⁸ Eurofer signals that there are currently insufficient financial incentives and resources for the industrial transition, as the EU Innovation Fund alone is not enough. It suggests diverting a larger share of the ETS revenues to decarbonisation of the EU's energy-intensive sectors such as steel, for both CAPEX and OPEX support.

The current EU funding landscape for decarbonisation of this sector is mainly aimed at providing support for capital investments, in large part through the Innovation Fund. The EIB also provides support through Project Development Assistance or loans. The funding is available to support the transition of existing plants and for greenfield development such as the Boden plant in Sweden.¹⁷⁹

Most (if not all) of these efforts to decarbonise the steel sector will also require a profound transition of energy sources in the sector – DRI requires a transition from coal to natural gas or hydrogen, EAF requires large volumes of electricity. Their success therefore depends on the timely availability of these energy sources and their infrastructure, as well as on their cost. At EU level, funding opportunities for these parts of the value chain is directly provided through the IF as well as the CEF-E programme. In addition, the various other funds, including the Cohesion Policy funds, the Just Transition Fund, as well as the Modernisation Funds, provide an opportunity for national governments to support their steel industry and mitigate the environmental, social and economic effects of transformation.

Compared to other energy-intensive industrial sectors, the need for investments in R&D and innovation appears to be relatively limited, as the sustainable production technologies are already relatively mature. However, not all technologies have been applied at (very) large scale yet and, as with every new technology, it is to be expected that further R&D can reduce costs and improve efficiency. This includes the low-carbon production processes itself, but also the other parts of the steel value chain, most notably the large-scale green hydrogen production, storage and transport, and the improved sorting and pre-treatment of steel scrap for EAF plants.¹⁸⁰

¹⁷⁸ [Concrete implementation of Draghi's competitiveness cure urgently needed to ensure business case for industry in Europe, says EUROFER.](#)

¹⁷⁹ [Stegra – Decarbonizing at scale - Stegra](#): a new steel plant that combines production of green hydrogen, green iron and green steel, that has secured a total of €6.5 billion of project financing.

¹⁸⁰ See, for example, Low-carbon technologies for the global steel transformation; A guide to the most effective ways to cut emissions in steelmaking, Agora, 2024, and [EAF innovation, scrap management guarantee steelmaking: UK Steel - EUROMETAL.](#)

Main conclusions of the steel industry case study

There are many decarbonisation projects ongoing in the EU steel industry; most if not all supported by national or EU funding. Many of these projects entail the replacement of current steel production processes by alternative, clean technologies; a necessary step in the transition towards a (almost) zero-emission steel manufacturing industry in Europe in the future.

Some steel manufacturers benefit from direct EU funding for these developments, most notably from the Innovation Fund, but also from other funding programmes such as the JTF and through the EIB. However, many manufacturers also receive significant national funding to support their decarbonisation efforts. This creates a risk of competition between Member States.

Even though these funding programmes generate interest from the steel industry, the developments in the steel sector also illustrate that this is only one of the policies that drive the steel industry's transition. Regulatory policies such as the EU ETS with CBAM and the Ecodesign Regulation are at least equally important, since these provide economic incentives for low carbon steel production. Furthermore, efforts to increase green hydrogen production, imports and infrastructure, renewable electricity production, power grid expansion, development of strategic partnerships with suppliers of materials, energy, intermediate products, etc. (both inside and outside the EU), may be equally important to create the right boundary conditions for the transition towards sustainable steel production in the EU. Given the competitive steel market, EU funding is likely to be a key enabler and driver, but its effectiveness depends on many other actions that need to be taken. A key factor is the higher production cost for steel manufacturing in Europe, compared to other regions, which will only increase further with the conversion to clean production processes. These challenges can be resolved through policies such as carbon contracts for difference, but also by other policy measures such as the CBAM, trade policies and energy policies.

5.5.8 Case study: Battery production in the Hauts-de-France Battery Valley, France

The Hauts-de-France region, often referred to as the new 'battery valley', encompasses the cities of Dunkirk, Douai, and Douvrin, collectively known as the three 'D' cities. Following the decline of its mining and steel industries, the region has emerged as France's leading automotive hub. Numerous original equipment manufacturers have established factories there, positioning the region to play a key role in the European electric vehicle market. It also aims to host all of France's gigafactory projects dedicated to the automotive sector as part of a vertically integrated industrial ecosystem that would include significant recycling activities.

In 2023, Automotive Cells Company (ACC), also known as the 'Airbus for Batteries', opened a new gigafactory in Douvrin. Another is scheduled to commence operations in 2024, under the direction of AESC Envision, at Douai. Additionally, two further gigafactories (Verkor and ProLogium Technology, both at Dunkirk) are anticipated to become operational in the coming years. This burgeoning industrial ecosystem is a direct result of the increasing policy focus on the battery value chain at EU level, beginning in 2017 with the creation of the European Battery Alliance (EBA), a cooperation platform with key industrial stakeholders, Member States and EIB.

To bring these projects to fruition, the EU, in collaboration with France and private investors (which are coordinated via the forums offered by the EBA), activated two main policy instruments: i) the IPCEI framework (for ACC and Verkor), which granted the French authorities the necessary authorisation to deliver public support totalling €1.5 billion; and ii) financing from the EIB with the support of InvestEU. The table below shows funding details of the first three plants running in the north of France.

These projects are currently facing difficulties. However, these issues are not primarily related to EU funding policies but instead to technological difficulties and/or lower than expected demand.

ACC has recently acknowledged that the aspirations of carmakers have been 'scaled back'. The prospects for demand for electric vehicles have arguably been affected by the abrupt reduction in car subsidy programmes, for example in Germany in the 2024 budget. New registrations of electric vehicles fell by 27 % that year compared to 2023, in a context where most other new vehicle registrations rose.¹⁸¹ In France, recent policy signals are mixed: on the one hand state public spending on EVs has been halved in the 2025 budget, while on the other hand there are stronger incentives for companies to green their car fleet.

Table 5.2 Project overview

Plant	Scale	EU funding	National public fundings	Other fundings
ACC (opened in 2023)	13GWh increasing to 40 GWh after three phases of planned expansion	No information found	-€846 million state aid approved under IPCEI - €943 million guarantees from BPI France (France's promotional bank) on debt provided by commercial banks. (Other funding for other ACC plants includes €450 million public support from Germany)	A €4.4 billion debt package for ACC projects including for two other plants in Germany and Italy. The debt is provided by a consortium of commercial banks.
AESC Envision (expected 2024)	9 GWh in 2024, rising to 24 GWh by 2030	EIB with the support of invest EU: -€337 million in direct loans to the project -€113 million in indirect loans to participating commercial banks.	-€159 million guarantee from BPI France on the debt provided by commercial banks. -€73 million of subordinated debt provided by a public bank 'Banque des Territoires'	-€873 million provided by a consortium of commercial banks.
Verkor (expected in 2025)	12 GWh	EIB: -€270 million of direct loans -€130 million of intermediated loans with participating commercial banks.	-€659 million French State aid approved under IPCEI -€353 million guarantees from public bank BPI France on the debt provided by commercial banks. -Public Bank 'Banque des Territoires' : -€130 million, bridging loan - €150 million subordinated loan	-€ 961 Million loans from a banking pool

Note: In addition to this direct funding, these projects also benefited from support to the remainder of the value chain of battery production in the context of the IPCEIs approved by the European Commission in 2019 and 2021, such as schemes to develop specific skills via the creation of a 'battery school' or support to supply critical minerals and metals (€500M).

- **'Market compatibility' of support provided:** ACC and Verkor benefited from public support provided in the IPCEI framework. This state aid instrument, which is subject to authorisation by the European Commission, was designed to promote innovation and the implementation of industrial projects in strategic and forward-looking areas through large-scale investments involving at least four Member States. This involves strong scrutiny by the European Commission to make sure that the support will not distort the EU internal market.

¹⁸¹ https://www.acea.auto/files/Press_release_car_registrations_December_2024.pdf

- **Leveraging private investments and interaction/interplay with national funding:** All three projects analysed here benefited from support from public banks, either through guarantees (BPI France) and/or through intermediated loans (EIB). These actors took part in discussions with commercial banks to help build the debt packages eventually granted to the plant developers.
- **Potential synergies:** These projects can develop synergies for the circular economy: one of the elements of the value chain for batteries consists of recycling batteries, both from post-consumer products but also by recycling production waste. Although these activities also benefit from support in the context of IPCEI, they face difficulties. For example, the French mining group Eramet recently announced that it was 'suspending' its plans to build two electric vehicle battery recycling plants in northern France by 2025 and 2027. The reason for this decision is the high level of uncertainty regarding both supply and downstream opportunities.
- **The funding landscape and interaction/interplay across funding programmes:** The projects are situated in a transition region and a territory identified as being in a territorial just transition plan, as defined by EU Cohesion Policy regulations. These projects are expected to modernise economic activity and create jobs. This was considered when approving support under the InvestEU scheme. In addition, the Just Transition Fund provides EU support to address the social, employment, economic and environmental impacts of the transition toward climate-neutral economy. It does provide some funding for the development and recycling of batteries in the North of France.¹⁸²

The example of the French battery valley shows how a conjunction of instruments, including both national and EU support, can help the development of industrial ecosystems and crowd in funding from commercial banks. This ecosystem approach to financing, combining de-risking instruments and preferential loans under the EIB, support from the MFF through InvestEU and in combination with national public finance, and JTF and state aid unlocked through the IPCEI process, is a model which could be built upon in the next MFF and under the Clean Industrial Deal.

However, given the strong competitive pressure they face, battery manufacturers, like other cleantech manufacturers, could benefit from further industrial policy interventions, such as subsidies, including from the EU. Going forward, it would be interesting to increase the scope for co-financing between Member States and the EU regarding cleantech manufacturing. The Innovation Fund is a potential good tool for this to be activated quickly, especially with the recently launched Innovation Fund 2024 Call and Battery calls.¹⁸³ Bringing in more EU support would also help to develop such projects in Member States with more limited fiscal space.

Regarding how this EU money could be used, it is worth considering the use of Auctions-as-a-service (similar to the hydrogen bank) for battery components. This model helps identify the lowest subsidy rates and works well for European industrial policy, as winning bids tend to be in regions best suited for the development of the supported technology (see McWilliams and Kneebone, 2024).

Offering more guarantees. Some battery manufacturers benefited from guarantees from a French Public bank, which improved access to debt finance. It is worth considering using this tool more often, including at EU level and to support the EIB's recently announced ambitions to provide counter-guarantees to clean tech companies.¹⁸⁴

¹⁸² See, for example: [RECYBAT: Battery reuse platform | Kohesio](#) ; [SMARTBAT: long life for batteries | Kohesio](#) ; [SEPAR 8: A battery Recycling plant | Kohesio](#).

¹⁸³ See: <https://bepassociation.eu/the-commission-announced-e3-billion-to-boost-the-eus-battery-manufacturing-industry/>

¹⁸⁴ See, for example, the recent announcement of a €5 billion package of counter-guarantees to boost investments in wind energy manufacturers. [EIB commits €5 billion to support Europe's wind manufacturers and approves over €20 billion in financing for new projects](#)

It took up to a year to get IPCEIs on batteries from pre-notification to formal approval by the European Commission. This framework could be reformed to increase the speed at which funds are disbursed. Such reforms should be a priority action under the Clean Industrial Deal.

5.6 Summary of recommendations

During our literature analysis, interviews and expert workshop on the topic of this chapter, we also gathered suggestions for improvements of the current EU funding system. A number of potential options for improvements of the current EU funding landscape were identified, and are presented in the following paragraphs.

Strengthen EU funding for industry and focus support on enabling net zero technologies

Given the very significant challenges industry faces in its transformation to a climate-neutral future, it can be concluded that a strong focus of the funding landscape towards the decarbonisation of industry and investments in clean technologies is key to meeting the EU's climate goals while maintaining the EU's competitiveness and security of supply of key materials and products.

It is therefore recommended that EU funding of industry investments into decarbonisation and clean technologies is significantly strengthened, in order to speed up the developments. Strengthening can take place along two pillars: increasing the overall EU budget for these sectors and increasing the effectiveness of the funding.

Furthermore, it is recommended that EU coordination of these developments should be increased, with the most promising future vehicle being the establishment of the Competitiveness Coordination Tool, as announced in the EU's Competitiveness Compass. This should then be aimed at ensuring that the EU's investments are spent effectively and efficiently, in line with the EU objectives on industrial decarbonisation, the internal market, international competitiveness and security of supply. Strengthening EU coordination can ensure EU-wide optimisation of the transition to new value chains and leverage the strengths of EU innovation, demand and skill levels across different regions.

As concluded above, a number of the current funding programmes were identified that are considered to have a significant targeted impact on industrial decarbonisation and clean tech: the Innovation Fund, InvestEU, CEF-E and Horizon Europe. It is therefore recommended to continue financing the types of projects these funds support also in the new MFF, and strengthen where possible.

Some options for improvements of the current funding landscape that could be considered are outlined in the following.

Strengthen dedicated EU funding for industrial decarbonisation and clean tech

The strong points of the current dedicated funding that should be the basis for future support programmes are the following:

- Defining clear and specific objectives and assessment criteria, with a sound methodology that focuses, among other things, on the GHG mitigation potential of a project.
- Targeting support to technologies that are key to EU industrial decarbonisation or clean tech, and which are not yet feasible without support but do have the potential for significant scaling up.
- Providing flexibility in the funding mechanism and a mix of funding tools, to enable targeted financial support to the areas of industrial decarbonisation and clean technologies that need it the most.

We therefore conclude that further strengthening EU funding instruments for investments in industrial decarbonisation and clean tech, particularly at Technology Readiness Levels of pre-commercial demonstration and above, could be a very effective means for further strengthening the EU funding landscape for industry.

In view of the urgency and the long lead times of the investments in decarbonisation and clean tech, a greater proportion of projected ETS revenue for the period 2024–2030 could already be allocated to calls within the 2024–2027 timeframe, before the next EU budget. These front-loaded funds could either expand the size of grant calls or serve as a supplementary EU guarantee for EIB lending to cleantech manufacturing.¹⁸⁵

The Commission could also expand the use of and budget allocation to fixed premium auctions, expanding the scope to other sectors beyond hydrogen, such as battery components, green steel or sustainable fuels for hard-to-abate transport modes. They should also assess the barriers to Member State participation in the EU's 'auctions-as-a-service', proposing reforms to ensure wider participation beyond Germany, Spain, Lithuania and Austria.¹⁸⁶

Providing efficient support for cleantech manufacturing driving innovation is crucial¹⁸⁷ Currently, cleantech innovators, SMEs and start-ups face barriers in accessing funding, notably due to the application process and rigid annual timelines. To address this, the Commission could consider shifting part of the funding to a continuous, 'always open' funding model. This would allow applicants to better prepare and submit proposals strategically, enhancing support for essential projects. However, this model needs to be developed further to ensure the cost effectiveness of the funding allocation, as it would not allow for the competition model that is currently applied. Additionally, as demand grows, the fund manager (currently CINEA) must be adequately staffed to ensure swift assessments, awards and disbursements. Earmarking a larger share of the funding for SMEs and start-ups could also be considered.

To align with the strategic goals of NZIA, the Commission should explore the mainstreaming of sustainability and resilience criteria, as proposed in the NZIA for public procurement and renewables auctions (and as have now been integrated into the second call of the Hydrogen Bank). This can help ensure that funds align with the EU's joint climate and competitiveness goals.

We also conclude that continued alignment of the funding with the specific needs of investors in industrial decarbonisation and clean technologies remains important. This can be achieved through the STEP process and EIC, and a regular scenario analysis (such as for the Impact Assessment of the 2040 climate target). See also further information below for some suggestions on maintaining the right focus.

Furthermore, market-based tools such as the auction design mechanism used for the Hydrogen Bank and Carbon Contracts for Difference (CfD) could be expanded, and these are generally well received by the stakeholders.¹⁸⁸ An example would be expanding the Hydrogen Bank model of fixed premium auctions to other strategic cleantech sectors or parts of the value chain, such as battery components or green steel. However, this needs consideration of how to ensure financing of CfDs through a fund which is currently limited and fixed in size, as the volume needed is inherently uncertain and the duration typically quite long

¹⁸⁵ Besnainou and Karagianni, 2024; CINEA, 2024

¹⁸⁶ [European Hydrogen Bank's 'Auctions-as-a-Service' scheme](#)

¹⁸⁷ See https://www.i4ce.org/wp-content/uploads/2023/09/The-sharpest-tool-in-the-box_report.pdf

¹⁸⁸ See, for example, [2024-07-04-businesseurope-policy-recommendations-energy-and-climate-transition.pdf](#)

Strengthen de-risking instruments for investments in production and deployment of clean technologies and net zero industries as emerging sectors

Many publications highlight the potential to attract private financing by de-risking investments.¹⁸⁹ The goal is to make these sectors more attractive to private capital by mitigating uncertainties related to market dynamics, technological advancements, and long-term profitability. Guarantees, low-interest loans, long-term contracts, grants and tax credits can all contribute to this. For example, volatile market conditions around fluctuating energy or raw material prices can be balanced to provide stability and predictability. With well-designed conditions for EU internal manufacturing, the benefits of lower financing costs can decrease prices along the value chain and therefore increase attractiveness beyond selected steps.

Together with financial de-risking, the policy framework should also minimise risks related to lengthy permissions processes, long lead times for decisions on financing applications and regulatory changes which create uncertainties for investments. In direct connection to financing, streamlined access and award decisions for defined sectors, technologies or regions can increase the ability to plan and mobilise private financing with public backing.

To scale innovative companies, further assessments of the EIB's venture debt support, and how to link it with funding under the MFF, should be explored, explicitly targeting the venture debt offering in these strategic sectors.

The EIB's funding strategy could be aligned with the objectives of the Clean Industrial Deal to ensure that sufficient guarantees and quasi-equity instruments, among others, are directed towards the cleantech value chain to enhance international competitiveness. The Wind Power Action Plan model of counter-guarantees could be replicated to support other strategic industries, such as batteries.

To support these EIB initiatives, functionalities of the current de-risking instruments should be expanded upon. Stakeholders are very positive about the effectiveness of the type of support for investments in industry, especially for SMEs and start-ups that have difficulty securing financing for their investments, in leveraging private investments and bringing projects to fruition.¹⁹⁰

Strengthen funding programmes for cross-border energy infrastructure

EU support for further development of cross-border energy infrastructure can contribute to reducing energy costs for industry and improving access to renewable energy, a prerequisite for many decarbonisation opportunities in industry. The current programme provides a good foundation for these developments, providing funding opportunities for strategic projects throughout the EU (Projects of Common Interest, PCIs). A future programme for cross-border energy infrastructure could be further strengthened by increasing EU coordination of the funding process.¹⁹¹ This may include the development of an EU integrated infrastructure plan aligned with the EU's climate goals, industry needs and long-term strategy, which can then form the basis for future EU infrastructure funding decisions. This would also allow for EU-level progress monitoring and adequate interventions if the infrastructure developments do not go as planned. Given how crucial the expansion of energy infrastructure is for the decarbonisation and competitiveness of industry and the challenges which many infrastructure projects face, increasing the size of the funding should also be considered.

¹⁸⁹ E.g. European Commission, Enrico Letta (2024): Much more than a market. Available at: <https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf>

¹⁹⁰ [InvestEU interim evaluation](#).

¹⁹¹ See, [4i-TRACTION Policy Brief 2024 Towards Transformative EU Climate Policy Recommendations 0.pdf](#) – recommendation no 4.

Strengthen just transition elements in EU funding policy

Climate policy for industry in general, as well as project-specific EU funding for industrial decarbonisation, may create socio-economic effects in a given territory. These effects of decarbonisation should be mitigated by a reinforced just transition element of future EU policy. This element should support upskilling/reskilling of heavy industry workers or support for job creation in clean technologies or other types of net zero, sustainable industry, to absorb redundant workers from decarbonised industry and revitalise post-industrial areas.

Strengthen the framework programme for Research and Innovation

Funding for climate relevant R&I in industry will remain necessary. The funding of research and innovation under the MFF should therefore continue, albeit with continued development of the focus areas. It should be ensured that cleantech, industry decarbonisation and renewable energy have a specific carve-out, as well as the less technical aspects of the transition towards a net zero industry, such as creation of favourable market conditions, innovation in governance and societal transition processes. Functionalities of the European Innovation Council, with focus on scaling innovation/supporting SMEs with a mixture of grant and equity support, could be expanded or built upon, with earmarking for climate technologies.

Furthermore, continuing to test and expand the use of the innovation procurement in future R&I funding (as recommended in the Heitor report¹⁹²) would be an important addition to the funding landscape in the next MFF. Procurement calls supported by EU funds should be designed around challenges (such as 'decarbonising high temperature heating processes in industry' or 'reducing reliance on third countries for critical minerals'), rather than technology-specific, to allow for a full scope of innovative solutions to potentially win bids.

Focus and Flexibility in the programmes and tools

Since the industrial transition needs to speed up in this decade and the decades to come, we expect that decarbonisation and clean technologies and their cost may change quite dramatically in the coming 5–15 years – due to innovation, economies of scale, and perhaps changes in the cost and availability of energy and materials, etc. This requires flexibility in the funding mechanisms and regular adaptation to these developments.

Future funding programmes for industrial decarbonisation and clean technologies (including the programmes for energy infrastructure and R&I) could then benefit from regular assessments of the main industry sectors, for example through decarbonisation roadmaps, sectoral decarbonisation scenario analysis or territorial just transition plans focused on challenges of specific territories. These should be based on the latest scientific and market developments, and possibly coordinated through the STEP process.

To monitor implementation on the ground, and allow for quick adaptations to changing market conditions, the European Industrial Alliances can advise on key sectoral bottlenecks and identify where further public intervention will be most effective, as well as on improving sectoral financing plans. Given that the EIB and national promotional banks already participate in these alliances, they offer the best forums for enhancing the implementation of financial instruments in support of cleantech manufacturing. The alliances should be expanded to include sectors not currently covered, such as carbon removals and grid technologies.

Ensure alignment of industry funding that has other key objectives with climate goals

¹⁹² [Align, act, accelerate](#)

EU funding programmes with key objectives other than industrial decarbonisation and clean technologies also have the potential to significantly contribute to supporting investments in industrial decarbonisation and clean technologies. The size of these funds is very significant, and their potential contribution to industrial decarbonisation and clean tech, as well as mitigation of effects of industrial decarbonisation, is likely to be very significant.

To ensure that this potential is realised, we suggest the following options for improvements to the current funding processes:

- Mainstreaming of principles of DNSH across the next budget, as well as a strengthened application of an iteration of the Sustainability and Resilience criteria first established under the NZIA to all relevant funding streams.
- Ensuring that the funding priorities of the funding programmes include industrial decarbonisation and clean tech, and align with the goals of NZIA and the Clean Industrial Deal. This could also entail carving out specific budgets for these priorities, and for clean technologies SMEs in particular. A strong role for the EIC should be envisioned.

These options for improvements can also increase the effectiveness of funding programmes that are implemented by Member States. Firstly, it can increase the scale of the developments, which can increase market size, reduce cost, and speed up innovations. It can also be a means to optimise industrial decarbonisation and clean technologies developments throughout the EU: national strategies may lead to different decisions than what would follow from an EU-wide strategy.

Ensure that Member States have the flexibility to contribute to the EU's cleantech and industrial decarbonisation goals

While European financing is preferable to an uncoordinated national approach, as discussed in the previous section, the EU competes with countries benefiting from much larger markets and substantial fiscal and funding support. To respond to this challenge, it is crucial to introduce greater flexibilities in the use of national state aid and continue to facilitate national investments in clean technologies and industrial decarbonisation.

The focus must be on empowering all Member States to invest in cleantech. Co-investment through EU programmes, which is not counted when assessing a Member State's debt sustainability, offers a key way forward.

Until sufficient EU-level funding reduces reliance on national state aid, ensuring Member States retain the flexibility and incentives to continue green investments is essential to supporting cleantech manufacturing, and industrial decarbonisation can be achieved through:

- Increasing the scope for co-financing between Member States and the EU regarding cleantech manufacturing, particularly those that are currently restricted from doing so under the economic governance framework.
- Making use of flexibilities to use unspent EU funds to increase Member State contributions to EU guarantees or other types of EU investment support. National authorities should also be encouraged to launch domestic guarantees and quasi-equity schemes for cleantech using their own unspent EU funds.
- Assess the barriers to Member State participation in the EU's 'auctions-as-a-service', proposing reforms to ensure wider participation beyond Germany, Spain, Austria and Lithuania.

The IPCEI Communication could be revised to implement governance models aligned with specific public policy objectives, ensuring robust monitoring and evaluation of notified state aid. Additionally, reforms should focus on speeding up fund disbursement and expanding state aid

eligibility under the IPCEI instrument to include projects that do not meet the 'global state-of-the-art' innovation threshold and those beyond the first industrial deployment stage.¹⁹³

Improve the application process for funding

Simplify the application process for funding, since this is often a barrier for smaller companies that do not have the expertise or capacity for these processes. More flexibility in the process, for example to allow for a revision of an application in case of an error, may also help both small and large companies. SMEs and start-ups are also often eligible for the EU funds in the current funding landscape, but in practice they often face significant barriers to applying and being successful in their application.

Several options for improving the application process and therefore access to funding were identified during the course of this study.

- Both incumbents and start-ups and clean technologies companies are often faced with inherent uncertainties and risks in their future market, costs and general success of the developments. Industrial decarbonisation and clean technologies require new technologies and value chains that further enhance these uncertainties. Application processes should take this into account, and not set too stringent criteria.
- Ensure the application process is as simple as feasible (given other objectives).
- Up-front funding is often necessary for these companies rather than funding after certain milestones. This can also be a means to de-risk the investment and attract investors.
- Harmonise the application processes of the various funds where possible, to reduce administrative effort needed to apply for more than one fund. Harmonisation can be at EU level only, but since many companies also apply for national funding (and some in more than one country), further harmonisation of national funding programmes would also be useful.

Ensure decarbonisation objectives are fully integrated into the EU's industry competitiveness policies

Strengthening the competitiveness of EU industry and ensuring security of supply of critical materials, technologies and products is a strategic goal that is currently high on the political agenda, with the publication of the NZIA and the recent Draghi report. This debate is closely linked to the topic of this report, but it is nevertheless useful to make a distinction between the different policy objectives in the policy debate.

While the EU regulatory and funding framework is a global pioneer in many climate policy instruments, the supply of the enabling clean technologies did not receive similar focus until the NZIA was adopted. The Draghi report confirms that only a small share of EU funding is accessible to clean technologies manufacturing. In contrast, the deployment of renewable energy installations and their use in production processes has received the majority of funding. This has successfully supported the significant increases in RES generation we have seen in recent years, which has also benefited EU industry. It is then important to ensure that industry competitiveness strategy and policies direct funding towards technologies and projects that are future-proof, given the long lead times and lifetime of these technologies and the reduction in the ETS the cap to almost zero in 2040. Investments in the 'wrong' technologies are likely to create a lock-in, and reduce the cost effectiveness of the EU's climate policy. By fully integrating the climate targets into competitiveness policies, overall policy effectiveness and efficiency can be expected to increase.

¹⁹³ For a competitive European industrial policy https://institutdelors.eu/wp-content/uploads/2024/10/PP304_European_industry_policy_Eils_EN-1.pdf.

This can be achieved through, for example, ensuring funding programmes for industry competitiveness adhere to STEP, DNSH and/or a tool such as the Taxonomy.

Streamline EU industry funding with market-based instruments

As mentioned earlier, EU funding is only part of the policy package that aims to reduce GHG emissions in industry and develop clean technologies manufacturing in the EU. The EU ETS and CBAM are the main market-based decarbonisation policies for industry, and they are at least equally important for achieving the transition needed in the sector to meet the climate goals. Demand policies such as the eco-design regulation can also be a key instrument in creating a wider market for the greener products and materials. Public procurement can be used effectively to create lead markets for decarbonised products and clean tech.¹⁹⁴

Continued focus on adequately streamlining the various tools in this policy package can therefore increase the effectiveness and efficiency of the individual policies.

This could be strengthened through STEP and other planning processes and programmes such as the EU's long term strategy, by laying out a roadmap and timeline for the transition of EU industry. This timeline can help to identify and assess where market-based (supply and demand) policies are sufficient, and where EU funding can have the highest added value – typically RD&I for specific technologies needed in the future and the scaling up of (almost) mature technologies.

¹⁹⁴ 2024-07-04-businesseurope-policy-recommendations-energy-and-climate-transition.pdf and [4i-TRACTION Policy Brief 2024 Towards Transformative EU Climate Policy Recommendations 0.pdf](#)

6 ANALYSIS OF GREEN EXCLUSIONS

6.1 Introduction

This chapter maps and assesses current environment and climate-related exclusions and associated exceptions in EU domestic funding programmes (section 6.2), followed by a general typology to classify exclusions (section 6.3).

The Box below presents definitions of key concepts related to this chapter.

Box 6.1 Definitions

Exclusions in the context of this report are understood as measures, actions and investments that are non-eligible to receive funding from the specific fund due to environmental and/or climate concerns, except in cases where exceptions are defined. Exclusions can be listed in a fund's legal documentation (e.g. the base regulation and delegated acts work programmes) or in additional official documents (e.g. technical guidance documents or Commission explanatory notes, particularly those providing information on operationalising the DNSH – see definition below).

Exceptions can be established for exclusions in a fund's scope, indicating specific circumstances under which excluded activities or 'parts' of these activities could be eligible for funding. For example, the InvestEU fund excludes fossil fuel projects but allows exceptions if there is no alternative technology, or if the project includes carbon capture and storage.

Exclusions in the context of this study prohibit activities and measures from being funded inside the EU by the different EU financing instruments. Exclusions are therefore legally binding within EU public funds but not for other public or private entities operating investments inside the EU, thus remaining legal in the EU territory. This entails that the exclusions are a form of **'soft' economic policy instrument**.¹⁹⁵

It should also be noted that exclusions are a **mainstreaming tool**. As such, they interact with other mainstreaming tools, ideally in a complementary way. Thus, to some extent the question of 'what should an exclusion achieve' is dependent on the mainstreaming architecture of a given fund, i.e. the interplay with other mainstreaming tools. Overall, the main purpose of setting exclusions is not incentivising green investments, nor to track contributions to green spending or its effects, but rather to safeguard EU spending against overly harmful effects, which is nevertheless a contributing factor to the first. Exclusions in this context form a 'base layer' of protection.

The *Green Budgeting in the EU process*,¹⁹⁶ led by DG ECFIN proposes examples of 'brown' budget items that are considered mostly harmful for environmental purposes. This list is only indicative and not comprehensive.

The OECD definition of 'Environmentally Harmful subsidies (EHS)', as laid out in the *toolbox for reforming environmentally harmful subsidies in Europe*,¹⁹⁷ has two distinct parts: (1) a subsidy is a result of a government action that confers an advantage on consumers or producers, in order to supplement their income or lower their costs; and (2), a subsidy is categorised as environmentally harmful if the negative environmental impacts are increasing due to the existence of the subsidy. The definition excludes the failure to internalise externalities (so government inaction), as well as general income support measures. The main challenge in defining environmental harm is selecting the counterfactual scenario, which varies by sector and regulatory context, requiring a case-by-case application of the EHS definition. This study includes three types

¹⁹⁵ See "TOOL #17. THE CHOICE OF POLICY INSTRUMENTS" in Better Regulation Toolbox (European Commission, 2023).

¹⁹⁶ See: [Green budgeting in the EU - European Commission \(europa.eu\)](https://ec.europa.eu/economy_finance/publications/2023/03/green-budgeting-in-the-eu).

¹⁹⁷ European Commission, Directorate-General for Environment, Porsch, L., Klebba, M., Camboni, M., Oosterhuis, F., Greno, P., Ruiz-Gauna I., Mugdal, S., A toolbox for reforming environmentally harmful subsidies in Europe – Final Report – 2022 edition, Publications Office of the European Union, <https://circabc.europa.eu/ui/group/c1a5a4e9-7563-4d0e-9697-68d9cd24ed34/library/3e685dda-2269-487d-a253-28cfd23b7466/details>.

of EHS: Fossil Fuel Subsidies¹⁹⁸, other energy-related subsidies or non-energy subsidies¹⁹⁹ that are harmful to the environment.

In the EU policy context, the 'Do no Harm' (DNH) and 'Do no Significant Harm'²⁰⁰ (DNSH) principles aim to ensure that all EU-led initiatives (be they policies, regulations, funding programmes, etc.) do not negatively impact the EU's climate and environmental objective, operationalising the 'green oath' contained in the original December 2019 European Green Deal Communication.²⁰¹ The DNSH principle has been incorporated into more than half of the EU funds, such as the Recovery and Resilience Facility, the ERDF, CF, ESF+, the Just Transition Fund, and the InvestEU.

While prioritising funding and case-by-case assessments can be useful for pursuing climate and environment goals, exclusions can serve as a strong policy tool when combined with other policies and mainstreaming tools. Exclusions should focus on the most harmful activities to maintain flexibility in EU spending and avoid complex applications of the "Do No Significant Harm" (DNSH) principle. Benefits of exclusions include reducing administrative costs and raising sustainability standards. A unified exclusion system under the next MFF could simplify DNSH assessments, reduce administrative burdens, and improve synergies across EU funds, although it requires balancing flexibility with consistency.

6.2 Assessment of existing exclusions

Annex 12 presents a mapping of current exclusions and exceptions from EU fund regulations of the MFF 21-27, and from the EIB and the European Bank for Reconstruction and Development (EBRD) (referred to as "bank exclusions" below).

During the mapping, preliminarily also 'brown items' of the Green Budgeting list (see Box 6.1) were included. However, given that they do not have legal implications, eventually they were not included in Annex 12 and in the analysis below. EU external funds such as NDICI – Global Europe and IPA III are also excluded from the analysis.

In total, we identified 71 separate exclusions, of which 32 had exceptions. Of the 71, 46 were identified in EU funds and 25 are bank exclusions.

The sectors identified are agriculture (which may include water management and afforestation practices), fishing, trade and industry-related activities, a separate category for extractive industry activities (excluding fossil fuel extraction), fossil fuel (any investments related to its extraction, production, use or transport), nuclear energy, energy (in this context, referring to any type of activity or technology in the energy sector not related to fossil fuel and nuclear), transport, and waste management. The category 'General' was used for any type of investments that were not sector-specific or that involved several of the previous sectors.

¹⁹⁸ Fossil fuel subsidies and other energy-related subsidies are reported under the [Regulation on the Governance of the Energy Union](#). The data is published in the [EU's annual report on energy subsidies](#).

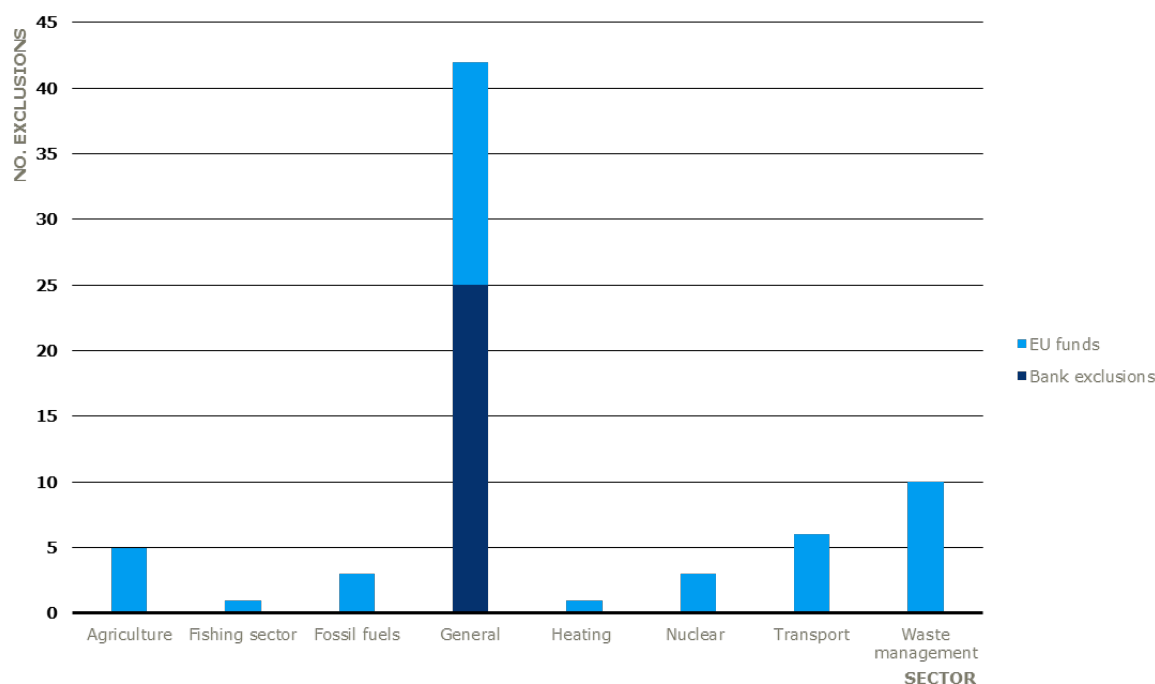
¹⁹⁹ To identify other non-energy EHS, the Commission and Member State [experts](#) are developing a [methodology](#). This will enable Member States to map their EHS and for the Commission to report on the level and type of these subsidies and progress made in phasing them out. The first reporting exercise will take place in 2025, alongside the collection of energy subsidies data.

²⁰⁰ For reference see: Beltran Miralles, M., Gourdon, T., Seigneur, I., Arranz Padilla, M. and Pickard Garcia, N., The implementation of the 'Do No Significant Harm' principle in selected EU instruments, Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/18850, JRC135691.

²⁰¹ European Commission (2019). COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal.

Our mapping shows most exclusions fall under the 'general' scope (42), followed by the waste management sector (10), and then transport (6). The Figure below shows an overview of exclusions mapped per sector and source.

Figure 6.1 Exclusions mapped per sector and source²⁰²



Environmentally harmful subsidies and fossil fuel subsidies

Aside from legal exclusions, the EU and its Member States have led several processes to identify and categorise measures having a high likelihood of being unsustainable and causing environmental harm. This study especially considers the 'brown list' proposed under DG ECFIN's Green Budgeting process;²⁰³ the toolbox for reforming environmentally harmful subsidies²⁰⁴ (for which EU Member States proposed EHS, several of which have been added to a list of candidates for reform); or those EHS identified under DG ENER's study on energy subsidies in the EU.²⁰⁵

Most EHS stem from national tax regimes and exceptions or tariff differentiation for targeted groups. It is likely that these national EHS interact or intervene with investments financed from EU funds. As explained in the toolbox for reforming EHS, most often subsidies correspond to a combination of policy areas. A frequent combination was noted between energy and transport policy, where the majority of these EHS are either energy tax exemptions or CO₂ tax exemptions for (fossil) fuels used in transport such as ferries, domestic and international shipping, cars and taxis, trucks and

²⁰² For the complete mapping of exclusions and exceptions, and sources, see Annex 12.

²⁰³ See: [Green budgeting in the EU - European Commission](#).

²⁰⁴ European Commission, Directorate-General for Environment, Porsch, L., Klebba, M., Camboni, M., Oosterhuis, F., Greno, P., Ruiz-Gauna I., Mugdal, S., A toolbox for reforming environmentally harmful subsidies in Europe – Final Report – 2022 edition, Publications Office of the European Union, <https://circabc.europa.eu/ui/group/c1a5a4e9-7563-4d0e-9697-68d9cd24ed34/library/3e685dda-2269-487d-a253-28cfd23b7466/details>.

²⁰⁵ European Commission, Directorate-General for Energy, Bon-Mardion, J., Casteleyn, M., Queenan, J. et al., Study on energy subsidies and other government interventions in the European Union – Final report – 2023 edition, Publications Office of the European Union, 2023, <https://data.europa.eu/doi/10.2833/571674>.

aircraft. Certain agricultural EU funding can also be included in this combination, with several EHS reducing the rate of excise tax for gas oil used in agriculture; in addition, in many EU regions, irrigation water is supplied far below the proper price covering the financial costs of the irrigation facilities (capital and operational costs) and with no regards to the resource costs of water scarcity. Transport and land use can often be combined for the construction of infrastructure.

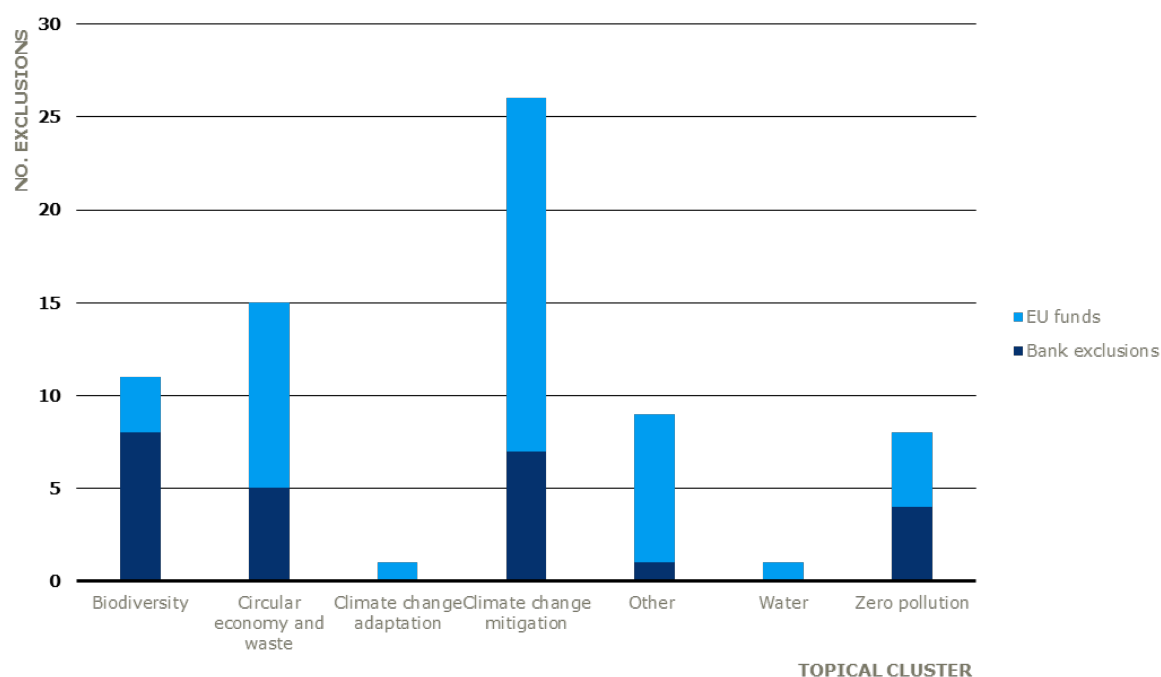
6.2.1 Characterisation per topic

Current exclusions were plotted against seven topical clusters; the first six corresponding to the objectives of the EU Taxonomy (Table 6.1). In addition, a separate category for 'R&I' and another named 'other' has been included to capture any potential outliers.

Table 6.1 Topical clusters

Cluster	Definition
Climate change mitigation	Exclusions to economic activities that undermine climate goals, such as projects that increase greenhouse gas (GHG) emissions, contribute to fossil fuel dependency, or hinder the transition to a sustainable, low-carbon economy, including direct and indirect Fossil Fuel Subsidies (indirect being FFS given to fossil-fuel intensive assets).
Climate change adaptation	Exclusions to activities that may intensify the detrimental effects and impacts of climate change on people, nature, assets or an economic activity, now or in the future.
Sustainable use and protection of water and marine resources	Exclusions to practices that negatively affect sustainable water management.
Transition to a circular economy	Exclusions to practices associated to the linear economy and to the perpetuation of the take-make-dispose model, such as incineration and landfilling.
Pollution prevention and control	Exclusion to polluting activities, or to the use of materials that can cause pollution, such as the use of substances of high concern.
Protection and restoration of biodiversity and ecosystems	Exclusions to practices that affect the integrity of biodiversity or wildlife.
R&I	Exclusions to research, development and innovation practices that can lead to the intensification of unsustainable practices.
Other	Exclusions related to green matters that cover several of the above topics or are not captured by the above, such as projects involving new nuclear power plants, uranium mining, and activities that do not meet strict safety and waste management standards.

Figure 6.2 shows the number of mapped exclusions per topic and per source of funding. The most predominant topic addressed by the exclusions is climate change mitigation, followed by biodiversity, and circular economy and waste. The results show how certain topics are more central when elaborating exclusions. Table 6.2 summarises the findings.

Figure 6.2. Exclusions per topic and source**EXCLUSIONS PER CLUSTER AND SOURCE**

The Table below presents a short analysis per topic.

Table 6.2 Summary of findings on exclusions per topical cluster

Cluster	Findings
Climate change mitigation	This study identified 26 existing exclusions that are based on climate change mitigation criteria. Example exclusions include airport infrastructure (e.g. in the regulations of the ERDF and CF, with exceptions, and partially in the RRF), and investments related to the mining, extraction, processing, distribution, storage or combustion of fossil fuels such as coal, oil, natural gas (e.g. in the regulations of ERDF/CF, InvestEU and JTF). The latter exclusion often includes exceptions to measures related to improving efficiency, transition to renewable and low-carbon gases, clean transport or transport used for civil protection services. Exclusions in this area are also applied by the EIB and the European Bank for Reconstruction and Development (e.g. projects involving fossil fuel extraction and associated facilities dedicated to fossil fuel transport).
Climate change adaptation	The assessment found one exclusion that is relevant for climate change adaptation criteria, and it is included within the CAP fund. The exclusion is about investments in large-scale infrastructure, as determined by Member States in their CAP Strategic Plans, not being part of the community-led local development strategies, except for broadband and flood or coastal protection preventive actions aimed at reducing the consequences of probable natural disasters, adverse climatic events or catastrophic events.
Sustainable use and protection of water and	We identified one exclusion within the CAP fund related to limitations on investments in irrigation facilities which do not contribute to the achievement, or the preservation, of good status of the associated water body or bodies. This exclusion underscores a commitment to promoting environmentally responsible investments and activities, while

Cluster	Findings
marine resources	discouraging practices that could potentially harm the environment or fail to meet specified quality standards.
Transition to a circular economy	We identified 15 different exclusions that are based on circular economy and waste criteria, both in several EU funds as well as in the EIB and EBRD. These exclusions aim to restrict funding to waste disposal or export activities that reproduce linear management of materials, the production of plastics, or the production of non-recyclable and toxic materials such as fluorinated gases.
Zero pollution	This report defines the zero pollution exclusions are those that specifically focus on preventing emissions of pollutant substances and in some cases, the production of highly dangerous substances such as asbestos-containing products, PBC, or the creation of nuclear energy facilities. In this review, we identified eight exclusions relevant to zero pollution. Most of the exclusions relevant to zero pollution were published by the EIB, although the RRF and the ERDF/CF also published relevant exclusions in this matter.
Biodiversity	We identified a total of 11 exclusions that are relevant to biodiversity. The EMFAF contains an exclusion to prevent overfishing and overcapacity by defining specific conditions related, e.g. to increasing the fishing capacity of the EU fleet. The investment banks also have published exclusions relevant to biodiversity, such as avoiding environmentally damaging fishing techniques or deforestation through the EIB (six exclusions) and the EBRD (two exclusions). The CAP includes two exclusions, i.e. to avoid purchase of animals, annual plants and their planting (which is not necessarily linked to biodiversity), as well as exclusions in afforestation practices that are not consistent with sustainable forest management principles.
R&I	The 'do no significant harm' (DNSH) principle is included in all the work programmes of Horizon Europe. However, this study identified no specific exclusions directly related to R&I. The Green Budgeting 'brown' list includes 'support for unsustainable R&D activities', particularly in the energy, fuel, transport and mining sectors.
Other	In total, we identified nine exclusions that fit within this category. An example of a broad exclusion covering different topical clusters is 'Reforms and Investments categorised as harmful' in the REPowerEU Regulation, exclusions targeting nuclear energy in the JTF, or Mechanical Biological Treatment plants excluded with exceptions in the RRF and ERDF/CF, and only permitted within the scope of the fund in the JTF.

6.2.2 Coherence and flexibility of the current exclusion system

The mapping of exclusions suggests there is a reasonable degree of coherence among exclusions and no major contradictions between different sectors and within fund priorities. However, the analysis suggests exclusions do not follow a single, precise logic, with the exception of some specific investment sectors, mostly regarding climate change mitigation (i.e. exclusions to phasing out fossil fuels or for airport infrastructure). In the current exclusion system, exclusions and exceptions remain a variable factor from one fund to another and do not present a unified approach across all allocations made by the funds, at least following the idea of flexibility that is necessary to apply in certain cases. This is partly attributable to the fact that each fund has its own characteristics and time frames, deals with different sectors and addresses different needs. Moreover, certain activities are excluded from certain EU funds purely because of the policy choice that the given programme is not intended to finance certain types of activities, rather than because of evidence-based climate and environmental considerations.

Exclusions are generally well aligned with the European Green Deal, and some explicitly refer to the Union or global agenda for combating climate change and enhancing the environment (e.g. under the CAP regulation: 'investments in afforestation which are not consistent with environmental and climate-related objectives in line with sustainable forest management principles'). However, some exceptions and fund provisions do not necessarily meet green objectives in the short run, to account for an economic transition period. For instance, in InvestEU there is the possibility to fund investments related to mining or to the extraction, processing, distribution, storage or combustion of solid fossil fuels and oil, as well as investments related to the extraction of gas, for projects where there is no viable alternative technology. Other examples of such exceptions are linked to Union economic, structural and cohesion objectives (e.g. in the ERDF/CF regulation: exception to the exclusion of investments increasing the capacity of facilities for the treatment of residual waste for outermost regions, in duly justified cases only).

Furthermore, when there is lack of clear guidance and operationalisation of exclusions, Member States can differ in interpreting and implementing EU-defined exclusions and exceptions, up to the point of there being compliance issues. This hints towards the need for more effective observation capacity from the European Commission.

As a result, there is potential to improve the coherence, simplicity as well as the flexibility of the exclusion system, which can in turn improve the overall impact of exclusions, although there may be trade-offs. For example, some trade-offs identified in the above-mentioned Joint Research Centre (JRC) report on the implementation of the DNSH principle that can be applied to the overall EU exclusion framework include:

- 'Reducing the administrative burden' versus 'Maximising the contribution of the principle to the EU climate and environmental objectives';
- 'Increasing consistency' versus 'Ensuring flexibility under very diverse conditions; or
- 'Increasing the capacities of the multiple actors involved' versus 'Managing efficiently the existing limited resources'.

6.3 Typology for green exclusions

The study team developed a classification system for exclusions and exemptions which is presented in Table 6.3 below.

Table 6.3 Classification of exclusions

	Definition	Examples ²⁰⁶
Exclusions		
Nature of the activity	Exclusions based on the nature of the investment, which can be considered harmful to environment and/or climate.	Excluding funding to (inefficient) fossil fuels
Performance-based	Exclusions based on defined thresholds for the impact on the climate or environment of the activity (e.g. GHG emissions per unit).	Excluding funding for investments into electricity generation from natural gas with emissions higher than 250gCO ₂ /kwh.
Benchmark-based	Based on comparison with similar activities, excluding those which are not considered to be	The RRF and JTF, in relation to measures supporting activities covered by the EU Emission Trading System (ETS), state that activities with projected CO ₂

²⁰⁶ Those examples are a mix of actual current exclusions as well as hypothetical exclusions. They are included here for providing a better understanding of the different types.

Definition		Examples ²⁰⁶
	among the best-in-class from an environment and/or climate perspective. ²⁰⁷	equivalent emissions that are not substantially lower than the relevant benchmarks established for free allocation should generally not be supported. ²⁰⁸
Relative improvement of the activity	Excluding activities which do not lead to a set minimum improvement threshold or did not put in place minimum 'improvement' processes.	Excluding funding for desalination plants where non-revenue water (NRW) reduction, water conservation and efficiency measures (such as leak detection and repair programmes) have not been effectively implemented.
Practice-based	Excluding activities which do not follow a set of practices which are considered best practice (e.g. qualitative criteria, a code of conduct, certification by an EU scheme).	Excluding funding for investments in afforestation which are not in line with sustainable forest management principles and the Guidelines on Closer-to-Nature Forest Management or the Guidance on payment schemes for forest ecosystem service.
Process-based	Excluding funding for activities which do not have a set of actions or points in place that need to be addressed.	Excluding funding for investments in 'anaerobic digestion of bio-waste' if no leakage monitoring plan is in place.
Location-based	Excluding funding for activities based on their location.	Excluding funding for investments in water-intensive industries within areas with projected reduced availability of water based on both the current water status objectives and long-term water balance and climate projections.
<i>Mainstreaming tool based</i> Out of scope of the work.	<i>Excluding funding for activities which have been considered harmful from an environment and/or climate perspective following a specific assessment.</i>	<i>Excluding funding for activities which are considered to do harm after a specific DNSH assessment was conducted.</i>
Exceptions to the exclusions		
Location-based	An exception for an exclusion which is granted based on the location of the activity.	Excluding funding for investments in disposal of waste in landfill except for the outermost regions.
Features of the activity	An exception from a broad exclusion which is granted due to their specific features (which could include all of the mechanisms described above, i.e. for example exception based on the nature of the activity, their performance etc.).	Excluding funding for investments related to fossil fuels except for the replacement of solid fossil fuels fired heating systems with gas-fired heating systems for the purpose of upgrading district heating.

The overview is developed based on the insights from the mapping and review of current exclusions. In addition, it is informed by a JRC report²⁰⁹ published in the context of the EU Sustainable Finance

²⁰⁷ See here for an overview of sectors and activities for which 'best available technologies' (BAT) are defined: <https://eippcb.jrc.ec.europa.eu/reference>.

²⁰⁸ European Commission (2021). Technical guidance on the application of 'do no significant harm' under the Recovery and Resilience Facility Regulation.

²⁰⁹ Canfora, p. et al. (2021) JRC Technical Report. Substantial Contribution to climate change mitigation – a framework to define technical screening criteria for the EU taxonomy.

Taxonomy, which defines 'generic approaches' for defining screening criteria for substantial contribution.²¹⁰

The overview was initially developed for the mapping exercise underlying the analysis in the last chapters. However, it also considered useful for development of exclusions going forward.

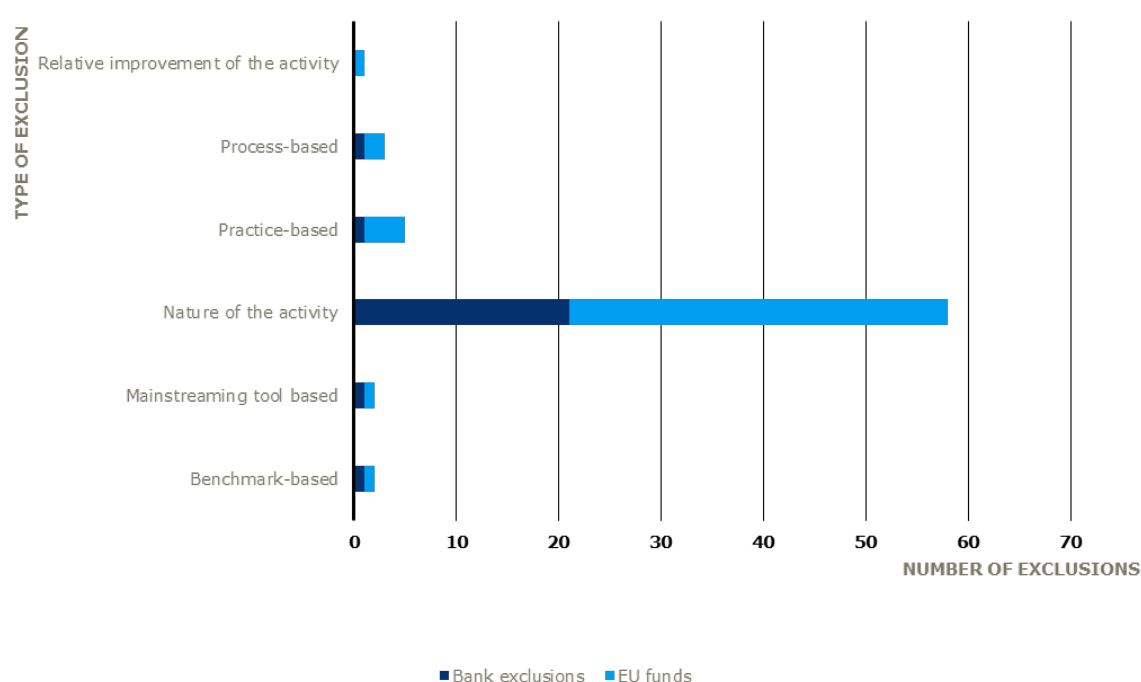
This is especially true for the assessment of advantages and disadvantages of different types of exclusions (see Annex 13) which was also developed by the study team. Exclusions and exceptions are analysed in terms of context-dependency/universality, administrative costs, clarity for applications, and raising ambitions, among others. Moreover, based on this assessment of the criteria mentioned above, this study presents reflections on how different types of exclusions would perform in different contexts and/or sectors (see Annex 14).

6.3.1 Characterisation per type

Exclusions

The categorisation of existing exclusions shows that 21 out of the 25 bank exclusions and 37 out of the 46 exclusions in the EU regulations are based on the nature of the excluded activity. Practice-based exclusions are the second most relevant group.

Figure 6.3 Exclusions per type and source

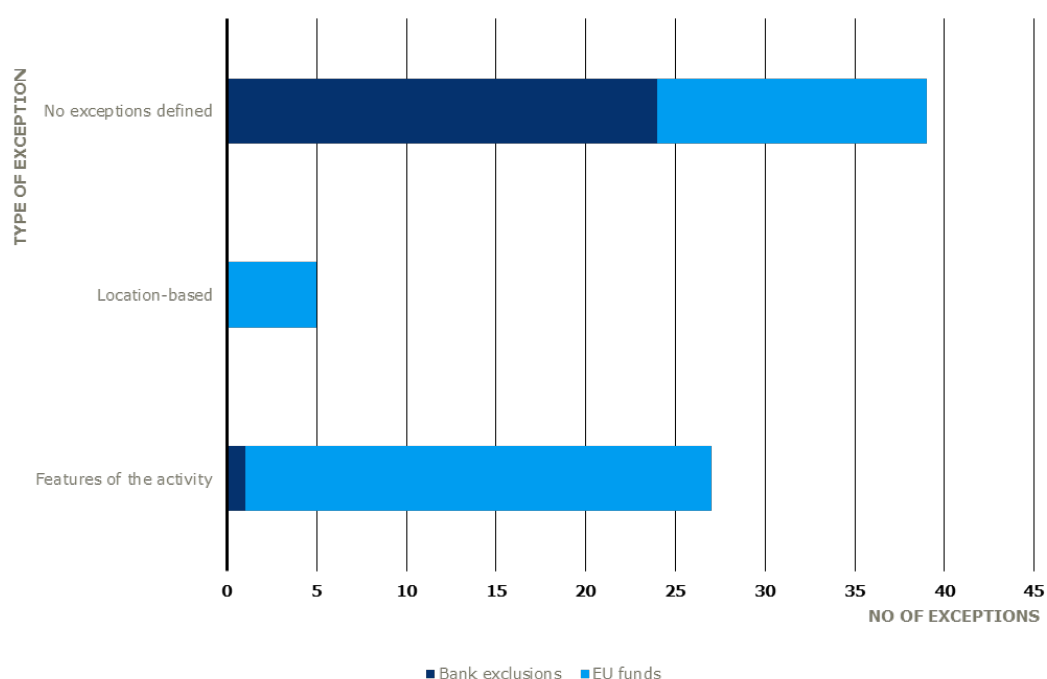


²¹⁰ In the JRC report, those approaches are presented in the context of defining minimum thresholds in order to be considered sustainable; the reverse conclusion (i.e. defining thresholds in order to be considered not sustainable) is in some instances useful for developing the classification presented in the Table).

Exceptions

The exceptions are essentially based on the features of the activity from the exclusion (27), whereas only five exceptions are location-based. The feature-based exemptions refer to the use of measures that may have a positive environmental impact (such as the purchase of animals for ecosystem restoration activities) or when there are no environmentally friendly alternatives (such as in the investment in fossil fuel-based technologies). The three location-based exemptions in EU regulations refer to the specific conditions of outermost regions.²¹¹

Figure 6.4 Exceptions per type and source



²¹¹ See Factsheet on [Outermost Regions](#).

7 GREEN MAINSTREAMING TOOLS

7.1 Introduction

This chapter examines the EU's green mainstreaming toolbox, its practical use and how its experience may be considered in designing the next MFF.

Other chapters in this report cover a number of specific mainstreaming tools, in particular green spending priorities (Chapter 2), green exclusions (Chapter 6) and tracking and monitoring (Chapter 8). Therefore, this chapter does not focus on these specific tools, to avoid repetition, although there are strong links, for instance between exclusions and the DNSH principle. Instead, a case study approach was followed, including specific sets of green mainstreaming tools other than the ones mentioned above, including their mutual relationships, such as overlaps and synergies.

Crucially, in this chapter, we assume that the post-2027 MFF will look significantly different to the current MFF. According to publicly available information, including the Communication from the European Commission on the Road to the next MFF, published on 11 February 2025,²¹² the next MFF should be more focused and simpler. Therefore, the number of funds is expected to decrease. It should also be more performance-oriented, with a plan for each country including reforms and investments, as is currently the case for the RRF. Another expected key feature of the next MFF is that the DNSH principle will be applied throughout the MFF, as long as this is feasible and appropriate in accordance with the relevant sector-specific rules. This is set out in Article 33(2d) of the revised Financial Regulation (Regulation (EU) 2024/2509)²¹³ that establishes the financial rules applicable to the general budget of the Union.

These expected features of the future MFF form the background for our assessments of the current green mainstreaming tools and the possible solutions for identified challenges in their current use. We have performed the work along four strands, each giving rise to a number of recommendations:

1. **Case study on green mainstreaming tools used at the *project* level.** The tools assessed are DNSH, Environmental Impact Assessment (EIA), climate-proofing and sustainability proofing. We identify challenges experienced by users, for instance related to overlaps and (experienced) added value, as well as opportunities such as synergies. We present recommendations for further strengthening these tools.
2. **Case study on green mainstreaming tools used at *programme* level.** The tools assessed are DNSH and Strategic Environmental Assessment (SEA). Also here, we identify challenges experienced by users and present recommendations.
3. **Case study on typology and criteria for green reforms.** In this case study, we examine the features of specific green reforms that could play a role in a more performance-based MFF, and their relationship to investments. We test a given draft typology of reforms and propose adjustments to arrive at a typology that is both useful and intuitive. We also develop a set of potential criteria that reforms should meet to be deemed suitable for supporting a performance-based MFF.

²¹² [Register of Commission Documents - COM\(2025\)46](#).

²¹³ [Regulation - EU, Euratom - 2024/2509 - EN - EUR-Lex](#)

- 4. Case study on green mainstreaming by financial institutions and third-party implementers.** This workstream provides information on green mainstreaming approaches and tools used by organisations outside the context of the EU domestic funds. These are, for instance, financial institutions or third parties that implement EU external funds.²¹⁴ Good practices were analysed, in particular with respect to challenges related to simplification and to monitoring, evaluation and impact assessment. These good practices then provided input for recommendations for the EU green mainstreaming toolbox.

The identification of green mainstreaming tools and their main features was performed on the basis of literature research. For the challenges experienced in applying these tools, some literature was available, although this was very limited for some tools, such as green enabling conditions. In general, interviews with stakeholders proved to be a key source of information for case studies 1 and 2, as well as for the experiences of financial institutions and third-party implementers. The interviews provided insights into how tools are operationalised on the ground, what challenges are being encountered, and how these challenges are being addressed by several Member States. Even so, obtaining clear and detailed examples of what exactly composes the challenge and for which types of projects this challenge materialises, proved to be difficult.

Section 7.2 provides an overview of the green mainstreaming tools that are within scope of this chapter. The objectives and application of the tools are described, as well as their use within the relevant funds. We also present some considerations on the level of the collection of green mainstreaming tools as a whole (the 'green mainstreaming toolbox') that have arisen from the case studies but go beyond their individual scopes. The four case studies are presented in sections 7.3 to 7.6. Final section 7.7 presents the main conclusions.

7.2 The EU's green mainstreaming toolbox

There are several types of green mainstreaming tools available in the context of EU funding. As mentioned above, the tools related to spending targets, exclusions and tracking and monitoring are covered by other chapters. This chapter focuses on tools that shape the programmes and concrete expenditure under various funds by mainstreaming climate and environmental policy considerations into their design. Even so, we do not cover all tools that meet this description, nor their deployment in all funds under the MFF. The four case studies focus on the following tools:²¹⁵ DNSH, climate-proofing, sustainability proofing, SEA, EIA and green enabling conditions. In doing so, we mainly kept the context of the cohesion policy funds, RRF and (for sustainability proofing) InvestEU in mind. We did not reflect on the specific use of these tools in other funds, such as Horizon Europe or funds under the Common Agricultural Policy.

7.2.1 Overview of the green mainstreaming tools covered and their application

Do No Significant Harm (DNSH)

Initially, the DNSH principle was introduced into the EU's sustainable finance framework, where it was applied to private investments to identify environmentally sustainable economic activities. The DNSH principle and its associated assessment, as considered in Article 17 of the Taxonomy

²¹⁴ One of the financial institutions we assessed is the EIB. The EIB does play a role within the context of EU domestic funds, for instance through InvestEU, but in this case we looked for good practices in their work outside this context.

²¹⁵ Here we use 'tools' as an umbrella term. DNSH is more a principle than a tool in itself. SEA and EIA are independent, legally mandatory assessments that have not been designed as a mainstreaming tool as such, but they contribute to shaping EU funding programmes and projects. In this chapter, we use 'tools' to refer to all these instruments for reasons of readability.

Regulation (for sustainable activities), states that no measure shall lead to significant harm to any of the six environmental objectives:

- Climate change mitigation
- Climate change adaptation
- Sustainable use and protection of water and marine sources
- Circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems.

It means in practice, that the measures/types of actions which would do such harm (even if it is only limited to one of the six environmental objectives), should not be financed under the relevant EU funding programmes. The DNSH assessment puts a stronger obligation on decision-makers to remove such types of actions that do significant harm to any of the six environmental objectives.

The general principle of 'do no harm' is laid down in the 2019 European Green Deal communication and the Interinstitutional Agreement accompanying the 2021–2027 MFF. DNSH plays a role under different EU funding programmes, in particular the RRF and the Cohesion policy funds. It was also reflected in the sustainability proofing guidance applicable to the InvestEU fund.²¹⁶ The implementation of the tool differs per instrument, for example in terms of checklists and application. Nonetheless, the purpose of using the DNSH principle is similar, as it is deployed before a programme or specific intervention²¹⁷ is implemented to determine whether it leads to significant harm to any of the six environmental objectives or not.

At present, in addition to guidance for DNSH in the RRF²¹⁸ and the explanatory note on the application of the DNSH under Cohesion policy,²¹⁹ DNSH guidance has recently been developed under the Social Climate Fund.²²⁰ Currently, there is no overall DNSH guidance applicable to all EU funds.

Strategic Environmental Assessment (SEA)

The SEA Directive (2001/42/EC)²²¹ aims to ensure that environmental considerations are taken into account when preparing, adopting and implementing certain public plans and programmes, to both ensure sustainable development as well as environmental protection. The SEA must be undertaken for plans and programmes that are prepared and/or adopted by a competent authority and subject to legislative, regulatory and administrative rules:²²²

- Plans and programmes prepared for specific sectors²²³ and setting the framework for development consent for projects under the EIA Directive (see below)

²¹⁶ JRC (2023). *Report on the implementation of the Do No Significant Harm principle in selected EU instruments: a comparative analysis*.

²¹⁷ It is challenging to define the exact possible levels of application of the DNSH principle, as this differs across the instruments under which DNSH is applied – see section 3.3.2 in JRC (2023). For the purpose of our case studies, it is important to note that it can be applied at the level of a specific intervention (which we refer to as the project level covered by case study 1) and at the higher level of a programme or plan (which we refer to as the programme level covered by case study 2).

²¹⁸ [Commission Notice – Technical guidance on the application of do no significant harm under the Recovery and Resilience Facility Regulation](#).

²¹⁹ <https://ec.europa.eu/transparency/expert-groups-register/core/api/front/document/64317/download>.

²²⁰ [DNSH technical guidance to the SCF - European Commission](#), 2025.

²²¹ [Directive - 2001/42/EC - EN - EUR-Lex](#).

²²² [Assessment of the certain effects of plans and programmes on the environment \(SEA\) | EUR-Lex](#).

²²³ Namely agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning and land use.

- Plans and programmes for which an assessment is required under Articles 6 and 7 of the Habitat Directive²²⁴
- Plans and programmes setting the framework for future development consent of projects other than those under the EIA Directive, which Member States have identified to have likely significant environmental effects.

The SEA Directive sets out the steps that must be taken to evaluate public plans and programmes in the Member States. The steps include scoping, preparing the environmental report, public consultation and participation, decision-making, and monitoring. The relevant environmental authorities and the public must be consulted on the draft plans/programmes and on the environmental assessment report. Both the environmental report and the results of the consultations have to be taken into account in decision-making. This also includes the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme. In order to identify unforeseen adverse effects at an early stage, significant environmental effects of the plan or programme are to be monitored.

The information that must be prepared for the environmental report is defined in Annex I of the SEA Directive.²²⁵ Annex II of the SEA Directive, states the criteria for determining the likely significance of environmental effects.

The SEA Directive does not only apply to plans and programmes that are EU-funded, and as such it was not designed as a mainstreaming tool within the context of the MFF. Even so, in practice it fulfils a key role in ensuring that plans and programmes financed by several EU funds take into account environmental aspects. In that sense, it functions as a green mainstreaming tool, and in particular as one of the few ones applicable at a programme level. This is why it is included in our assessment.

Environmental Impact Assessment (EIA)

The EIA Directive (2011/92/EU²²⁶, as amended by 2014/52/EU²²⁷) requires that certain public and private projects likely to have significant effects on the environment are be assessed according to their impact on the environment. Projects listed in Annex I of the Directive are subject to a mandatory EIA. For projects listed in Annex II, EU Member States shall determine if these would have significant impact on a case-by-case basis, or based on a set of criteria, such as location, size or type of projects. The EIA assesses the direct and indirect impacts on environmental factors of a project, including population and human health, biodiversity, land, soil, water, air, climate, etc. Project developers must provide a report containing the assessment and potential measures to relieve environmental impact, before the project can be approved.²²⁸

Projects listed in Annex I are typically large-scale, high-impact projects that, by design, might have significant environmental risks. This involves e.g. large infrastructure projects, energy production, heavy industry and waste management. Projects in Annex II include typically medium-scale projects

²²⁴ [Council Directive 92/43/EEC](#).

²²⁵ Information that must be considered in the environmental report is for example the outline of the content, the environmental characteristics of the areas impacted, environmental protection objectives, likely significant impacts on the environment (such as biodiversity, humans, flora and fauna, air, water and material assets), potential alternatives, and the outline of monitoring measures. See: [Directive - 2001/42 - EN - EUR-Lex](#).

²²⁶ [Directive - 2011/92 - EN - EIA - EUR-Lex](#).

²²⁷ [DIRECTIVE 2014/52/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - of 16 April 2014 - amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment -](#).

²²⁸ See: https://environment.ec.europa.eu/law-and-governance/environmental-assessments/environmental-impact-assessment_en.

that have potential environmental impacts that can vary depending on their characteristics, location or context. Examples include investments in agriculture, extractive industry, energy, metal production and processing, and other industries such as food, textiles and rubber. Infrastructure, waste management and tourism can also fall under Annex II.

The screening for the need for an EIA as well as the execution of the EIA is performed during the project preparation phase. Depending on the maturity of a project and the permitting procedure, in case of many EU funded projects, the EIA is taken into account when deciding whether the project will be approved or not. The preparation of an EIA goes through a process consisting of several stages: 1) Screening (for Annex II projects only), where the decision is made whether an EIA is required; 2) Scoping (voluntary), where the issues to be addressed in the EIA are identified; 3) the preparation of the EIA report, which shall contain information regarding the project, the baseline scenario, the likely significant effect of the project, the proposed alternatives, the features and measures to mitigate adverse significant effects as well as a non-technical summary; 4) consultations with the public concerned, environmental authorities, local and regional authorities and other Member States (if concerned); 5) decision-making including information on the decision taken; 6) monitoring (for projects with significant adverse effects).²²⁹

As with the SEA Directive, the EIA Directive has not been designed as a mainstreaming tool for EU-funded projects. Even so, projects that receive funding through any of the funds in the MFF and fall under the scope of the EIA Directive, have to be subjected to EIA or screening in accordance with the Directive's requirements. This way, by identifying potential risks and requiring mitigating measures, the EIA contributes to the green mainstreaming process in practice, which is why it is included in our assessment.

Climate-proofing

Climate-proofing constitutes a process to assess climate change mitigation and adaptation aspects of infrastructure projects. Commission guidance developed for climate-proofing²³⁰ sets common principles for the identification, classification and management of physical climate risks when planning, developing, executing and monitoring infrastructure projects and programmes. It considers both climate adaptation and mitigation, and is divided into two phases of screening and detailed analysis.

Climate-proofing is legally required as a tool for the CEF, as laid down in the CEF Regulation,²³¹ and for the European Regional Development Fund (ERDF), Cohesion Fund (CF) and Just Transition Fund (JTF), as laid down in the Common Provisions Regulation.²³² It is also relevant for InvestEU, but here the climate mitigation and adaptation aspects are covered by sustainability proofing, which is broader in scope (see below). It follows the principle of DNSH, see above).²³³ Climate-proofing is required for infrastructure investments that have a lifespan of five years or more. This includes both large-scale infrastructure, as well as projects with a small infrastructure component.

Climate-proofing is a process that is mostly carried out before the investment decision is made. The climate-proofing process consists of multiple phases applied to both climate pillars (mitigation and adaptation):

²²⁹ See the guidance on the preparation of the environmental impact assessment report, <https://op.europa.eu/en/publication-detail/-/publication/2b399830-cb4b-11e7-a5d5-01aa75ed71a1>.

²³⁰ [EUR-Lex - 52021XC0916\(03\) - EN - EUR-Lex](#).

²³¹ [Regulation - 2021/1153 - EN - EUR-Lex](#).

²³² [Regulation - 2021/1060 - EN - EUR-Lex](#).

²³³ See: <https://ec.europa.eu/newsroom/cipr/items/722278?utm>.

- Screening, to determine whether a carbon footprint (mitigation) or a detailed analysis on adaptation is needed;
- Detailed analysis on one or both of the two dimensions (mitigation and adaptation), in which the GHG emissions and climate risks are assessed and, when applicable, measures are designed;
- Consolidation and documentation of the climate-proofing analysis.

Similar to the EIA, climate-proofing is mainly applicable to the preparation phase of an investment project. In contrast to the EIA, climate-proofing is only applicable to EU-funded projects and was designed specifically as a green mainstreaming tool in the context of the MFF.

Sustainability proofing

Sustainability proofing is a requirement under the InvestEU Fund targeted at implementing partners, financial intermediaries and project promoters benefiting from the InvestEU support. In this process, significant impacts on three sustainability dimensions (climate, environmental and social) should be identified and addressed.²³⁴

In the case of InvestEU, sustainability proofing was introduced to ensure that operations benefiting from InvestEU support are in line with or contribute to the EU's green priorities, and aims at raising the bar and going beyond the requirement to comply with existing legislation whenever possible. The sustainability proofing requirements include the assessment of the climate, environmental and social dimensions of an investment project or indirect financing operation. The InvestEU Regulation states that projects below a certain size specified in the guidance shall be excluded from the proofing. Hence, the guidance introduces a threshold below which investments are exempt from the requirement to conduct screening and sustainability proofing. This threshold is set at €10 million, except for projects that require an EIA. For intermediated financing (in particular support to SMEs and small mid-caps), a simplified form of sustainability proofing was designed to reduce the administrative burden and reflect the particularities of this type of financing.

Sustainability proofing consists of the following steps:

- Assessment of compliance with EU and national legislation. This includes compliance with legal requirements in the three dimensions of sustainability (climate, environmental and social);
- InvestEU screening to identify potential risks;
- Further assessment and proofing for relevant elements at risk under each dimension;
- Positive agenda (voluntary): providing recommendations for increasing the sustainability performance of projects or operations.

For the climate dimension (mitigation and adaptation), the methodology for sustainability proofing largely mirrors that of the EC Technical Guidance on Climate-Proofing of Infrastructure (see above).

Green enabling conditions

Enabling conditions are set in the Common Provisions Regulation (CPR).²³⁵ They are defined as prerequisite conditions for the effective and efficient implementation of the specific objectives of the EU's structural funds. A subset of these conditions refers to specific 'green' objectives under Policy Objective 2. There are seven green enabling conditions listed in Annex IV of the CPR, and they apply for support under the ERDF and the Cohesion Fund. All green enabling conditions are linked to the implementation of certain elements of existing EU legislation and/or a planning

²³⁴ See: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021XC0713\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021XC0713(02)).

²³⁵ [Regulation - 2021/1060 - EN - EUR-Lex](#)

framework in the fields of climate, energy, environment and/or disaster risk reduction. Green enabling conditions apply to all Member States wishing to invest under a specific objective and hence are not Member State specific. More detailed information on green enabling conditions is provided in Annex 15.

7.2.2 Considerations on the mainstreaming toolbox as a whole

Mainstreaming tools across the various phases of plans, programmes and projects

Most green mainstreaming tools described above focus on the preparation phase of plans/programmes or projects before funding decisions are made. In general, the tools focus on screening and/or assessing activities in terms of environmental impact, to prevent (potentially) funded initiatives from harming the environment and to take into account their effects on the environment. Specifically, the considered tools are applied in the following manner:

- SEA assesses the environmental impact of a public plan or programme in the preparation phase (before the decision is made on a plan or programme) and requires, among other things, the consideration of reasonable alternatives to find ways of reducing or avoiding the significant adverse environmental effects of the proposed plan/programme²³⁶.
- DNSH is undertaken in the programming phase at different levels, depending on the fund to which it is applied²³⁷. The assessment takes place at programme measure or types of action level, but once certain conditions are identified in order to be DNSH compatible, the compliance with these conditions should be ensured and monitored at project level (e.g. via specific milestones and targets integrated within a plan/programme). That is why we include DNSH both in case study 1 (project level) and case study 2 (plan or programme level). The principle prevents funding of harmful activities up front, or eliminates types of activities after the DNSH assessment.
- An EIA is performed at project level for projects falling under the scope of the EIA Directive. Depending on specific funding programmes' requirements, some projects can receive conditional funding decisions before the finalisation of an EIA. However, actual construction work can only start after the EIA procedure has been concluded and all relevant permits have been issued. The EIA report and the decision to authorise a project, among others, should include a description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects of the project on the environment.
- Both climate-proofing and sustainability proofing are performed in the project preparation phase.

There is no separate mainstreaming tool that focuses on the monitoring and evaluation phase, assessing to what extent the upstream green mainstreaming process did indeed properly address climate and environmental risks or to what extent individual tools delivered what could be expected based on their intervention logic. Even though provisions are in place in the EIA and SEA Directives to monitor the significant environmental effects of the implementation of plans/programmes/projects (depending on applicability of the Directive) to identify unforeseen adverse effects, and to be able to undertake appropriate remedial action, these Directives do not cover all EU-funded plans/programmes or projects.

²³⁶ Further information on 'reasonable alternatives' is available, among others, in [the Guidance on the implementation of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment](#).

²³⁷ The terminology differs depending on the EU funding programme e.g. the RRF uses a term 'measure' while the Cohesion policy 'type of activities' which are synonymous terms.

Overlaps and synergies among tools versus fragmentation

In the interviews, many stakeholders noted that there can be significant overlaps among green mainstreaming tools, both at project and programme level. This adds to an administrative burden on both beneficiaries and public authorities, such as ministries and Managing Authorities. However, stakeholders did not always agree on the nature of the overlap and the extent to which this overlap poses a problem in itself, regardless of the resulting administrative burden and capacity challenges.

Indeed, overlap of tools can refer to different situations. In terms of the policy areas they apply to, there is clearly some overlap among several green mainstreaming tools. For instance, DNSH, EIA and climate-proofing all look, among other things and to a varied extent, into climate impacts. However, in terms of the background, actors involved and intervention logic of the tools, there are often clear differences.

In the above example, EIA is a separate assessment under the responsibility of competent authorities (e.g. national environmental ministries, regional or local authorities). EIA has not been designed as a green mainstreaming tool for EU funds but in a wider context, to ensure that any public and private project which is likely to have significant effects on the environment is subject to an environmental assessment. The EIA is a tool to support decision-makers in their decisions and it is one of different elements considered in the permitting procedure. It does not rule out approval of projects with likely significant effects on the environment, but it sets a procedure for the environmental assessment. On the other hand, DNSH is an instrument adopted to assess whether certain activities should or should not be supported by EU funds. It explicitly excludes measures which entail significant harm to environmental objectives.

Considering that, in the context of some EU funds, both the DNSH and EIA apply, it might happen that DNSH may block EU funding to certain activities even though a project was given a green light by decision-makers following an EIA procedure. This outcome should not be considered an inconvenient overlap among tools. Indeed, it could be seen as a proof that this combination of tools did function properly, and both are needed in the context of the ambitious European Green Deal agenda. Instead of overlap, there is rather a synergy between the two with the DNSH ensuring that EU funding does not support environmentally harmful activities. Additionally, it should be noted that not all projects fall under the scope of the EIA Directive and require a screening or an EIA.

The participation of the competent authorities, the public concerned and – in certain cases – other Member States, is another important element of the EIA and SEA procedures, in which they differ from other mainstreaming tools discussed in this section.

Our finding that some of the stakeholders who work with these mainstreaming tools on a daily basis do not recognise the different intervention logics of the various tools or do not appreciate the added value of one compared to the others, may pose a challenge in itself. This suggests that the aim of the mainstreaming tools and their interactions are not always clear to the actors involved. At the same time, the high number of tools and the associated administrative burden may lead to limited time available for assessments. Also, the high number of tools increases the need for efficient coordination between multiple national or sub-national actors. Together, these dynamics may result in a risk that the quality of the assessments, and hence of the mainstreaming process, might be sub-optimal.

To be sure, for some combinations of tools, there seems to be overlap indeed, also in terms of intervention logic, and this should be addressed. This is elaborated in more detail in the case studies.

Besides concerns about quality, we found that the challenge posed by the high number of mainstreaming tools is not so much overlap among tools, but rather fragmentation and the lack of a holistic view on projects and their sustainability. While this study focuses on mainstreaming tools dealing with climate and environment, stakeholders involved in the funding process also have to

consider other aspects of sustainability, such as in terms of social or gender equality. Several tools assess different aspects of this broader sense of sustainability, but there is no overarching framework in which those aspects can be reconciled. Concretely, a project has many sustainability aspects, covered by various tools, and it can score quite differently on all these aspects. In practice, there are not always realistic options to mitigate or avoid adverse impacts. This means that, to arrive at a funding decision, positive and negative sustainability impacts on different aspects need to be balanced, sometimes implying an implicit choice of what sustainability aspect is deemed most important. Currently, a framework to make such decisions in a consistent manner is lacking.

7.3 Case study 1: Green mainstreaming tools at the project level: DNSH, Climate-Proofing, Sustainability Proofing, EIA

7.3.1 Introduction to the case study

This case study assesses the interaction between Environmental Impact Assessment (EIA), climate-proofing, sustainability proofing and DNSH. These tools are all used at the project level. DNSH is in principle applicable to all EU funding programmes subject to the Common Provisions Regulation, as well as under InvestEU, the RRF and the Social Climate Fund. EIA is a separate EU Directive, and is applicable to projects in its own right, regardless of EU funding. Climate-proofing is mandatory for infrastructure projects with a lifespan of over 5 years in any of the funds under the CPR. It also applies to TEN-T projects, provided that they require an EIA (for which the procurement process was initiated after 18 July 2024), which would also be applicable to the EU funds used to support such projects²³⁸. Sustainability proofing is specifically used in the context of the InvestEU Fund.

As the tools are applied in the same realm of mainstreaming climate and environmental objectives, the question arises whether further synergies and efficiencies can be achieved within and between these tools. This case study therefore delves into the intervention logic of the various tools, and assesses whether the tools contain overlaps or present implementation challenges. We explore possible solutions to potential challenges based on literature and best practices in Member States. Based on the outcomes, we make recommendations on the use and design of the tools for the next EU MFF. The approach followed in this case study is a literature study, complemented by an extensive set of interviews with stakeholders in a selection of Member States. These stakeholders operate at various levels in the process (national government, Managing Authorities, external consultants). This case study is closely related to case study 2 on the interaction between SEA and DNSH at programme level, with DNSH being included in the analysis in both case studies.

In the next section, we introduce the tools and the experiences by users of the selected tools. Subsequently, we introduce practices by Member States coping with experienced challenges. Lastly, we propose recommendations focused on streamlining and simplifying the application of the tools.

7.3.2 Experiences by users of the selected tools

Climate-proofing, EIA, DNSH and sustainability proofing are used at project level. DNSH applies at a measure, type of actions level *and* is cascaded to a project level. It has implications for subsequent projects resulting from a specific measure/type of action (e.g. an example of a measure – renewable

²³⁸ "Projects of common interest for which an environmental impact assessment must be carried out in compliance with Directive 2011/92/EU shall be subject to climate-proofing. The climate-proofing shall be undertaken taking into account the latest available best practice and guidance to ensure that transport infrastructures are resilient to the adverse impacts of climate change, through a climate vulnerability and risk assessment, including through relevant adaptation measures, and through integration of the costs of greenhouse gas emissions in the cost-benefit analysis. Without prejudice to other Union legal acts, such requirement does not apply to projects for which the procurement process of the environmental impact assessment has been initiated by 18 July 2024.", [Regulation \(EU\) 2024/1679](#), OJ L, 2024/1679, 28.6.2024.

energy investments; an example of a project resulting from such measure: a specific geothermal project, etc.). Of the tools, sustainability proofing is only considered in the context of the InvestEU Fund (in line with the InvestEU Regulation²³⁹).

As these tools often address overlapping issues, there is potential for streamlining. For instance, some of the stakeholders mentioned that elements from climate-proofing (and strategic environmental assessments, see case study 2) can be used in demonstrating compliance with the DNSH principle at a measure level. Moreover, both climate-proofing and EIA cover some aspects also included in DNSH (although DNSH has a slightly different scope). For example, climate-proofing supports the integration of climate change considerations into infrastructure projects. At the same time, while broader in scope, EIA serves similar purposes, namely to identify the environmental effects of projects (see also section 7.2). Both tools can help prove that some projects might have significant carbon footprint impacts and should not be funded considering the ambitious European Green Deal agenda.

Below, we discuss in more detail the experiences and challenges in applying the various tools in relation to each other.

Do No Significant Harm

As outlined in section 7.2, the DNSH principle is fairly new. It was introduced in the EU Taxonomy Regulation in 2018 (2020/852)²⁴⁰, and introduced as an eligibility requirement in the RRF in 2021. Regulation 2021/1060 of the EU on the Common Provisions Regulation also establishes that DNSH should be applied to funds covered by the CPR, such as ERDF, Cohesion Fund, ESF+ and JTF²⁴¹.

The interviewed stakeholders indicated that one challenge with the DNSH principle is that they perceive a lack of clear guidance on the operationalisation of this principle (despite the existence of the DNSH guidance specifically for the RRF). There are a few technical screening criteria established for the EU Taxonomy, but there is no overarching technical guidance for the operationalisation of the DNSH principle in the EU funding context so far. DNSH is applied at various levels, but it is not always clear to implementers which parts of DNSH are covered in other processes, such as EIA, climate-proofing or sustainability proofing, as well.

The lack of clear guidance is further noted in a report from Bankwatch²⁴². Here, it is concluded that DNSH holds a lot of promise, but the effectiveness of the principle in the end depends on how managing authorities apply it on the ground. This is especially true for the alignment between what is outlined and assessed in terms of environmental impact in the initial funding stage, versus the extent to which mitigation measures are applied in the implementation phase. Especially when the initial assessment at project level is of poor quality, Bankwatch notes a lot of discrepancies here, in the sense that implementation of mitigation measures falls behind of what is assessed to be needed in the assessment phase.

The DNSH guidance developed under the RRF states that carrying out and implementing an EIA, SEA or climate-proofing process can, in some cases, be sufficient for a Member State to demonstrate compliance with DNSH. However, this does not exempt them from carrying out a DNSH assessment, as the EIA, SEA or climate-proofing may not cover all the aspects that are required in the DNSH assessment.

²³⁹ See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0523&qid=1617090511360>

²⁴⁰ See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852>

²⁴¹ See: <https://eur-lex.europa.eu/eli/reg/2021/1060/oj/eng>

²⁴² From theory to practice: A case-based analysis of the EU's 'do no significant harm' principle (Bankwatch, 2024): <https://bankwatch.org/publication/from-theory-to-practice-a-case-based-analysis-of-the-eu-s-do-no-significant-harm-principle>

Environmental Impact Assessment (EIA)

The EIA Directive (2011/92/EU as amended by 2014/52/EU) requires that major building and development projects in the EU must be assessed according to their impact on the environment. In the context of mainstreaming, EIA is a standalone process that is legally required by EU legislation. It was not initially designed as mainstreaming tool, but can, in the end, be considered and applied for this purpose. As such, we focus on the ways to streamline other mainstreaming tools along the EIA process.

The DNSH and the EIA have some overlaps in scope. However, they do differ in certain aspects (coverage of environmental aspects or objectives), and they have a different legal basis. EIAs are performed for individual projects, which either are likely to have a significant environmental impact, or which by their characteristics are determined by Member States to require an EIA. An EIA assesses the environmental effects of a planned project and identifies, among others, measures taken to avoid, prevent, reduce and, if possible, offset significant adverse effects on the environment. Although EIA has a broader scope in terms of environmental aspects covered, DNSH contains more specific criteria, especially concerning climate change (in DNSH, climate change adaptation and mitigation are distinguished, whereas in EIA this is not done).

The DNSH principle assesses whether a measure is considered to do significant harm to one of the six environmental dimensions covered. This means that DNSH complements the EIA assessment by determining whether or not the investment complies with DNSH, even in cases where projects have already gone through the EIA process and are compliant with other applicable legislation. EIA completion primarily means that environmental effects have been identified and considered in the decision-making process, but it does not necessarily mean that all potential harms have been avoided or sufficiently mitigated. As such, the investment may be ineligible for EU funding due to the DNSH assessment, which might conclude that a measure causes 'significant harm' to any of the six environmental objectives. Conversely, EIAs can be used to ensure or provide evidence on compliance with DNSH.

As such, the DNSH principle adds an extra layer of aligning public funding with overarching objectives and targets set for climate and environment at EU level²⁴³. This is echoed by the statement in the Technical Guidance on the application of DNSH under the RRF Regulation, in the sense that carrying out and implementing an EIA (among others) can, in some cases but not always, be sufficient for a Member State to demonstrate compliance with DNSH. This does not exempt an MS from carrying out the DNSH assessment, since the EIA may not cover all the aspects that are required in the DNSH assessment. Moreover, it also has a different purpose as a tool – to ensure that environmental concerns are considered from the very beginning of new building or development projects, or their changes or extensions, and to allow the public to actively engage in the EIA procedure. Hence, the DNSH assessment is complementary to EIA and helps to avoid financing measures/projects that might cause 'significant harm'.

During the interviews stakeholders raised issues related to the quality of EIAs. To perform an EIA (or a DNSH assessment), sufficient knowledge and expertise are needed to assess the risks on climate and environment. The EIA is usually performed by external consultants and evaluated by competent authorities. Even when outsourced, the assessments in some cases are insufficient to demonstrate the actual risks and propose effective mitigation measures. This challenge is demonstrated by some examples analysed by Bankwatch²⁴⁴. In some cases, insufficient expertise is available to either properly identify and/or properly mitigate important risks to the environment,

²⁴³ Beltran Miralles, M., Gourdon, T., Seigneur, I., Arranz Padilla, M. and Pickard Garcia, N. The implementation of the 'Do no significant harm' principle in selected EU instruments, Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/18850, JRC135691.

²⁴⁴ See: Bankwatch, 2024. 'From theory to practice: A case-based analysis of the EU's 'do no significant harm' principle'

meaning that even though the EIA (or DNSH) assessment is executed according to their requirements, they do not succeed in their purpose of preventing or mitigating harm to the environment. The main takeaway is that in some cases, on paper, EIA (and DNSH) provide the envisaged process to identify environmental risks, but the lack of time, expertise or independent review can lead to a situation where some of the significant risks remain unidentified and thus not addressed or followed up.

Climate-proofing

Climate-proofing is a mainstreaming tool also set in the Common Provisions Regulation, in Article 73(2)(j) given as mandatory for infrastructure projects with a life span of over 5 years. Moreover, the InvestEU Regulation (2021/523) and the CEF Regulation (2021/1153) set requirements on climate-proofing for projects funded in these respective funds.

One challenge raised by stakeholders is the administrative burden that climate-proofing can pose. Climate-proofing is obligatory for infrastructure projects with a lifespan of 5 years or more. These are usually bigger projects, with many aspects. However, there are also many smaller infrastructure projects that also have a lifespan of at least 5 years and therefore qualify for a climate-proofing process. For such smaller projects, climate-proofing is a fairly substantial assessment with a relatively high administrative burden relative to the size of the project. Small projects with only an infrastructure component are also required to do full climate-proofing, despite the fact that it has very low relevance to the project, and therefore often the beneficiary lacks expertise to do climate-proofing on the infrastructural component of the project. Moreover, 'infrastructure' and 'infrastructure component' are in some cases difficult to define, which makes it difficult to determine whether a project contains an infrastructure component and therefore requires climate-proofing. A clear definition of these terms is lacking. Bankwatch demonstrates this ambiguity and high administrative burden in various case studies, in which the lack of specific expertise is demonstrated in examples where the infrastructure component is only a small part of the project, leading to a situation where climate-proofing reports on infrastructure can seem arbitrary and a matter of 'ticking a box'.²⁴⁵

The climate-proofing process shows some overlap with EIA. The EIA Directive requires that the EIA Report covers 'the impact of the project on climate (for example, the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change' (Annex 4(5)(f) to the Directive on EIA (2011/92/EU as amended by 2014/52/EU)). The Technical Guidance on Climate-proofing also recalls it: 'there is an overlap between the EIA process and the climate-proofing process. The two processes should be planned together to take advantage of the overlap.'²⁴⁶ The Guidance further describes how climate change mitigation and adaptation issues (the main focus of climate-proofing) can be integrated in the stages of the EIA process. As such, the guidance provides the tools to deal with the EIA and climate-proofing in parallel, in cases where both are required.

When comparing DNSH and climate-proofing, with respect to climate aspects there is a degree of overlap. In this case, however, there is no clear guidance on how to address this. The Commission's DNSH guidance suggests that when an MS has carried out an EIA, SEA, sustainability or climate-proofing, it can support the arguments in the context of demonstrating compliance during a DNSH assessment. This is especially true at measures/type of action level. As is the case with an EIA, doing a climate-proofing assessment does not exempt the MS from carrying out a full DNSH assessment. There is, however, no clear overall guidance on how to exactly combine climate-

²⁴⁵ See: Bankwatch, 2024. 'From theory to practice: A case-based analysis of the EU's 'do no significant harm' principle'

²⁴⁶ See: https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_1045.

proofing with the DNSH process, except for some general suggestions in the technical guidance for the RRF.

Sustainability proofing

Sustainability proofing is only required under the InvestEU Fund. This process is similar to climate-proofing, but has a broader sustainability scope. As is the case with climate-proofing and EIA, sustainability proofing can be a process to support the arguments in the DNSH assessment, without exempting the MS from doing a DNSH assessment. As such, there is potential to streamline sustainability proofing and DNSH further as well.²⁴⁷

In contrast to climate-proofing, the sustainability proofing guidance already proposes further integration of DNSH and sustainability proofing. According to the Questions and Answers on the InvestEU Programme, sustainability proofing requirements will integrate further the DNSH criteria of the EU Taxonomy. This notion demonstrates the potential for further integration of both tools.

Based on the stakeholder interviews, no conclusions can be drawn on potential synergies or overlaps between sustainability proofing and the EIA process.

Summary of stakeholder experiences

In summary, we identify the following challenges in implementing the four mainstreaming tools (EIA, DNSH, climate-proofing and sustainability proofing) and their potential for further integration, based on stakeholder experiences:

- Conducting meaningful assessments requires sufficient time and expertise, as well as, ideally, an independent review.
- DNSH is a fairly new tool, but with the potential to be all-encompassing. A need for broad technical guidance emerges from user experiences.
- Compared to EIA, climate-proofing and sustainability proofing, DNSH provides an additional layer of protection. EIA, climate-proofing and sustainability proofing can serve to support arguments that demonstrate DNSH compliance, but they cannot replace the DNSH assessment as a whole. This gives potential to further integrate climate-proofing and sustainability proofing into DNSH.
- EIA Directive is a self-standing Directive with its own purpose, and does not qualify for simplification or legislative merging into other processes without amending the Directive.
- Climate-proofing can have a high administrative burden, especially if projects are small or only contain a small infrastructure component.

7.3.3 Practices by Member States

Based on interviews conducted with stakeholders in various Member States, we have identified a number of practical solutions that have been applied so far to ease some of the administrative burden or overlaps potentially present in the various tools.

Czech Republic: streamlining DNSH and climate-proofing

In the Czech Republic, national authorities have initiated a process to incorporate both DNSH and climate-proofing into their decision-making process by designing a Technical Support Instrument

²⁴⁷ In the context of RRF, some form of streamlining has already been applied. The Commission considers the application of the Technical guidance on sustainability proofing for InvestEU (2021/C 280/1), in combination with application of the relevant implementing partner's policies related to implementing the InvestEU Fund sufficient to prove the absence of significant harm. Further provisions are set out in Commission notice (C/2023/111).

project²⁴⁸. The initiative resulted in a set of guidelines for the application of DNSH and climate-proofing in funding under RRF and Cohesion policy.²⁴⁹ The guideline includes steps that could be taken to 'feed in voluntary climate-proofing' into the steps to ensure DNSH compliance. These guidelines can be used by managing authorities and potential beneficiaries of the funding. The project consisted of a comprehensive set of steps to analyse the use of DNSH and climate-proofing, develop and disseminate the guidelines, and then support the implementation of the guidelines. As a result, these guidelines are now in use, giving the managing authorities and funding beneficiaries a practical tool that helps them align funding decisions and project monitoring with both DNSH and climate-proofing.

Spain: streamlining DNSH, climate-proofing and SEA

Similar to the Czech Republic, in Spain national authorities developed guidance for the implementation of DNSH, climate-proofing as well as Strategic Environmental Assessments²⁵⁰. For DNSH, orientations on the implementation of DNSH were drafted to ensure homogeneous implementation on 20 ERDF programmes, and to identify main instruments to justify compliance with DNSH conditions. In parallel, a methodological note was developed to support the implementation of climate-proofing. The main component here was the development three tools for small infrastructure projects: buildings, water and urban projects.

Hungary: Sustainability mentoring for smaller projects as part of DNSH compliance

In Hungary, sustainability mentoring is prescribed for smaller projects (of up to €1.25 million) as a mitigation measure for SMEs in the DNSH analysis conducted by the Economic Development Programme, as a manner of simplification. This is, however, not the only DNSH, climate or horizontal requirement addressed towards the SMEs in general. The actual requirements depend on the actual call, the eligible operations, activities.

Hungary: Approach to climate-proofing

In Hungary, climate-proofing is based on the Commission's guidance as a standard approach. There is also a simplified climate-proofing assessment, which is basically used in cases where the development is not essentially an infrastructure investment, but small-scale, complementary infrastructure investments are also supported, so that the development will certainly not result in significant greenhouse gas emissions above 20,000 tonnes of carbon dioxide equivalent per year. For this reason, the simplified assessment focuses in particular on the adaptation to climate change. However, the standard approach, which is the primary climate-proofing method for infrastructure projects, is expected to cover both a climate adaptation and a mitigation assessment.

Italy: Streamlining the application of climate-proofing and the links between climate-proofing, SEA and EIA

In Italy, national climate-proofing guidelines were released in October 2023,²⁵¹ clarifying the scope of application by 182 Intervention Fields (of Annex 1 of CPR 1060/2021). For each of the intervention fields, it was decided whether climate-proofing was required or not (or to be determined). With this guide, the issue of defining what constitutes 'infrastructure' is addressed.

²⁴⁸ Presented at an ENEA-MA meeting in Madrid on 24 October 2024.

²⁴⁹ See: https://vlada.gov.cz/assets/evropske-zalezitosti/aktualne/1_DLV-5_Managing-authorities-guidelines.pdf by Trinomics, 2024.

²⁵⁰ Presented at an ENEA-MA meeting in Madrid on 24 October 2024.

²⁵¹ [Dipartimento per le politiche di coesione e per il sud - Verifica climatica dei progetti infrastrutturali finanziati dalla politica di coesione 2021-2027](#).

Generally, climate-proofing is not required for projects regarding investments not indicated as 'infrastructure' in Art. 5 of ERDF Regulation. Those projects shall not include interventions for new establishments/buildings and/or for 'major renovations'. Therefore, climate-proofing is required for projects regarding the realisation of new buildings/establishments or 'major restructuring' of existing buildings/establishments (major restructuring cases are identified in relation to: energy purposes, with at least 25% of the total building surface area involved; anti-seismic or other purposes, with at least 25% of the total volume affected).

Italy is also working on national guidelines on integrating climate-proofing with SEA and EIA. The main goal is to provide climate-proofing evaluation within the scope of the SEA, also including the impact of climate change on the infrastructure foreseen by the plan/programme, resulting in an improved quality of SEA (see case study 2, in section 7.4). For projects requiring an EIA, climate-proofing can be fully integrated within the EIA using the guidelines. In both cases, the non-duplication principle of environmental assessment procedures is applied.

7.3.4 Recommendations

In terms of solutions for the identified challenges, we provide two suggestions for potential ways forward that can be considered to streamline the tools further.

Over time, streamline DNSH, climate-proofing and sustainability proofing

The partially overlapping focus between climate-proofing and DNSH represents one key challenge. A similar conclusion is drawn for sustainability proofing and DNSH. Climate-proofing and (the climate mitigation and adaptation dimension of) the DNSH principle have overlaps both in required appraisal information and in the scope of the tools. One of the main contributing factors to the challenge of implementing both simultaneously is the lack of clear and official guidance on DNSH compliance across the various EU funding programmes with a wide sectoral coverage.

According to the Financial Regulation, DNSH will be applied in the next MFF where feasible and appropriate in accordance with the relevant sector-specific rules. Where DNSH will indeed be used, we recommend streamlining the application of DNSH, climate-proofing and sustainability proofing, potentially in one single tool and operational process, and supported by new horizontal guidelines. Streamlining could also include properly defining infrastructure or infrastructure components so as to prevent disproportionate administrative burdens.

Consider simplifying sustainability and climate proofing for small investments

Should sustainability proofing and climate-proofing continue to be operated in their own right, we recommend a simplified approach for small investments. Currently, sustainability proofing is required for all investments of at least €10 million. When compared to large infrastructure projects, this might be considered a relatively small amount, leading to a disproportionate administrative burden. Stakeholders indicated that in some cases they refrain from applying for guarantees under InvestEU because of the high administrative burden associated with sustainability proofing. There is a simplified way of applying sustainability proofing (when the investment is considered for 'general purpose', paragraph 2.7 of the [Sustainability Proofing Guidance](#)), but this does not apply for investments in concrete assets, etc.

To decrease administrative burden and ensure InvestEU also remains accessible to smaller investors, it might be useful to consider to either raise the threshold for application of sustainability proofing or to apply the simplified format now associated with general purpose financing to relatively small investments. It should be noted that the economic value of an investment may not always properly indicate the importance of ensuring climate resilience, but it might make a start of relieving

the administrative burden. A similar approach could be developed for climate proofing. Further analysis would be needed to check if (or in which cases) this would be compatible with the broad application of DNSH as included in the Financial Regulation and what impacts such a change could bring.

7.4 Case study 2: Green mainstreaming tools at the programme level: DNSH & SEA

7.4.1 Introduction to the case study

This case study focuses on the overlaps and added value of mainstreaming tools used at plan or programme level: SEA and DNSH.

To identify recommendations to reduce the potential inefficiencies of the tools and strengthen their added value, we combine the intervention logics of the tools with practical insights from stakeholders. Both SEA and DNSH are mainstreaming tools to ensure that the undertaking of plans/programmes promotes sustainable development and do not harm the environment. However, as explained below, there are differences between the two tools.

Box 7.1 Differences: SEA and DNSH

A major difference between the two mainstreaming tools is that the execution of the Strategic Environmental Assessment is a self-standing obligation linked to the environmental assessment of plans or programmes that fall under the SEA Directive, as explained in section 7.1, which also exists outside the context of mainstreaming in EU funds. DNSH, on the other hand, serves more specifically as a mainstreaming tool within the EU funding context. Further, both mainstreaming tools vary in terms of scope, coverage of the environmental aspects and assessment itself. In terms of scope, the SEA assesses the general impact on the environment, such as climatic factors, biodiversity, water and air. Besides the general environmental impact, in the SEA also aspects like human health and cultural heritage are taken into account. With the DNSH assessment, the potential significant harmful impacts on the six environmental objectives, as stated in Article 9 of the Taxonomy Regulation, are checked. Therefore, specific environmental pillars, such as climate adaptation, climate change mitigation and the transition to the circular economy are considered as well with DNSH during the preparation of a new plan/programme. Nevertheless, for the DNSH assessment, information from the SEA may be used as evidence or verification of alignment with the DNSH principle. Both tools vary in terms of assessments as well. With the SEA, the outcomes of the environmental report have to be taken into account during the preparation and decision-making process (mitigation measures are identified), while the DNSH focuses on ensuring that a measure/type of action does not cause significant harm to any of the six environmental objectives. If such harm is likely to occur, a measure/type of activities should be excluded from a plan/programme. Lastly, the SEA Directive requires the consultation of the public on the environmental report as part of the programme development process. The DNSH assessment, on the other hand, does not require a consultation process.

Currently, there are no formal guidelines on how to apply DNSH and SEA simultaneously at programme level. For those authorities that wished to rely heavily on the SEA as part of their justification of compliance with the DNSH principle in the context of Cohesion policy, informal suggestions of the Commission included, for example:

- Adding an additional section/chapter within the SEA report on compliance with the DNSH principle (if the report has not been finalised yet and the procedure is still ongoing);
- Linking the SEA assessment to DNSH criteria available for specific activities or measures under Taxonomy Delegated Acts or available Commission DNSH Guidance (for example, are such criteria complied with for the planned measures under the plan/programme);

- Adding specific considerations on how the DNSH was complied with, in the light of the information and assessment under the SEA report;
- Preparing a summary paper/table outside the SEA report (esp. if the SEA report or the procedure has been already finalised) explaining to what extent the SEA assessed the 'types of activities' with regards to their potential to do significant harm to the six environmental objectives under the Taxonomy Regulation.

7.4.2 Experiences by users of the selected tools

Even though SEA and DNSH address similar goals, the differences between the two tools pose some challenges for several Member States.

The main barrier is the lack of guidelines for the systematic integration of the DNSH and SEA application. A potential cause of this is the difference in level of (legal) establishment of guidance of both tools - the SEA is legislated by an EU Directive and translated into national legislation. Therefore, this type of assessment is already well established in EU Member States. DNSH on the other hand, is in its early stage of application and experience needs to be collected to fully exploit its potential in practice.

7.4.3 Practices by Member States

Some Member States have developed tailor-made approaches to reduce the administrative burden and barriers when using both the tools simultaneously:

- In Slovenia, the assessment process is organised with a view to preventing double assessment (for example, relevant SEA parts are used in DNSH to avoid duplication).
- In France, a national framework has been developed²⁵², in which the DNSH's scope of assessment for programmes will be limited from six to two objectives: adaptation to climate change and transition to a circular economy. The other four objectives are estimated to be covered within the scope of the SEA in France.²⁵³
- In Italy, guidelines have been prepared to integrate DNSH in SEA for almost all programmes. In addition, a monitoring approach will be implemented in the near future, to investigate the value of using both SEA and DNSH.²⁵⁴

²⁵² France's general approach for DSNH is described in section 4.1.3 of the [Vademecum de gouvernance et de mise en oeuvre des fonds européens 2021-2027](#). It refers to a national methodology for DNSH but this document cannot be accessed without special authorisation.

²⁵³ See: https://ec.europa.eu/newsroom/repository/document/2024-21/C4T_ASB_Knowledge_Piece_DNSH_Principle_YKHNFkUEWISzxCM85UGHU9CXda_105338.pdf

²⁵⁴ In the case of Italy, guidelines on 'Implementation of the Horizontal Principle DNSH (Do No Significant Harm Principle) in the programs co-financed by the Cohesion Policy 2021-2027' -prepared by the Department for Cohesion Policies and for the South and the Presidency of the Council of Ministers, in collaboration with the Ministry of Environment and Energy Security- were released on 7th December 2021. These guidelines provide clear indications to the Managing Authorities of co-financed programs on how to integrate the DNSH principle evaluation within the SEA.

Box 7.2 Overview of DNSH and SEA guidelines Italy

To combine the SEA and DNSH assessment, several steps are explained in the [Guidelines of the Department for Cohesion Policies of Italy](#):

- In the scoping phase of SEA, actions that may have a significant impact on the environmental objectives of the DNSH principle are identified. In addition, activities that harm the environment are excluded;
- DNSH criteria are developed within the SEA as part of the SEA methodology;
- In the SEA environmental report, both the DNSH findings and potential mitigation measures are included;
- The documentation for decision-making is streamlined; DNSH findings are mentioned in a separate section in the conclusion of the environmental report.

In case a strategic environmental assessment is finished, DNSH should be evaluated separately.

7.4.4 Recommendations

Our analysis shows that at the plan or programme level the two instruments DNSH and SEA partially overlap in their scope and operational intervention logic, and that, partly as a result of this, stakeholders may struggle to apply both tools in an efficient manner.

To ensure an efficient application of both DNSH and SEA, synchronise their deployment and avoid the duplication of results, new targeted guidelines or an explanatory note (different from the existing SEA Guidelines) could be developed. Such guidelines or explanatory note should provide insight into how both tools can and should be used jointly in a way that prevents double work; provide clearer definitions regarding the scope of application; coordinate the timing of both assessments to ensure their mutual reinforcement; allow for evidence-based conclusions on possible exclusions of measures or types of activities; and provide recommendations to ensure a high level of climate and environmental ambition for measures or types of actions included in a plan or programme. Member States' initiatives, such as the guidelines developed by the Italian government mentioned above, could be used as good practices to inform such guidelines.

This solution would be relatively easy to implement, as no changes in legislation are required. On the other hand, differences in scope between the two instruments would still exist. The scope of SEA goes beyond the six pillars of DNSH. At the same time SEA only looks at 'climatic factors' while DNSH distinguishes climate mitigation and adaptation. New guidelines would only establish an operational approach for efficient use of both tools, but not reconcile as such differences between the two instruments themselves.

7.5 Case study 3: Possible typology and criteria for green reforms in the next MFF

7.5.1 Introduction to the case study

In this third case study, we examine what kind of reforms in the field of climate and environment underpinned investments within the RRF and current MFF over the last years. This exercise is expected to help to identify lessons learned for the post 2027 MFF, in terms of type of reforms that may be useful as a condition for EU funding as well as criteria that the reforms should fulfil.

The main reference regarding green reforms in this case study is provided by the RRF regulatory framework and actual reforms proposed and being implemented by Member States under the RRFs. The RRF Regulation stipulates specifically that 'The green transition should be supported by reforms and investments in green technologies and capacities, including in biodiversity, energy efficiency,

building renovation and the circular economy, while contributing to the Union's climate targets, fostering sustainable growth, creating jobs and preserving energy security.²⁵⁵

The European Semester process provides further insights about reforms. It emphasises the importance of implementing structural reforms to improve the competitiveness, productivity, and sustainability of EU economies. Country-Specific Recommendations (CSRs)²⁵⁶ and National Reform Programmes²⁵⁷ are key elements of the European Semester related to reforms, including reforms in the field of climate and environment.

Another instrument that involves reforms in the field of environmental policy is the Environmental Implementation Review (EIR). The EIR is a reporting tool designed to improve the implementation of EU environmental laws and policies by Member States.²⁵⁸ It is used to identify shortcomings in implementation, with the option of the Commission offering Technical Assistance to address the main issues. The EIR works through individual country reports, which highlight the main challenges and achievements of each Member State in implementing key EU environmental laws and policies as well as suggest priority actions to improve implementation.

Furthermore, the current Cohesion policy offers additional perspectives on the implementation of 'regulatory and planning' reforms in the climate and environment sector. The experience gained from applying green 'enabling conditions' – which can be considered equivalent to 'regulatory/planning reforms' – provides useful lessons that can inform our understanding of this type of reform. The 2021–2027 Cohesion policy sets out enabling conditions that must be met in order to receive funding for investments aimed at achieving specific goals, such as the promotion of a circular and resource-efficient economy. There are seven green enabling conditions listed in Annex IV to the CPR.²⁵⁹ All green enabling conditions are linked to the implementation of certain elements of existing EU legislation or planning frameworks in the fields of climate, energy, environment and/or disaster risk reduction. Green enabling conditions apply to all Member States and hence are not tailor-made at Member State level. More detailed information on green enabling conditions is provided in Annex 15.

The importance of reforms in both supporting and being linked to investments is expected to continue in the context of EU funding beyond post 2027 MFF. This raises the question what types of 'green' reforms would be suitable to play a role in such a new design of the MFF. In this case study we assume the working definition of a reform that is currently used by the Commission services.²⁶⁰

We approach this question along two strands of work:

- **1) Typology of reforms.** We tested a given draft typology of reforms against three sources of current green reforms: green CSRs under the European Semester, green reforms in the national RRP and green reforms in the EIR. We propose amendments to the draft typology in order to

²⁵⁵ [Regulation \(EU\) 2021/241, Recital 11](#)

²⁵⁶ Country-Specific Recommendations (CSRs): Each year, the European Commission issues CSRs to individual member states, outlining the reforms and policy actions needed to address their specific economic and social challenges. These recommendations are based on a thorough analysis of the member state's economic situation, including its strengths, weaknesses, opportunities, and threats.

²⁵⁷ National Reform Programmes (NRPs): These are strategic documents that outline a country's plans and policies for implementing structural reforms to achieve specific economic, social, and environmental objectives.

²⁵⁸ See [Environmental Implementation Review - European Commission](#).

²⁵⁹ [Common Provisions Regulation 2021-2027, Regulation \(EU\) 2021/1060](#)

²⁶⁰ Commission services use the following working definition: 'A reform should correspond to a clear institutional, legislative, or regulatory change which ensures long-lasting effects on the functioning of a market, public governance, or on progress towards relevant policy objectives. Contrarily, a reform cannot simply be a promise of future action or a general and unspecified commitment. A reform can be related to implementing the existing EU acquis, but not all actions taken to implement the EU acquis can automatically be considered a reform.'

arrive at a coherent, logical typology that both covers the existing green reforms as well as reflects a useful categorisation of future green reforms. Furthermore, we provide tables containing examples of reforms for all major categories of the typology for each of the six thematic fields as used in the EU Taxonomy²⁶¹. These tables are included in Annex 16.

- **2) Design criteria for reforms.** As a second task within this case study, we propose and discuss a set of possible criteria that may be considered for selecting and designing green reforms in the context of the next MFF. These criteria should ensure that the reforms are workable, are in line with relevant EU principles and contribute to the objective of the introduction of the reforms. We propose a set of possible criteria and also indicate, to the extent possible, for each type of reform (from the first task) which criteria are expected to be met rather easily and which may form a challenge for that type of reform.

7.5.2 Typology of reforms

As a starting point for this case study, a draft typology of reforms was provided by the Commission. This draft typology distinguishes the following categories:

- **Regulatory or legislative reforms** | Changes to national legal acts, and policies that are aimed at achieving EU objectives, including environmental and climate objectives.
- **Institutional, governance or administrative reforms** | Changes to administrative structures and procedures that improve, for instance, the rule of law, the enforcement of environmental law, public participation or access to justice in environmental decision-making. Measures to improve competence and capacity-building in decision-making authorities, for example, strengthening knowledge on environmental impact assessments. Measures to simplify or accelerate administrative procedures, for example permitting, without compromising environmental safeguards.
- **Financial and economic incentive reforms** | Changes aimed at designing e.g. taxes, charges or price-measures to support e.g. environmental action and promote environmental objectives. This type of reform could also cover measures aimed at improving the sustainable finance agenda by setting incentives to attract or leverage private capital to finance the delivery of environmental and climate objectives.
- **Data monitoring and management reforms** | Changes aimed at improving data management, including gathering, monitoring and reporting and measures to ensure high quality, accuracy, transparency and availability of environmental and climate data.
- **Other reforms** | Any other category, if needed.

We have applied this typology to the three sources of existing green reforms mentioned above. In particular, we have considered:

- The CSRs under the European Semester from 2019 onwards
- An existing overview, provided by the Commission, of 373 green reforms that are included in the Member States' RRP
- The Environmental Implementation Review (EIR) of 2022.

Testing the draft typology

As a first order test on how well this draft typology works for existing green reforms, we have classified the 373 green reforms from the national RRP according to the four categories mentioned above. We have carried this out on the basis of brief descriptions of the reforms as provided in the Commission's overview, not on the basis of the elaborate reform descriptions in the RRP themselves. We decided to proceed in this way because the assignment was to test the usefulness

²⁶¹ Climate mitigation, climate adaptation, circular economy, pollution prevention and control, water and biodiversity.

of the draft typology and adjust it where needed, not to actually classify all green reforms on the basis of this draft typology. For all the 373 reforms, we assigned a category (1–4, or 5/[empty] when none of the existing categories seemed to apply). In some cases, we assigned multiple categories, as a described reform apparently included multiple types of reforms according to the draft typology.

On the basis of this exercise, we concluded that there is room for significant improvement of the draft typology. In the first place, we found that the draft typology has flaws on the practical level. This is mainly because the majority of the reforms was classified as category 1 (regulatory or legislative reforms) (ca. 50–60%), with category 2 and 3 covering smaller shares (ca. 30% and 10%, respectively) and category 4 being rarely assigned (ca. 5%). Naturally, a classification in which one category is overrepresented is less useful, as it suggests that a different classification, with other categories or sub-categories, would be able to convey more information. Looking at the definition of the first category, it is not unexpected that it turns out to be a broad one, as it not only refers to 'legal acts' but also to 'policies', which is a very encompassing category in itself. It includes reforms that are quite different in character, such as:

- The drafting of a *Soil protection strategy* to curb land use in Austria (AT 4.B.1)²⁶²;
- Implementation of a *Climate and Resilience Law* consisting of measures to reduce emissions in France (FR C2.R1); and
- *Support for the construction of onshore RES plants* in Lithuania (LT B.1.1.2 Sub-measure 2).

In the second place, we found that also on a conceptual level the draft typology has some challenges to it. This is mainly because there is no clear reason why category 3 reforms (financial and economic incentives reforms) as well as category 4 reforms (data monitoring and management reforms) could not be category 1 reforms (regulatory or legislative reforms) at the same time. Of course, not all financial incentive or data monitoring reforms have to be a regulatory or legislative reform at the same time, but this is easily possible.²⁶³

We also included the other two sources of green reforms (CSRs and EIR) in our testing process, but at a higher level, as we did not categorise all reforms from these sources according to the draft typology due to limited resources. An important observation, particularly with regards to the CSRs and to a lesser extent the prioritised actions from the European Semester's Economic Policy Guidance (EIR), is that reforms are frequently defined in overly broad terms and lack concrete specifics. They seemed to relate to a certain policy objective or ambition, rather than to specific actions that would make up the reform. As a consequence, it was sometimes challenging to decide in which category a reform would fit best.

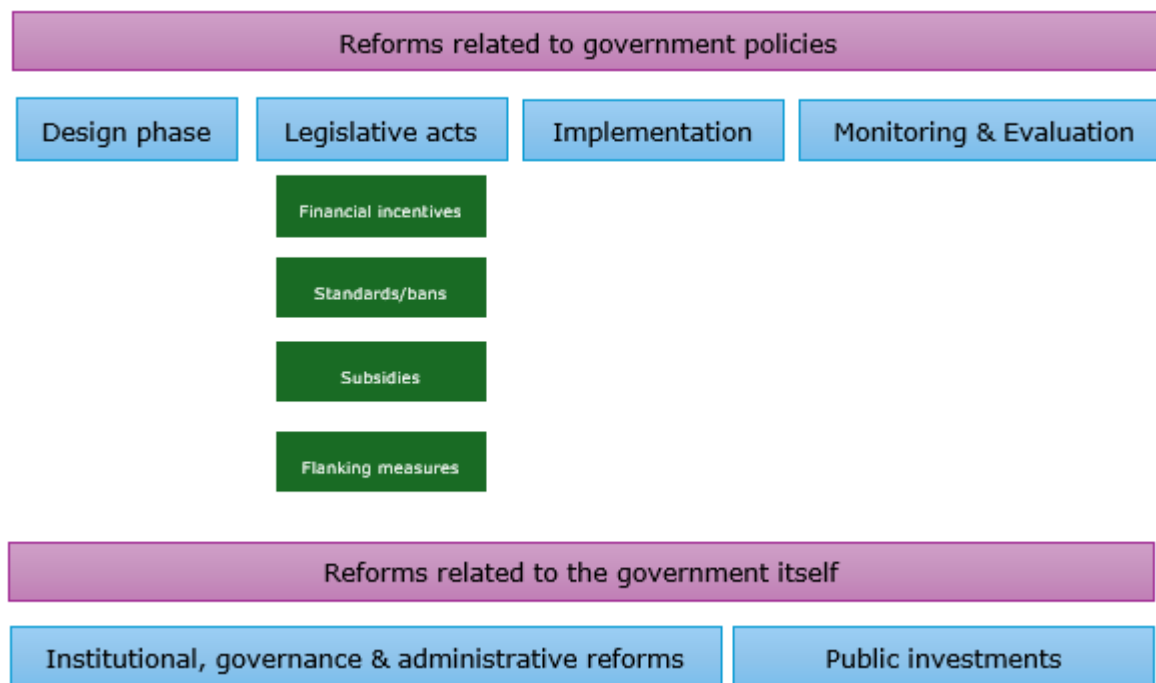
For the above reasons, we developed a proposal for an adjusted typology, which is schematically presented in Figure 7.1. Below, we explain how we arrived at this proposal.

²⁶² Here and in the remainder of this section, the codes mentioned in brackets after concrete reforms refer to the reform codes in the respective RRs of the Member State in question.

²⁶³ So, technically, we state that subsets of category 3 and 4 reforms are actually subsets of category 1 reforms, so the draft categories are therefore not mutually exclusive.

Developing an adjusted typology of reforms

Figure 7.1 Schematic overview of the proposed reform typology as explained in the main text



To tackle the practical and conceptual issues outlined above and to design an adjusted typology that is both practical and user-friendly, we started by revisiting the working definition of a reform in the context of the future MFF which is expected to be more performance-based. Reforms, where possible linked to investments, are actions, imposed on the EU Member States, that aim to improve 'the functioning of a market, public governance, or progress towards policy objectives'. By serving as a condition for the disbursement of funds, these reforms will contribute to making EU funding more effective, targeted and result-oriented.

Fundamentally, governments have the inherent ability to influence the actions of others, including citizens, companies, and entire industries, through a wide range of policy tools and mechanisms. These instruments may take the form of legislative acts or non-legislative measures and can be used to shape the behaviour of external actors. Additionally, governments can take internal actions that affect their own operations, for instance by carrying out institutional changes or undertaking initiatives led by civil servants. Therefore, we propose that the first level categorisation of an adjusted reform typology be:

- **1. Reforms related to government policies**, directed at the society and economy at large
- **2. Reforms related to the government itself**, directed at government institutions and internal processes.

This alignment is roughly equivalent to the first two categories of the draft typology, although we propose a subtle distinction. In the first category, we consider 'policies' as the core concept instead of 'regulatory or legislative reforms'. Our analysis of green reforms reveals that some initiatives such as developing a strategy or conducting a pilot project, can be considered reforms even if they do not involve regulatory or legislative changes. An example is the development of a National Hydrogen Strategy in Portugal (POR TC-r29). These types of reforms can still have a significant

impact, even if they do not fit neatly into the traditional categories of regulatory or legislative reforms.

At the second level of categorisation, we first look into the first main category which focuses on policies. As explained above, this category encompasses government policy-making that impacts all sectors outside the public sector itself. Our analysis of sources of reforms reveals that this category is quite broad, comprising a diverse range of reforms. Upon closer examination, we find that these types of reforms are related to the different phases or aspects of the policy-making process. For instance, some reforms involve the development of strategies, action plans and roadmaps etc., while others entail conducting pilots to test specific policy instruments in a controlled environment. An example for the latter is a pilot project on *the circular use of construction waste from buildings* (C6.1.R7) in Croatia.

A large share of the reforms relates to legal acts: changes in laws and supplementing regulations. An example is the *modernisation of nature conservation legislation* in Finland (P1.C5.R1).

Some other reforms have to do with implementing²⁶⁴ existing strategies or legislative changes. For instance, the EIR 2022 priority action 'Complete implementation of the Urban Waste Water Treatment Directive for all agglomerations, by building up the necessary infrastructure'.

Lastly, many of the reforms that were classified under category 3 (data monitoring and management reforms) include aspects of monitoring and evaluation, as data are often (but not exclusively) used for measuring the impact of policies in order to evaluate them. An example is *the implementation of an IT system for transport emissions* (R-3.07) in Belgium.

Therefore, we propose a further classification of 'reforms related to government policies' in four sub-categories:

- 1. Reforms related to the design of policies, related to strategies, action plan, pilots, etc.
- 2. Reforms related to legislative acts and other types of regulation that (legally) enshrine policy instruments.
- 3. Reforms related to the implementation of policies, in the sense of realising and carrying out policies on the ground.
- 4. Reforms related to monitoring and evaluation (M&E) of policies, including data collection and assessment (category 4 in the draft typology).

Often, these sub-categories represent consecutive phases of the policy-making process, but not all phases are always necessary and for our classification this time aspect is not key, as things should not be overcomplicated: we propose this classification because policy-related reforms mostly do apply to one of these four aspects, and because almost all actual green reforms in the sources we use nicely fit in one of these four sub-categories. Furthermore, in our view it has added value to explicitly list implementation and M&E as distinct categories for reforms, as these are key aspects of the policy-making cycle that are sometimes overlooked when the focus is on legislative changes.

Our examination of main category 2, which pertains to reforms within the government itself, reveals that the existing description of institutional, governance, and administrative reforms provides a useful framework for classifying reforms aimed at improving the public sector's performance in achieving green policy objectives. However, our analysis has identified a significant gap: reforms related to public investments, including public procurement, which are inherently government

²⁶⁴ Note that in the context of EU policies, the term implementation is used in two slightly different ways. Implementation can refer to the legal transposition of EU Directives into national legislation. In this case, implementation is a legal act. In a more broader sense, implementation of policies means 'carrying out on the ground what has been legislated or adopted as a policy'. In our classification, we use the latter understanding of implementation, which we distinguish from adopting legislative changes in the first place.

actions, are not adequately captured by the current terminology. To fill this gap, we propose adding public investments as a separate subcategory within category 2.

- 1. Institutional, governance or administrative reforms
- 2. Public investments

Thus, we have arrived at a typology of two main categories and six sub-categories in total, instead of the four or five categories of the draft typology. In our view, this typology both classifies the existing reforms in a sensible way and reflects a logical way to classify future reforms. Still, category 1.2, on legislative acts, covers a relatively large share of the reforms. Many of the existing reforms boil down to enshrining a certain policy change into legislation or supplementing regulation, and it can be expected that this will also be the case for future reforms under the next MFF. Therefore, a further distinction might be considered just for this category, in which the legal green reforms are subdivided according to some principle. We stress that this could be done in several ways, and here we just present one suggestion, reflected in the green boxes in Figure 7.1.

Our proposal for this third level of categorisation is to look into the types of greening policies that can be distinguished. Building on consortium knowledge as well as literature,²⁶⁵ we propose the following four types of green policies that need a legal basis:

- 1. Taxes, carbon pricing and other financial incentives
- 2. Standards and bans
- 3. Subsidies and other financial support on innovation and application of green technologies
- 4. Flanking measures, such as regulation of markets.

The first of these sub-categories would more or less coincide with category 3 of the draft typology.

In Annex 16, examples are included of reforms for the six sub-categories we have developed, for each of the six thematic areas of the EU Taxonomy (where applicable). We did not include specific examples for the potential last level of classification of legislative reforms discussed above.

7.5.3 Criteria for green reforms

In developing our revised typology of reforms, we have already considered what would constitute a practical and user-friendly framework for application in the next MFF. However, not any reform that would fit in a certain category of reforms, would be automatically suitable for the purpose of making the next MFF more performance-based. Reforms should also meet certain criteria. Here, we develop a first assessment of how these criteria may look like. We also briefly discuss, where applicable, to what extent reforms of certain categories are likely or less likely to meet the criteria.

Proposal for criteria

We distinguish the following potential three main criteria. They are listed in order from high-level and conceptual towards more concrete and practical. They can each be worked out in several sub-criteria.

1. Alignment with the relevant principles of the functioning of the EU.

Until now, disbursements of EU MFF funds towards Member States have not been conditional on (green) reforms. For the ERDF and the Cohesion Fund, green enabling conditions are in place, but these are not tailor-made for Member States and reflect implementation actions that are already required under the EU acquis. Performance-based funding was introduced in the RRF, but this is a

²⁶⁵ E.g. [CE Delft \(2024\) Synthesis Report Climate Policies](#) & [Goerlach B. et al \(2022\), Policy towards a Climate-Neutral Europe. 4i-TRACTION Deliverable 4.1. Ecologic Institute, Berlin.](#)

one-off facility funded outside the MFF. Linking disbursement for MFF funding explicitly to the achievement of reforms, measured by targets and milestones, would be a novelty for the EU.

In order to ensure both legal soundness and political backing, the required reforms should be in line with the relevant principles of the functioning of the EU, such as distribution of competences, and the principles of subsidiarity and proportionality, but also the Better Regulation agenda. This would ensure that when the European Commission and the Member States agree on reforms that should be carried out by the latter, the same principles apply as in usual EU policy development.

2. Alignment with the objectives of the performance-based MFF.

This is an overarching criterion that makes sure that the reforms fit well in the theory of change that is envisaged with developing a more performance-based MFF as well as in the working definition of a reform referred to above. It can be translated in the following concrete criteria:

- **Ease of linking the reform to investments.** As in the RRF, reforms are linked to effective investments where possible. Linking can occur in several ways, e.g. a reform may need a certain amount of investment to be executed (e.g. Reform of the Primary Health Care System (measure ID: 16755) in Greece) or a reform may induce investments (e.g. the Spanish 'Sustainable Forest Management' reform (SPA C4.I4), which includes the purchase of 100 special purpose firefighting assets, among other things). Therefore, this criterion includes direct investment costs of reform as well as incentivising and facilitating investments. To be sure, not all reforms are suitable for establishing a link to investments, so this criterion should not be a knock-out, but rather be applied where appropriate.
- **Contribution to green policy objectives of the EU and the Member States.** In the end, reforms are supposed to bring policy objectives closer to achievement. For green reforms, this applies (at least) to policy objectives in the six policy areas of the EU Taxonomy. It should be made clear how the reform and/or its related investment would contribute to established policy objectives. This criterion also includes the contribution to institutional and administrative capacity in these areas, as this indirectly also helps achieve the policy objectives.
- **Consistency with other policy objectives of the EU and Member States.** If a green reform is inconsistent with other policy objectives, a trade-off needs to take place, also taking into account reforms in other policy areas.
- **Additionality of the reform.** As mentioned in the working definition of a reform, a reform can be related to implementing the existing EU acquis, but not all actions taken to implement the EU acquis can automatically be considered a reform. If possible, the reform should go beyond implementation of minimum requirements and/or add something to other instruments that are in place to bring the policy objectives closer. Additionality is not a knock-out criterion for all reforms, as some reforms can indeed be linked to the implementation of existing legislation, and should be applied where appropriate.
- **Synergies achieved by the reform.** It would be advantageous if a reform would support the achievement of several policy objectives in different areas at the same time. For instance, a reform related to e-vehicles could enhance climate mitigation and air quality at the same time.

3. SMART-ness of the reform

This is an overarching criterion that makes sure the reform can be implemented practically on the ground. It can be operationalised through specific criteria such as the ones provided by the SMART approach:

- **Specific.** This means the reform should have a sufficient **level of concreteness**. A reform should involve one or more concrete actions, such that it is clear when the reform has been carried out. Currently, in particular the CSRs are formulated in a very high-level way, for example 'improve energy efficiency' (AT, 2023) or 'Promote reform and investment on sustainable water and waste management and the circularity of the economy' (HU, 2022).

- **Measurable.** Linked to the previous criteria, it should be easily possible to **monitor** to what extent the reform has been carried out. Therefore, the description of the reform should include certain targets and/or milestones. Preferably, also the outcomes and/or results of the reform should be measurable, but the extent to which this is possible will vary greatly with the type of reform.
- **Achievable.** The reform should be realistic and achievable within the given context and timeline. This applies to the Member State government involved as well as other stakeholders that have to play a role in carrying out the reform.
- **Relevant.** A reform should have a clear added value and objective. This also relates to the criterion of contributing to green policy objectives presented above.
- **Time-bound.** Ideally, all reforms should also include a timeline, as is the case in the current RRP. This is crucial for an effective use of reforms (in particular: targets and/or milestones) as a condition for disbursement of MFF funds towards Member States.

In Table 7.1 we included for most criteria one example of an existing reform that is scoring well against the criterion.

Table 7.1. Examples of reforms in line with proposed reform criteria

First level criteria	Second criteria	level	Reform code ²⁶⁶	Content of reform
Alignment with the relevant principles of the functioning of the EU			IT-C[M3C2]-R[R1.3]	Simplification of the authorisation procedures for cold ironing plants (in line with better regulation)
Alignment with the objectives of the performance-based MFF	Ease of linking the reform to investments.		PT-C[C14]-R[r29]	Create a national hydrogen strategy
	Contribution to green policy objectives of the EU and the Member States		FR-C[C2]-R[R1]	Establishment of the Climate and Resilience Law
	Consistency with other policy objectives of the EU and Member States		LT-C[C2]-R[B-1-2-.B-1-2-1-]	Support for the purchase of clean vehicles by the public sector and business (in line with health policy objectives)
	Additionality of the reform		FI-C[P1C5]-R[R1]	Modernisation of the nature conservation legislation
	Synergies achieved by the reform		LT-C[C2]-R[B-1-2-.B-1-2-1-]	Support for the purchase of clean vehicles by the public sector and business (scoring well, synergy between climate and (air) pollution)

²⁶⁶ Refers to the reform codes as included in the RRP of the Member State in question

First level criteria	Second criteria	level	Reform code ²⁶⁶	Content of reform
SMART-ness of the reform	Specific (Level of concreteness)		ES-C[C28]-R[R4]	Creation of a multimodal public transport network in the Riga metropolitan area, including a single and coherent timetable, a single price and discount policy and a single ticket system
	Measurable (Ease of monitoring)	(Ease of monitoring)	LV-C[C1]-R[1-1-1-r-]	Reform of tax measures contributing to the ecological transition
	Achievable	-		Depends on context
	Relevant	-		Depends on context
	Time-bound		All RRP reforms	All reforms in the RRP have a set timeline for targets and milestones

Linking criteria and the typology of reforms

Lastly, we briefly discuss the interlinkages between the proposed typology of reforms and the criteria above. For each of the six sub-categories of our typology (see Figure 7.1), we highlight which criteria may be particularly easy or may be challenging to achieve. This is not an exhaustive overview; we focus on the most pronounced relationships, and in some cases there is no particular relationship to be expected.

Design phase of policies (1.1): As this category includes the drafting of strategies and roadmaps, etc., it is relatively easy to link the reforms in this category to **investments** and to **synergies**, as these documents are broad and can link to several policy objectives. For instance, reforms and investments are clearly linked through the Forest Strategy and Forestry Plan of Spain (SPA C4.R3). On the other hand, a **high level of concreteness** and **monitoring** can be a challenge, because if the reform only checks whether a plan or strategy has been drafted or updated, the quality and usefulness of the content is not guaranteed.

Legislative reforms (1.2): Legal acts or other regulations may be relatively hard to link to **investments**, as they can reflect formal legal changes without a clear perspective of investments. As mentioned above, this is not necessarily a problem, as not all reforms do incentivise or facilitate investments by their nature. On the other hand, legislative reforms easily comply with a **high level of concreteness, being measurable and time-bound**.

Implementation (1.3): Typical for the category of policy implementation is that it may be relatively hard to guarantee **additionality**, as implementation of EU or national legislation is required by definition, even though it might take time, political traction or require capacity-building. Also **monitoring** may be a challenge here, as implementation can have many aspects, not all of which can easily be measured.

Monitoring and evaluation (1.4): This category scores high on the **contribution to green policy objectives**, as this is basically what M&E reforms are supposed to deliver. Reforms in this category are less easily linked to **investments**.

Institutional, governance and administrative reforms (2.1): These types of reforms can be relatively hard to **measure**. Also, a clear **timeline** may be under pressure, as institutional and administrative changes typically take a long time to materialise.

Public investments (2.2): This reform is relatively easy to **measure**, and also the **level of concreteness** is expected to be sufficient, as it can be made very explicit what types of goods should be procured.

7.5.4 Recommendations

This case study offers a tentative reform typology and a set of reform criteria. For easy reference, the typology and criteria are summarised below.

Typology

1. Reforms related to government policies
 - a. Design phase
 - b. Legislative acts and regulations
 - c. Implementation
 - d. Monitoring & Evaluation and data management
2. Reforms related to the government itself
 - a. Institutional, governance and administrative reforms
 - b. Public investments

Category 1b, on legislative acts and regulations, is still a broad category and may be further subdivided. One option to do so is to classify different types of green policies that need to be (legally) established, for instance:

- Financial incentives
- Standards and bans
- Subsidies and other types of financial support
- Flanking policies.

Criteria

1. Alignment with the working principles of the EU, such as division of competences, proportionality and subsidiarity and the Better Regulation agenda.
2. Alignment with the objectives of the performance-based MFF
 - a. Ease of linking the reform to investments (where appropriate)
 - b. Contribution of the reform to EU and MS green policy objectives
 - c. Consistency with other EU and MS policy objectives
 - d. Additionality of the reform (where appropriate)
 - e. Synergies achieved by the reform
3. SMART-ness of the reform (implementability)
 - a. Specific, having a sufficient level of concreteness
 - b. Measurable, with the reform being easily monitored
 - c. Achievable by the Member State and relevant stakeholders
 - d. Relevant in terms of objectives and added value
 - e. Time-bound, with a timeline for targets and milestones.

7.6 Case study 4: Green mainstreaming by financial institutions and third-party implementers

7.6.1 Introduction

Several interviews were conducted to collect information on the mainstreaming approaches and tools being used by financial institutions and third-party implementers of EU funding. The organisations and specific tools under analysis are summarised in the table below. Their experience could provide us with potential 'out-of-the-box' solutions for challenges related to the tools addressed in the case studies and to the EU's mainstreaming toolbox as a whole.

A wide variety of tools have been developed to contribute to the mainstreaming of climate and environmental objectives in EU funds and programmes. The main challenge for the identification of tools not used in the framework of EU funds was to target those that could provide useful examples and inspiration, or that could even be replicated in the EU context. Hence, it was decided to narrow down the analysis to the tools developed by large organisations managing important funds with a certain level of complexity. In this way, the tools identified mostly originate from international organisations, mainly multilateral and bilateral development agencies, and international financial institutions.

The scope of the analysis for non-EU organisations was refined all along the project deliverables. The lack of a clear definition of what constitutes a mainstreaming tool was a limiting factor to elaborate a well-defined methodology for the selection of the tools. The process for identifying tools was therefore based on the same principles used to categorise EU mainstreaming tools, namely: tool level and tool phase. In addition, rather than focusing solely on mainstreaming tools or processes, it was agreed to proceed with a more high-level approach in order to better understand the green mainstreaming architecture currently in place in different organisations. Hence, the interviews focused to a large extent on understanding the context, organisation and main challenges of the development of an efficient green mainstreaming architecture in the different institutions and organisations under analysis. In the next phase, the study looked deeper into specific mainstreaming tools that had been identified as relevant, conducting a more in-depth examination of these tools.

Table 7.2 Organisation and scope of the analysis

Organisation	Scope of the analysis	Tool level	Tool phase
European Bank for Reconstruction and Development (EBRD)	Monitoring & Evaluation tools and Measurement, Reporting & Verification system	Project	Monitoring
European Investment Bank (EIB)	- EIB Green Gateway - Green Eligibility Checker Tool	Project	Preparation/design; implementation
French Development Agency (AFD)	Sustainable Development Analysis & Opinion mechanism	Programme; Project	Preparation/design
German Development Cooperation Agency (GIZ)	Climate-proofing methodology	Project	Preparation/design
International Development Finance Club (IDFC)	Biodiversity Toolbox mainstreaming tool	Programme; Project	All

A comprehensive analytical framework was subsequently developed to inform the analysis of the selected use cases. This framework consists of four key dimensions, each aligned with specific research questions that served as a basis for conducting in-depth interviews.

Box 7.3 Analytical framework developed for the analysis of mainstreaming practices of financial institutions and third-party implementers.

Q1. *Mainstreaming architecture and toolbox*

- What is the mainstreaming architecture contributing to climate and environment objectives currently in place within their organisation? Does it apply to one specific intervention sector or is it cross-sectoral?
- Do they deal with a high number of different mainstreaming tools related to climate and environment within their organisation, and resulting overlaps, or did they manage to keep the number of tools very small? If so, how do these tools work/look like?

Q2. *Typology of tools*

- Do they deploy tools for different budgeting phases? For example, not just set spending targets for climate at the start and defining to what extent each project contributes to the target, but also monitoring and evaluation whether these projects in the end really contributed to climate objectives as promised?
- Do their tools clearly distinguish between what the money should *achieve* (e.g. emissions reduction, more biodiversity) and what the money should *not* do (causing harm, negative side effects etc.)? If so, is this included in the same tools, or do they use different tools for these two functions?

Q3. *Practical use of mainstreaming tools*

- Do their beneficiaries experience a high administrative burden from their mainstreaming tools for climate and environment? How do they explain the rationale and added value of their tools to beneficiaries and partners?

Q4. *Link to EU policies and standards*

- Do they make use of concepts developed by the EU, for instance the Taxonomy, or references to other EU policies or standards?

Although the analytical framework was used to organise the collection of the information in a homogeneous way, it became clear as the work progressed that two specific components should be further investigated for the selected organisations to inform the EU green mainstreaming practices:

- A first component (section 7.6.2) looks at good practices on simplification of the mainstreaming architecture. As identified in section 7.2 and across the different case studies, one of the key challenges for the EU seems requiring more efficiency in the practical implementation of its mainstreaming toolbox as a whole. Many different tools and mechanisms exist but there is a need to find ways to avoid overlaps and improve synergies. Some good practices can be drawn from financial institutions and third-party implementers, notably from the French Development Agency (ADF) and the EIB.
- A second component (section 7.6.3) focuses on exploring initiatives from financial institutions and third-party implementers in setting up monitoring, evaluation and learning (MEL) systems to improve the achievement of climate and environmental outcomes. The study found that an over-emphasis on financial targets, a common trend in the EU and beyond, can have significant implications for the success of development projects, undermining both their relevance and potential for meaningful impact.²⁶⁷ Rather, there is a need to better evaluate additionality and impact of mobilised financial flows to achieve larger scale impact more efficiently. Good practices from the European Bank for Reconstruction and Development (EBRD) and AFD can be obtained here.

7.6.2 Good practices on simplification of the green mainstreaming architecture

The organisations we assessed employ a range of tools, approaches, and processes to integrate climate and environmental objectives into their investments and funding mechanisms. Overall, it

²⁶⁷ OECD. (2023). Lessons from Evaluation: Rapid Review of Bilateral Climate Finance Evaluations. DAC Network on Development Evaluation. DCD/DAC/EV(2023)1. See: <https://one.oecd.org/document/DCD/DAC/EV%282023%291/en/pdf>

was found the organisations adopt a combination of three types of mainstreaming approaches, under which are being developed and used a variety of tools: a strategic or programmatic approach, a technical approach (at programme or project level), and an operational approach. They are further detailed in the Box below.

Box 7.4 Typology of green mainstreaming approaches.

- **A strategic or programmatic approach** to green mainstreaming, by setting up specific funding programmes or facilities dedicated to fund green activities directly, e.g. directing funding towards green intervention sectors such as climate adaptation, nature restoration etc., or indirectly, e.g. development of public policies, support in mainstreaming green approaches into 'grey' projects. An example could be the CICLIA facility, set up by the French Development Agency in 2016. CICLIA facility supports African cities in the preparation of low-carbon and resilient urban projects.²⁶⁸ More specifically, CICLIA funds studies and technical assistance in all areas of the sustainable city to assist African local authorities in developing projects that contribute to tackling climate change.
- **A technical approach** to mainstreaming through the development of frameworks, sets of rules or criteria, specific requirements, against which investments' portfolio, programmes or projects are assessed to evaluate the extent to which they align with climate and environmental objectives. Typically, each of these frameworks requires the development of specialised tools to conduct assessments. This approach to mainstreaming can be split into two separate ones: a programme-level approach and a project-level approach to mainstreaming.
 - The **programme-level approach to mainstreaming** is usually applied to set out general objectives, to define principles or criteria, or to monitor and evaluate the programmes or investment portfolios' alignment with social, environment and climate objectives. It aims to achieve the target objectives at the portfolio level. This includes e.g. climate and environmental strategies and policies, strategic environmental assessments, standards (aligned with e.g. EU or international standards), exclusion lists and negative screening etc. Other strategies include for instance funding agreements established with counterparties with legally binding commitments to include mainstreaming practices in project implementation.
 - The **project-level approach to mainstreaming**, typically mobilised by public financial institutions, is oriented around project-level assessments to ensure that new financing activities fully align with climate and environmental objectives. Specific toolboxes are developed within each service, department, or programme of the organisations, and tailored to the types of projects funded. These tools comprise e.g. screening tools to conduct environmental impact assessments, climate risks assessments or carbon footprint analysis, performance requirements (e.g. EBRD's 10 performance requirements²⁶⁹), concept notes, monitoring and evaluation tools with tailored and aggregated indicators, due diligence processes etc.
- Lastly, **an operational approach** to green mainstreaming appears to be increasingly undertaken by financial institutions. This approach rather focuses on moving from the development of frameworks, standards, and criteria – as described above – to their concrete implementation by the organisations, their intermediaries, or their final beneficiaries. The idea is to support the operationalisation of these instruments by improving their uptake. The tools developed under this approach include e.g. the delivery of trainings, advisory services, technical assistance, etc.

Across these different approaches to green mainstreaming, similar challenges to those experienced within the EU could be identified. The proliferation of green mainstreaming tools in recent years has resulted in a complex landscape, with many interviewees highlighting the issue of overlap between different tools. In response, numerous institutions are now seeking to streamline their different approaches across their funds or programmes to ensure a higher degree of coherence. These efforts can be characterised as simplification processes, designed to reduce complexity and improve the

²⁶⁸ AFD, CICLIA Facility. See: [CICLIA : Cities and Climate in Africa | AFD - Agence Française de Développement](#).

²⁶⁹ EIB, Performance Requirements. See: [How to implement our performance requirements \(ebrd.com\)](#).

overall effectiveness of mainstreaming strategies. Two examples of such approaches are developed in this section.

Simplification through integration: the *Sustainable Development Analysis & Opinion Mechanism* by the French development agency (AFD).

The first approach to simplification of the green mainstreaming architecture focuses on integrating several aspects of sustainability as well as existing tools covering these aspects into an overarching framework. By putting such a framework in the centre of decision-making, the mainstreaming process can be simplified while at the same time it delivers a more integrated approach of the various aspects of sustainability.

As an example of this approach, we look into the Sustainable Development Analysis & Opinion Mechanism²⁷⁰ (in short: Sustainable Development Mechanism, SDM) developed by the AFD, which is a strong illustration of a strategy to progress toward more integration. It was set up by the French development agency to cover the several dimensions addressed by the pre-existing sectoral mainstreaming tools. The objective of the mechanism is to perform an analysis and rating system and to qualify each project's contribution to the Sustainable Development Goals (SDGs) across six pillars (biodiversity, climate mitigation and climate adaptation, social ties, gender, economy and governance). The adoption of the tool aimed at mainstreaming more effectively sustainability challenges into all of its financing operations. The SDM tool bears resemblance to the EU DNSH principle and mechanism. Nevertheless, the SDM has distinguished itself as the overarching tool for all AFD projects and financing, and act as a 'sustainable development watchdog' in a systematic and integrated manner. In 2021, AFD launched a project to converge all tools for sustainable development analysis that the group and its subsidiaries (e.g. Proparco and Expertise France) had developed so that they could be more coherent. To this end, AFD Group adapted the SDM to the specificities of their respective activities, partners, clients and financing and in 2023 a common framework for all was adopted. It is expected that the framework will help drive greater impacts for financed operations and strengthen the Group's coherence and accountability.

The SDM process begins right from project identification, based on dialogue with the concerned partner or client, and continues throughout the entire project life cycle: project appraisal; financial approval; contractualization; project implementation; evaluation. The process is two-fold:

1. The sustainable development analysis. A preliminary analysis is performed by the AFD team in charge of financing appraisal in order to assess the anticipated impacts *ex ante*. This analysis informs the dialogue with AFD's partners and clients concerning the project's content and impacts. It is based on a rating of the project's expected effects using a progressive scale of impacts from a negative impact (-2 if significant, -1 if residual), neutral (0) or positive impact (+1 if moderate, +2 if significant, +3 if structural).

The analysis grids qualify the anticipated impacts on each of these dimensions. The assessment grids are applicable to all sectors and all types of projects and financing. Their purpose is to identify strategies for promoting transformational projects that best address sustainable development challenges, as well as to apply a 'do no harm' approach, ensuring that no project financed has a negative impact on sustainable development.

To account for the complexity of the projects assessed, some safeguards are implemented. For instance, to assess the impacts of inherently complex projects, a double rating (e.g. '-1' and '+2') on the same dimension is possible, in order to reveal any differentiated effects and provide information on sustainable development trade-offs.

²⁷⁰ AFD, Sustainable Development Analysis Grids. See: [The Sustainable Development Analysis Grids | AFD - Agence Française de Développement](#).

2. The sustainable development opinion. Following the analysis, an independent assessment is carried out by a team from the Strategy Department of AFD to assess the project's expected contributions and qualifies its alignment with SDGs. This opinion informs the decision of AFD bodies at the financing approval stage: it can be favourable; favourable with recommendations; reserved or negative.

Specific safeguards are integrated into the process. For instance, as AFD pledged to have all its funding fully aligned with the Paris Agreement, if the climate dimension receives a negative rating, a negative opinion is automatically given.

The SDM is a living tool, which means there is still room for improvement. For instance, work is still ongoing to better specify the criteria to rate the different dimensions. This is particularly the case for the climate adaptation dimension. It was identified that projects with significant adaptation ambitions (SDM 'resilience' rating +2 or +3) very often have primary or secondary objectives relating to adaptation. However, their logical framework does not systematically include results or impact indicators linked to resilience to climate change beyond aggregable indicators. A dedicated AFD unit is working on developing impact indicators and targets defined in consultation with the client, set out in the logical framework to measure the direct effect of the operation on the targeted adaptation objectives.

Figure 7.2 on the next page shows part of the analysis grid of the SDM framework.

Figure 7.2 Extraction of the analysis grids from the SDM framework applied to the Biodiversity conservation, Management of environment and natural resources pillar. Available online: [The Sustainable Development Analysis Grids](#)

 General rating scale Rating sub-criteria	- 2	- 1	0	+ 1	+ 2	+ 3
	The project significantly degrades biodiversity ① and natural resources ② in the long term: – it is likely to substantially modify critical habitats ③ – or to convert/degrade natural habitats ④ without compensatory measures	The project has residual impacts ⑤ on biodiversity and natural resources: – it degrades modified habitats ⑥ in the absence of mitigation measures – OR it degrades natural habitats despite the definition of mitigation measures – OR it encourages practices that are harmful to biodiversity	The project has no negative impact on biodiversity and natural resources, nor does it identify opportunities to develop or improve the state of biodiversity or natural resources	A dialogue has been conducted with the project sponsor on biodiversity conservation and/or sustainable natural resource management issues and/or the project has unintended and unproven positive impacts on biodiversity or natural resources	A secondary objective of the project is to contribute to biodiversity conservation or the sustainable management of natural resources	The project aims to structurally improve the state of biodiversity and/or ensure the ecological quality and sustainability of natural resources
Ecosystem integrity, functionality and connectivity	– Destruction or significant modification of habitats essential for species diversity – Reduction or elimination of so-called 'regulating' ⑦ or 'supporting' ⑧ services (water cycle, climate regulation, carbon sequestration, soil productivity, etc.) – Spread of invasive alien species threatening native species and ecosystem functionality	Modification of ecosystems located in anthropized areas: – diminution in the number of species, greater fragility of animal and plant populations, reduction in endemic ecological diversity, fragmentation of habitats and loss of connectivity between peripheral biodiversity areas or in the area impacted by the project – intentional introduction of invasive alien species that threaten native species	The integrity, functionality and connectivity of the ecosystems in the project's area of influence are not lastingly modified and/or affected by the project activities	Localised and ad-hoc ecosystem improvements even if these are unintentional and unproven: – marginal reduction of pollution in anthropized environments – rapid intervention on newly detected invasive alien species through environmentally friendly means	Approaches contribute, secondarily, to enhancing the integrity, functionality and connectivity of ecosystems: – creation of ecological continuities (urban and peri-urban environments, intensive agricultural areas, etc.) – ecological restoration ⑨ of ecosystems heavily disturbed by human activities (wetlands, watercourses, woodlands, etc.) – extension-recovery of biodiversity areas – reaturation of degraded environments – reduction of pollution in degraded or sensitive environments – management of very widespread invasive alien species, through environmentally friendly means	Approaches aimed at sustainably improving the integrity, functionality and connectivity of ecosystems: – protection of natural areas (networks of protected areas, hotspots, etc.) – reinforcement of ecological continuity (urban and peri-urban environments, intensive agricultural areas, etc.) – extension-recovery of biodiversity areas – protection or reintroduction of threatened wild species – ecological restoration at the scale of a catchment areas, mountain range or a bio-geographical entity – reduction of a major source of pollution – prevention of the introduction and spread of invasive alien species through environmentally friendly means
Sustainable use of natural resources	Overexploitation of natural resources, irreversibly modifying their capacity for renewal	Degradation of ecological quality and/or overexploitation of natural resources, compromising their availability and sustainability at local level	Project-induced changes in the use of natural resources do not have a long-term effect on the ecological quality and availability of natural resources	Improved efficiency in the use of natural resources without a demonstrable link to the project	Approaches contribute, secondarily, to improving the quality and availability of exploited natural resources: – integrated water resource management – promotion of agro-ecological practices at plot and family farm level – sustainable practices at the level of a value chain – development of local and endemic species (agriculture, forestry, reforestation, etc.)	Approaches aimed at improving the sustainability of exploited natural resources (in quantitative or qualitative terms): – integrated and sustainable management of natural resources at the level of a catchment area, a mountain range, a bio-geographical sector or a territory – long-term commitment to sustainable practices by economic sectors dependent on natural resources (agriculture, forestry, fisheries, industry) – combating soil degradation/ artificialisation
Including communities in natural resource and ecosystem management	Exclusion of populations from access to biodiversity and natural resources	Increased risk of conflict over access to and use of biodiversity and natural resources	No involvement of affected populations in any action to conserve and sustainably use biodiversity	Occasional involvement, as needed, of the populations concerned	– Approaches enable continuous participation of the populations in the project's systems for management, ecological monitoring, surveillance and/or control – Collaborative construction of rules for access to and management of resources	Approaches aimed at the institutional and legal recognition of the role of local populations and indigenous communities in conserving and sustainably using biodiversity (common spaces, community-based management, co-management, etc.)

Simplification through operationalisation: the Green Gateway Initiative of the EIB

Under the 'operational approach to mainstreaming', many organisations develop guidelines and technical guidance to support beneficiaries and partners in understanding the requirements. This is for instance the case for the EBRD, which published a technical guidance associated with its Green Economy Transition framework.²⁷¹ The International Fund for Agricultural Development developed mainstreaming guidance (Social, Environmental and Climate Assessment Procedures of the International Fund for Agricultural Development, 2015)²⁷² subject to subsequent updates (2017 and 2020). In addition, the International Fund for Agricultural Development established a dedicated unit with technical capacities to integrate climate change adaptation in its interventions.

To go further in supporting their staff, their beneficiaries and partners in navigating the tools and frameworks, other organisations such as the AFD offer training and awareness-raising campaigns to help institutional change and encourage systemic approaches to integrate climate considerations into project funding. In a similar way, the German development cooperation agency GIZ offers bilateral assistance to investment and project officers to support them going through the different steps of the mainstreaming procedures.

Alongside these examples, a strong case is made by the EIB and its Green Gateway initiative²⁷³. The Green Gateway was set up jointly between the EIB and the European Investment Fund. The portal of the Green Gateway is targeting financial intermediaries and aims to help them assess and report on the green eligibility and green impact of their projects. It offers a green eligibility check tool (the Green Eligibility Checker²⁷⁴), guidelines and case studies on green investment criteria and access to interactive e-learning programmes. As such, Green Gateway tools are instrumental in helping EIB financial intermediaries with allocating green sub-projects under EIB intermediated finance products.

The EIB is also helping its financial intermediaries with targeted bilateral advisory support activities to accelerate lending to climate change mitigation, adaptation and environmental sustainability projects. The bilateral advisory support consists of a set of complementary modules, including product development, portfolio screening, project origination, impact reporting and monitoring and on-the-job training. Each activity is tailored to the specific needs of the financial intermediary. The advisory is delivered by a team of EIB and external financial and technical experts in a flexible and hands-on manner.

The Green Eligibility Checker is one of the initiatives developed under the Green Gateway. It is designed to support project promoters, businesses, and public bodies to determine whether their investment projects can be considered as 'green' under the EIB's criteria. It is specifically designed to support EIB's financial intermediaries in originating, appraising, and reporting on green investments financed through the EIB's intermediated debt products or through other financing sources.

It operates through three steps:

- Selecting a measure (or investment types) in the areas of e.g. energy efficiency, industry, agriculture;
- Providing basic input details for the selected measure;

²⁷¹ EBRD, GET. See: [Green Economy Transition \(GET\) approach](#).

²⁷² International Fund for Agricultural Development, SECAP. See: [IFAD's Social, Environmental and Climate Assessment Procedures \(SECAP\)](#).

²⁷³ EIB, Green Gateway. See: <https://greengateway.eib.org/>.

²⁷⁴ EIB, Green Eligibility Checker tool. See: [EIB Green Eligibility Checker](#).

- Creating a report to view the results of the assessment, adding details, or downloading the Green Checker Results which contains a box with reporting indicators.

The Green Eligibility Checker tool developed by the EIB provides valuable insights that other financial institutions could leverage to improve their green mainstreaming strategies:

- **Transparency and clear criteria:** Providing clear, accessible criteria for what constitutes a 'green' project helps build trust with potential clients and ensures that project promoters understand the requirements from the beginning. This can streamline the application and approval processes by ensuring that only eligible projects are submitted. In addition, the 'EIB Green' (climate action criteria and environmental sustainability) criteria are aligned with the substantial contribution criteria as defined in the EU Taxonomy.
- **User-friendly interface:** The tool proves to be a straightforward and interactive tool that can engage users more effectively. Making complex criteria understandable and navigable for non-experts is crucial for simplifying the process of mainstreaming climate and environmental objectives.
- **Accessibility and alleviation:** The Green Eligibility Checker tool specifically targets 'small' projects under €25 million, which represents around a third of EIB's funded projects. The tool's main goal is to provide a more efficient and user-friendly way for EIB's financial intermediaries to assess sub-projects against the EIB's green eligibility criteria, with the aim of reducing the administrative workload of their staff members. By using this tool, users can rapidly assess sub-projects against the relevant EIB green eligibility criteria and receive the confirmation 'EIB Green' if these criteria are met, thereby avoiding the need to undertake the extensive EIB procedure on environmental and climate requirements.
- **Preliminary self-assessment:** The Green Eligibility Checker tool provides an interesting opportunity for project promoters to conduct a self-assessment before formal engagement with the financial institution. It can save both parties time and resources, filtering out projects that do not meet the criteria early on.
- **Education and guidance:** The tool not only assesses eligibility but also educates users about sustainable practices and requirements. By offering guidance on how to adjust projects to meet criteria, it can help promote better environmental outcomes across the board.

Figure 7.3 Green Gateway initiative – Green Eligibility Checker tool developed by the EIB.

GREEN GATEWAY Advice for financial institutions | **GREEN ELIGIBILITY CHECKER**

EN SETTINGS ASSESSMENT SUPPORT

European Commission | European Investment Bank

Step 1: Select measure Step 2: Provide input Step 3: Create report

Select an investment measure for assessment

Please select one of the measures from the list below. Once a measure is selected, you will be asked to provide basic input data to start the impact and eligibility assessment.

Search investment measures by keyword, name or green category

Green category Economic activities Always EIB Green (Yes/No)

Agriculture

Agriculture plays a central role in climate change, sustainable development and food security. It has the potential to be a net positive sector from an emissions perspective.

	Modernisation of agricultural storage There are many opportunities to improve energy efficiency in agricultural storage. Such opportunities include the replacement of electric motors or upgrades in heating,...	→		Heating system replacement in greenhouses Across Europe, agricultural cultivation in greenhouses consumes high amounts of energy, mainly from heating the greenhouses: As much as 65-85% of a greenhouse's total...	→
	Harvester replacement The exhaust emission intensity of combine harvester engines has improved significantly over the last 20 years due to stricter emission standards and technological...	→		Irrigation pump replacement Replacing irrigation pumps with more efficient models and improved control strategies can save energy.	→
	Irrigation system modernisation	→		No-tillage equipment	→

7.6.3 Good practices on monitoring, evaluation and impact assessment

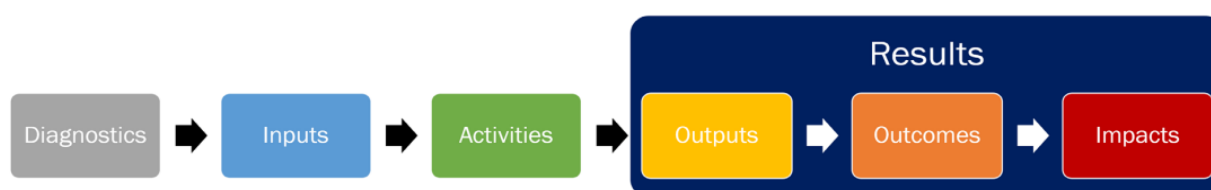
On the basis of the review of practices of financial institutions and third-party implementers, it became clear that organisations use a wide variety of tools across their different approaches to green mainstreaming. Some are very generic and align with international or EU standards and methodologies, for example, a strategic environmental assessment or other environmental assessments, climate-proofing, priority spendings, exclusion lists etc. Some are tailored to the type of interventions, investment vehicles, projects funded, or beneficiaries. In general, the overall approach to mainstreaming allows to clearly distinguish between what the money should achieve (e.g. emissions reduction, more biodiversity) and what the money should not do (causing harm, negative side effects etc.).

Similarly to the EU practices, the interviews and research conducted with various non-EU organisations revealed that the main challenge lies not in setting ambitious targets and criteria at the outset of a project, during the appraisal phase, which many of them already do, but rather in ensuring effective monitoring and evaluation of the financial flows' contribution to achieving environmental and climate objectives.

To deal with this issue, many institutions are working towards the development of dedicated tools to support and guide the process of monitoring and evaluating projects. For instance, the EBRD is currently working on improving the M&E framework associated to the GET initiative, as described in the following section.

More specifically, attention is growing to shift the focus from measuring *inputs*, such as climate or biodiversity finance towards finding ways to capture the *impacts* of investments, namely the *results* of the projects (see below in Figure 7.4). This is highlighted in a report from OECD stating that: 'An over-emphasis on financial input targets has implications for both relevance and impact. Prioritising the mobilisation of (private) climate finance inputs over the achievement of climate outcomes can be detrimental to overall climate efforts. Credibly evaluating additionality and impact of mobilised finance can support a targeted and relevant mobilisation strategy that achieves larger scale impact more efficiently.'²⁷⁵

Figure 7.4 Project-level monitoring and evaluation indicators used by the multilateral development banks (MDB) Climate Finance Group



Several examples of initiatives developed by financial institutions are described in the following section.

²⁷⁵ OECD. (2023). Lessons from Evaluation: Rapid Review of Bilateral Climate Finance Evaluations. DAC Network on Development Evaluation. DCD/DAC/EV(2023)1. See: <https://one.oecd.org/document/DCD/DAC/EV%282023%291/en/pdf>

Monitoring and evaluating the outcomes of the Green Economy Transition approach by the EBRD

The new EBRD's Green Economy Transition (GET) approach for 2021–2025 (GET 2.1)²⁷⁶ aims to support the acceleration of the transition to a green, low-carbon and resilient economy by aligning its activities with the principles of international climate agreements, including principally the Paris Agreement; enhancing policy engagement for the development of long-term low carbon strategies and greening of financial systems; and scaling up investment by innovating across a set of specific environmental and climate mitigation and adaptation thematic areas such as green digital solutions, just transition, circular economy, natural capital and green value chain financing.

To support the implementation and delivery of GET 2.1, the EBRD has set up a specific mechanism to track and evaluate the projects' environment and climate benefits. In particular, the Independent Evaluation Department of the EBRD is working on establishing a more efficient and result-oriented monitoring, reporting and verification process. The EBRD is facing similar challenges to those experienced by the other financial institutions, notably MDBs (multilateral development banks), to manage the high level of complexity linked to the evaluation of their green agendas. It works closely with them to align and integrate in EBRD processes the latest methodologies and taxonomies developed, e.g. the MDBs Common principles for tracking climate mitigation²⁷⁷ and adaptation finance,²⁷⁸ the EU Taxonomy for Sustainable Finance, EU Environmental legislation, Green Bonds Principles or TCFD Guidelines.²⁷⁹

The GET Handbook²⁸⁰ incorporates all the external methodologies, taxonomies and GET indicators, and includes guidelines on their selection and adoption, in this way providing a clear reference for EBRD operations and, at the same time, for external stakeholders including financial intermediaries. The Annexes to Implementing the Green Economy Transition from the Technical Guide present a repository of results-based indicators²⁸¹. In particular, one of the Annexes describes how the EBRD tracks and reports GET climate change adaptation activities and was updated in 2023 following the publication of the updated MDB joint methodology for tracking climate change adaptation finance.

The new monitoring, reporting and verification system is expected to ensure a better reporting of *ex post* results and aims to develop a 'culture of results'. All the green finance results are presented in the [Annual Report](#), [Sustainability Report](#) and through the annual [Joint Report on Multilateral Development Banks' Climate Finance](#).

In addition, the EBRD assesses the expected impact of their operations at project level. Hence, the monitoring, reporting and verification team will be in charge of providing capacity-building as well as technical assistance to their financial intermediaries and final clients to support them in conducting these assessments.

²⁷⁶ [What is the EBRD's Green Economy Transition approach?](#).

²⁷⁷ IDFC. (2023). Common principles for climate change adaptation finance tracking. [idfc-2023-common-principles-adaptation.pdf](#).

²⁷⁸ IDFC. (2023). Common principles for climate mitigation finance tracking. [World Bank Document](#)

²⁷⁹ TCFD = Taskforce on Climate-Related Financial Disclosures.

²⁸⁰ EBRD. (March 2024). Implementing the Green Economy Transition – Technical Guide.

²⁸¹ EBRD. (March 2024). Annexes to Implementing the Green Economy Transition – Technical Guide.

Building and tracking resilience to climate change by the World Bank

To help guide investment decisions and improve climate resilience in project design and outcomes, the *Resilience Rating System* (RRS)²⁸² was developed by the World Bank, along with an accompanying climate risk stress testing method and tool. This new methodology provides guidance and specific criteria to assess resilience along two complementary dimensions of project design: it considers both the resilience *of* the project, and the resilience *through* the project (as described below).

This methodology provides interesting insights and contributes to the effort of developing innovative frameworks for monitoring and reporting on impacts rather than only measuring inputs when financing and implementing 'green' projects.

The RRS evaluates and rates investment projects from C to A+, based on their resilience attributes in two complementary dimensions. The resilience of rating considers a project's design, reflecting the confidence that it will achieve its expected objectives and maximise development benefits in the face of climate and disaster risks. The resilience through the project rating considers a project's outcomes and reflects its contribution to improving climate resilience in the broader community, sector, and systems, and to driving transformational adaptation.

The World Bank's RRS aims to show that capturing resilience impacts is a valuable complement to input metrics to measure the quality and expected outcomes of investments. Both RRS dimensions are important, to encourage investments to achieve the best outcomes and contribute to building wider resilience for beneficiaries.

RRS also shows that even though a generalised methodology for assessing projects' impacts is required to ensure better coherence, it is important to develop sector-specific applications to maximise effectiveness. The overarching and consistent framework for evaluating and tracking projects' 'green performance' needs to be completed with more detailed sector-specific guidance, activity-level information, and specific indicators, in order to increase the useability and consistency of the assessment.

7.6.4 Recommendations

This section assesses the experiences of a number of financial institutions and third-party implementers of EU funds with green mainstreaming. These organisations often face similar challenges as those reported by EU stakeholders. Based on good practices and lessons learned by the financial institutions and third-party implementers, we recommend the following:

- Consider the experiences with the Sustainable Development Analysis & Opinion Mechanism²⁸³ (SDM) set up by the French development agency, in the context of any future streamlining efforts for green mainstreaming tools.
- Examine if and to what extent the experiences with the EIB's Green Eligibility Checker could help to reduce fragmentation in the mainstreaming toolbox, and increase understanding of tool mechanisms and objectives. Although the scope of this tool is more limited than the scope of the EU green mainstreaming architecture, the Green Eligibility Checker is a good example of a framework that brings together different information flows in order to judge overall eligibility against certain criteria.

²⁸² World Bank. (2021). 'What You Need to Know About the Climate Change Resilience Rating System.' Feature story, January 25. <https://www.worldbank.org/en/news/feature/2021/01/25/what-you-need-to-knowabout-the-climate-change-resilience-rating-system>.

²⁸³ AFD, Sustainable Development Analysis Grids. See: [The Sustainable Development Analysis Grids | AFD - Agence Française de Développement](#).

7.7 Summary of recommendations

In this chapter, we have assessed key green mainstreaming tools, identified main challenges faced by stakeholders and proposed options to address them. We also explored the role of green reforms in a performance-based MFF. Lastly, we drew on the experiences of financial institutions and third-party implementers regarding green mainstreaming, including the tools they use, the challenges they face and how they address these challenges.

Simplification and reduction of fragmentation

Our analysis suggests that simplifying the green mainstreaming box is important for several reasons: reducing administrative burden, responding to capacity constraints and to the risk of superficial application of tools, which could compromise the quality of outcomes and ultimately undermine policy objectives related to climate and environment. Also, the tools are often considered to be too 'heavy' for application for smaller projects, with the effort required to apply them outweighing the benefits. The introduction of the 'blanket approach' for DNSH as specified in the Financial Regulation, presents an opportunity to reassess and streamline the application of various tools.

Our analysis of the experiences of financial institutions and third-party implementers revealed that they face similar challenges in their green mainstreaming processes. Notably, the proliferation of green mainstreaming tools in recent years has led to an increase in complexity. Since the different tools and processes are not always well understood and managed by stakeholders, this might lead to a high administrative burden and a potential decline in the quality of mainstreaming outcomes. However, some of the organisations assessed have developed initiatives that may inspire EU actors in their efforts to streamline existing mainstreaming tools.

Below, we summarise the recommendations from case studies 1, 2 and 4 that aim at simplification of the mainstreaming toolbox used under the current MFF:²⁸⁴

- **Over time, streamline DNSH, climate-proofing and sustainability proofing.** This could potentially result in a single tool at the operational level combining DNSH and climate-proofing/sustainability proofing.
- **Simplify sustainability proofing and climate proofing for small investments,** if maintained as separate tools.
- **Develop new targeted guidelines or an explanatory note for the combined use of SEA and DNSH** at plan or programme level to ensure an efficient application of both instruments and synchronise their deployment
- **Consider the experiences with the Sustainable Development Analysis & Opinion Mechanism²⁸⁵** (SDM) set up by the AFD, in the context of any future streamlining efforts for green mainstreaming tools.
- **Examine if and to what extent the experiences with the EIB's Green Eligibility Checker could help to reduce fragmentation** in the mainstreaming toolbox, and increase understanding of tool mechanisms and objectives.

²⁸⁴ Our assessment was based on a selection of stakeholders from a limited amount of Member States. In the case studies, we referred to a couple of solutions for simplification and reduction of administrative burden that were developed by the Member States themselves. It could well be that experiences and solutions from other Member States could provide inspiration for other avenues for simplification and/or reduction of administrative burden. Therefore, it may be useful for the Commission to systematically collect these solutions and investigate which solutions could be applied more broadly across Member States. It should be noted, however, that as the current budget cycle has not been finalised, the solutions proposed by Member States have not yet been part of an auditing process. Waiting for the outcomes of this process would provide more insight into what would be the most viable solutions.

²⁸⁵ AFD, Sustainable Development Analysis Grids. See: [The Sustainable Development Analysis Grids | AFD - Agence Française de Développement](#).

Monitoring and evaluation

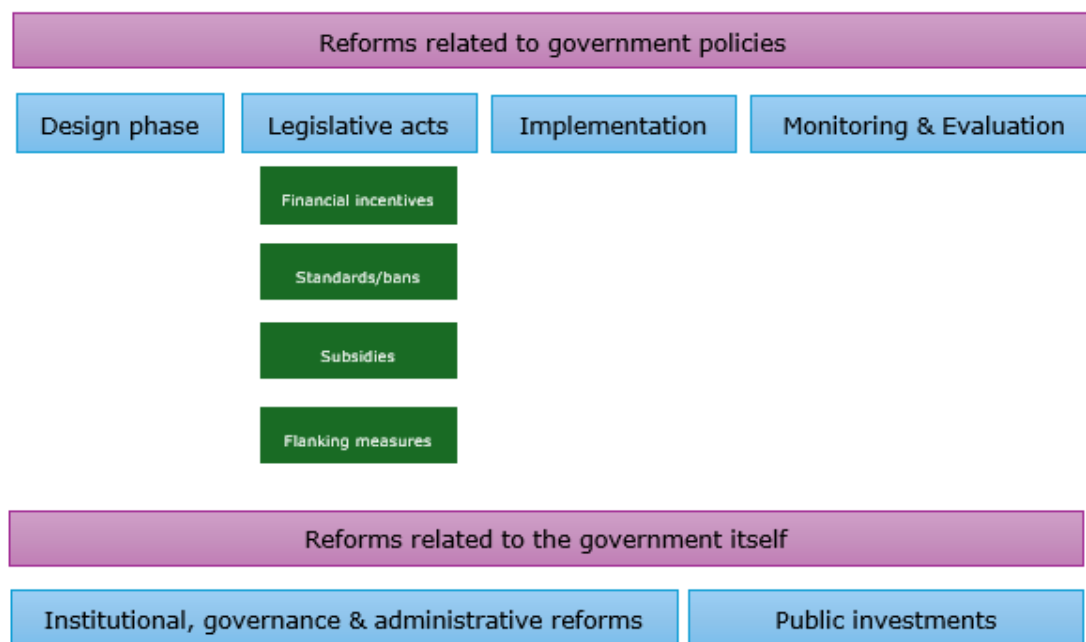
Based on the assessment of green mainstreaming tools used within EU funds, we found that most of the tools operate mainly at the beginning of the budgetary programming and project cycle, when plans/programmes or measures/projects are being designed. In particular, there is a focus on financial inputs and spending targets. Even though these may be very effective for their own purposes, this means the mainstreaming framework is currently strongly 'front-loaded'. There are no tools specifically dedicated to monitoring and evaluating the actual implementation and impacts of funded activities in terms of green objectives. This may pose a risk to the mainstreaming exercise as such.

Our assessment suggests that there is a need to shift the focus from measuring *inputs*, such as climate or biodiversity finance, to find ways to capture the *impacts* of investments, i.e. the *results* of the projects. This change of approach is now increasingly considered by several organisations, such as the AFD (where this will specifically apply to climate adaptation funding but aims to be replicated for other green objectives such as biodiversity. In line with the development of the Global Goal on Adaptation (GGA),²⁸⁶ AFD's long-term objective is to achieve impact-based accountability framework for climate change adaptation).

Reforms typology and criteria

Based on case study 3, and in the light of a more performance-based approach considered in the context of the next MFF, we recommend using our typology as depicted below as a starting point for the discussion on the role and the main features of future green reforms.

Figure 7.5 Proposed typology of green reforms



²⁸⁶ UNFCCC Global Goal on Adaptation. [Global goal on adaptation | UNFCCC](#).

Furthermore, we recommend considering the following reform criteria. These should evolve as the design of the next MFF and the role of reforms becomes clearer over the coming months.

1. Alignment with the working principles of the EU, such as division of competences, proportionality and subsidiarity and the Better Regulation agenda.
2. Alignment with the objectives of the performance-based MFF
 - a. Ease of linking the reform to investments (where appropriate)
 - b. Contribution of the reform to EU and MS green policy objectives
 - c. Consistency with other EU and MS policy objectives
 - d. Additionality of the reform (where appropriate)
 - e. Synergies achieved by the reform
3. SMART-ness of the reform (implementability)
 - a. Specific, having a sufficient level of concreteness
 - b. Measurable, with the reform being easily monitored
 - c. Achievable by the Member State and relevant stakeholders
 - d. Relevant in terms of objectives and added value
 - e. Time-bound, with a timeline for targets and milestones.

8 OPTIONS TO IMPROVE TRACKING AND MONITORING METHODOLOGIES OF GREEN SPENDING

8.1 Introduction

Mainstreaming climate and environmental action in the MFF rely on a combination of key elements, with tracking and monitoring expenditure playing a crucial role to ensure that EU budget is used effectively, efficiently and in a transparent and accountable manner. It also provides objective information on the achievement, or not, of sectoral and general spending targets. This information can then be used, among others, for reporting purposes towards EU partners and in international negotiations; to support transparency and effective communication on the EU's action externally and internally; to ensure the consistency of budgets with environmental commitments; or to improve the effectiveness of spending, both at decision-making and implementation phases. Lastly, sound tracking fosters better involvement of operators and end-beneficiaries of EU funds, drawing their attention to a topic which may not be their primary objective.

The European Commission has been tracking climate and biodiversity spending since the 2014-2020 MFF. The Commission's approach is based on the Rio Markers, an approach originally developed as a "descriptive rather than quantitative" tool, delivering "an approximate quantification of [...] finance flows" regarding a specific thematic (climate and biodiversity in this case) in a budget. It relies on three-coefficients, from 100% in the case of "significant" contribution to climate (resp. biodiversity) objectives to 0% for "no or insignificant" contribution, through 40% for "moderate" contribution. In the 2021-2027 MFF this approach has been further developed towards an "effect-based" methodology. This methodology maintains the coefficients, albeit with adapted definitions focusing on the expected effects. Also, it is based on interventions, meaning that a list of activities funded by the EU budget (called "intervention fields", short IF) was created, each with specific coefficients attached to it.

It is important to note that there are differences between the approaches used for tracking in internal (i.e. within the EU) and external financing. This study focuses on internal funding. However, while this study covers only funding programmes and instruments applied within the EU, some of its findings may have relevance for external financing.²⁸⁷

This chapter discusses potential improvements to the existing system. Firstly, it presents suggestions relating to IF (section 8.2) and then relating to tracking coefficients (section 8.3). Work related to this chapter included providing ad-hoc input to discussions regarding potential revised or new IF. Consequently, the analysis presented in this chapter is mostly high-level.

8.2 Intervention fields

8.2.1 High-level assessment of potential issues within the current IF

Overview of Intervention Fields

Under the current MFF, the tracking is applied to climate (mitigation, adaptation), biodiversity and air quality²⁸⁸. A climate tracking methodology is established for several funds²⁸⁹ in their regulations

²⁸⁷ A parallel study was launched by the European Commission which focuses on mainstreaming in external financing.

²⁸⁸ [Green budgeting - European Commission](#)

²⁸⁹ [Climate Mainstreaming Architecture in the 2021-2027 Multiannual Financial, SWD\(2022\) 225 final.](#)

or other related documents, including the funds under the Common Provisions Regulation (CPR)²⁹⁰, the funds under the common agriculture policy (CAP)²⁹¹, the Connecting Europe Facility (CEF)²⁹² or the European Maritime, Fisheries and Aquaculture Fund (EMFAF)²⁹³, InvestEU²⁹⁴ and the Recovery and Resilience Facility²⁹⁵. IF in the CPR are listed under the policy objectives (although the use of IF is not restricted to a policy objective), while in the RRF and the EMFAF there is no link made to specific policy objectives. In the RRF, while there are no specific policy objectives stated in Annex VI to the Regulation, there is a methodological overlap with policy areas in some instances²⁹⁶.

A tracking mechanism has also been adopted for biodiversity²⁹⁷. The tracking methodology is fund specific, relying on IF when they exist and other mechanisms when they do not. This tracking mechanism is used to follow up on the interinstitutional agreement²⁹⁷, which established that biodiversity should be mainstreamed in EU programmes to allocate at least 7.5% of annual spending to biodiversity objectives in 2024 and 10% in both 2026 and 2027.

The National Emission Reduction Commitments Directive (NECD)²⁹⁸ includes also a legal obligation to track funding for clean air²⁹⁹.

High-level analysis of the current system

A high-level analysis was conducted of the system described above. No specific data collection was conducted for this analysis; it was rather informed by other work conducted in the course of the project. On this basis the following observations can be made:

- Climate mitigation is generally well covered by IF existing for funding programmes.
- For sectors with more indirect climate or biodiversity impacts such as employment, education, governance, there is little to no tracking while at the same time they could be very relevant for achieving climate and biodiversity objectives.

²⁹⁰ Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy. See: <https://eur-lex.europa.eu/eli/reg/2021/1060/oj/eng>

²⁹¹ See e.g. here for an overview: https://agriculture.ec.europa.eu/common-agricultural-policy/financing-cap/cap-funds_en

²⁹² Regulation (EU) 2021/1153 of the European Parliament and of the Council of 7 July 2021 establishing the Connecting Europe Facility and repealing Regulations (EU) No 1316/2013 and (EU) No 283/2014 (Text with EEA relevance). See: <https://eur-lex.europa.eu/eli/reg/2021/1153/oj/eng>

²⁹³ Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004. See: <https://eur-lex.europa.eu/eli/reg/2021/1139/oj/eng>

²⁹⁴ Regulation (EU) 2021/523 of the European Parliament and of the Council of 24 March 2021 establishing the InvestEU Programme and amending Regulation (EU) 2015/1017. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32021R0523>

²⁹⁵ Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility. See: <https://eur-lex.europa.eu/eli/reg/2021/241/oj/eng>

²⁹⁶ See: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/assets/methodology/Methodology%20for%20climate%20tracking%20under%20the%20RRF.pdf

²⁹⁷ INTERINSTITUTIONAL AGREEMENT of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources. See: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222(01))

²⁹⁸ Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (Text with EEA relevance). See: <https://eur-lex.europa.eu/eli/dir/2016/2284/oj/eng>

²⁹⁹ [Clean-air tracking - European Commission](#)

- Climate change adaptation is covered by IF, but only to a limited extent, and mostly through IF focused on specific hazards³⁰⁰. This could be reconsidered: IF could potentially be structured around different types of adaptation solutions instead of hazards so as to cover multi-hazard measures. Structuring by measures would also allow to create incentives for nature-based Solutions, since these usually have more than one benefit (e.g. adaptation as well as biodiversity). This could then be reflected in the tracking coefficients, providing an incentive to funding recipients to apply those measures in order to meet different spending targets.
- No IF seems to capture just transition spending across different EU funds.
- More granularity is also needed in other sectors. In the energy sector, for instance, a specific IF for hydrogen would be very useful as currently hydrogen investments have to be assigned to other areas (usually renewable technologies). Other such gaps include energy storage (currently it features only as part of the IF for smart grids) and CCS projects. However, the trade-off between more granularity and more reporting complexity for MS and managing authorities needs to be kept in mind; a potential way to address this would be to create specific and granular IF for policy priorities, and provide less granularity for other cases
- In general, environmental objectives are not well covered by existing IF, in particular circular economy, pollution and biodiversity, and where they are applied, it is not at a granular level.
- The use of result indicators linked to IF could help quantify impacts of IF.
- For funds focussing specifically on climate and environment (such as LIFE), the lack of IF makes it difficult to track spending on a more granular level.

8.2.2 Identification of potential fields for revision or expansion of current IF

The study team provided ad-hoc technical input to discussions regarding potential revised or new intervention fields. Prior to this, preparatory work was conducted to identify potential shortcomings of the current IF. This included the following work:

- Interviews with policy officers
- Assessment of coherence and consistency of IF across different funds

The results of those two exercises are briefly presented below.

Interviews with EC policy officers

The study team interviewed EC policy officers from several Commission DGs³⁰¹ in charge of the funds within the scope of the project to identify specific needs for the expansion and revision of the IF. The most relevant results are summarised in aggregated form below.

Table 8.1 Overview of insights on IF mentioned during interviews

Fund	Description
Comments regarding strengths of the current IF	• In some funds, such as EMFAF, IF have been developed over various iterations of the fund, new proposals have to be made carefully • A priori no new IF expected in transport, focus remains on completing the TEN-T network. • IF related to border and railway connectivity, and alternative fuels infrastructure remain critical.
Comments regarding	• New IF should be introduced to adapt to emerging energy challenges and opportunities.

³⁰⁰ See e.g. IF 58, 59 and 60 in Annex I of the CPR

³⁰¹ Including DG AGRI, DG CLIMA, DG CONNECT, DG ECFIN, DG EMPL, DG ENER, DG ENV, DG MARE, DG MOVE, DG REFORM, DG REGIO, DG RTD

Fund	Description
potential revisions	- Assessing the need for additional IF should also be done based on technological advancements and policy priorities. For instance, hydrogen, Carbon Capture and Storage/Use, Energy Storage, and a range of other activities could be added as new IF to match evolving sector needs. - Also in other major climate and environment policy areas IF should be revised and strengthened to reflect policy priorities, such as nature and biodiversity, circular economy, healthy life as well as clean technologies and decarbonisation.

Relatively limited concrete insights could be gathered from these interviews which may suggest that not much attention is paid to them. This is noteworthy, given the potential impact that IF and related tracking coefficients can have (e.g. create spending incentives, reflect policy and funding priorities and steer funding, especially in shared management funds) .

Interviews also highlighted the complexities and intricacies of IF and how they are used in different tracking systems under different funds. This is likely to affect the effectiveness and efficiency of comparing and aggregating results across different MFF funds.

A more streamlined approach through a combined list of IF (and how they are used and understood internally in the different DGs) would help address such problems .

Consistency of IF across EU funding programmes

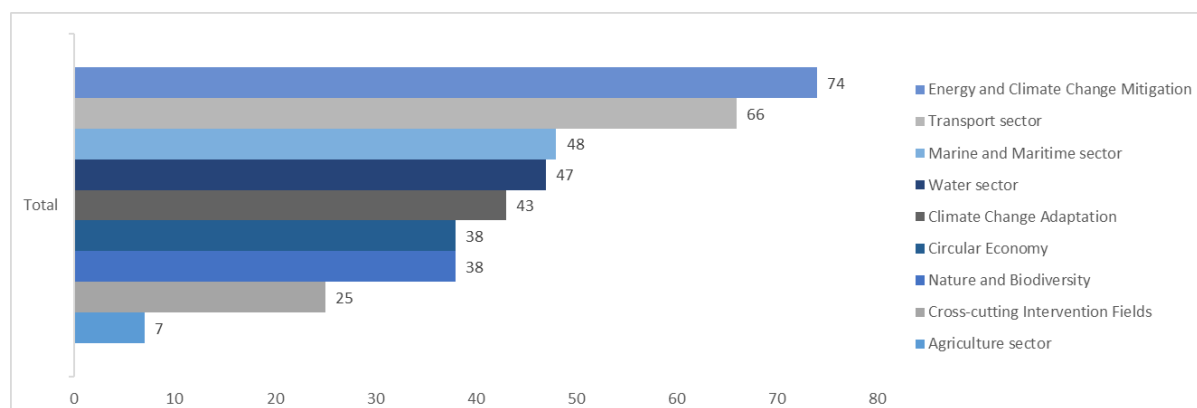
The study team mapped IF across the following funds and funding programmes:

- CPR
- RRF
- InvestEU
- EMFAF
- CAP funds

This resulted in a database of 467 IF. However, many of them are repeated in different funds (mostly between InvestEU, RRF, CPR) and taking this into account a total of 223 unique IF have been identified. The allocation of coefficients for the calculation of support to climate change objectives and of coefficients for the calculation of support to environmental objectives is 100% consistent across the different funds.

The 223 unique IF were mapped against their contribution to sectors with environmental/climate relevance. (see Figure 8.1). This also included a category for “cross cutting intervention fields” such as e.g. “Innovation processes in SMEs” or “Research and innovation activities in large enterprises, including networking”³⁰² (such cross-cutting IF cannot be allocated to a specific environmental or climate-relevant sector but funded activities which are classified under those IF may still be relevant for the environment or the climate; e.g. “innovation processes in SMEs” could also entail innovation for more resource efficiency or for decarbonisation of processes). Some IF were assigned to several sectors, creating overlaps between sectors (for instance energy and climate change, and transport sector). The outcome of this mapping exercise is summarised below in Figure 8.1 below.

³⁰² Both IF are used in RRF and CPR.

Figure 8.1 Distribution of IF by sector as mapped by the study team

The high-level conclusions of the further analysis of the database as well as a closer look at specific sectors and areas³⁰³ are as follows:

- There are large differences between the number of IF applicable to different sectors. This is not in itself an issue because differences in numbers could for instance point at more streamlined funding needs within a sector (e.g. “waste water collection and treatment”³⁰⁴) vs a more complex field or represent the differences of overall allocation of EU funds to different sectors.
- However, there are discrepancies: both “transport” and “agriculture”, for example, are fairly complex sectors with many different interventions that could be funded, and both have substantial allocations from the EU budget. In the case of transport, this led to a detailed set of IF split by type of infrastructure, distinct IF for infrastructure within TEN-T or not, and others; in the case of agriculture, the approach to capture complexity was instead to define very broad IF.
- It can be argued that consistent approaches to handling complexity of different funding sectors would be beneficial when the goal of the tracking is to capture the performance of the MFF in a coherent manner.
- The possibility to use IF and their tracking coefficients as “incentives” and to monitor the environmental and climate performance of the MFF is unevenly applied across the IF.
- As an example, under the RRF, the CPR and InvestEU a distinction is made between “waste water collection and treatment” and “waste water collection and treatment compliant with energy efficiency criteria” where the latter has a 40% climate coefficient, while the former has 0% (and other similar examples can be found). However, in other instances this distinction has not been applied (e.g. there are several IF for social infrastructure in the RRF and the CPR where a distinction could have been made between infrastructure in line with specific energy efficiency criteria and infrastructure which is not). Consistency or clear rules for when such distinction should be made in IF could be beneficial
- A different approach could be to align exclusions and IF more closely; following the above example that could for instance mean that the MFF only funds “waste water collection and treatment compliant *with* energy efficiency criteria”.
- The high number of “cross-cutting intervention fields” makes performance assessments of the MFF challenging

³⁰³ Climate change adaptation, water, biodiversity, circular economy, clean air, agriculture, digital, fisheries, health.

³⁰⁴ Used in RRF, CPR, InvestEU

8.3 Tracking coefficients

This section presents reflections on potential improvements to the way coefficients are currently used in the MFF.

8.3.1 Potential improvements to avoid overestimating spending on relevant objectives

Introduction

The Rio Markers approach, as described in the introduction to this chapter, has the advantage of simplicity. However, in the case of the MFF 2014-2020, it has been criticised, notably by the European Court of Auditors³⁰⁵, for overstating the contribution of some policy schemes³⁰⁶, not accounting for spending detrimental to climate, or introducing inconsistencies especially in shared management tools. The revised 2021-2027 approach (see introduction to this section) has also been criticised by the European Court of Auditors as leading to potential overestimations within the context of climate mainstreaming under the RRF³⁰⁷.

At the same time, the current system also promotes positive climate (and biodiversity) outcomes while maintaining transparency and efficiency in the tracking process³⁰⁸. Indeed, one of the main advantages of the current EU tracking system is the low administrative burden³⁰⁹. But this simplicity, at the same time, has been described as the main weakness of the current climate tracking coefficient system. Thus, a balance needs to be found between the extent to which coefficients reflect reality, and the workload and administrative costs required to use them in the tracking process.

The current system of assigning fixed coefficients of 0%, 40%, or 100% to EU funding risks not reaching its full potential to create incentives to integrate climate change mitigation, climate change adaptation, and biodiversity measures into broader funding activities where these objectives are not the primary focus. This is particularly relevant for activities where such measures add value but do not represent the core investment purpose. Because there are only three coefficient levels this may lead to 'boundary issues'³¹⁰ in determining whether spending qualifies under a specific marker, especially for categorising expenditures with moderate climate impacts.

This is explained through an example below.

Box 8.1 Example of how boundary issues can lead to overestimating spending on relevant objectives

Under the current methodology, a project that includes energy efficiency measures, for example, may incur slightly higher costs than an equivalent project without such measures. While these efficiency measures contribute to greenhouse gas emission reductions, they may not be considered significant enough to justify a 40% coefficient and would thus default to 0%. If there is a spending target for climate change mitigation,

³⁰⁵ See: https://www.eca.europa.eu/Lists/ECADocuments/SR22_09/SR_Climate-mainstreaming_EN.pdf

³⁰⁶ Notably CAP-related policies, although these were contested by Commission services as can be seen at https://www.eca.europa.eu/Lists/ECARepplies/COM-Replies-SR-22-09/COM-Replies-SR-22-09_EN.pdf. The CAP climate tracking methodology will be revised by end 2025

³⁰⁷ See: <https://www.eca.europa.eu/en/publications?ref=SR-2024-14>

³⁰⁸ European Parliament (2023). Climate Mainstreaming in the EU Budget: 2022 Update. See: [https://www.europarl.europa.eu/RegData/etudes/STUD/2022/732007/IPOL_STU\(2022\)732007_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2022/732007/IPOL_STU(2022)732007_EN.pdf)

³⁰⁹ Including due to the fact that national and regional administrators have experience with this system

³¹⁰ Nesbit, M., Stainforth, T., Kettunen, M. and Blot, E. (2021). Review of approaches to tracking climate expenditure. Institute for European Environmental Policy (IEEP), Brussels and London. See: <https://ieep.eu/wp-content/uploads/2022/12/Review-of-approaches-to-tracking-climate-expenditure-IEEP-2021.pdf>

a project promoter may then opt for the cheaper version without efficiency measures (unless alternative mainstreaming mechanisms are in place), as the additional expenditure would not contribute to meeting the target.

To counteract this, a 40% coefficient may instead be allocated to such projects to incentivise the inclusion of energy efficiency and other climate-aligned elements. However, this approach risks overestimating climate-related spending. For instance, in the case of "wastewater collection and treatment" versus "wastewater collection and treatment compliant with energy efficiency criteria" used already as example in section 8.2, if the former costs €10 million and the latter €10.5 million, the additional cost of meeting energy efficiency criteria is only €0.5 million. Yet, under a 40% coefficient, €4.2 million of the total expenditure would be recorded as contributing to climate objectives, significantly inflating the reported climate-related spending.

Given that climate change mitigation, climate change adaptation, and biodiversity goals are most effectively achieved through their mainstreaming into broader investment projects—often at relatively low additional cost—the current system creates a dilemma. If a 0% coefficient is applied, these contributions risk being consistently underestimated, whereas if a 40% coefficient is used, they may be exaggerated.

To address this two approaches could be considered.

First potential approach – introducing an additional coefficient

One potential solution is to introduce an additional 10% or 20% coefficient to better capture the contributions of projects where climate and biodiversity measures are incorporated but not central.³¹¹ Arguments in favour of this approach include that it would provide a more nuanced representation of climate and biodiversity spending, making it easier to reflect incremental improvements and encouraging investments that integrate sustainability elements. It would also reduce the risk of not sufficiently encouraging small but meaningful improvements in project design.

However, there are drawbacks. Most importantly, introducing an additional coefficient would create inconsistencies with the EU's international reporting obligations, particularly regarding climate finance commitments where the OECD approach is already established. It could also complicate budgetary reporting and increase administrative burdens for project managers and EU institutions, potentially undermining the efficiency and transparency of the tracking system.

Second potential approach – splitting funding activities projects into different IF

An alternative solution would be to split funded activities into different IF. This approach is already used in InvestEU, where different components of an operation can be assigned distinct climate tracking markers.

As specified in the InvestEU Programme climate and environmental tracking guidance³¹², for direct operations under InvestEU, different markers could be applied to various components of the same operation. The relevant components should be determined based on the proportion of related expenditure or revenues (in the case of support to enterprises) associated with a specific IF. An operation with clearly distinct components can be divided only if a significant portion (typically at least 10% of the total project cost) of the components contribute to the IF listed in the regulation. Generally, an operation should not be divided into more than three distinct components.

Within InvestEU, this ensures that there is a solution for better financial tracking of projects with mixed objectives and not being forced into an all-or-nothing categorisation.

³¹¹ See also the corresponding discussion in section 3.6.1

³¹² See: https://investeu.europa.eu/document/download/e1c2b9e7-eb6e-40b1-a81b-78e83c979081_en?filename=InvestEU%20C%26E%20T%20C_2021_3316_Main%20%26%20Annexes_EN.pdf

In the case of climate change adaptation, climate change mitigation, or other environmental objectives which are rather mainstreamed into larger investments instead of being at the heart of the investment, the costs related to those objectives could be tracked separately in an IF with a 100% coefficient, while the rest would receive a 0% coefficient. This would be in line with related concept of “additionality” which is used in the field of climate change finance; it is shortly explained in the Box below.

Box 8.2 The concept of additionality used in the field of climate change finance³¹³

The additionality of an adaptation project is the portion of finance required in addition to, or separate from, the cost of development; in other words, it is the amount of finance needed to account for the risks of climate change. For instance, given that adaptation is not the main aim of the project, if the government builds a new bridge, only the additional cost arising due to climate change adaptation should be considered adaptation expenditure.

While this can also be challenging from a methodological standpoint, the concept is already used in the context of the Governance Regulation³¹⁴ where the Implementing Regulation³¹⁵, which defines the format of national reporting, mentions in footnote 16 that for the share of spending used to support climate adaptation the member states should report “the additional investment that makes a project (that would have been realised anyway) climate resilient”.

This approach allows for a more precise allocation of expenditure, ensuring that only the climate-relevant portions of a project are counted towards spending targets. This enhances transparency and credibility in financial tracking. Additionally, it aligns better with the nature of many large-scale infrastructure projects, which frequently incorporate multiple objectives. Finally, it would still be in line with the OECD methodology, reducing “translation” costs for international reporting as is the case for the first potential approach on adding a new coefficient.

However, there are also some drawbacks. Firstly, as the implementation of the InvestEU tracking guidance is still in early stages, no evidence is available on the extent to which projects are in fact split across different IF and on the implications. Also, breaking down projects into multiple IF requires more granular reporting, which could place additional administrative burdens on project developers and funding authorities.

Finally, especially for adaptation it is uncertain whether the concept of “additionality” can be transferred to the context of EU climate finance tracking, given the current definitions for the different coefficients, as discussed in the next section.

³¹³ Based on Valverde, María José et al. (2022). Costs of Adaptation vs Costs of Inaction. Final Report. Ramboll Management Consulting, Ecologic Institute, Frankfurt School: Brussels, Berlin, Frankfurt am Main. See: <https://www.ecologic.eu/sites/default/files/publication/2024/2633-10-Cost-of-Adaptation-vs-Cost-of-Inaction-web.pdf>

³¹⁴ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (Text with EEA relevance.). See: <https://eur-lex.europa.eu/eli/reg/2018/1999/oj/eng>

³¹⁵ Commission Implementing Regulation (EU) 2020/1208 of 7 August 2020 on structure, format, submission processes and review of information reported by Member States pursuant to Regulation (EU) 2018/1999 of the European Parliament and of the Council and repealing Commission Implementing Regulation (EU) No 749/2014 (Text with EEA relevance). See: https://eur-lex.europa.eu/eli/reg_impl/2020/1208/oj/eng

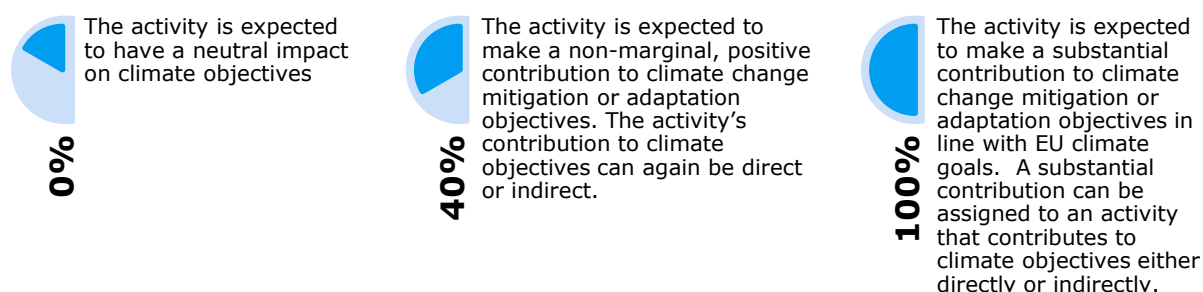
8.3.2 Potential improvements for splitting climate finance tracking into adaptation and mitigation

As stated in the 2021 Performance Communication³¹⁶, important features of the EU coefficients are as follows:

- They are based on the expected effect (effect-based)
- They are activity based (i.e. are applied to a pre-defined list of interventions)
- They are linked to the European Green Deal.

Building on this, and especially in light of the “effect-based” methodology, the Commission Staff Working Documents “Climate Mainstreaming Architecture in the 2021-2027 Multiannual Financial Framework”³¹⁷ defines the climate coefficients as presented in Figure 8.2 and further described below.:

Figure 8.2 Definition of EU climate coefficients according to SWD(2022) 225 final



In the current 2021-2027 MFF climate finance tracking is not split into climate change adaptation and mitigation, but rather summarised under “climate action”. However, reporting EU budget climate expenditure in a disaggregated manner between the two is a commitment included the December 2020 Interinstitutional Agreement³¹⁸.

In light of this, it can be argued that the definitions shown in Figure 8.2 would need to be split by climate change adaptation and climate change mitigation and further operationalised in order to allow for a consistent attribution of coefficients for both.

The remainder of this section discusses some of the potential issues or misunderstanding that could stem from the current rather vague definitions. The section does not aim to solve those issues, but rather to trigger further thinking regarding the definitions of the three coefficients. Only when those definitions are clear, coherent coefficients for all IF can be developed across all sectors.

³¹⁶ Communication from the Commission to the European Parliament and the Council on the performance framework for the EU budget under the 2021-2027 MFF – COM(2021) 366. See: https://commission.europa.eu/publications/communication-eu-budget-performance-framework-2021-2027_en

³¹⁷ SWD(2022) 225 final COMMISSION STAFF WORKING DOCUMENT Climate Mainstreaming Architecture in the 2021-2027 Multiannual Financial Framework. See: https://commission.europa.eu/document/download/968be999-7fd5-45ac-8c1b-0c9edcce2c15_en

³¹⁸ INTERINSTITUTIONAL AGREEMENT of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources. See: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020Q1222(01))

0% - The activity is expected to have a neutral impact on climate objectives

For climate change mitigation, the current definition of “neutral impact on climate objectives” could be questioned particularly for large-scale investments such as infrastructure. Construction projects inherently involve substantial GHG emissions due to material production, transportation, and construction processes. Thus, categorising such projects as having a neutral impact on climate objectives may overlook substantial contributions to GHG emissions, potentially underestimating the climate impact during construction (or operation) of these investments. On the other hand, “neutral” could be also translated as “not better or worse as compared to GHG emissions from comparable projects” or “not better as compared to legal requirements”.

For climate change adaptation, defining a 0% as having a “neutral impact” could suggest that no part of the investment has been used for adapting the investment itself to climate change, or that no part of it is meant to provide wider adaptation (e.g. a dam protecting land from flooding). The former interpretation assumes that an investment does not face any climate change risks from hazards such as flooding, heatwaves, or storms, as it is considered “neutral”. Given that virtually all infrastructure projects are exposed to some degree of climate hazards, this definition may be misleading. It does not clarify whether the project has been assessed for climate risks but found to be unaffected, or whether no consideration of adaptation has taken place at all.

40% The activity is expected to make a non-marginal, positive contribution to climate change mitigation or adaptation objectives. The activity’s contribution to climate objectives can again be direct or indirect.

The 40% coefficient is even more complex when applied to adaptation. The definition states that the activity must make a “non-marginal, positive contribution,” but this is ambiguous in the context of climate-proofing investments. Does it imply that only a small part of the investment volume has been used for climate adaptation? Or does it mean that climate-proofing was done but only to a limited extent, as opposed to a more comprehensive approach? In the case of infrastructure, this distinction is particularly relevant—should a project that incorporates limited adaptation measures, such as improved drainage or heat-resistant materials, be considered only “somewhat” climate-proofed? Conversely, one could argue that once an investment has been adapted to withstand climate risks, the entire investment is effectively climate-aligned, making the 40% designation misleading.

In mitigation, the 40% coefficient can be similarly difficult to apply, as it is unclear whether it refers to an investment that includes partial emissions reductions or one where mitigation was considered but not maximised.

100% The activity is expected to make a substantial contribution to climate change mitigation or adaptation objectives in line with EU climate goals. A substantial contribution can be assigned to an activity that contributes to climate objectives either directly or indirectly

For the 100% coefficient, the definition states that an activity must make a “substantial contribution” to climate objectives in line with EU climate goals. However, this definition lacks precision, particularly for adaptation. Unlike mitigation, where impact can often be quantified in terms of emission reductions, adaptation is context-dependent and lacks clear quantitative thresholds. If a project fully integrates adaptation measures, should it automatically qualify for 100%, or is there a distinction between strong and transformative adaptation measures versus standard climate-proofing? The broadness of the definition may lead to inconsistencies in how investments are classified across different sectors and funding programmes.

For climate change mitigation, a 100% coefficient assumes that the activity makes a substantial contribution to reducing GHG emissions. This entails that the mitigation measures are central to the project's objectives. One potential shortcoming of this definition is that it does not clarify the thresholds or metrics for determining what constitutes a substantial contribution (e.g. if it has to go beyond current legislation; this is also further discussed in the following section 8.3.3).

8.3.3 Options to link coefficients to taxonomy criteria

This section discusses the potential to make use of the EU Taxonomy technical screening criteria for economic activities to support the allocation of coefficients to different IF.

The activities in the EU taxonomy took NACE codes³¹⁹ as a starting point and developed them further. NACE is the European standard classification of productive economic activities and captures the universe of economic activities partitioned in such a way that a NACE code can be associated with a statistical unit carrying them out. An economic activity takes place when resources such as capital goods, labour, manufacturing techniques or intermediary products are combined to produce specific goods or services. Thus, an economic activity is characterised by an input of resources, a production process and an output of products (goods or services). This is different from the approach of IF, given that the EU budget is mostly an investment budget that does not support specific economic activities, but rather funds different types of investments. For instance, the NACE code E36.0.0 describes the economic activities by operators within the field of "Water collection, treatment and supply", while the IF "wastewater collection and treatment" refers to investments by EU funds in this infrastructure.

Nevertheless, some of the activities covered under the Taxonomy overlap with IF; in those cases, it could be considered to build on the work done under the Taxonomy to determine whether an economic activity is environmentally sustainable (through technical screening criteria) and link them to IF.

The Taxonomy uses two key sets of technical screening criteria: the "substantial contribution" technical screening criteria and "Do No Significant Harm" (DNSH) technical screening criteria.

Their differences are summarised in below.

Box 8.3 Differences between "substantial contribution" technical screening criteria and "Do No Significant Harm" technical screening criteria

The substantial contribution technical screening criteria are designed to identify activities that make a substantial contribution to one or more of the EU's environmental objectives. These criteria focus on activities that substantially contribute to at least one of the six environmental objectives:

- Climate change mitigation,
- Climate change adaptation,
- Sustainable use and protection of water and marine resources,
- Transition to a circular economy,
- Pollution prevention and control, and
- Protection and restoration of biodiversity and ecosystems.

Specific thresholds, standards, and performance metrics are set to measure whether an activity makes a substantial contribution. These metrics are stringent and aligned with scientific and policy goals to ensure they drive substantial environmental benefits. For example, an activity might need to achieve substantial reductions in greenhouse gas emissions for climate change mitigation or meet high standards for reducing pollutants for pollution prevention.

³¹⁹ See here for an overview of the NACE codes: https://ec.europa.eu/competition/mergers/cases/index/nace_all.html

The Taxonomy's Do No Significant Harm (DNSH) technical screening criteria, on the other hand, ensure that while an activity may make a substantial contribution to one environmental objective, it does not cause significant harm to any of the other five environmental objectives. These criteria assess the potential negative impacts of an activity across all six environmental objectives to ensure a balanced approach to sustainability. The DNSH criteria set out requirements to avoid significant adverse impacts, which might include compliance with existing environmental regulations, implementation of best practices, and adherence to safety and precautionary principles to minimise harm.

Following the example of waste water, both of those criteria as defined in the taxonomy for the activity "Construction, extension and operation of waste water collection and treatment" can be found here: <https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/320/view>

The key differences between the substantial contribution criteria and the DNSH criteria is that the former aim to identify activities that positively contribute to environmental goals, focusing on enhancing one or more specific environmental objectives with performance-based and impact-driven metrics while the DNSH criteria aim to ensure that activities do not negatively impact other environmental goals, taking a safeguard-based approach to ensure no adverse effects. Thus, the substantial contribution technical screening criteria are stricter and more ambitious than the DNSH criteria.

It is unlikely that DNSH criteria could be linked to tracking coefficients, given that they to a large extent reflect existing environmental regulations. The question is rather to what extent the substantial contribution criteria be linked to the coefficients.

Possibility of using substantial contribution technical screening criteria for a 2-tier system

Given the ambition of the EU system to track expected effects rather than inputs, linking the EU taxonomy substantial contribution technical screening criteria to the coefficients used for tracking green expenditure in EU funding seems sensible. Funding a project does not automatically ensure it has a positive impact; however, the likelihood of a project having a positive impact is much greater if it follows ambitious guidelines, thresholds, and benchmarks as defined by the EU substantial contribution criteria.

This approach was applied to some extent when updating the climate tracking framework in 2021 under the CPR/RRF. Specific requirements were introduced for a set of IF that if met would grant a 100% climate coefficient (see table 8.3 below). The requirement was partly inspired by the EU taxonomy substantial contribution criteria.

Table 8.2 Example of a two-tier ambition" system in the RRF climate tracking framework

IF	Coefficient for the calculation of support to climate change objectives
Energy efficiency renovation or energy efficiency measures regarding public infrastructure, demonstration projects and supporting measures	40%
Energy efficiency renovation or energy efficiency measures regarding public infrastructure, demonstration projects and supporting measures compliant with energy efficiency criteria ³²⁰	100%

³²⁰ Those criteria are then further defined as follows: "If the objective of the measure is (a) to achieve, on average, at least a medium-depth level renovation as defined in Commission Recommendation on Building Renovation (EU) 2019/786 or (b) to achieve, on average, at least a 30% reduction of direct and indirect GHG emissions compared to the ex-ante emissions. The renovation of buildings is also meant to include infrastructure in the sense of intervention fields 85 to 92."

Building on this example, one approach could be to further develop a “two-tier ambition” system in IF. Such a system defines two intervention fields per intervention: one that meets the substantial contribution technical screening criteria and one that does not.

However, this approach may overcomplicate and increase administrative burdens if there is a need to show compliance with substantial contribution Technical Screening Criteria for all activities to be financed

In addition, as the Taxonomy does not cover all activities, it could require strict criteria for those that are covered while other areas which are not covered would benefit from the climate marker without any conditions. The granularity of criteria also varies widely: whereas for climate change mitigation, for example, the Taxonomy contains detailed criteria covering a wide range of economic activities across multiple sectors, for biodiversity this is much less the case. Criteria for climate change adaptation mostly consist of a generic, process-based approach. Thus, currently only the mitigation criteria could be used to some extent if the goal is to have equally stringent conditions attached to a specific coefficient.

Finally, in such an approach, meeting the mitigation substantial contribution technical screening criteria should not automatically mean that a 100% climate coefficient is assigned as explained by example below.

Coming back to the wastewater example, one intervention field could require alignment with the substantial contribution criteria for mitigation set out in the Taxonomy.³²¹

This is already somewhat the case under the RRF/CPR where a distinction is made between the following two IF:

- Waste water collection and treatment
- Waste water collection and treatment compliant with energy efficiency criteria

In this case, the energy efficiency criteria could be replaced by the ambitions of the substantial contribution technical screening criteria.

In the current RRF/CPR approach, a climate coefficient is 40% is assigned and it is likely that this would also be preferable when linking the higher ambition IF to the substantial contribution technical screening criteria. This is because, even if there are specific energy efficiency criteria, the primary goal remains the treatment of waste water, hence a 100% climate coefficient would be an over-estimation.

Only fund activities which meet substantial contribution criteria

An alternative approach would be to only fund activities that meet substantial contribution criteria (an “EU high sustainable ambition funding” approach). This would ensure that funded projects are held to the highest standards of environmental impact, thereby maximising their positive effects on sustainability. However, there are potential challenges attached to this:

- In certain instances, public funding will be needed for investments that potentially do not satisfy the substantial contribution technical screening criteria.
- There may be territorial implications, as it might not be equally feasible in all MS
- Not enough projects would be able to meet the criteria.

Thus, too much conditionality may represent an implementation challenge.

³²¹ See <https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/318/view>

Comparison

In both potential approaches, the following should be noted:

- The EU taxonomy does not cover all activities that the MFF may support.
- The proof that a project aligns with the substantial contribution technical screening criteria may increase administrative burdens.
- Implementing projects following the criteria often requires specific skills and capacities that may be unevenly distributed between regions and MS within the EU.
- Implementing projects following the criteria may be more costly than those with lower environmental ambition.

If the EU budget were to only fund projects with a high-level of ambition to add most value in attaining environmental objectives, this could have territorial implications as some Member States may not have the required capacity to align all investments with sometimes challenging substantial contribution criteria.

A “two-tier ambition” would address territorial implications to some extent by also allowing access to funding by regions and MS with lower capacity. However, over time such approach would increase discrepancies in “environmental cohesion” (which chapter 2 has been identified as one indicator for EU added value in environmental funding).

For both approaches, it should be kept in mind that the Taxonomy is dynamic and the technical screening criteria are regularly revised. Linking tracking coefficients to the technical screening criteria therefore implies updating coefficients once the technical screening criteria change.

Appendix 1. PRIORITIES”

ANNEXES TO CHAPTER 2 “EU GREEN FUNDING

ANNEX 1. REVIEW OF EXISTING APPROACHES TO DEFINING THE NOTION OF “EU ADDED VALUE” IN THE CONTEXT OF THE EU BUDGET

EU funding is limited and is predominantly an investment budget. It will also likely become more limited in the next MFF, also regarding the part of it relevant for climate and environment.

Thus, to make the most out of the EU spending, it can be argued that it should be used where there is the most EU added value.

However, defining this “EU added value” is challenging. As a starting point, reference can be made to the **Better regulation toolbox** (European Commission, 2023) which defines³²² EU added value as “changes that are due to the EU intervention, over and above what could reasonably have been expected from national actions by the Member States”.

This general principle is further explored with a focus on funding by the Commission Staff Working Paper **“The added value of the EU budget”** (European Commission, 2011). It argues that here the concept of EU added value “could not be based on entirely objective criteria” and that “the final judgement on whether expected added value would justify an EU programme is ultimately the result of a political process”. However, it nevertheless proposes a few criteria that can be useful in the realm of this study, namely:

- **Effectiveness:** where EU action is the only way to get results to create missing links, avoid fragmentation, and realise the potential of a border-free Europe.
- **Efficiency:** where the EU offers better value for money, because externalities can be addressed, resources or expertise can be pooled, an action can be better coordinated.
- **Synergy:** where EU action is necessary to complement, stimulate, and leverage action to reduce disparities, raise standards, and create synergies

The 2010 Commission Communication on the **EU Budget Review** (European Commission, 2010) also contained a section on EU added value that argues that “the EU budget should be used to finance EU public goods”. It further gives the following examples of what possible EU added value effects from the EU budget could be, namely:

- Offer economies of scale
- Allow the effective targeting of policy priorities
- Avoid unnecessary overlaps
- Allow core policies to work well through large geographic scope, such as the identification of excellence in research through competition, where the critical mass required often does not exist at national level alone.
- Address cross-border challenges in areas like infrastructure, mobility, territorial cohesion or EU research cooperation
- Leverage a much wider range of public and private resources than available at the national level alone

The subsequent **2018 EU Spending Review**³²³, referring back to the **2017 paper “Reflection paper on the future of EU finances”**³²⁴, defines EU added value through the following criteria:

- Treaty objectives and obligations
- Public goods with a European dimension
- Economies of scale

³²² TOOL #47. EVALUATION CRITERIA AND QUESTIONS

³²³ COMMISSION STAFF WORKING DOCUMENT. Spending review. Accompanying the document. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. A Modern Budget for a Union that Protects, Empowers and Defends. The Multiannual Financial Framework for 2021-2027. {COM(2018) 321 final}. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1527239561812&uri=CELEX%3A52018SC0171>

³²⁴ Reflection paper on the future of EU finances. See: <https://op.europa.eu/en/publication-detail/-/publication/5f9c0e27-6519-11e7-b2f2-01aa75ed71a1>

- Spillover effects
- Subsidiarity
- Benefits of EU integration
- European values: peace, democracy, rule of law

The Communication “A Modern Budget for a Union that Protects, Empowers and Defends The Multiannual Financial Framework for 2021-2027”³²⁵ which is linked to the 2018 spending review, develops in its Annex for each MFF funding programme a narrative on their respective EU added value.

The concept of “EU public goods” (or “**European public goods**”) mentioned in the 2010 and 2019 budget reviews is also a valid concept to look into as part of this chapter. It combines two questions (or concepts) – what is a public good³²⁶, and what level should they be delivered on (e.g. EU level or at the (sub-) national level).

The recent study “**Which European Public Goods?**” (Wyplosz, 2024) discusses for different topics if they can be considered a European Public Good (e.g. the green transition or the digital transition) and to this end identifies two criteria (out of the seven criteria usually used to assess if a policy domain should be handled at central level, here the EU, or a sub-central level) that argue for the provision of a public good at EU level:

- Increasing returns to scale. The presence of economies of scale means that shifting the provision of goods to the central (here, European) level would cut costs and/or improve efficiency.
- Spillovers (also called externalities). In the presence of spillovers, one country’s provision of public goods may benefit other countries (for example, spending on defence) or, in the opposite, hurt them (like when competing for scarce vaccines). In both cases, coordination is helpful and, doing it jointly is the best form of coordination.

Another recent paper (Buti et al., 2023) aims at defining European public goods by developing criteria that are also based on economic theory of public goods and the theory of fiscal federalism, but which also take the specific institutional and political features of the EU into account. The criteria are shown in the following Table.

Table 8.3 Features of European public goods

Rationale	Feature	Explanation
Economic	Non-rivalry and/or non-excludability	The existence of these two qualities or even of one of them, also in a weak form, imply that an EPG would be either a ‘pure’, ‘mixed’, or ‘impure’ public good.
	Economies of scale and scope	Beyond a minimum level, the production cost of additional units of EPGs decreases (economies of scale); the same applies to the joint financing and production of EPGs (economies of scope).
	Positive externalities	The production and utilisation of the EPGs in a given sector or by a given number of EU Member States create positive spillovers to other sectors and other EU Member States. Combined with economies of scale and scope, these externalities entail positive multiplier effects at EU level.

³²⁵ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A Modern Budget for a Union that Protects, Empowers and Defends The Multiannual Financial Framework for 2021-2027. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2018%3A321%3AFIN>

³²⁶ Which on a general level often is defined as goods or services which are non-excludable and non-rivalrous; they often are maintained and catered for by the public sector because the free market will not deliver them since their use cannot be charged.

Rationale	Feature	Explanation
Institutional	Mutual interest	EU Member States have a mutual interest in jointly designing, financing, and producing EPGs because the availability of these goods is beneficial to each of the participating countries and the production of these same goods at national level would be too costly or unfeasible.
	Cross-border dimension	The effective acquisition of EPGs requires the involvement of financial resources of several or all EU Member States. Nevertheless, any good financed by EU resources but nationally produced is not included in our definition of EPGs.
Political	Mission-oriented	EPGs are key to pursue EU's strategic priorities in the economic or non-economic areas.
	Beyond subsidiarity	EPGs produce externalities that improve the efficiency and effectiveness not only at national level, but also for the EU as a whole. Hence, the impact of the EPGs cannot be reduced to an assessment of subsidiarity.

Source: (Buti et al., 2023)

Based on those criteria, the paper then defines six priority areas for the EU to act in at central level, which include green transition and energy (decreasing EU energy dependence and safeguarding EU's leading role towards climate change) and raw materials (to reduce competitiveness gaps and increasing strategic autonomy).

The question is now how to translate the findings in the literature into a framework that can be used for identifying environmental fields that EU funding should focus on.

There are several challenges. Firstly, as shown, there is no one agreed definition or criteria to choose from. Secondly, even where criteria are defined, as argued in the paper "The added value of the EU budget" (European Commission, 2011), the concept of EU added value cannot be based entirely on objective criteria and that eventually the judgement would result from the EU political processes. Finally, the challenge is that arguably many of the arguments of the last section are more tailored towards direct management funding, while shared management funding represents (at least currently) a much larger budget share.

ANNEX 2. SUMMARY OF INTERVIEW FINDINGS PER FUND

The table below reports reflections on priorities on the previous MFF 2014-2020 (i.e. “past lessons”), relevant insights for the composition of priorities for the next MFF 2028-2034 (i.e. “future expectations”), and any relevant comment on the current MFF (i.e. “present reflections”) that can help to provide an idea of the current priorities and performance of the various funds assessed by the analysis.

Fund	Past lessons	Present reflections	Stakeholders' future expectations
Cohesion Fund - European Regional Development Fund - Just Transition Fund	- Shift from previous MFF to current, focusing more on climate and environmental issues. - Gas projects excluded, signalling a move towards more sustainable energy sources. - Reflects transition towards facilitating economic and social adjustments for green policies.	- Housing sector underlines balancing market distortion with social inclusion and affordability. - Decarbonisation of transport and support for re-industrialisation highlighted. - Proposed merging of ERDF and EAFRD into a single sustainable instrument for long-term rural development. - Flexibility might help address states lagging in green transition efficiently.	- Future strategies to favour flexibility over thematic concentration, aligning with European Semester. - Performance-based approach suggested for tailoring state-specific solutions. - Emphasis on effective investments in climate and green transitions, less on new regulations.
Connecting Europe Facility - Energy	- Shifted focus towards infrastructure and cross-border cooperation for enhanced EU interconnectivity, including renewable energy. - Excluded less climate-friendly investments, notably natural gas projects, aligning closer with EU climate objectives. - Employed a nuanced approach with tailored criteria emphasising climate considerations in project selection. - Acknowledged exceptions for critical energy dependencies, maintaining flexibility. - Moving towards sustainable energy solutions, reflected in strategic portfolio diversification up to 2029.	- Continuing efforts to integrate considerations from environmental impact assessments (EIA) led by DG ENV. - Emphasised the importance of balancing climate priorities with manageability for project beneficiaries. - Project integrity and evaluation overseen by CINEA, closely monitoring established milestones. - The interviewees highlighted the critical need for projects with EU added value, particularly in climate-relevant sectors facing budget constraints. - No expectation for a near-term revision of the TEN-E regulation, suggesting stability in selection criteria of projects.²	- The expenditure dedicated to climate-related endeavours might increase. - Emphasis on aligning with EU taxonomy for climate mitigation and adaptation, ensuring sustainability. - Significant dedication of funds towards taxonomy-relevant projects for climate considerations in the initial calls. - Streamlining the project selection process under the TEN-E regulation with a strong focus on climate relevance.
Connecting Europe Facility - Transport	Continuity in rail and waterborne investments from previous MFF,	Emphasising sustainable transport continues as a core strategy,	Prioritise mature, ready-for-construction projects, emphasising efficiency and readiness.

Fund	Past lessons	Present reflections	Stakeholders' future expectations
	emphasising sustainable transport modes. - Achieved at least 70% of the transport budget supporting climate objectives. - Recognised need for prioritising cross-border connections to enhance European connectivity. - Acknowledged the importance of infrastructure for alternative fuels, aligning with energy sector synergies. - Lessons on flexible funding priorities due to changing geopolitical situations, highlighting military mobility requirements.	necessitating streamlined guidelines for beneficiaries. - Highlighted investment needs far exceed current funding, suggesting exploration of blending and private financing solutions. - Potential for involvement with EIB and other banking loans to support alternative fuel infrastructure projects. - Infrastructure for alternative fuels and sustainable transport modes like rail and waterborne transport to remain key priorities.	- Focus on completing TEN-T, with ongoing investments in rail and waterborne transport to remain. - Integration of environmental measures in project selection, leveraging CBA to incorporate environmental impact. - Anticipate sustained emphasis on alternative fuel infrastructure, seeking to involve more private investments.
Digital Europe Programme	N/A	- Need for balancing energy demands of digital infrastructure with environmental benefits. - Acknowledging the evolutionary nature of digital technologies in addressing environmental challenges - Importance of continuing stakeholder collaboration in setting future priorities - Clarity on funding allocations to ensure highest EU added value in environmental projects - Lack of a specific focus on digital tools for environmental objectives in the previous MFF. - Realised the importance of investing in high-precision modelling for climate and biodiversity. - DEP initiative marked a shift towards integrating digital solutions in environmental strategies. - Emphasis on supporting innovations under real-life conditions for green topics.	- Emphasis on developing and expanding digital twins for climate and biodiversity. - Integration of AI and supercomputing to bolster climate adaptation and mitigation. - Advancing data spaces is crucial for supporting diverse environmental applications. - Prioritising training for effective use of environmental data tools - Focus on digital solutions that contribute directly to EU's green transition goals. - Alignment of DEP's future projects with broader EU sustainability policies.

Fund	Past lessons	Present reflections	Stakeholders' future expectations
European agricultural fund for rural development - European agricultural guarantee fund	• Strong focus on biodiversity protection, with the introduction of specific reporting coefficients. • Introduction of eco-schemes, promoting environmental and climate goals via voluntary participation. • Past decision-making relied on carrying forward previous investment's threads.	• Climate tracking is more on financial allocation rather than direct emission measurements as it is set now.	• Ongoing discussions about priority areas for the next MFF, with unclear directions. • A broader approach to set priorities may be needed, considering supporting both biodiversity and socioeconomic fields. • Climate adaptation remains a priority; however, the distribution and impact of funds require closer examination. • Reflections on making the DNSH principle more flexible to address varying needs across different MS. • Scepticism about applying the taxonomy principle broadly, potentially ill-suited for CAP.
European Maritime Fisheries and Aquaculture Fund	• EMFAF focused more on biodiversity and climate than EMFF, reflecting an increased emphasis on these areas. • The fund prioritises maximum public benefit, particularly at the artisanal and local community levels. • Mandated financial instruments underused, suggesting a need for more accessible or incentivised utilisation. • Persistent focus on not funding projects that could be financed privately to ensure public funds maximise benefit. • Emphasised significant investments in control, enforcement, and data collection to support informed policy decisions and sustainable fisheries management.	• Experience under current MFF underscores, among others, the utility of DNSH principles and targeted investments like engine replacements within sustainability criteria. • Continuous refinement and adaptation of funding strategies highlighted as key to responding to changing political priorities and environmental needs.	• Continuation of strong environmental and climate focus, with potential deeper integration of biodiversity considerations. • Identifying intervention areas that could benefit from increased or optimised fund allocation. • Enhanced coherence between funding priorities and the sustainable management of shared maritime and fisheries resources. • Anticipation of evolving needs, possibly incorporating more digital and gender-related objectives under SDG alignment.
European Social Fund Plus	• N/A	• A discourse on whether to keep funds separate or merge them for better efficiency and targeted outcomes. • Thematic specialisation increased, with climate objectives set at ERDF 27% and	• Enhanced tracking and detailed reporting for capturing the green contributions of funds needed, acknowledging administrative cost concerns. • A recommendation for fund-agnostic priority setting, highlighting the need for

Fund	Past lessons	Present reflections	Stakeholders' future expectations
		cohesion at 37%; ESF lacked specific thresholds.	strategic allocation amidst budget constraints. Importance of continuing focus on social interventions despite budget limitations emphasised.
Horizon Europe	- No big shift in themes; priorities largely remained consistent with previous MFF, focusing on environment, biodiversity, and climate. - Increased emphasis on nature; original proposals aimed to strengthen nature-focused funding, though actual allocation didn't significantly change. - Inertia and lobby power influenced allocations; notable discrepancies in budget allocation to aviation and rail, questioning the sustainability of investments. - Renewable energy dominated by biomass and solar, highlighting possible neglect of other potentials like geothermal or tidal energy.	- Linear thinking in product solutions needs revaluation; the current approach may not fully leverage the benefits of a green transition. - Communicating benefits of a greener future crucial for public acceptance and support. - Inclusivity in policy-making; ensuring civil society and public procurers are not overlooked in the dialogue on future funding priorities. - Emphasise behavioural change and land use, suggesting a needed focus on innovations like precision agriculture and multi-cropping systems.	- Mission-based approach recommended, focusing on solving specific issues through stakeholder collaboration. - Need for addressing societal and behavioural changes, ensuring benefits of green transition are widespread and equitable. - Highlighting underexplored areas like land use and precision agriculture for potential future emphasis. - Fairness in job creation and benefit distribution from green projects to counter resistance and resentment.
Innovation Fund - Modernisation Fund	- Broader scope beyond renewables and CCS, with an emphasis on decarbonisation through the ETS reflecting continuity and expansion. - Impact assessment for ETS revision drove changes, suggesting reliance on evaluations to guide adaptations. - Centralised management by Commission, moving from MS-led projects because of high failure rates under previous approach. - GHG emission avoidance became the primary funding criterion, marking a shift	-	- Increased centralisation and project maturity focus expected to continue, optimising efficiency and effectiveness. - Auction and grant services to increase resources and efficiency; a sign of moving towards centralised EU-level decision-making processes. - Anticipation of emission reduction impacts on ETS allowances volumes, hinting at adaptable funding strategies based on evolving environmental and climate goals.

Fund	Past lessons	Present reflections	Stakeholders' future expectations
	from a cost-based model for modernisation.		
InvestEU	- Consolidated financial instruments into a singular framework to support diverse policy objectives, including environmental sustainability. - Introduced the Sustainable Infrastructure Window targeting 60% for climate/environmental projects. - Previous tools lacked defined environmental targets, which has been addressed in the current MFF. - Experience from past MFF highlighted difficulties in finding viable projects for financial support due to high risk and cost.	- Flexibility and a realistic approach highlighted for future MFF exclusions, emphasising case-by-case evaluation and proportionality. - Discussion on the potential for leveraging a taxonomy approach for clarity in project eligibility and environmental impact assessment. - The administrative complexity of managing environmental funding priorities underscores the need for streamlined processes and coordination among policy DGs. - The evolving nature of environmental priorities and the importance of aligning investment mechanisms with policy goals are likely to shape future funding strategies.	- Continuing difficulty in identifying financially viable high-risk environmental projects suggests need for targeted support and potentially revised criteria. - Expected to maintain or possibly increase focus on environmental and climate investments, with considerable attention on sustainable infrastructure. - The importance of technical assistance acknowledged for developing a viable project pipeline for repayable support. - Emphasis on ensuring projects comply with environmental standards and the DNSH principles to be financed.
Programme for Environment and Climate Action (LIFE)	- Priorities now include zero pollution and clean energy transition. - Emphasis has increased on renewable energy and energy efficiency. - Climate issues have gained more prominence over time. - Consistently supported Natura 2000, focused on environmental goals.	- LIFE is the sole EU programme dedicated to biodiversity and biodiversity protection has to be considered as a permanent priority. - Funding for the circular economy and biodiversity protection needs to increase. - Scaling up small-scale technologies for market adoption is essential. - Flexibility in financing projects ensures LIFE remains stable.	- Action on green topics, biodiversity protection, and climate adaptation/mitigation needed. - Specific actions required for tangible environmental conservation impacts. - Green innovation funding crucial for implementing and accelerating the green transition. - Dedicated financing and technical assistance vital for legislation support, like the Nature Restoration Regulation.

Fund	Past lessons	Present reflections	Stakeholders' future expectations
Recovery and Resilience Facility³²⁷	N/A	- Rapid technology evolution requires adaptability in funding priorities, hinting at ongoing adjustments to maintain relevance. - Strategic guidance lacking within RRF for member states, indicating future frameworks may benefit from clearer, strategic direction on green transition. - Vertical approach effectiveness, suggesting future funds could focus more specifically on targeted areas rather than broad, horizontal issues. - Administrative challenges in "tagging" methodology, underscoring the balance between ensuring compliance and managing demands on member states. - Priorities broadened to include biodiversity protection and FitFor55 goals, underlining a shift toward comprehensive green and tech transition efforts. - Green transition became the overarching aim, showing an evolution from the previous MFF's approach, focusing on environment, biodiversity, and climate. - Member states' freedom in proposing priorities for achieving objectives, showcasing a more decentralised approach to defining and meeting targets. - Challenges in prioritising investments highlighted, indicating a need for clearer guidance and more effective tagging and tracking methodologies.	- Adaptation to climate change, including preventive measures for climate-related risks like fires, storms, and drought, becomes a priority. - Increased use of recycled materials as raw materials, emphasising circular economy principles and efficiency. - Cycling infrastructure development, indicating a push towards sustainable mobility. - The performance framework to take into account evolving sectors like hydrogen, suggesting future priorities will include expanding green energy sources.

³²⁷ This is a one-off tool; however, findings relating to it may still be relevant in the next MFF

Fund	Past lessons	Present reflections	Stakeholders' future expectations
REPowerEU (as part of RRF)	N/A	- Priorities shifted to accelerate green and digital transition with a 37% budget allocation to climate change/energy. - Priorities informed by the need for decarbonisation and supporting renewables, biogas, biomethane, and hydrogen investment. - Flexibility in funding, such as seen in the RRF, is crucial to adapt to geopolitical situations and regional needs. - A regional perspective is essential in addressing energy mixes and transitioning from coal.	- Continuation of emphasising technology-neutral approaches to supply an uncertain energy mix while focusing on decarbonisation and competitiveness. - New measures are needed to accommodate investor uncertainty regarding the future energy landscape. - The identification and promotion of clean technologies, including the decarbonisation of the gas system and hydrogen, are critical.
Social Climate Fund	N/A	- Emphasis shifted towards renewable energy in buildings and sustainable construction practices. - Continual adjustment of guidelines necessary to align with evolving environmental legislation and targets. - Need for clear communication and guidance documents to aid member states in aligning with EU-wide environmental objectives. - Emphasis on balancing rigidity and flexibility within funding rules to accommodate unique challenges across member states. - Future priorities to increasingly reflect an integrated approach to achieving climate neutrality and biodiversity conservation. - Acknowledgement that certain practices need to be upscaled while others phased out.	- Stronger inclination towards renovating existing infrastructure over new construction to minimise environmental footprint. - Greater emphasis on integrating circular economy principles in construction to enhance resource efficiency. - Expectation to expand renewable energy use in buildings further, alongside green infrastructure. - Anticipate more bespoke approaches allowing for state-specific compromises on fund allocation.

Fund	Past lessons	Present reflections	Stakeholders' future expectations
Technical Support Instrument	N/A	- Experiences from the financial sector informed current MFF negotiations, revealing trade-offs between climate goals and environmental objectives. - Prioritisation shifted towards green goals to facilitate a structural shift towards sustainability. - The evolving EU Taxonomy development is critical in defining future funding priorities, underscoring the importance of clarity and applicability. - The importance of balancing climate goals with environmental objectives, ensuring neither is prioritised at the expense of the other. - The potential of green budgeting, disaster budgeting, and gender budgeting as part of a new economic governance framework.	- Greater emphasis on assessing climate and environmental objectives holistically expected. - Need for all DGs within the Commission to consistently adhere to a green agenda, signalling broader acceptance. - Member States focusing more on climate mitigation/adaptation, but growing awareness of biodiversity's importance. - Anticipated stronger link between finance and environmental considerations across Member States.

ANNEX 3. SUMMARY OF LITERATURE FINDINGS PER FUND

The team carried out analysis on the various funds within scope of this project. Specifically, we analysed for each fund and when available, these different categories of documents:

- Mid-term evaluation from the 2014-2020 timeframe
- *Ex post* evaluation from the 2014-2020 timeframe
- Impact assessment from the 2021-2027 timeframe
- Mid-term evaluation from the 2021-2027 timeframe

The analysis gathered information regarding the rationale followed for the previous MFF 14-20 and the current MFF 21-27 for the prioritisation of certain investments and the exclusion of others in the context of this project.

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
Alternative Fuels Infrastructure (AFIF)	From 2014-2020 mid-term: • N/A From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • N/A From 2021-2027 mid-term: • N/A Other sources: • N/A	From 2014-2020 mid-term: • N/A From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • N/A From 2021-2027 mid-term: • N/A Other sources: • N/A	From 2014-2020 mid-term: • N/A From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • N/A From 2021-2027 mid-term: • N/A Other sources: • N/A
Cohesion Fund (CF)down	From 2014-2020 mid-term: • N/A From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • Encouragement of thematic concentration towards green growth, including investments in environmental sustainability, low-carbon technologies, and climate adaptation measures. • Emphasis on integrating climate resilience and greenhouse gas emission reduction measures across major projects. • Recognition of digital connectivity and transport networks as vital components for a more connected Europe, suggesting that sustainable infrastructure is a priority in bridging economic, social, and territorial divides. From 2021-2027 mid-term: • / Other sources: • With a substantial budget aimed at fostering socio-economic convergence and supporting a smooth and fair green and digital transition, investments that advance these goals, especially in sustainable development, are prioritised.	From 2014-2020 mid-term: • N/A From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • / From 2021-2027 mid-term: • / Other sources: • /	From 2014-2020 mid-term: • N/A From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • The document underscores the significance of addressing green budgeting and investments within the context of integrated territorial development. This includes urban, rural, and coastal developments, as well as addressing specific challenges faced by the EU's outermost regions. • The need for simplifying the rules governing green investments and the use of funds, to reduce administrative burdens and make it easier for initiatives aligned with green objectives to receive support. From 2021-2027 mid-term: • / Other sources: • /
Connecting Europe Facility (CEF) including Military Mobility	From 2014-2020 mid-term: • Projects that offer high European added value in addressing climate change, enhancing energy efficiency, and facilitating the shift to a low-emission economy receive prioritisation. • Investments in transport and energy infrastructure that facilitate the EU's decarbonisation and energy transition goals are highlighted. This includes development of alternative fuels infrastructure, high-performance electricity lines, and smart grids that enable the integration of renewable energy sources. From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • N/A	From 2014-2020 mid-term: • Projects that lack commercial viability yet do not deliver on significant externalities like regional security of supply, innovative solutions, or substantial environmental benefits could potentially be considered for exclusion. From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • N/A From 2021-2027 mid-term: • N/A Other sources:	From 2014-2020 mid-term: • There is recognition of the need for the CEF and its policy frameworks to be more adaptable to new technological developments and priorities, such as digitalisation and accelerated decarbonisation. The potential for unlocking further public and private investment is acknowledged, indicating a need for increased budget allocation to address more market failures and augment the EU's green investment capacity. From 2014-2020 <i>ex post</i>: • N/A From 2021-2027 impact assessment: • N/A

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
	From 2021-2027 mid-term: - N/A Other sources: - Prioritisation towards projects that support EU-wide connectivity and infrastructure enhancement, which includes green and sustainable development initiatives such as smart grid, renewable energy connections, and digital infrastructure for energy efficiency.	/	From 2021-2027 mid-term: - N/A Other sources: - Budget cuts to the CEF to finance the European Fund for Strategic Investments (EFSI) imply a recalibration of available resources, which could affect future green investments.
Digital Europe Programme (DEP)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
European agricultural fund for rural development (EAFRD)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
European agricultural guarantee fund (EAGF)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
European Maritime Fisheries and Aquaculture Fund (EMFAF)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources:	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: /	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources:

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
	- Special focus is placed on aids to mitigate the effects of natural disasters, adverse climatic events, and diseases in aquaculture. This prioritises spending on preventive measures, control, and eradication of diseases, and compensating for damages caused by protected animals. These aspects highlight the necessity of investing in sustainable practices and resilience against climate change impacts. - By emphasising support for local coastal communities, the EMFAF acknowledges the importance of socio-economic sustainability alongside environmental priorities. These investments are intended to empower communities, promote sustainable local economies, and support the broader goal of ecological sustainability. - Investments in the sustainable blue economy are a priority, demonstrating a comprehensive approach to ocean governance that includes not only the conservation of marine ecosystems but also the promotion of sustainable maritime activities that can generate economic growth without compromising the marine environment.		- The report discusses the impact of policies like the EU 2030 Climate and Energy Framework on state aid, pointing to areas of potential incoherence. For instance, compensations for flood damages in aquaculture might be reevaluated to encourage more resilient and sustainable practices in the face of increasing climate change risks. - The evaluation highlighted potential challenges in the legal and administrative processes, particularly concerning the alignment with post-2020 EMFF conditions. This complexity underscores the importance of simplifying and clarifying rules to support stakeholders in effectively utilising state aid for green investments.
European Regional Development Fund (ERDF) incl INTERREG	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
European Social Fund Plus (ESF+)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
European Space Programme	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - The document emphasises the importance of space in monitoring climate change, highlighting actions like Copernicus which provides crucial data for understanding global climate trends. This suggests prioritising investments in satellite technologies and services that improve climate monitoring and impact assessment capabilities. From 2021-2027 mid-term:	From 2014-2020 mid-term: / From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: / Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - green budgeting and investment in the space sector are seen as integral to broader policy objectives, reinforcing the EU's commitment to sustainability and environmental protection. - Mention of applications responding to natural disasters and supporting renewable energy (e.g. Reuniwatt's Copernicus-based forecasts). From 2021-2027 mid-term:

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
	- The document highlights the development of services for the detection and forecast of different types of pollen. This initiative, set to expand, underscores the importance of investing in health-related environmental services. - With Copernicus monitoring CO2 and other greenhouse gases, there's a clear indication of the need to prioritise investments in technologies and services that contribute to the monitoring and reduction of emissions. - Investment in improving the description of ocean physics and the development of models for fisheries, pollution, and biodiversity protection through projects like NECCTON indicate the priority given to safeguarding marine ecosystems. Other sources: - N/A		- The document discusses the use of Copernicus data in sectors like oil & gas, showing how environmental data can reduce costs and increase revenues by providing precise geospatial information. Other sources: - N/A
Global Europe: Neighbourhood, Development and International Cooperation Instrument (NDICI)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - The broad scope of selected priority areas in programming allows for a level of flexibility, enabling adjustments to unforeseen events (i.e. flexible approach).	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: /	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - Prioritising high-impact green projects in spending and investments, ensuring that funds are directed towards projects with significant environmental, climate, and energy benefits.
Horizon Europe	From 2014-2020 mid-term: / From 2014-2020 ex post: - Horizon 2020 investments have been notably aligned with at least one Sustainable Development Goal (SDG), emphasising the integration of green spending with global sustainability agendas. - The contributions of the Joint Research Centre (JRC) underscored the significance of science-driven policy-making in key policy areas, including environmental sustainability. This suggests prioritising research and innovations that can shape and implement EU policies, particularly those focused on environmental challenges. - Projects like Park4SUMP underline the focus on urban mobility enhancements, aiming at integrating sustainable parking measures to support the broader vision of sustainable urban transport. - The Horizon 2020 Green Deal call, as an example, highlights a preferential focus on projects with a higher Technology Readiness Level (TRL), especially those that aim at technology validation and demonstration in relevant environments (TRL 4-6). Of course, the programme also acknowledges the need for funding both incremental and breakthrough research. From 2021-2027 impact assessment: - Emphasising the importance of breakthrough innovations, particularly in deep-tech domains, point towards prioritising investments in high-risk, high-impact technologies that can	From 2014-2020 mid-term: / From 2014-2020 ex post: / From 2021-2027 impact assessment: - No specific list of exclusion but low-impact or incremental innovation projects and projects not aligned with EU climate goals may be less likely to receive funding. From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - Emphasis on greater economic and inclusive growth that creates jobs in Europe. This includes establishing compatible indicators for research and innovation support, potentially relevant for green investments if applied to sustainable industries. From 2014-2020 ex post: - Horizon 2020 has devoted a significant portion of its investment towards climate-related research but fell short of its 35% target, indicating both a strong commitment and an area for potential improvement in directing funds towards climate action. - There are concerns over the administrative and proposal evaluation costs, affecting the efficiency of the framework programme. This is indirectly relevant to green spending as it underscores the importance of streamlining administrative processes and reducing application hurdles, potentially making green investments more accessible and attractive. From 2021-2027 impact assessment: - Identifying a significant equity funding gap in Europe, particularly for young, innovative firms in deep-tech sectors, implies a strategic opportunity for green spending and investments to fill this void. From 2021-2027 mid-term: - N/A Other sources: - N/A

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
	significantly contribute to the EU's green and digital transitions. This supporting projects aiming at the environmentally safe capture and geological storage of CO₂ (CCS), as well as innovative renewable energy and energy storage technologies. - Projects contributing substantially to mitigating climate change through CCU are a priority. These technologies capture carbon dioxide emissions from sources like power plants and industrial processes, to prevent CO₂ from entering the atmosphere. - Horizon Europe and the R&I window of the InvestEU Fund support these areas under the Open Innovation pillar, emphasising the advancement in decarbonisation techniques. From 2021-2027 mid-term: - N/A Other sources: - N/A		
Humanitarian Aid (HUMA)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - Investments in disaster preparedness are indirectly supporting green initiatives by focusing on climate adaptation measures and infrastructure that enhance community resilience to climate-induced disasters	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: /	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: /
Innovation Fund	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
InvestEU Programme	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
Just Transition Mechanism including Just Transition Fund	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
Modernisation Fund (MF)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
Overseas Countries and Territories (OCT)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - Projects aimed at combating climate change, preserving biodiversity, and sustainable natural resource management are likely to be favoured. - Priority to biodiversity conservation activities, specifically targeting actions for biodiversity conservation and fighting against invasive species in Small Island Developing States and OCT	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - The framework suggests that projects or OCTs that do not meet specified eligibility criteria for certain programs, such as the GCCA, may be excluded from direct financial support for specific initiatives despite potentially benefiting indirectly through capacity-building and association in regional initiatives.	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: /
Pre-Accession Assistance (IPA III)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - Priority actions: boosting funding towards climate action and environmental sustainability projects.; integrating green considerations and sustainability across various sectors and thematic areas. From 2021-2027 mid-term: - N/A Other sources: /	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: / From 2021-2027 mid-term: - N/A Other sources: /	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - Need for a more streamlined and simplified approach to programming and implementing external action instruments to ensure they effectively support green and sustainable initiatives. - Supplementary Insights: the necessity for a streamlined and effective approach to support green initiatives; emphasis on leveraging and blending to finance sustainable development projects; calls for simplified procedures to enhance flexibility and responsiveness to sustainability challenges.

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
			From 2021-2027 mid-term: - N/A Other sources: - The emphasis on cross-border cooperation presents opportunities for shared environmental projects and green infrastructure development, reinforcing the EU's priorities for smart, sustainable, and inclusive growth.
Programme for Environment and Climate Action (LIFE)	From 2014-2020 mid-term: - Importance of Payments for Ecosystem Services (PES) projects, emphasising agricultural improvement, enterprise development, training in forest regeneration, and biodiversity enhancement. This signals a clear prioritisation of projects that contribute positively to ecosystem services and biodiversity conservation. - Combining grant funding with private finance, justified economically even when a business model exists, due to the public good nature of many biodiversity projects. This combination can provide a viable pathway for advancing green infrastructure and pro-biodiversity investments. - Categories for spending include Green Infrastructure, Biodiversity Offset, and Innovative pro-biodiversity and adaptation investments, with each having its defined financial needs and complexity challenges. These areas are critical for preserving natural capital and fostering sustainable economic development. From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - The LIFE Programme is designed to prioritise actions that support innovation, demonstration, and the development of best practices for environmental and climate challenges. This involves testing, demonstrating, and piloting new technologies, approaches, or policies, particularly in the realms of nature, biodiversity, environmental governance, and climate mitigation. - A focus is placed on building the capacities of various stakeholders, including governmental bodies, non-governmental organisations (NGOs), the private sector, and research institutions, to speed up the implementation of environmental and climate legislation and policies. From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - Projects not demonstrating financial viability or those posing risks to environmental integrity may be excluded. From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - Projects that do not align with EU environmental or climate legislation, or do not contribute significantly towards the EU's environmental and climate objectives, may implicitly be excluded from funding. From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - The document outlines several challenges to financing green projects, such as regulatory or market risks, the complexity of transacting for natural capital, and securing private-private transactions for conservation. - The necessity for a range of instruments to develop and implement green projects signals an evolving landscape of green financing, pointing towards the sophistication of financial models that blend public and private funds for optimal environmental outcomes. From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - The new LIFE Programme aims to address cross-cutting objectives such as flexibility, focusing on performance, and enhancing coherence and synergies with other EU programmes. This approach signifies a systemic effort to optimise the contributions of LIFE towards achieving broader EU environmental, climate, and energy targets. From 2021-2027 mid-term: - N/A Other sources: - N/A
Recovery and Resilience Facility (RRF)	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term:	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
	- Green infrastructure, sustainable mobility, and energy efficiency, clearly are the main important priorities. Other sources: - N/A	Other sources: /	Other sources: - The RRF encourages comprehensive reforms and investments that not only accelerate the green transition but also incorporate digital transformation and social cohesion. - Stakeholder involvement, including that of local and regional authorities, social partners, and civil society organisations, is a critical factor for the successful implementation of RRF objectives.
REPowerEU	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
Social Climate Fund	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - The fund should priorities investment in projects that aim to reduce carbon emissions and enhance resilience to climate change impacts, as well as promoting resource efficiency. - Focus on transitioning to a low-carbon, resource-efficient, and climate-resilient economy. - Adjusting education and training system reforms to match the skills required in a low-carbon and climate-resilient economy, supporting workforce transition towards sustainable sectors.	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: /	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - Climate action is not isolated within specific thematic objectives but is integrated across various sectors and investment priorities, indicating a holistic approach to addressing climate change. - Emphasising the role of partnerships at national, regional, and local levels in preparing and implementing programs that are coherent with national/regional strategies and the EU's ambitious objectives for climate action.
STEP	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
Technical Support Instrument	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment:	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment:	From 2014-2020 mid-term: - N/A From 2014-2020 ex post: - N/A From 2021-2027 impact assessment:

Fund	Findings relevant for priorities	Findings relevant for exclusions	Other relevant findings and comments
	- N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	- N/A From 2021-2027 mid-term: - N/A Other sources: - N/A	- N/A From 2021-2027 mid-term: - N/A Other sources: - N/A
Union Civil Protection Mechanism	From 2014-2020 mid-term: - N/A From 2014-2020 <i>ex post</i>: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - Enhancing environmental sustainability through integrating climate change adaptation into disaster risk reduction strategies can be considered a priority. This includes investment in early warning systems, flood prevention, and sustainable water management. - Investments in infrastructure resilience, including the restoration of natural landscapes that double as flood defences (e.g., wetlands, floodplains), align with green investment principles. - Prioritise investments that focus on reducing the carbon footprint of civil protection operations, particularly through the life cycle analysis of vehicles and equipment used in disaster response. This involves selecting greener alternative vehicles and other equipment that emit fewer greenhouse gases over their lifetime. - Reuse, repairability, and recycling of materials and resources in civil protection activities is important.	From 2014-2020 mid-term: - N/A From 2014-2020 <i>ex post</i>: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - Excluding investments in resources or materials that are not sustainable or do not promote circular economy principles, such as single-use items or non-recyclable materials.	From 2014-2020 mid-term: - N/A From 2014-2020 <i>ex post</i>: - N/A From 2021-2027 impact assessment: - N/A From 2021-2027 mid-term: - N/A Other sources: - Integrating nature-based solutions for flood management is fundamental for the climate adaptation strategy. - The importance of integrating circular economy concepts and sustainability in all phases of the disaster management cycle, from preparedness and response to recovery, is necessary. - Initiatives like acquiring tools for water contamination detection and improving forest management to prevent fires highlight the integration of environmental considerations in enhancing disaster prevention mechanisms.

ANNEX 4. DETAILED MATRIX WITH PROPOSED PRIORITIES

The Table in this Annex includes a detailed overview of the potential future spending priorities developed in this study.

Identifying spending priorities in an objective and systematic manner is challenging, given the extensive funding needs across various societal areas, including environmental initiatives. To enhance objectivity, the methodology applied incorporates a broad range of qualitative and quantitative inputs. These include interviews with policy officers, reviews of past evaluations and impact assessments, and analysis of legal requirements in the EU acquis. Additionally, data from key environmental reports, such as those from the European Environment Agency and the Environmental Implementation Review, have been assessed alongside expert consultations and an advisory panel review.

The research has been structured around two key dimensions: environmental clusters, which align with the 8th Environment Action Programme and the EU Taxonomy for sustainable activities, and economic sectors to ensure coherence with policy frameworks. The findings have been organised in a matrix format, mapping proposed priorities at the intersection of relevant environmental and economic categories. In cases where priorities do not fit neatly within one category, they have been classified as 'cross-cutting'. The detailed matrix, which presents the proposed priorities, is provided below.

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
Climate change mitigation	GHG emissions and mitigation efforts & Renewable energy sources & Energy efficiency	[Mentioned here on climate change mitigation, but also relevant for other areas] As emphasised 2024 SAB report on climate neutrality, since “the perceived fairness of EU climate policies will determine whether they are implemented successfully, EU policies need to address regressive social impacts of climate policy measures”, i.e. a fair and just transition is needed, including through funding underpinning. The importance of a just transition is also highlighted in the 9th Cohesion Report³²⁸, which emphasises that the green transition has potential to reduce regional inequalities, but also equally could lead to them widening if not supported properly, for example by co-financing investment in renewable energy, energy efficiency, clean and circular technologies, carbon-free vehicles and the corresponding infrastructure, and retraining and education. The report argues that this is particularly important in less developed regions, which tend to be less prepared for the transition to a climate-neutral economy and to have more difficulty in reaping the potential benefits. EU funding (such as current just transition fund or social climate fund) is appropriate here due to pan-European relevance.	The 2024 SAB report on climate neutrality³²⁹ recommends that CAP support should shift “away from emission-intensive agricultural practices, including livestock production, and towards lower-emitting products, environmental services and economic diversification”, while also taking into account the needed parallel decrease in consumption of GHG-intensive agricultural products (to avoid that CAP emission reduction efforts are offset by increased imports). Thus, in addition to proposed changes in priorities of CAP support, EU funding could aim at behavioural change initiatives in this field.	The 2024 SAB report on climate neutrality recommends (in chapter 9) to limit the promotion and use of bioenergy towards end use sectors with limited other mitigation options to reduce the risk that aggregate demand will exceed sustainably available supply; it can be considered to carry this priority over into EU shared management funds.	The 2024 SAB report on climate neutrality recommends (in chapter 6) to limit the promotion and use of sustainable biofuels and hydrogen-based fuels to transport modes for which direct electrification is not suitable (e.g. at least in the short to medium term aviation), and in other cases (such as railway) to prioritise electrification; it can be considered to carry this priority over into EU shared management funds. Limiting the use of biofuels to cases where electrification is not possible would also have other synergetic benefits, including reducing biofuels as land-use-change-driver, which contradicts the need to maintain and expand the area of forests and wetlands (chapter 9 of that report).	No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation found that the one-stop-shops (e.g. as currently financed under the LIFE CET programme) are very effective at establishing smooth customer journeys for building owners and for ensuring effective energy efficiency renovations. The evaluation also argued that deep renovations should be prioritised in order to reduce the risk of lock-ins and improve cost-efficiency of funding support. Energy efficiency (including in buildings) is among the top priorities of EU policy and so in line with the “policy aligned budget” criterion there would be EU added value by providing funding for those interventions; however, across the whole EU this is also very costly and by far surpasses the EU budget volume. Thus, instead of directly funding all types of energy efficiency measures in buildings, the EU budget could focus on pushing innovative solutions which then could be rolled out across the EU (catalytic effect). In addition, any energy efficiency renovations should also make best use of the may possible	As mentioned in the report “The future of European competitiveness – In-depth analysis and recommendations”³³¹, decarbonisation in energy-intensive industries should be prioritised. They are relevant because they include hard-to-abate (HtA) industries (like cement, glass, steel, chemicals and plastics), which face particular challenges in reducing GHG emissions due to their reliance on fossil fuels or feedstock. Decarbonising the HtA industries necessitates a comprehensive transformation of assets and processes, requiring significant investment that would contribute to the strategic priority set by the new Commission.	The 2024 SAB report on climate neutrality highlights the following related issues (chapter 13): • More funding for demonstration stage and commercial deployment (“valley of death” in RD&D process) of climate innovation • More public funding for RD&D in key technologies necessary for the transition towards climate neutrality, such as batteries and hydrogen • The current EU funding architecture offers limited predictability beyond 2030, which increases uncertainty for long-term projects

³²⁸ Ninth Report on Economic, Social and Territorial Cohesion. See: https://ec.europa.eu/regional_policy/information-sources/cohesion-report_en

³²⁹ Towards EU climate neutrality. Progress, policy gaps and opportunities. Assessment Report 2024. European Scientific Advisory Board on Climate Change. See: <https://climate-advisory-board.europa.eu/reports-and-publications/towards-eu-climate-neutrality-progress-policy-gaps-and-opportunities>

³³¹ https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
						synergies with adaptation measures in buildings. ³³⁰		
		EU funding has a track-record of supporting SMEs as they are often seen as backbone of the EU economy and crucial players for achieving a climate-neutral economy ³³² . At the same time the impact assessment on the 2040 climate target ³³³ (see its Annex 4) highlights the need to support SMEs through programmes for SMEs but also by sector-specific measures, as part of a just transition. Given that under the recommended 90% GHG reduction target (likely to be translated into law in the near future) the impact assessment assumes high investment needs in 2031-2040, the next MFF could play an important role in reaching this target in time and in a just manner.		Increasing the share of renewable sources in gross final energy consumption, proposed due to the unlikelihood of achieving 2030 target as shown by the semi-quantitative analysis. This EU action would add value because of its pan-European relevance.	The 2024 SAB report on climate neutrality criticises the lack of consideration in EU policies (and funding) for reducing transport demand, which could also be considered to be prioritised in future EU funding.	Increasing energy efficiency throughout the lifecycle of buildings is an infrastructure solution, proposed due to the unlikelihood of achieving 2030 targets as shown by the semi-quantitative analysis. This EU action would add value because of its catalytic effect through replicability potential.	As mentioned in the report “The future of European competitiveness – In-depth analysis and recommendations” ³³⁴ , the EU should prioritize the establishment and support of green regional industrial clusters. By fostering industrial symbiosis and sharing energy, by-products, and services such as carbon capture, these clusters can enhance energy efficiency, resource use, and circularity. This is a strategic priority linked to competitiveness but also brings added value through resource pooling.	The importance of material efficiency is gaining more traction and e.g. a recent report by the International Resource Panel ³³⁵ highlights that, in addition to large GHG reduction potential, material efficiency can also deliver biodiversity and pollution benefits. Further research and scaling up of solutions could thus deliver synergetic benefits, and EU funding could deliver this in an efficient way.
				TEN-E / Connecting Europe Facility are PRIME relevant according to rules; keep in mind that SAB mentions that energy efficiency is the only area where the EU made insufficient progress in the past, and that “Putting the energy efficiency first principle into practice should be mandatory for all energy infrastructure projects advancing energy system integration”	Improving railway mobility is an infrastructure type of action and is driven by the need to improve sustainable mobility modes as part of the EU’s commitment to becoming net-zero by 2050. Railway is considered the mass transport mode with the lowest GHG emissions and external costs, having competitive advantages over other modes of transport ³³⁶ . The EU action would		The 2024 SAB report on climate neutrality in chapter 5 highlights that promising technologies are under development for reducing the GHG intensity of key GHG-intensive materials ³³⁷ and that their development (and upstream and downstream deployment) need to be scaled up, but that support for early deployment is lacking (see also input under R&D&I in this table).	Renewable energy is inherently variable, making the expansion of R&D&I in stabilisation and continuous generation – including advanced energy storage – an urgent priority. The EU’s involvement adds significant value by pooling resource and expertise across MS, enabling a more robust and coordinated approach to overcoming these technical barriers.

³³⁰ See e.g. here <https://www.eea.europa.eu/publications/cooling-buildings-sustainably-in-europe> or here <https://op.europa.eu/en/publication-detail/-/publication/7cca7ab9-cc5e-11ed-a05c-01aa75ed71a1/language-en>

³³² COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS An SME Strategy for a sustainable and digital Europe. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0103>

³³³ COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT REPORT Part 1 Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Securing our future Europe’s 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52024SC0063>

³³⁴ https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en

³³⁵ IRP (2022). Making Climate Targets Achievable: Improving Wellbeing through Reduced Absolute Resource Use. Potočník, J., Teixeira, I. A think piece of the International Resource Panel Co-Chairs. See: <https://www.resourcepanel.org/reports/making-climate-targets-achievable>

³³⁶ See: https://www.era.europa.eu/system/files/2024-07/20242052_PDF_TR0924239ENN_002.pdf

³³⁷ E.g. iron and steel, cement, and chemicals, accounting together for half of the EU industrial GHG emissions.

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
					have added value because of its potential to bridge missing links.		EU funding could play a role here, due to increased effectiveness and efficiency coming from resource pooling, to help reaching the ambitions GHG reductions expected from those sectors.	
				The demand for key energy transition technologies will remain high in the long term, and the projections in the framework of REPowerEU, installed capacity for wind, solar and batteries will more than double in 2050 compared to 2030. In light of this, there is a priority to address the need to strengthen EU's Net-Zero technology manufacturing capacity to reduce high import dependence for key net-zero technologies while guaranteeing affordable, reliable and sustainable clean energy, as identified in the respective EU needs assessment³³⁸ as part of the Net-Zero Industry Act (NZIA) legislative proposal. This includes investments in upstream R&D development and downstream deployment of net-zero technologies for renewable energy, as well as for supporting first-of-a-kind installations and net-zero technology production plants.				

³³⁸ European Commission (2023). COMMISSION STAFF WORKING DOCUMENT Investment needs assessment and funding availabilities to strengthen EU's Net-Zero technology manufacturing capacity

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
Climate change adaptation	Climate change and impacts on ecosystems	Climate change adaptation becomes an ever-growing urgency and requires large amounts for investments. The urgency is also reflected in the Political Guidelines for the next European Commission 2024-2029 published ³³⁹ in July 2024 by then-president-elect Ursula von der Leyen which emphasises the importance of climate adaptation, preparedness and solidarity.	Addressing risks to crop production can be implemented through nature based solutions, due to its critical risk severity level as shown by the semi-quantitative analysis. This EU action would add value because of its universal relevance.					
	&	As argued out in the 9 th Cohesion Report ⁵⁶ , climate change could also widen territorial disparities if not properly addressed; the report points also out that adverse events and their impact on people and the economy, as well as their capacity to cope with them, are unevenly distributed across Europe, and that some regions which are already poorer than the EU average, are more vulnerable and disproportionally affected. Thus, in line with the environmental cohesion criterion, this could be considered a strong priority for EU funding.						
	Climate change risks to society	It should also be pointed out that a survey conducted during a plenary meeting of the European Network of Environmental and Managing Authorities (ENEA-MA) as part of this project showed that the stakeholders perceived biodiversity and climate change adaptation as the two sectors in which EU funding would provide largest added value. Further discussion on those results revealed that those are the topics perceived by the recipients to be not sufficiently prioritised to due difficult businesses cases and lack of direct economic benefits of the projects.						
	&	The 2024 SAB report on climate neutrality points out that LULUCF sinks are increasingly under pressure from natural disturbances, exacerbated by climate change, a trend that is projected to worsen in the future. This highlights the need for increased adaptation efforts; a specific example given in the report is to shift from conifer monocultures to mixed-species or broadleaf forests, which, in addition to adaptation, would also synergistically increase biodiversity.						
	Climate change adaptation strategies and plans	Addressing pluvial and fluvial flooding affecting the general population can be implemented through infrastructure and nature based solutions, driven by its critical risk severity level as shown by the semi-quantitative analysis. This EU action would add value because of its universal relevance , driven by its critical risk severity level.						
		Addressing heat stress affecting the general population can be implemented through infrastructure and nature based solutions, driven by its critical risk severity level as shown by the semi-quantitative analysis. This EU action would add value because of its universal relevance.						
		No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation found, that investments in adaptation could be enhanced. While MS, regions and local governments have adaptation strategies in place now, many still suffer from lack of operationalisation, and in the last period, programmes tended to be informed more by other strategies, e.g. in flooding than by the, often quite late, adaptation plans. Assuming that MS have by the next MFF advanced more in preparing the holistic plans for adaptation, these investments could be prioritised. As mentioned above, there is EU added value in providing funding for operationalising adaptation plans, like it is currently done under the LIFE Programme.						

³³⁹ See: https://commission.europa.eu/about-european-commission/president-elect-ursula-von-der-leyen_en

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
		However, the evaluation also emphasised that especially for adaptation there is limited capacity in local and regional governments (where most of the adaptation work needs to be implemented) and that thus technical assistance/capacity-building remains very pertinent in this sector. The evaluation highlights that this is even more relevant for nature-based solutions for adaptation, which require deep technical understanding, but can be very effective and synergetic.						
		No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation found, that investments for strengthening cross-border links and coordination (e.g., through Interreg) should be prioritised, ensuring that adaptation solutions are identified that properly addresses the risk at hand with account taken of cross border impacts and interdependencies. EU funding would provide clear added value here.						
Water and marine	Water ecosystems and wetlands	Despite progress in the implementation of legislation for collection and treatment of urban wastewater is still not collected and treated as it should be in many MS [EIR]. In addition, the recast Urban Wastewater Treatment Directive ³⁴⁰ entered into force on 01 January 2025 that will lead to significant additional investment needs ³⁴¹ due to stricter requirements to addresses remaining pollution and novelties including integrated urban wastewater management plans, quaternary treatment, energy neutrality and resource recovery; to be implemented, with a stepwise approach, generally by 2045. As per the impact assessment, public budgets, water tariffs and extended producer responsibility (EPR) are expected to cover part of the investment costs. Traditionally, EU funding played an important role in the implementation of the Directive, and this could be a continued priority in shared management funding, given its high costs (justified by high effectiveness in reducing pollutants), but also its pan-European relevance (e.g. downstream pollution).						
	& Hydro-morphological pressures							
	& Pollution pressures on water and links to human health	Water security is mentioned as priority in the Political Guidelines for the next European Commission 2024-2029 ²⁷ published in July 2024 , in light of mounting pressures on that resource; this is in line with the planned initiative by the European Commission to put forward a non-legislative initiative on water resilience, with the aim to ensure access to water for citizens, nature and the economy, while also tackling catastrophic flooding and water shortages. Given current trends in climate change, but also in water abstraction and use, it is likely that this topic will only become more important in the future. EU wide initiatives, as well as EU funding, are justified by the importance, but also the cross-border nature of water resources (and virtual water). The exact funding priorities should then be aligned with the initiative, which was expected to be published in Q1 2024.						
	& Water abstraction and its pressures on surface and groundwater	In light of the expected increase in water pressures (see above) it should be considered to put a funding focus on water reuse, water efficiency measures, and sewage sludge investments. For example, it could be considered to make investments into wastewater infrastructure (see above) conditional to parallel measures for water reuse, which would also ensure strong synergies between water, climate change adaptation, and renewable energy (due to the possibility of using sewage sludge as biofuel)						

³⁴⁰ See: Directive (EU) 2024/3019 of the European Parliament and of the Council of 27 November 2024 concerning urban wastewater treatment (recast) (Text with EEA relevance) :<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022PC0541&qid=1668778087100>

³⁴¹ E.g. stricter threshold for scope of Directive from 2,000 p.e. to 1,000 p.e.; new standards for IAS; higher treatment standards.

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
	State of marine ecosystems and biodiversity	The BBNJ Agreement was adopted in June 2023 and is open for signature by all states and relevant organisations from September 2023 to September 2025, entering into force 120 days after the date of the sixtieth ratification. The EU is already working on the ratification ³⁴² of the Agreement, and after its						
	& Pressures and impacts on marine ecosystems	entering-into-force, the Agreement's implementation will likely require the adoption of legislation at EU level. While the adaption of the agreement was a major milestone in a very long process, many details are still open and need to be further developed, piloted and implemented. The EU, already a frontrunner in the BBNJ High Ambition Coalition should continue to lead by example in the implementation and further development of the agreement, given the dire state of the ocean and the important role this agreement can play.						
	& Sustainable use of the seas	The EU Biodiversity Strategy for 2030 sets the target of protecting 30% of EU land and sea by 2030. One third of this, areas of very high biodiversity and climate value, should be under strict protection. EU funding should continue to help Member States develop a coherent, transnational network, and facilitate cross-border coordination, including for transnational marine protected areas.						
	& Marine protected areas	EU funding could be leveraged for maritime spatial planning to map and protect blue corridors that ensure species can migrate protected from pressure from fishing, shipping and other threats. This would support the conclusions on the blue economy from the Council of the EU in May 2021, that include leveraging blue corridors to improve the functional connectivity of ecological networks and to ensure sustainable fisheries and navigation in marine ecoregions ³⁴² .						
Circular economy and waste	Circular use of materials & Material efficiency & Waste generation &	Creating a single market for waste is political priority highlighted in the Guidelines for the next European Commission 2024-2029 published ³⁴³ . It has the potential to enhance efficiency through economies of scale and improved logistics. It will support higher recycling rates by enabling flow of recyclable materials to the best equipped facilities and can attract investment in advanced waste management infrastructure. Thus, there is clear EU added value for investments in achieving this goal which in addition to policies, could also include funding for research, early uptake of technologies, or coordination.				The construction sector is very resource intensive. Increasing resource efficiency in the building sector is an action identified as critical by key global assessments, with a focus on steelmaking and cement production ³⁴⁴ . It is a reform solution, driven by its high improvement potential as revealed by the semi-quantitative analysis. This EU action would add value by increasing effectiveness and efficiency.		Expanding R&D&I in circular economy practices can be considered a priority as highlighted by the literature review and interviews due to the need to increase circularity rates, business models related to repair and reuse with high social value reduce costs and accelerate progress in green technologies. The EU action would have added value because of its resource pooling potential and mutual learning from progress in different socio-

³⁴² General Secretariat of the Council, Brussels, 26 May 2021. Council conclusions on a sustainable blue economy: health, knowledge, prosperity, social equity.

³⁴³ See: https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf

³⁴⁴ See: https://www.resourcepanel.org/sites/default/files/documents/document/media/gro24_full_report_1mar_final_for_web.pdf

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
	Waste management							ecological environments
		No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation found, that investments into ‘new solutions’ tend to be less prioritised in programmes and spending. That would apply for instance to circular solutions in water (water re-use and sludge re-use) and circular solutions in SMEs. To promote the use of such ‘new solutions’, a focus could be on awareness building investments would play a role as well, and a strengthening of awareness raising efforts could also add to the effectiveness. The improved uptake of such solution could have energetic benefits coming from circular economy. From a standpoint of “why the EU should invest in this as compared to other potential sources such as MS or private sector”, i.e. EU added value, a point can be made that specifically mentioning those as priority in funding programmes, their uptake could be improved across the EU. Another EU added value criterion that applies is that such funding would mirror EU policy priorities.						
		No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation argued that EU funding should prioritise waste prevention through circularity and circular design over waste management. Currently, measures supporting waste management are more prominent and visible under cohesion policy programmes than measures aiming at waste prevention. To speed up the green transition of the economy, more emphasis on waste prevention is needed. EU added value would be given due to alignment with EU priorities.						
		As shown in the latest <i>Waste Early Warning Report</i> ³⁴⁵ , there is a need to finance projects higher up the waste hierarchy including in waste prevention, reuse and recycling. This includes both soft measures, such as promoting behavioural changes for prevention and reuse, next to investments in waste infrastructure, especially considering the landfill reduction targets beyond 2027 and the need to enhance recycling and the EU's circularity rate. Repairing and reusing products involves supporting individual companies to develop viable circular business models, including reverse logistics within the internal market, and fostering local communities to establish value-added services. Such initiatives, particularly focused on repairing and reusing products, would enable access to affordable goods for people with low purchasing power, contributing to a more inclusive and sustainable circular economy. This would bring added value through the catalytic effect and replicability potential.						
		No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation found, that considering waste from a national perspective prevents the identification of cross-border opportunities managing waste close to the source. EU funding could thus be provided for cross-border waste management projects, where it would provide clear EU added value.						
		Awareness raising activities to enhance citizens' participation in decreasing waste generation is a soft solution to improve						

³⁴⁵ REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS identifying Member States at risk of not meeting the 2025 preparing for re-use and recycling target for municipal waste, the 2025 recycling target for packaging waste and the 2035 municipal waste landfilling reduction target. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A304%3AFIN&qid=1686220362244>

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
		separate collection of municipal waste ³⁴⁶ . The EU action would have added value because of its potential catalytic effect and universal relevance.						
		Expanding effective capacity for separate collection and treatment/recycling of biowaste and packaging waste ³⁴⁷ is an infrastructure action and considered a priority due to the need to increase preparing for re-use and recycling rates. EU action would have added value because increasing the rates is a strategic priority and has potential for environmental cohesion.						
		Enhancing compliance and monitoring of waste management practices is a reform measure, driven by discrepancies in waste management performance data as shown by the semi-quantitative analysis. EU action would add value by increasing environmental cohesion.						
Zero pollution	Air pollutants & Chemicals & Industrial pollution	Deteriorating trends dominate in terms of chemical pollution and risks to human health and well-being as highlighted in the semi-quantitative analysis. Focus on improving protection of human health through better regulating and restricting chemicals would bring added value to the EU through the universal relevance. improving chemical regulation brings profound and far-reaching benefits, reinforcing the EU's commitment to a safer, healthier, and more sustainable future for everyone.	The funds supporting the CAP (EAGF, EARDF) contribute and continue to support the Zero Pollution targets. Despite the challenges identified by the ZP monitoring assessment [1], combining EU-derived and MS priorities, the national CAP Strategic Plans promote agricultural practices through EcoSchemes and Agri-Environment-Climate Commitments (AECCs) that promote reduced use of chemicals (pesticides, mineral fertilisers), replacement of chemical fertilisers with organic and/or their more efficient use through precision agriculture (EU Farm Sustainability Tool – EU FaST), including conversion to organic farming and circular flows, aiming to reduce chemical pressures such as nitrates leaching in soil and water and ammonia emissions in air. The EARFD funded bottom-up LEADER projects and European Innovation Partnerships (EIP)-AGRI also contribute towards this direction and should continue promoting knowledge				The transposition of the requirements applicable to industrial installations is belated as highlighted by the semi-quantitative analysis. Providing support to MS to improve transposition of the Industrial Emissions Directive and the Seveso-III Directive is a technical assistance measure that could bring added value through environmental cohesion	Enhancing air quality monitoring through targeted investment in technology and research is a crucial action for enforcing EU Ambient Air Quality Directive as highlighted by the literature review and interviews.

³⁴⁶ See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023DC0304>

³⁴⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023DC0304>

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
			dissemination and innovation in agriculture and food systems. [1] https://www.eea.europa.eu/publications/zero-pollution					
Biodiversity	Terrestrial protected areas & EU protected species and habitats & Common species (birds and butterflies) & Ecosystem condition and services	As noted in EU biodiversity financing reports ³⁴⁸ , the current financing model has so far failed to deliver the financial resources needed to implement the Natura 2000 network fully, largely due to limits on public budgets and competing demands for them. Hence, innovative financing approaches could be pursued by attracting financing from a wider range of public sector budgets at MS level, private sector funding (e.g. through product markets, corporate sponsorship, biodiversity offsets, visitor payback schemes and PES).	Biodiversity and ecosystems would benefit from improvements in the CAP strategic plans 2023-2027 to support the management of semi-natural grasslands, protection of ecosystem services and re-introduction of landscape features ³⁴⁹ .		Projects related to the greening of TEN-T infrastructure, such as the creation of ecological corridors and improvements to reduce fragmentation (i.e. through CF). This would add significant EU value for cross-border benefits and creation of missing links, as part of a true Trans-European Nature Network, in line with the key nature protection commitment by 2030 established in the EU Biodiversity Strategy.		The EU could prioritise productive investments with catalytic effects in SMEs and jobs in business producing sustainable food or biomass products from Natura sites, such as paludiculture crops on rewetted peatlands, sustainable aquaculture, tourism and visitor related business in and around Natura sites.	As highlighted by the Europa Biodiversity Observation Network User and Policy Needs Assessment ³⁵⁰ , national biodiversity monitoring programs face issues like insufficient coordination, inadequate technical and financial resources and unclear targets. High quality, consistent biodiversity data is crucial to meet the EU's 2030 Biodiversity Strategy goals and other related policies. Thus, investments in this area highly benefit from cross-country, cross-institutional and cross sectoral coordination of existing funding to design a European Biodiversity Monitoring System. Thus, Horizon Europe funding should remain a priority in this area.
		No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation found, that the cohesion policy's potential for supporting biodiversity had not been fully used in the financing period 2014-2020 due to a lack of prioritisation of nature investments. This may be linked to a second point in the evaluation, which found that due to the broad scoping of nature and biodiversity-relevant interventions (e.g. including investments in tourism and visitors' infrastructure), their actual contribution to biodiversity objectives in many cases remained unclear. This may be alleviated by defining clear priorities directly for biodiversity objectives in the next MFF. In general there is a clear EU added value for funding in this topic, given its urgency and strategic priority, e.g. reflected by the biodiversity strategy. In a post-27 MFF which may merge many of the existing funds into a few, this would then in other words call for a stronger priority of LIFE-type funding under its current nature	The EAGF through CAP eco-schemes should continue to engage farmers voluntarily in biodiversity enhancement practices. Eco-schemes could moreover fund conservation interventions and to fund the management landscape features.					Based on the findings from interviews, Horizon Europe could continue to integrate biodiversity and natural capital within its global challenges pillar, fostering interdisciplinary approaches that link biodiversity with other critical topical clusters in the scope of this study (e.g., through investments in development and

³⁴⁸ IEEP and the N2K Group (2022) Financing Natura 2000. EU funding opportunities 2021-2027. Final report under EC Contract ENV/D.3/SER/2019/0016

³⁴⁹ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Environmental Implementation Review 2022 Turning the tide through environmental compliance.

³⁵⁰ See: [EuropaBON_User-and-Policy-Needs-Assessment_Final-March2022.pdf](#)

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
		and biodiversity sub-programme, i.e. clearly focused on the protection and restoration of Europe's nature and halting and reversing biodiversity loss. It should also be pointed out that a survey conducted during a plenary meeting of the European Network of Environmental and Managing Authorities (ENEA-MA) as part of this project showed that the stakeholders perceived biodiversity and climate change adaptation as the two sectors in which EU funding would provide largest added value. Further discussion on those results revealed that those are the topics perceived by the recipients to be not sufficiently prioritised to due difficult businesses cases and lack of direct economic benefits of the projects.						improvement of habitat restoration techniques and measures of impact, such as carbon storage measurements and GHG emissions from restored sites).
		Ecosystems throughout EU would benefit from improvements, as their degradation continues to be a problem. Payment for ecosystem services projects were found important as highlighted by the interview and literature review analysis. They represent a good option dealing with the trade-off of farmers' livelihoods and protection of ecosystems and their services.	Both agricultural crop and animal intensive production are found to be sectors with most significant negative environmental impact and greatest potential for biodiversity improvement as highlighted by the semi-quantitative analysis. Therefore, prioritising these sectors for EU investment would have great value by leveraging sustainable agricultural technologies and practices.					
		LIFE projects have shown to be very effective from piloting new and innovative approaches, to building networks and initiatives that are later supported by other funding. Ongoing work on the mid-term evaluation of the LIFE programme shows these projects, which deliver multiple benefits for biodiversity, ecosystem services and people, would face significant challenges to survive without LIFE funding. EU added value of such investments is therefore clear, and is increased for jointly funded projects with non-EU countries (e.g. green infrastructure projects focused on cross-border terrestrial or marine protected areas). Strategic nature projects can also mainstream biodiversity objectives into sectoral programmes that can then create and maintain green infrastructure. The Nature Capital Financing Facility (NCFF) within LIFE should be a high EU priority to develop instruments for innovative biodiversity finance, such as regulatory support and capacity-building for ecosystem services and biodiversity offsets.						
		One in three bees and butterflies species are in decline. As shown by the semi-quantitative analysis, deteriorating trends are projected to dominate until 2030. Furthermore, it is unlikely to reverse the decline in populations of common birds. Therefore, prioritising actions towards protecting common species and reverse their decline would bring EU added value through their cross-border relevance.						
		EU funding (e.g. through ERDF and CF programmes, Interreg), has particular added value for large-scale ecosystem restoration projects that deliver green infrastructure for biodiversity and nature-based solutions for climate change adaptation and/or disaster risk reduction, economy and ecosystem services, in line						

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
		with the EU Nature Restoration Law ³⁵¹ , and EU Biodiversity Strategy ³⁵² for 2030. Examples of investments in this field include ecosystem restoration for carbon sequestration (e.g. peatland restoration), projects aimed at protecting and managing river basins (e.g. involving green infrastructure for water purification); and restoration of contaminated or degraded land to create green infrastructure ³⁵³ .						
Vertical sector-specific priorities			The EU Industrial Strategy ³⁵⁴ aims to enable a swift green and digital transition of EU industry and its ecosystems. The transition pathway for the agri-food industrial ecosystem developed under this process ³⁵⁵ predominantly recommends (chapter 4.7) that EU funding should focus more on information sharing and technical assistance and financial literacy and skills of agri		The TEN-T network ³⁵⁶ is crucial for creating a seamless, efficient, and multimodal transport infrastructure across the EU, enhancing economic growth, connectivity, and sustainability. EU funding is justified as it supports the completion of essential transport links. To improve sustainability of the required construction, they should be subject to highest sustainability standards. ³⁵⁷ Funding under cohesion policy is also available for transport infrastructure outside the TEN-T network where in general the added value of EU funding is less straight forward from a green funding perspective. However, also outside of TEN-T funding for in general green transport modes could still be considered. For railways, non-TEN-T funding is currently available for	The New European Bauhaus (NEB) initiative was announced by the European Commission in 2020 as an extension of the European Green Deal and aims at facilitating and steering the transformation of our societies alongside the values of sustainability, aesthetics and inclusion. NEB projects thus have the potential to generate very synergetic benefits. As reported in the 2023 New European Bauhaus Progress Report ³⁵⁸ , 106 MEUR were set aside for the delivery of the NEB in 2021 and 2022 through different funds. Given the new nature of the initiative, prioritising this at EU level would have clear coordination benefits, as well as a catalytic effect through replicability.	The EU Industrial Strategy aims to enable a swift green and digital transition of EU industry and its ecosystems. The transition pathway for the chemical industry sector developed under this process recommends that the EU funding priorities in this sector (chapter 2) should, among others, support (incl. financial support) retrofitting of industry assets as well as reforms in permitting procedures for plant investments. Expect for cohesion-considerations (at the same time mixed with state aid considerations), it is unclear what added value EU funding for this entails over other funding sources. However, other funding-related priorities are listed in the document which would have clear EU added value, including the development of hub structures.	

³⁵¹ Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869 (Text with EEA relevance)

³⁵² COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Biodiversity Strategy for 2030 Bringing nature back into our lives

³⁵³ IEEP and the N2K Group (2022) Financing Natura 2000. EU funding opportunities 2021-2027. Final report under EC Contract ENV/D.3/SER/2019/0016

³⁵⁴ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe’s recovery. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0350>

³⁵⁵ See: https://single-market-economy.ec.europa.eu/sectors/agri-food-industrial-ecosystem/transition-pathway-agri-food-industrial-ecosystem_en

³⁵⁶ While the core network, which includes the most important connections between major cities and nodes, must be completed by 2030 and thus post-27 MFF funding would not be relevant for this, funding would still be relevant for the extended core network and the comprehensive network.

³⁵⁷ See e.g. recent guidance on the decarbonisation of transport infrastructure construction carried out for the European Commission https://transport.ec.europa.eu/document/download/982f3916-d1e7-427a-93cd-4e8ccfdff6c_en?filename=decarbonised_construction.pdf

³⁵⁸ See: https://new-european-bauhaus.europa.eu/about/progress-report_en

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
					electric/zero emission railways (IF99) or for other railways (IF98). Railways are a clear EU transport priority and thus EU funding, from a cohesion policy perspective, can still be seen to have EU added value. However, as noted earlier, the 2024 SAB report on climate neutrality recommends (in chapter 6) to limit the promotion and use of sustainable biofuels and hydrogen-based fuels to transport modes for which direct electrification is not suitable, and thus it should be considered to priorities funding for electrified railways (or limit funding to). In cohesion policy in the 21-27 MFF there is also a possibility to use funds for roads outside the TENT-T network (IF90) which should be reconsidered since it does not align with EU priorities.			
					The EU Industrial Strategy aims to enable a swift green and digital transition of EU industry and its ecosystems. The transition pathway for the mobility ecosystem developed under this process ³⁵⁹ recommends (chapter 7) that it should be ensured that the Innovation Fund can support transport related Projects.	The EU Industrial Strategy aims to enable a swift green and digital transition of EU industry and its ecosystems. The transition pathway for the building sector developed under this process ³⁶⁰ recommends that the EU funding priorities in this sector (building block 5) should entail reforms (e.g. streamlining regulatory and administrative	The EU Industrial Strategy aims to enable a swift green and digital transition of EU industry and its ecosystems. The transition pathway for the textile industry ecosystem developed under this process ³⁶⁶ recommends that the EU funding priorities in this sector (chapter 5.7) should be on R&I for a sustainable and circular transition of the ecosystem, where clear EU added value	

³⁵⁹ See: https://single-market-economy.ec.europa.eu/sectors/automotive-industry/mobility-transition-pathway_en

³⁶⁰ See: https://single-market-economy.ec.europa.eu/sectors/construction/construction-transition-pathway_en

³⁶⁶ See: https://single-market-economy.ec.europa.eu/sectors/textiles-ecosystem/textiles-transition-pathway_en

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
						processes) as well as investments (e.g. subsidies for energy efficiency renovations).³⁶¹ A large share³⁶² of related funding during the current MFF period comes from the Recovery and Resilience Facility (RRF)³⁶³, where building investments could be part of the RRFs³⁶⁴, the centrepiece of the Next Generation EU, but also other funds such as the ERDF was used to directly finance investments in buildings. Continued EU funding in the sector for direct investments could be justified from a just transition angle (or cohesion) such as currently is done in the Social Climate Fund; outside of this EU-added-value criterion, it is unclear what added value EU funding for direct investments in energy-related renovation brings over other funding sources³⁶⁵. Other current funding in the sector ecosystem is manifold and, given the environmental and climate importance of the sector, should be continued to be prioritised (e.g. skill-related funding under ESC+ or JTF, or research activities, both due to the effectiveness benefits	is provided due to effectiveness. For other recommendations such as reforms the EU added value is less clear.	

³⁶¹ The report contains more detailed recommendations which are not repeated here.

³⁶² According to an analysis by DG GROW, 41% of the total funding available in the RRF is dedicated to construction-related measures

³⁶³ See: https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en

³⁶⁴

³⁶⁵ At the same time, if any building activity is supported under any EU fund, it should be subject to effective energy-efficiency and other sustainability criteria.

Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
						of EU funding in this case)		
					The EU Industrial Strategy aims to enable a swift green and digital transition of EU industry and its ecosystems. The transition pathway for Aerospace Ecosystem developed under this process³⁶⁷ contains a wide range of recommended actions regarding funding and investment (chapter 8.3), including most notably on research regarding EU funding, which would provide clear EU added value due to increased efficiency and effectiveness. Notably, the transition pathway does not call on EU funding (but rather MS and industry) for integrating of R&I results into operational capacities. In a focus group organised within this project, it was discussed with some representatives of the aviation sector what kind of funding priorities the EU should have, regarding sustainability in the aviation sector. The result of this discussion were two opposing standpoints³⁶⁸, the first of which argues that EU funding			

³⁶⁷ See: https://defence-industry-space.ec.europa.eu/transition-pathway-aerospace-ecosystem-1_en

³⁶⁸ Standpoint 1: Since the EU budget is limited and public money, the EU must pursue the highest sustainability standards and a long-term vision, focusing on upscaling and deploying zero emission technologies that have most difficulty in entering the market (e.g., efuels, SAF, Hydrogen - although more difficult business case). Accordingly, it should exclude investments on research, production or deployment of technologies that do not meet or aim to meet these standards. The EU should also not invest into short-term gradual improvements, e.g. energy-efficiency measures in conventional aircrafts. The EU Taxonomy should be seen as minimum standards and not be used for defining EU priorities and/or exceptions – the EU funds should be held to much higher standards.

Standpoint 2: Prioritised measures and actions should consider competitiveness together with environmental and climate concerns. Exclusions and limitations in EU funding to the air transport sector have not been ‘compensated’ with support in the uptake of green technologies. This will likely lead to an unlevelled playing field and place the EU aviation sector at a disadvantaged position growth-wise. In the short and medium terms, there will still be a considerable proportion of non-renewable fuels in aviation despite SAF; thus, the EU should still prioritise low carbon, renewable and energy efficient technologies and infrastructure. Instead of *ex ante* exclusions, a case-by-case approach to investments (e.g. through CBA) could be more convenient and reduce administrative burden.

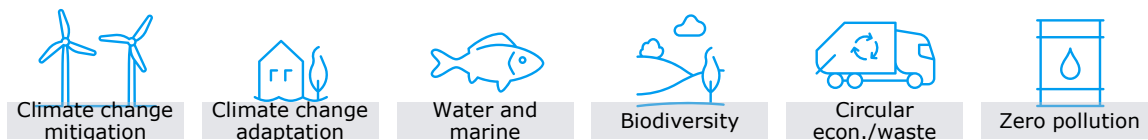
Topics	Subtopics	Vertical priorities	Sectoral priorities					
			Food system, agriculture (incl. transition to sustainable agriculture)	Energy	Transport	Buildings and construction	Industry and other economic sectors	R&D&I
					should be used towards implementing highest standards in the long run, while advocates of the second standpoint argued that the EU should also aim at supporting short- and medium benefits, including none-zero technologies.			
					No evaluation of the 21-27 cohesion policy exists yet. However, the prior <i>ex post</i> evaluation found that the biggest challenge ahead is the reduction of car usage, which emphasises the importance of implementing support policies and measures to discourage car use which hinges on political commitments and a shift in people's mindset. Thus, funding for behavioural change may play a pivotal role here. Given that in general sustainable transport is a EU priority (and not reflected by all national and regional governments), EU funding would have added value here.			

ANNEX 5. SEMI-QUANTITATIVE ASSESSMENT

Methodology - overview

This annex presents the findings of the review of semi-quantitative sources per environmental cluster.

As a reminder, the following environmental clusters have been considered:



Under each environmental cluster, the following two sections are presented in this annex:

- Policy trends, implementation, outlook and investment gaps
- Sectors with the highest environmental impact

Methodology – First section – Policy trends, implementation, outlook and investment gaps

Sources

The first section presents the overview of relevant commitments under the European Green Deal, climate & environmental policy targets most distant to being achieved across the EU, environmental policy fields with lowest level of implementation, and investment gaps. To this end, the larger environmental clusters have been further broken down into policy fields or “themes”.

The reports included in the first section of the assessment are shown in the Box below.

Box Overview of sources for first section

- The **European environment – state and outlook 2020** (SOER 2020) (EEA, 2019) is published by EEA every 5 years and is at its 6th edition. It identifies serious gaps between the state of environment and existing EU near- and long-term policy targets. Specifically, the thematic summary assessment, the overview of selected policy objectives and targets were extracted from *Part 2 – Environment and climate trends*. Policy objectives were included only if target year is in the future or N/A.
- The **Monitoring report on progress towards the 8th EAP objectives 2023 edition** (8th EAP progress 2023) (EEA, 2023) describes the annual progress towards 8th EAP objectives based on 28 indicators and corresponding targets. The indicators, targets and prospects of meeting them by 2030 are presented in the form of a score board based on the thematic priorities.
- The **Environmental Implementation Review 2022** (EIR 2022) (European Commission, 2022a) is a regular reporting tool designed to improve the implementation of EU environmental laws and policies. It includes individual country reports and a communication drawing cross-cutting conclusions at EU level for each thematic area. For this assessment the former was included.
- The DG Environment’s internal report on EU’s environmental investment needs and financing towards the 2030 objectives **Environmental investment needs, financing and gaps in the EU-27** (Investment needs 2024) provides a sectoral breakdown of green transition investment gaps which has been used for this assessment. All clusters are covered excluding climate change adaptation for which the assessment is pending
- For the “Climate change adaptation” cluster, an additional report has been included, namely the **European Climate Risk Assessment** (EEA, 2024). The report highlights 36 climate risks with potentially severe consequences across Europe. Based on the risks, it identifies priorities for EU policy action

Results have then been summarised for each report and presented in an aggregate manner by using an intuitive rating system explained below.

Rating system used for overview tables

The table below summarises the rating system used for assessing policy trends, implementation and outlook.

Table Rating system

Rating system			
SOER 2020 – Past trends and outlook	Improving trends dominate	Trends show a mixed picture	Deteriorating trends dominate
SOER 2020 – prospects of meeting policy objectives	Largely on track	Partially on track	Largely not on track
8th EAP progress report - Outlook	It is very likely	It is likely but uncertain	It is unlikely but uncertain
EIR - Assessment	Positive momentum	Mixed progress	Performance challenges

For the SOER 2020 and 8th EAP progress report, rating systems have already been developed. In the case of SOER 2020, two systems were developed consisting of three levels based in the degree of alignment with targets and policies.

In the case of 8th EAP progress report, the rating system is divided into four levels, and the middle levels, defined by more uncertainty, were merged.

Lastly, for the EIR, a new rating system was developed based in the qualitative assessment of the findings. For example, if most member states are on track with implementing policies or reaching targets a “positive momentum” is attached to the finding. If there are large differences in the performance of the member states, “mixed progress” is attached to the finding. Finally, if most member states are faced with challenges in implementing policies or achieving targets, “performance challenges” tag was attached to the finding.

Methodology – Second section – Sectors with the highest environmental impact

The second section identifies sectors with highest environmental impact and improvement potential within this environmental cluster.

It is based on a 2020 study implemented by Ramboll for DG ENV called **Sustainable Finance Taxonomy: Data collection and environmental objectives**. Originally, the study included a hierarchy of 25 sectors with highest environmental impact and highest improvements potential

based on a multicriteria analysis, which consisted of three versions of weighting. For the purpose of this report, the most relevant weighting version was chosen and a top of 15 sectors with highest environmental impact was extracted for four of the six clusters (i.e. circular economy and waste, biodiversity, water and zero pollution).

This section does not exist for the climate change mitigation and climate change adaptation environmental clusters, given that they were not in focus of the original study.

A short summary of the approach follow in that study is presented in the Box below.

Box Summary of methodology

The following steps were undertaken for each of the Taxonomy's environmental objectives 3 to 6:

- First, a conceptual framework ('assessment logic') was developed to define the goal and scope of the objective and major drivers to such a goal based on the Taxonomy Regulation and other EU political frameworks or pieces of legislation relevant for the respective objective.
- Then, a definition of what impacts and improvement potentials refer to and how they are assessed was developed for each of the objectives.
- Subsequently, indicators and data needs were developed for conducting the assessment on the impacts and improvement potentials in each objective.
- Guided by the assessment logics, data collection and analysis of impacts and improvement potentials were carried out for each environmental objective, summarised in a comprehensive table
- Results were used to assess the magnitude of impacts & improvement potentials per economic activity.
- On the basis of the final assessments, sequences of economic activities are derived for each environmental objective
- Based on that approach, the following types of sectors were identified:
- Sectors with a high negative impact (i.e. footprint) on the environment
- Sectors with activities that positively affect the objective
- Economic activities that enable improvement potentials in other sectors or activities with a high negative impact. An example of such an 'enabling' activity is 'the manufacture of pollution control equipment'.

The final lists of sectors have then be developed through a multi-criteria-analysis (MCA).

In this MCA, numerical weights were introduced to reflect the relative importance of each indicator, and the weighting was based on considerations that have emerged from literature research. However, still different ranking options were prepared, based on different scenarios for numerical weighing, were relevant. In the context of this current study, not all the different scenarios are presented, but rather, per section, the one mentioned to be the "most likely" in the 2020 study; or, where this was not defined, the first one to be presented in the final report.

High-level overview of results of first section

The Table below summarises the findings from the first section of the semi-quantitative assessment across all environmental clusters. More detailed findings are then presented further below in the Annex.

Table Overview of findings across all topical clusters

Source		SOER 2020			8th EAP progress 2023	EIR 2022
Cluster	THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	2030 TARGET Outlook	Assessment of findings
Biodiversity	Terrestrial protected areas	↑	→		→	↓
	EU protected species and habitats	→	→		→	↑ ↓ →
	Common species (birds and butterflies)	↓	↓		→	
	Ecosystem condition and services	↑	→			↓ → →
Circular economy and waste	Circular use of materials	↑	→	→	↓	→ ↑
	Material resource efficiency	↑	→		→	
	Waste generation	→	→		→	↓

Source		SOER 2020			8th EAP progress 2023	EIR 2022
Cluster	THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	2030 TARGET Outlook	Assessment of findings
	Waste management	↑	↑			↓ →
Climate change adaptation	Climate change and impacts on ecosystems	↓	↓		→	
	Climate change risks to society	↓	↓		→	
	Climate change adaptation strategies and plans	↑	↑			↓
Climate change mitigation	GHG emissions and mitigation efforts	↑	→	↓	→ ↓	↑ ↑ ↑
	Energy efficiency	↑	→	↓	↓	
	Renewable energy sources	↑	→	↓	→	
Freshwater	Water ecosystems and wetlands	→	→			↓
	Hydro-morphological pressures	↓	→			
	Pollution pressures on water and links to human health	→	→		→	↓ → ↑ → ↓

Source		SOER 2020			8th EAP progress 2023	EIR 2022
Cluster	THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	2030 TARGET Outlook	Assessment of findings
	Water abstraction and its pressures on surface and groundwater	↑	→			↓
Marine environment	State of marine ecosystems and biodiversity	→	↓			
	Pressures and impacts on marine ecosystems	→	↓			
	Sustainable use of the seas	→	→			
	Marine protected areas	↑	→		→	↑
Air pollution	Emissions of air pollutants	→	→	→		↓ ↓ ↑
	Concentrations of air pollutants	↑	→	↑		
	Air pollution impacts on human health and well-being	↑	→	↑	↑	
	Air pollution and impacts on ecosystems	→	→	→		→ ↓
Pollution (chemical)	Emissions of chemicals	→	↓			

Source		SOER 2020			8th EAP progress 2023	EIR 2022
Cluster	THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	2030 TARGET Outlook	Assessment of findings
Pollution (industrial)	Chemical pollution and impacts on ecosystems	→	↓			
	Chemical pollution and risks to human health and wellbeing	→	↓			
	Pollutant emissions from industry	↑	→			→
	Clean industrial technologies	↑	→			

Detailed results – Climate change mitigation

Policy trends, implementation, outlook and investment gaps

The EU has taken many actions to mitigate climate change and a general positive momentum was created. However, the prospects of meeting policy objectives until 2050 is largely not on track, with a total of additional investments needed amounting to €620 billion per year

Table Climate change mitigation - Policy trends, implementation, outlook and investment gaps

Source	SOER 2020					8th EAP progress 2023		EIR 2022 ³⁶⁹		EU recovery needs
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030 and 2050	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
GHG emissions and mitigation efforts	 improving trends dominate	 trends show a mixed picture	 Largely not on track ³⁷⁰	Limit human-induced global temperature rise to well below 2 °C (and pursue efforts to limit the temperature increase to 1.5 °C) above pre-industrial levels [...]	permanent	<i>Reduce net GHG emissions by at least 55% from 1990 levels</i>	 it is likely but uncertain	In 2020, EU-27 domestic greenhouse gas emissions, including in international aviation, were down by 31% from 1990 levels and reached their lowest level in 30 years. If emissions and removals from the LULUCF sector are included, this results in a net emissions reduction of 34%. The EU has thus substantially exceeded its target under the UN Framework Convention on Climate Change (UNFCCC) of reducing greenhouse gas emissions by 20% by 2020 compared to 1990.	 positive momentum	620 bn EUR/year
				A climate-neutral economy: net zero GHG emissions by 2050	2050	<i>Increase net GHG removals by carbon sinks from LULUCF sector to -310 million tonnes CO2 equivalent by 2030</i>	 it is very unlikely	The EU ETS has a very high compliance rate, as each year installations cover around 99% of their emissions with the required number of allowances. The system presently covers around 36% of the EU's total greenhouse gas emissions from close to 9 500 power stations and manufacturing plants (i.e. stationary installations), and flights within the European Economic Area. In total, by 2020, EU ETS emissions from stationary installations had already fallen by 43% since 2005.	 positive momentum	
				By 2050, the EU's objective, in the context of necessary reductions by developed countries as a group, according to the IPCC, is to reduce GHG emissions by 80-95 % below 1990 levels. Milestones: 40 % cuts in emissions by 2030 and 60 % by 2040	2050			EU-27 emissions covered by the Effort Sharing Decision (ESD) were almost 11% lower in 2019 compared to 2005. The 2020 target (-8%) was therefore already exceeded before the COVID-19 crisis. All MS met their obligations under the ESD in 2013-2018. Some MS needed to mobilise the flexibility mechanisms in the legislation in order to meet their current obligations. MS are planning, adopting and implementing policies and measures to achieve their effort-sharing targets under the current ESR.	 positive momentum	
Energy efficiency	 improving trends dominate	 trends show a mixed picture	 Largely not on track	Milestones: 40 % cuts in emissions by 2030 and 60 % by 2040	2030	<i>Reduce by 2030 the primary and the final energy consumption levels to respectively 992.5 and 763 million tonnes of oil equivalent</i>	 it is very unlikely			
Renewable energy sources	 improving trends dominate	 trends show a mixed picture	 Largely not on track	At least 32% of EU energy from renewable sources	2030	<i>At least 42.5% of energy from renewable sources in gross final energy consumption by 2030</i>	 it is unlikely but uncertain			
				Overarching objectives: secure, competitive and sustainable energy Specific objectives: expand security of energy supply; develop a connected EU energy market; reduce energy demand and improve energy efficiency; decarbonise the energy mix; and increase research and development	2030; 2050					

³⁶⁹ Improvement suggestion: The climate figures included in the assessment are quite outdated by now. They can be updated with the latest state of play as described in CAPR 2023 (Climate Action Progress Report 2023 - European Commission (europa.eu)) and our assessment of draft updated NECPs (National energy and climate plans (europa.eu))

³⁷⁰ This contradicts the latest reports on EU's emission's reduction goals, see CAPR 2023 and the 2023 EU wide assessment of draft updated NECPs

Table 88.4 Climate change mitigation - summary

Source	SOER 2020			8th EAP progress 2023	EIR 2022
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030 and 2050	Outlook of meeting targets by 2030	Assessment
GHG emissions and mitigation efforts	↑	→	↓	→ ↓	↑↑↑
Energy efficiency	↑	→	↓	↓	
Renewable energy sources	↑	→	↓	→	

Detailed results – Climate change adaptation**Climate risks****Table 8 Climate risks for different clusters and the urgency to act on them**

	Urgent action needed	More action needed	Further investigation	Sustain current action	Watching brief
Ecosystems	coastal ecosystems, marine ecosystems, biodiversity/carbon sinks due to wildfires (Southern Europe)	biodiversity/carbon sinks due to wildfires, biodiversity/carbon sinks due to droughts and pests, species distribution shifts, ecosystems/society due to invasive species, aquatic and wetland ecosystems, soil health	cascading impacts from forest disturbances		
Food	crop production (Southern Europe)	crop production	food security due to climate impacts outside Europe, food security due to higher food prices, fisheries and aquaculture		livestock production
Health	heat stress-general population, population/built environment due to wildfires	population/built environment due to wildfires, well-being due to non-adapted buildings, heat stress - outdoor workers (Southern Europe)	pathogens in coastal waters, health systems and infrastructure	infectious diseases	heat stress - outdoor workers

	Urgent action needed	More action needed	Further investigation	Sustain current action	Watching brief
	(Southern Europe)				
Infrastructure	pluvial and fluvial flooding	coastal flooding, damage to infrastructure and buildings, energy disruption due to heat and drought (Southern Europe)	energy disruption due to heat and drought, energy disruption due to flooding, marine transport, land-based transport		
Economy and finance	European solidarity mechanisms	public finances, property and insurance markets, population/economy due to water scarcity (Southern Europe)	population/economy due to water scarcity, pharmaceutical supply chains, supply chains for raw materials and components, financial markets	winter tourism	

Source: Adapted from European Climate Risk Assessment 2024 by EEA, 2024.

Policy trends, implementation, outlook and investment gaps

Regarding climate change adaptation, past trends show a negative picture when considering **impacts on ecosystems and risks to society**. These trends are projected to continue, and 2030 targets are unlikely to be met.

Table Climate change adaptation - Policy trends, implementation, outlook and investment gaps

Source	SOER 2020			8th EAP progress 2023				EIR 2022	
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030/2050	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment
Climate change and impacts on ecosystems	↓ deteriorating trends dominate	↓ deteriorating trends dominate		Strengthen resilience and the capacity to adapt to climate-related hazards and natural disasters in all countries	2030	Decrease the area impacted by drought and loss of vegetation productivity	→ it is unlikely but uncertain		
Climate change risks to society	↓ deteriorating trends dominate	↓ deteriorating trends dominate				Reduce overall monetary losses from weather and climate-related events	→ it is unlikely but uncertain		
Climate change adaptation strategies and plans	↑ improving trends dominate	↑ improving trends dominate		Integrate climate change measures into national policies, strategies and planning	2030				
				Climate-proofing EU action: mainstream adaptation measures into EU policies and programmes	N/A			By 2020, all MS had put in place a national adaptation strategy or plan. Adaptation efforts in each MS and at EU level need to be intensified, as climate impacts appear to be at the worst end of the spectrum that had been projected, and will increasingly manifest in cascading and compound risks as well. Meanwhile, the implementation of adaptation has lagged behind. Appropriate action to prevent and/or minimise the damage that can be caused by climate change brings significant economic and social benefits.	↓ performance challenges

Table Climate change adaptation - summary

Source	SOER 2020		8th EAP progress 2023	EIR 2022
THEME	Past trends (10-15 years)	Outlook to 2030	2030 TARGET Outlook	Assessment
Climate change and impacts on ecosystems	↓	↓	→	
Climate change risks to society	↓	↓	→	
Climate change adaptation strategies and plans	↑	↑		↓

Climate change adaptation seems to perform well in terms of *Strategies and plans*, however *Climate change impacts to ecosystems* and *Climate change risks to society* would need increased attention since they didn't perform so well in the past and trends are likely to deteriorate.

Detailed results – Water and marine

Policy trends, implementation, outlook and investment gaps

The analysis of past trends within the water and marine cluster, encompassing both freshwater and marine environments, reveals a combination of challenges and achievements. Past trends present some challenges in terms of **hydro-morphological pressures** and good performance regarding **water abstraction** and **marine protected areas**. However, country reports indicate **poor ecological and chemical status** and increased investments in this domain are recommended. The outlook for 2030 shows a mixed picture within most themes characterising the freshwater environment. More emphasis should be given to enhancing the state of marine ecosystems and biodiversity. Investment gaps have been calculated for water protection and management, drinking water and wastewater, amounting to a total of €27.95 bn per year (see Table).

Table Freshwater - Policy trends, implementation, outlook and investment gaps

Source	SOER 2020				8th EAP progress 2023	EIR 2022			EU recovery needs
THEME	Past trends (10-15 years)	Outlook to 2030	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
Water ecosystems and wetlands	→ trends show a mixed picture	→ trends show a mixed picture	Protect, conserve and enhance freshwater as well as the biodiversity that supports this natural capital	2050			Implementation of the Water Framework Directive (WFD) objectives continues but, although the assessment of the third river basin management plans (RBMPs) is pending, it can be said that progress towards achieving good status for water bodies is generally slow, despite the fact that the 2027 deadline is drawing near. This is due to a mix of factors: failure to set reference conditions for the characterisation of water bodies and incomplete assessment of pressures, insufficiencies in the monitoring of water, meaning that the status of water bodies is unknown, assessments of the impact of activities on water bodies are incorrectly performed, and the exemptions invoked are not sufficiently justified.	↓ performance challenges	
Hydro-morphological pressures	↓ deteriorating trends dominate	→ trends show a mixed picture							
Pollution pressures on water and links to human health	→ trends show a mixed picture	→ trends show a mixed picture	Eliminate challenges to human health and well-being, such as water pollution and toxic materials	2050			The Commission has shared its findings on the second RBMPs with the MS in question and expects to see the shortcomings addressed when the third RBMPs are submitted. The Commission is also verifying how the national systems (e.g. permits and inspections) ensure that the WFD is correctly applied on the ground by each MS as regards abstraction of water, point source and diffuse pollution. The MS were due to report to the Commission their RBMPs and flood risk management plans (FRMPs) by 22 March 2022. The Commission is concerned that many MS have not yet met their legal reporting obligations and is ready to act on findings of non-compliance as appropriate.	↓ performance challenges	5.9 bn EUR/year (water protection and management) + 4.6 bn EUR/year (drinking water)
							The 1998 Drinking Water Directive is well implemented overall in the EU. However, it is a cause for concern in a few countries. By 12 January 2023, all MS had to transpose the recast Directive to comply with the revised quality standards and the Commission is providing support in order to ensure the timely and correct transposition of the new rules.	→ mixed progress	
							Overall, the Bathing Water Directive shows high rates of excellent or good performance in the EU. However, there are some differences between MS.	↑ positive momentum	
			Improve water quality by reducing pollution	2030	Reduce nutrient losses by at least 50% in safe groundwater resources	→ It is unlikely but uncertain	Many MS have problems in relation to the implementation of the Nitrates Directive and should step up their efforts to further reduce nitrate pollution from agriculture in groundwater and eutrophication by designating all nitrate-vulnerable zones and by including appropriate measures in their action plans⁸².	→ mixed progress	
							Despite a degree of progress, urban wastewater is still not collected and treated as it should be in many MS, which is why most of them are still facing infringement proceedings and a few have been subjected to financial penalties. Progress depends on MS prioritising investments for wastewater collecting systems and treatment plants, including through efficient use of the cohesion policy funding where available, and European Investment Bank loans.	↓ performance challenges	15 bn EUR/year (wastewater)

Source	SOER 2020				8th EAP progress 2023	EIR 2022			EU recovery needs
THEME	Past trends (10-15 years)	Outlook to 2030	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
Water abstraction and its pressures on surface and groundwater	 improving trends dominate	 trends show a mixed picture	Substantially increase water use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater	2030			The country reports present the latest information on the percentage of water bodies not achieving good ecological and chemical status, the abstraction of water per sector as well as the water exploitation index. Increased investments are essential if those objectives are to be met, and EU funding continues to support those implementation efforts, mainly through the cohesion policy, the Recovery and Resilience Facility, and Horizon Europe.	 performance challenges	
			Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	2030					

Table Marine environment - Policy trends, implementation, outlook and investment gaps

Source	SOER 2020				8th EAP progress 2023		EIR 2022		EU recovery needs
THEME	Past trends (10-15 years)	Outlook to 2030	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
State of marine ecosystems and biodiversity	 trends show a mixed picture	 deteriorating trends dominate	Ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora	N/A					-0.15 bn EUR/year (marine water) -2.3 bn EUR/year (marine litter and microplastics)
			Minimise and address the impacts of ocean acidification	2030					
			Achieving concentrations in the marine environment near background values for naturally occurring hazardous substances and close to zero for man-made synthetic substances	2028					
Pressures and impacts on marine ecosystems	 trends show a mixed picture	 deteriorating trends dominate							
Sustainable use of the seas	 trends show a mixed picture	 trends show a mixed picture							
Marine protected areas	 improving trends dominate	 trends show a mixed picture			Legally protect at least 30% of the EU's sea area by 2030	 It is unlikely but uncertain	The progress on the MSFD appears in the country reports in the biodiversity chapter due to its importance to the protection of the marine environment. The Commission looked into the advancement on the assessment of the status of the EU marine waters and the regional cooperation between MS sharing the same marine sub-region to address predominant pressures.	 positive momentum	

Source	SOER 2020		8th EAP progress 2023	EIR 2022
THEME	Past trends (10-15 years)	Outlook to 2030	Outlook of meeting targets by 2030	Assessment
Water ecosystems and wetlands	→	→		↓
Hydro-morphological pressures	↓	→		
Pollution pressures on water and links to human health	→	→	→	↓ → ↑ → ↓
Water abstraction and its pressures on surface and groundwater	↑	→		↓

Source	SOER 2020		8th EAP progress 2023	EIR 2022
THEME	Past trends (10-15 years)	Outlook to 2030	Outlook of meeting targets by 2030	Assessment
State of marine ecosystems and biodiversity	→	↓		
Pressures and impacts on marine ecosystems	→	↓		
Sustainable use of the seas	→	→		
Marine protected areas	↑	→	→	↑

As seen in the table above, within the *Water and marine* cluster, *Marine protected areas* seem to have performed best in the past, while the future bringing only uncertainty or mixed trends. Negative outlooks are predicted for the *State of marine ecosystems and biodiversity* and *Pressures and impacts on marine ecosystems*.

Sectors with the highest environmental impact

The table below presents the economic sectors with the greatest combined environmental impact and potential for improvement. The sectors are ranked from the highest to the lowest based on

their impact and improvement potential. This hierarchy was developed in a prior DG ENV project, with the methodology detailed in the beginning of this Annex.

Table Water - Top 15 sectors with highest negative environmental impact and highest improvement potential³⁷¹

Ranking	Name of sector / activity
1	Growing of non-perennial crops
2	Growing of perennial crops
3	Manufacture of basic metals
4	Manufacture of rubber and plastic products
5	Inland passenger water transport
6	Inland freight water transport
7	Manufacture of chemicals and chemical products
8	Sea and coastal passenger water transport
9	Sea and coastal freight water transport
10	Manufacture of fabricated metal products + machinery and (electrical) equipment
11	Manufacture of basic pharmaceutical products and pharmaceutical preparations
12	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
13	Mining of metal ores; Other mining and quarrying; Mining support service activities
14	Manufacture of leather and leather related products
15	Manufacture of ceramic products

Detailed results – Circular economy and waste

Policy trends, implementation, outlook and investment gaps

The following table presents an overview of policy trends, implementation status, outlook, and investment disparities within the circular economy and waste management sector. It portrays a nuanced landscape, characterised by variations among themes and member states. While historical data suggests positive trends, the projected outlook signals potential challenges ahead. Across most member states, the national circular economy strategies have been put in place, yet achieving higher levels of **circularity rates** remains an ongoing challenge. Over the past decade, the EU has made notable progress in **material resource efficiency**, although the 2030 target appears unlikely to be achieved. **Waste generation rates** continue to grow, posing significant difficulties to reduction efforts. Assessments for waste management are divergent: SOER 2020 indicates improving trends in both past performance and future projections, whereas EIR 2022 highlights obstacles in meeting related to the **preparation for reuse/recycling**. Total investment gap for this cluster adds up to €26.6 billion per year (see Table 8.5).

³⁷¹ changing landscape for AQ concentrations should be

Table88.5 Circular economy and waste - Policy trends, implementation, outlook and investment gaps

Source	SOER 2020					8th EAP progress 2023	EIR 2022		EU recovery needs	
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
Circular use of materials	 improving trends dominate	 trends show a mixed picture	 Partially on track			Double the ratio of circular material use by 2030 compared to 2020	 It is very unlikely	There are large differences in circularity rates between Member States (MS), with the secondary use of materials diverging from the 12.8% EU average, from 1.3% in Romania to 30.9% in the Netherlands³⁷². The same is true for resource productivity, where the EU average is 2.09 euro/kg, ranging from 0.3 euro/kg in Bulgaria to 5.89 euro/kg in the Netherlands³⁷³.	 <i>mixed progress</i>	23.5 bn EUR/year
								Most MS now have national circular economy strategies and action plans in place or have announced and/or made progress in comprehensive strategies covering the whole life cycle of products.	 <i>positive momentum</i>	
Material resource efficiency	 improving trends dominate	 trends show a mixed picture		- Achieve the sustainable management and efficient use of natural resources - Create more with less, delivering greater value with less input, using resources in a sustainable way and minimising their impacts on the environment	2030 2050	Significantly decrease the EU's material footprint, by reducing the amount of raw material needed to produce the products consumed in the EU	 It is unlikely but uncertain			
Waste generation	 trends show a mixed picture	 trends show a mixed picture		Halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	2030	Significantly reduce the total amount of waste generated by 2030	 It is unlikely but uncertain	Waste prevention remains an important challenge in all MS, including those with high recycling rates. The trend is moving in the wrong direction, as the generation of municipal waste in the EU has increased since 2014 from an average of 478 kg to 505 kg per capita: only five MS have reduced their generation per capita since 2014.	 <i>performance challenges</i>	
Waste management	 improving trends dominate	 improving trends dominate		55%/60%/65% of municipal waste is prepared for reuse or recycled (differing calculation method for the 50 % target)	2025/ 2030 /2035			Achieving the 2020 target of 50% preparation for reuse/recycling of municipal waste remains an issue of particular concern, as highlighted in the 2018 early warning reports	 <i>performance challenges</i>	3.1 bn EUR/year
				Reduce landfill to a maximum of 10 % of municipal waste generated	2035			Despite some progress, compliance with the basic obligations of the Waste Framework and Landfill Directives (closure of illegal landfills, rehabilitation, and treatment of waste before landfilling) is yet to be achieved. The Commission is currently pursuing infringement proceedings against 12 MS over non-compliance with the Landfill Directive	 <i>mixed progress</i>	
				Specific targets for collection, recycling and/or recovery of packaging waste, construction and demolition waste, WEEE, end-of-life vehicles, batteries, single-use plastics (incl. market restrictions and requirements for recycled content)	2008- 2035					
				All plastics packaging should be recyclable	2030					

³⁷² Improvement suggestion: use of secondary materials" would be more correct. Reference year 2020³⁷³ Reference year 2020

Source	SOER 2020			8th EAP progress 2023	EIR 2022
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	Outlook of meeting targets by 2030	Assessment of findings
Circular use of materials	↑	→	→	↓	→ ↑
Material resource efficiency	↑	→		→	
Waste generation	→	→		→	↓
Waste management	↑	↑			↓ →

As seen in the table above, *Material resource efficiency* presents a lot of uncertainty, while there are concerns of meeting the 2030 targets for *Circular use of materials*. The best performer and with good prospects seems to be the theme *Waste generation*.

Sectors with the highest environmental impact

The table below presents the economic sectors with the greatest combined environmental impact and potential for improvement. The sectors are ranked from the highest to the lowest based on their impact and improvement potential. This hierarchy was developed in a prior DG ENV project, with the methodology detailed in the beginning of this Annex.

Table 8.6: Circular economy and waste - Top 15 sectors with highest negative environmental impact and highest improvement potential³⁷⁴

Ranking	Name of sector / activity
1	Manufacture of computer, electronic and optical products
2	Manufacture of electrical equipment
3	Manufacture of textiles
4	Manufacture of wearing apparel
5	Construction of buildings
6	Manufacture of leather and related products
7	Manufacture of other non-metallic mineral products
8	Manufacture of food products
9	Manufacture of machinery and equipment n.e.c.
10	Electricity, gas, steam and air conditioning supply
11	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
12	Manufacture of chemicals and chemical products
13	Civil engineering
14	Manufacture of basic metals
15	Manufacture of fabricated metal products, except machinery and equipment

³⁷⁴ Suggestion to use 2023 ECA special report 17/2023 'Circular economy – Slow transition by member states despite EU action'

Detailed results – Zero pollution

Policy trends, implementation, outlook and investment gaps

The majority of findings within the 'zero pollution' cluster predominantly focus on air pollution. While policy objectives are largely on track to address **concentrations of air pollutants and their impacts on human health**, challenges persist in meeting the **2030 emission reduction commitments**, particularly concerning nitrogen oxides (NOX), particulate matter (PM2.5), and non-methane volatile organic compounds (NMVOCs). Additionally, reducing **ammonia (NH3) emissions** from agriculture poses significant challenges³⁷⁵. Concerning chemical pollution, the outlook is worrisome, with deteriorating trends projected for **chemical emissions**, their **effects on ecosystems**, and associated **risks to human health**. Finally, regarding industrial pollution, the 2030 outlook presents a mixed scenario concerning pollutant emissions from the industry and the adoption of clean technologies. The estimated investment gap amounts to €38.5 billion per year (see Table 8.7 and Table 8.8).

³⁷⁵ [this report](#) shows that ammonia is the pollutant that is most tricky for the majority of MS. This confirms the current implementation status (see [here](#) for an overview).

Table 8.7. Air pollution - Policy trends, implementation, outlook and investment gaps

Source	SOER 2020					8th EAP progress 2023		EIR 2022		EU recovery needs
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
Emissions of air pollutants	 trends show a mixed picture	 trends show a mixed picture	 partially on track	Attain emission ceilings and reduction commitments for the main air pollutants SOx, NOx, NMVOCs, NH3 and primary PM2.5 (for the latter, only reduction commitments)	2030			Despite improvements, air pollution is still a major health concern for Europeans. Where limits have persistently been exceeded, the Commission has been consistent in opening infringement proceedings for key pollutants, such as particulate matters and nitrogen dioxide. In some of these cases, the Court of Justice of the EU (CJEU) has already handed down judgments which make remedial action even more urgent.	 performance challenges	- 32.6 bn EUR/year (air quality) - 3.8 bn EUR/year (radiation)
				Attain EU Member State and EU emission ceilings and reduction commitments for the main air pollutants SOx, NOx, NMVOCs, NH3 and primary PM2.5 (for the latter, reduction commitments only)³⁷⁶	2030			Around half of the MS are also considered to be at high risk of non-compliance with 2030 onwards emission reduction commitments for nitrogen oxides (NOX), particulate matter 2.5 µm size (PM2.5) and non-methane volatile organic compounds (NMVOCs).	 performance challenges	
								One Member State has not yet submitted its national air pollution control programme.	 positive momentum	
Concentrations of air pollutants	 improving trends dominate	 trends show a mixed picture	 largely on track	Achieve levels of air quality that do not give rise to significant negative impacts on, and risks to, human health and the environment (in line with the WHO air quality guidelines)	N/A					
				Attain limit values for SO2, NO2, C6H6, CO, Pb, PM10 and PM2.5; achieve target values for PM2.5, O3, As, Cd, Ni and BaP; the long-term objective for O3; the national exposure reduction target and the exposure concentration obligation for PM2.5; and critical levels for SO2 and NOx	2030					
Air pollution impacts on human health and well-being	 improving trends dominate	 trends show a	 largely on track	By 2030, cut the health impacts of air pollution (in terms of premature mortality due to PM and O3) by 52 % compared with 2005	2030					

³⁷⁶ There are no EU wide targets, The NEC Directive establishes MS reduction commitments

Source	SOER 2020			8th EAP progress 2023			EIR 2022		EU recovery needs	
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
		mixed picture		By 2030, substantially reduce the number of deaths and illnesses from air pollution	2030	Reduce premature deaths from air pollution by 55% by 2030	↑ it is very likely			
Air pollution and impacts on ecosystems	→ trends show a mixed picture	→ trends show a mixed picture	→ partially on track	No exceedances of the critical loads and levels	N/A			MS need to fulfil air quality monitoring requirements in a systematic and consistent way in order to better inform clean air and biodiversity policies at EU and national level. Infringement cases against two MS focus on shortcomings in monitoring networks.	→ mixed progress	
				By 2030, reduce the ecosystem area exceeding eutrophication limits to 35 %³⁷⁷	2030			Meeting emission reduction commitments for ammonia (NH₃) from agriculture, one of the five pollutants covered by the National Emission Reduction Commitments Directive, requires further efforts. The 2022 emission projections review indicates that more than 70% of MS are at high risk of non-compliance with 2020-2029 and 2030 onwards emission reduction commitments for ammonia. Achieving compliance requires measures such as introducing low-emission agricultural techniques, including for livestock, manure and fertiliser management.	↓ performance challenges	

Table 8.8. Chemical and industrial pollution - Policy trends, implementation, outlook and investment gaps

Source	SOER 2020			8th EAP progress 2023			EIR 2022		EU recovery needs	
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030/2050	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
POLLUTION (CHEMICAL)										
Emissions of chemicals	→ trends show a mixed picture	↓ deteriorating trends dominate								-0.6 bn EUR/year (chemicals) - 1.5 bn (soil)
Chemical pollution and impacts on ecosystems	→ trends show a mixed picture	↓ deteriorating trends dominate		Priority hazardous substances under Directive 2008/105/EC are eliminated from surface waters in accordance with the WFD	N/A					
				To prevent or, where that is not practicable, to reduce emissions to air, water and land and to prevent the generation of waste in order to achieve a	N/A					

³⁷⁷ Improvement suggestion: the ZPAP target (reduce by 25% the EU ecosystems where air pollution threatens biodiversity compared to 2005) could be used.

Source	SOER 2020				8th EAP progress 2023		EIR 2022		EU recovery needs	
THEME	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030/2050	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
				high level of protection of the environment taken as a whole						
Chemical pollution and risks to human health and wellbeing	→ trends show a mixed picture	↓ deteriorating trends dominate		• Improve the protection of human health and the environment through registration, evaluation, authorisation and restriction of chemicals	N/A					
				• Reduce cancers/deaths from workplace exposures to chemicals	N/A					
				• Reduce mercury levels in the environment and human exposure and protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds	N/A					
POLLUTION (INDUSTRIAL)										
Pollutant emissions from industry	↑ improving trends dominate	→ trends show a mixed picture		• ‘...to prevent or, where that is not practicable, to reduce emissions into air, water and land and to prevent the generation of waste, in order to achieve a high level of protection of the environment taken as a whole’	permanent			• The transposition of the requirements applicable to industrial installations is belated. The Commission launched infringement proceedings against several MS for failure to correctly transpose the Industrial Emissions Directive and the Seveso-III Directive.	→ mixed progress	
				• increase resource efficiency of industry	N/A					
Clean industrial technologies	↑ improving trends dominate	→ trends show a mixed picture		• ‘By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes...	2030					

Source	SOER 2020			8th EAP progress 2023	EIR 2022
<i>THEME</i>	Past trends (10-15 years)	Outlook to 2030	Prospects of meeting policy objectives 2030	2030 TARGET Outlook	Assessment
Emissions of air pollutants	→	→	→		↓↓↑
Concentrations of air pollutants	↑	→	↑		
Air pollution impacts on human health	↑	→	↑	↑	
Air pollution and impacts on ecosystems	→	→	→		→↓

Source	SOER 2020		EIR 2022
<i>THEME</i>	Past trends (10-15 years)	Outlook to 2030	Assessment
POLLUTION (CHEMICAL)			
Emissions of chemicals	→	↓	
Chemical pollution and impacts on ecosystems	→	↓	
Chemical pollution and risks to human health and wellbeing	→	↓	
POLLUTION (INDUSTRIAL)			
Pollutant emissions from industry	↑	→	→
Clean industrial technologies	↑	→	

Within the *Zero pollution* cluster, chemical pollution seems to have a negative outlook across all themes, while *Air pollution impacts on human health* seems likely to achieve 2030 targets and objectives

Sectors with the highest environmental impact

The table below presents the economic sectors with the greatest combined environmental impact and potential for improvement. The sectors are ranked from the highest to the lowest based on their impact and improvement potential. This hierarchy was developed in a prior DG ENV project, with the methodology detailed in the beginning of this Annex.

Table Zero pollution - Top 15 sectors with highest negative environmental impact and highest improvement potential

Ranking	Name of sector / activity
1	Crop production, including support activities
2	Manufacture of chemicals and chemical products
3	Manufacture of basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms
4	Other passenger land transport; freight transport by road and removal services; individual traffic
5	Manufacture of textiles + Manufacture of wearing apparel
6	Manufacture of basic pharmaceutical products and pharmaceutical preparations
7	Electric power generation, transmission and distribution
8	Manufacture of fabricated metal products + electrical and electronic equipment + motor vehicles and transport equipment
9	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
10	Manufacture of pesticides and other agrochemical products
11	Manufacture of rubber and plastic products
12	Water transport
13	Manufacture of cement, lime and plaster
14	Manufacture of glass and glass products
15	Manufacture of basic iron and steel and of ferro-alloys

Detailed results – Biodiversity

Policy trends, implementation, outlook and investment gaps

Below, the table provides an overview of the review for the biodiversity cluster. The past trends show a mixed picture, with notable progress on terrestrial protected areas (excluding **protected forest areas**) and ecosystem condition and services (mostly on **assessing the ecosystems' condition and ecosystem services accounting**). However, as more ambitious targets are being set, the outlook for most themes within the biodiversity cluster indicates forthcoming challenges, notably with increased pressures on **common species, such as birds and butterflies**. Most 2030 targets are unlikely to be achieved. Total investment gap for the biodiversity efforts add amounts to €21.5 billion per year Table 88.9 Biodiversity - Policy trends, implementation, outlook and investment gaps (see Table 88.9).

Table 88.9 Biodiversity – Policy trends, implementation, outlook and investment gaps

Source	SOER 2020		8th EAP progress 2023			EIR 2022			EU recovery needs
THEME	Past trends (10-15 years)	Outlook to 2030	Policy objectives	Target year	Indicator	Outlook of meeting targets by 2030	Findings	Assessment	Additional investment needs
Terrestrial protected areas	 improving trends dominate	 trends show a mixed picture			Legally protect at least 30% of the EU's land area by 2030	 It is unlikely but uncertain	Forests are under huge pressure. Of the 27% of EU forest area protected under the EU nature directives, less than 15% have a favourable conservation status and the number of forest habitats with a bad conservation status has increased.	 performance challenges	21.5 bn EUR/year (nature legislation & biodiversity strategy 2030)
EU protected species and habitats	 trends show a mixed picture	 trends show a mixed picture			Increase the degree of connectivity in forest ecosystems with a view to creating and integrating ecological corridors and increase climate change resilience	 It is unlikely but uncertain	Enforcement action at EU level has limited the damaging impacts of infrastructure projects and logging activities while contributing to species protection, expanding the Natura 2000 network and increasing the number of sites with a management plan in place.	 positive momentum	
							Despite significant efforts by MS and some improvements, biodiversity in the EU continues to decline and shows deteriorating trends. Some of the habitats in the poorest condition across the EU are semi-natural grasslands, bogs, mires and fens. Despite a reduction over the last decade, net land take in the EU-27 still amounted to 83.8 m2/km2 between 2012 and 2018.	 performance challenges	
							Although the provisions of the Habitats and Birds Directives are long established and well-known, several MS still fail to designate special areas of conservation and to establish conservation objectives and measures. Most of the MS need to speed up efforts to complete their Natura 2000 networks, especially in the marine environment.	 mixed progress	
Common species (birds and butterflies)	 deteriorating trends dominate	 deteriorating trends dominate			Reverse the decline in populations of common birds	 It is unlikely but uncertain			
Ecosystem condition and services	 improving trends dominate	 trends show a mixed picture	Biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for their intrinsic value and essential contribution to human well-being and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided	2050			Biodiversity and ecosystems would greatly benefit from significant improvements to the overall common agricultural policy (CAP) and the new CAP strategic plans 2023-2027, support for the management of semi-natural grasslands, protection of ecosystem services and from efforts to re-introduce landscape features in areas where they have been lost.	 performance challenges	
							Progress has been made across the EU on assessing the condition of, and pressures on, ecosystems and their services using the common EU methodology (MAES), and on ecosystem accounting. However, more support is needed to improve the performance of biodiversity monitoring and ensure consistent reporting, and to engage a critical mass of business players in order to demonstrate the benefits we gain from the EU's natural capital and the impacts thereon.	 mixed progress	
							Although the full implementation of the Regulation on invasive alien species (IAS Regulation) only started in 2019, it already delivers on its objectives, such as a coherent framework for addressing IAS at EU level and increased awareness of the problem of invasive alien species. However, challenges remain, as most MS have not yet implemented the action plans to address the priority pathways required by Article 13 of the IAS Regulation.	 mixed progress	

Source	SOER 2020		8th EAP progress 2023	EIR 2022
THEME	Past trends (10-15 years)	Outlook to 2030	Outlook of meeting targets by 2030	Assessment of findings
Terrestrial protected areas	↑	→	→	↓
EU protected species and habitats	→	→	→	↑ ↓ →
Common species (birds and butterflies)	↓	↓	→	
Ecosystem condition and services	↑	→		↓ →

Based on the table above, for biodiversity cluster, there seems to be a lot of uncertainty and mixed trends regarding *habitats*. The theme that seems to perform worst is *Common species (birds and butterflies)*. The others seem to have positive past trends but the outlook remains uncertain.

Sectors with the highest environmental impact

The table below presents the economic sectors with the greatest combined environmental impact and potential for improvement. The sectors are ranked from the highest to the lowest based on their impact and improvement potential. This hierarchy was developed in a prior DG ENV project, with the methodology detailed in the beginning of this Annex.

Table 8 Biodiversity - Top 15 sectors with highest negative environmental impact and highest improvement potential

Ranking	Name of sector / activity
1	Agriculture crop production
2	Agriculture animal production
3	Mining and quarrying
4	Forestry and logging
5	Tourism, sports and leisure activities
6	Marine fishing
7	Hydropower (dams, weirs, run-off-the-river)
8	Construction including conversion from other land uses
9	Passenger or freight land transport
10	Wind, wave and tidal power
11	Water transport
12	Marine aquaculture
13	Research and experimental development on natural sciences and engineering
14	Manufacture of food and beverage products
15	Waste collection, treatment and disposal activities; materials recovery

Appendix 2. ANNEXES TO CHAPTER 3 “OPTIONS FOR IMPROVING FUNDING FOR NATURE RESTORATION”

ANNEX 6. DETAILED ANALYSIS OF EU FUNDS

Supporting section 3.3 and 3.4, Annex 6 presents an overview of major EU funds and programmes that support nature-related objectives under the current MFF, including an analysis of their contributions to nature restoration and nature-based solutions (section 3.4, Appendix 2).

CF and ERDF

Cohesion policy (this includes in addition to the CF and ERDF, also the JTF and the ESF+) is implemented in shared management between MS and Commission. Under the cohesion policy programmes are drafted by MS and adopted by the Commission (around 370 programmes in total).

The CF and ERDF **frequently highlight green infrastructure and the preservation of biodiversity**. These terms are central to the ERDF and Cohesion Fund's objectives of promoting a greener, low-carbon economy. The emphasis on green infrastructure, including in urban areas, and the protection of nature and biodiversity, underscores a broad approach to environmental sustainability and resilience. The regulation stresses the importance of protecting and enhancing natural habitats and ecosystems as key strategies for climate adaptation and mitigation. However, climate objectives are a recurrent theme, with a strong focus on climate change mitigation and adaptation. The regulation sets specific financial targets for climate-related expenditures, demonstrating the priority given to addressing climate change within the ERDF and Cohesion Fund frameworks. Ecosystem-based approaches to climate change are also addressed frequently, including natural processes and solutions to address climate and environmental challenges.

Objectives, Priorities and Earmarking

37% of the overall financial allocation of the Cohesion Fund are expected to contribute to climate objectives. Both the CF and ERDF should contribute to the overall objective of 7.5% of annual spending under MFF to biodiversity objectives in the year 2024, **10% of annual spending under MFF to biodiversity objectives for 2026 and 2027**. The CF and ERDF need to contribute to the overall objective climate objective of 30%.

Both funds contribute particularly to disaster prevention, promoting biodiversity and green infrastructure, including preservation, valorisation and the highlighting of protected natural areas, and other measures to reduce greenhouse gas emissions, such as the preservation and restoration of natural areas with high potential for carbon absorption and storage, including by rewetting of moorlands, the capture of landfill gas or emission reduction in industrial processes or products, would be particularly important. Furthermore, the ERDF and CF particularly contribute to the investments aiming to contribute to the EU Biodiversity Strategy, Zero Pollution Action Plan, Soil Strategy, EU Forest Strategy, European Climate Pact etc

CF and ERDF have a dedicated specific objective under PO2 (Greener Europe) aimed at enhancing protection and preservation of nature, biodiversity, and green infrastructure, including in urban areas, and reducing all forms of pollution. Other dedicated objectives also impact nature restoration and address nature-based solutions, in particular the promotion of climate change adaptation and disaster risk prevention, and resilience, taking into account eco-system-based approaches or the promotion of multimodal urban mobility. **The ERDF under PO 5 supports integrated economic, social, and environmental development** through cross-sectoral strategies, **emphasising functional urban areas to foster cooperation and strengthen urban-rural links**. Article 12 (2021/1058) mandates ERDF support for the European Urban Initiative, covering all urban areas and supporting the Urban Agenda for the EU, including local authorities' participation in thematic partnerships.

Regarding the thematic concentration, MS may decide in line with Art.4 (2021/1058) to comply with thematic concentration at national level or at the level of category of region. MS shall indicate its choice in its Partnership Agreement referred to in Article 10 of Regulation (EU) 2021/1060. The

Regulation (EU) 2021/1058 also sets spending allocations for different group of countries³⁷⁸: Group 1: 85 % of their ERDF resources referred to in paragraph 1 to PO 1 and PO 2, and at least 30 % to PO 2; Group 2: 40 % of their ERDF resources referred to in paragraph 1 to PO 1, and at least 30 % to PO 2; Group 3: at least 25 % of their ERDF resources referred to in paragraph 1 to PO 1, and at least 30 % to PO2.

CF and ERDF support nature restoration and nature-based solutions through dedicated objectives and PO2 and PO5. In addition, also 30% of the funding from the ERDF needs to be allocated to PO2 which supports nature restoration and nature-based solutions. This can be considered as a means of ring-fencing or earmarking, however, is sufficient to meet current funding needs.

Eligibility Requirements/Selection Criteria

Building on the Partnership Agreement with each MS (see Art. 8 CPR; content of the agreement see Art. 11), specific programmes are adopted. Art. 6 CPR outlines that the climate contribution target for each Member State shall be established as a percentage of its total ERDF and Cohesion Fund allocation and included in programmes as a result of the types of intervention and the indicative financial breakdown pursuant to point (d)(viii) of Article 22(3). According to Art. 63 CPR the eligibility of expenditure shall be determined on the basis of national rules, except where specific rules are laid down in, or on the basis of, this Regulation or the Fund-specific Regulations. Therefore, there are not eligibility requirements at EU level for nature restoration or nature-based solutions, apart from support through PO2 or PO5.

Investments eligible from ERDF, Cohesion Fund, are defined through national, regional, and cross-border programmes. EU payments are granted once the prioritised action framework for 2021-2027 is agreed, including the identification of the priority measures and an estimate of financing needs. It is the MS responsibility to select the projects in line with the scope of the programmes adopted by the Commission. Regarding the interaction with other funds, the implementation of CF and ERDF should ensure coordination and complementarity with the ESF+, the Just Transition Fund, the EMFAF and the European Agricultural Fund for Rural Development (EAFRD). Generally, there is some flexibility to transfer certain levels of funding between the funds.

Funding Allocation

The funding available under the Cohesion Policy amounts to €392 billion, including the European Regional Development Fund, Cohesion Fund, European Social Fund Plus and Just Transition Fund.

2021-2027 allocations from the CF and ERDF directly benefitting nature amount to a total of €16.6 billion, €7.5 billion for Nature and biodiversity protection; €2.7 billion for the protection, restoration and use of Nature2000 sites, €4,1 billion for the rehabilitation of industrial sites and contaminated land and €2.2 billion for air quality and noise reduction measures.³⁷⁹

Monitoring and Evaluation

The monitoring committee approves the project selection criteria and amendment of programmes during the period.³⁸⁰ In line with Art. 6 CPR MS shall regularly monitor adherence to the climate contribution targets, based on the total eligible expenditure declared by the beneficiaries to the managing authority as broken down by types of intervention in accordance with Article 42 and on data submitted by the Member State.

³⁷⁸ Group 1: gross national income ratio equal to or above 100 % of the EU average; Group 2: gross national income ratio equal to or above 75 % and below 100 % of the EU average; Group 3: gross national income ratio below 75 % of the EU average

³⁷⁹ Tas, 'Cohesion Policy Supporting Nature Restoration'.

³⁸⁰ Tas.

MS should establish a performance framework that allows to monitor, report and evaluate the programme performance during the implementation of the programme and contributes to measuring the overall performance of the Funds (Art. 16 CPR). The performance framework shall include output and result indicators linked to specific objectives, milestones and targets to be achieved by the end of the year 2029 for output and result indicators.

Leverage for Private Financing

The regulation does not include any information on leverage for private funding.

JTF

The Just Transition Fund (JTF), pillar one of the Just Transition Mechanism (JTM) under Cohesion policy, supports regions and people in addressing social, employment, economic, and environmental impacts of the transition towards the EU's 2030 energy and climate targets and 2050 climate neutrality goal.

Objectives, Priorities and Earmarking

JTF shall also contribute to overall climate target of 30 % and 7.5 % (2024) and **10 % target to biodiversity objectives** (in 2026 and 2027). While the climate target is legally binding, the biodiversity target is not. Recital 6 explains that resources from the JTF's own envelope are additional to the investments needed to achieve the overall target of 30 % of the Union budget expenditure contributing to climate objectives.

However, there is no strict earmarking for nature restoration. Art. 8 of the JTF Regulation (2021/1056) outlines the scope of support under the JTF: any activities directly linked to the specific objective set out in Art. 2 (*enabling regions and people to address the social, employment, economic and environmental impacts of the transition towards the Union's 2030 targets for energy and climate and a climate-neutral economy of the Union by 2050*). Art. 8 (2) includes a list of activities that the JTF shall exclusively support, this includes in particular nature-based solutions actions, but also nature restoration: investments in smart and sustainable local mobility, including decarbonisation of the local transport sector and its infrastructure; research and innovation activities; investments in regeneration and decontamination of brownfield sites, land restoration and including, where necessary, green infrastructure and repurposing projects, taking into account the 'polluter pays' principle; investments in enhancing the circular economy, including through waste prevention, reduction, resource efficiency, reuse, repair and recycling.

Common output indicators and common result indicators for the JTF cover areas of nature restoration and nature-based solutions, e.g., RCO 36 - Green infrastructure supported for other purposes than adaptation to climate change, RCO 38 - Surface area of rehabilitated land supported or RCO 39 - Area covered by systems for monitoring air pollution installed.

Eligibility Requirements/Selection Criteria

The JTF regulation does not include any particular information on eligibility requirements for nature restoration processes or nature-based solutions actions³⁸¹. It outlines activities generally supported under the JTF. Member states prepared their territorial just transition plans (TJTP) and related cohesion policy programmes in accordance with Annex D of their European Semester country report of Feb 2020.

³⁸¹ Albeit provisions of the CPR apply

Art. 7 (1) outlines that MS who have not made a commitment to implement the objective of achieving a climate-neutral Union by 2050, only receive 50 % of the annual allocations for that Member State set out in accordance with Articles 3(4) and 4(3) and included in the priorities.

Funding Allocation

The EU Just Transition Fund (JTF) provides a total of €19.32 billion for the period 2021-2027. According to the Commission and budget performance data (green budget priorities), 98% of the 2021-2027 budget is allocated for climate mainstreaming, **4% for biodiversity mainstreaming** and 12% for clean air.³⁸²

Monitoring and Evaluation

According to Art. 14 JTF regulation (2021/1056), the Commission will by 30 June 2025, review the implementation of the JTF concerning its specific objectives and considering changes in Regulation (EU) 2020/852, the Union's climate goals in the European Climate Law, and the Sustainable Europe Investment Plan. A report will be submitted to the European Parliament and Council, possibly with legislative proposals.

Leverage for Private Financing

The regulation does not include any information on leverage for private funding.

RRF

Measures supported by the RRF should contribute to the green transition, including biodiversity. The contribution of recovery and resilience plans of the individual Member States to the green transition should account for an amount that represents at least 37% of the recovery and resilience plan's total allocation (recital 23). However, this is a climate target with possible indirect contributions to biodiversity. But the regulation aims to contribute to the mainstreaming of biodiversity action in Union policies (recital 24). nObjectives, Priorities and Earmarking

As outlined above, the RRF should contribute to mainstreaming biodiversity action and supports **nature restoration processes and nature-based solutions actions/measures** through the green transition objective (37 %), through for example climate adaptation measures with impact on nature restoration. Apart from intervention fields and the overarching green transition objective, there is **no specific/strict earmarking or ring-fencing for nature-based solutions and nature restoration in the RRF regulation**. Experts outline that within the RRF, the identification of precise areas for financing is not clearly defined compared to the REPowerEU which outlines priorities and eligibility criteria for funds.³⁸³ **A vertical approach, i.e. focusing on specific topics/ sectors is more effective than addressing horizontal issues and it is also easier to manage.**³⁸³ In general, it is recommended to implement reforms rather than absorbing investment into a pre-settled financial framework. Therefore, **enacting reforms may be more effective than adding to what already exists at the member-state level.**³⁸⁴ Many intervention fields, however, address nature-based solutions and nature restoration, this includes for example 035-037 on Adaptation to climate change measures and prevention and management of climate-related risks, 049-050 on the restoration and protection of nature, 056 on the rehabilitation of industrial sites or 075 on cycling infrastructure.

³⁸² European Commission, 'Just Transition Mechanism - Performance'.

³⁸³ IV 2

³⁸⁴ IV 2

Eligibility Requirements/Selection Criteria

As outlined above the green transition is the overall objective within the RRF, member states have their own priorities and outline in their recovery and resilience plans how to achieve these objectives within the overall green transition objective. The process involves an open dialogue between the EU and MS.³⁸⁵ **MS are provided with guidelines on how to set their priorities, and climate targets must be met before the national plan can be approved and access to funds granted.** While MS have the freedom to decide which projects to invest in, they must adhere to areas of intervention fields introduced earlier. Experts note that this may not be the most suitable tool for cross-border investments and projects like cross-border infrastructure.³⁸⁶ Hence, would also affect cross-border nature conservation projects/sites.

Funding Allocation

The total funding for the green transition in the Recovery and Resilience Plans (RRPs) amounts to €501.88 billion. Specific allocations include **€6.9 billion for biodiversity and ecosystem protection**, €12.24 billion for climate change adaptation, €12 billion for sustainable water and marine resource management, and €9.13 billion for transitioning to a circular economy and waste recycling.³⁸⁷ Article 11 specifies the maximum financial contribution for each Member State, based on GDP, unemployment rates, etc., with the methodology detailed in Annex II.

Monitoring and Evaluation

Article 19 outlines the assessment criteria for a recovery and resilience plan, or any updates to that plan. The Commission must consider various sources of analytical information pertaining to the concerned Member State. This includes data available through the European Semester, as well as other relevant information such as the National Reform Programme, the National Energy and Climate Plan, and territorial just transition plans. The assessment will focus on the plan's lasting impact, effectiveness, and efficiency, ensuring effective monitoring and implementation, with measures that are reasonable and plausible.

Article 27 mandates that Member States report biannually on their progress in achieving recovery and resilience plans within the European Semester. Upon completing agreed milestones, governments can request performance-based payments.

Article 29 requires the Commission to monitor the Facility's implementation and report *ex post* on expenditures under each pillar, including the green transition. An *ex post* evaluation report is due by December 31, 2028 (Art. 32).

Leverage for Private Financing

According to Art. 17, recovery and resilience plans are eligible for financing under the Facility must include measures to implement reforms and public investments through a comprehensive and coherent package, which may also incorporate public schemes designed to incentivise private investment.

InvestEU

The Invest EU Fund combines thirteen centrally managed EU financial instruments and the European Fund for Strategic Investments into one instrument. Under the Invest EU Fund, there is a single fund with a strong financial capacity and a single set of coherent requirements, which applies

³⁸⁵ IV 2

³⁸⁶ IV 2

³⁸⁷ Payne, 'Recovery and Resilience Facility, Technical Support Instrument, InvestEU, Green Assist'.

throughout the financing cycle to the benefit of final beneficiaries and financial intermediaries. Under this Regulation the Commission and the EIB Group shall form a partnership with the objective of supporting the implementation of the InvestEU Programme and fostering consistency, inclusivity, additionality, and efficient deployment.

Objectives, Priorities and Earmarking

InvestEU supports the achievement of the overall climate target of 30%, and the allocation of 7,5% in 2024 and 10% in 2026 and 2027 to the overall biodiversity objective. The program **aims to promote the mainstreaming of environmental objectives in operations.**

The Invest EU Fund is a market-based and demand-driven instrument, with strong emphasis on EU policy priorities. It supports four Policy Windows, focusing on investments where the EU can add the most value, including a **sustainable infrastructure** window (for implementing partners: at least 60% of this window should contribute to meeting Union's climate and environment targets). The social window also supports climate or environmental projects. Where a financing or investment operation proposed to the Investment Committee falls under more than one policy window, it shall be attributed to the policy window under which its main objective. These policy areas can generate investments under 2 compartments: EU compartment (main focus on EU policy priorities and investments with EU value added) and MS compartment (specific national priorities, it is activated by indicating their intention in a programming document, the Commission signs contribution agreements with MS). MS can choose to contribute up to 2% of their shared management fund allocation via their Partnership Agreements.

InvestEU promotes the conservation, restoration, management and enhancement of natural capital for biodiversity and adaptation benefits, including by means of green and blue infrastructure projects. It supports sustainable development in urban, rural, coastal, offshore areas development and wider bioeconomy. Projects financed under the sustainable infrastructure window also include areas of circular economy, water waste or other environment infrastructure, including inland waterways, deployment of innovative technologies that contribute to the environmental or climate resilience objectives. The support for water includes, flood protection, networks efficiency, infrastructure for the collection and treatment of wastewater, coastal infrastructure and other water-related green infrastructure, which will comprise of investment projects and accompanying services supporting the implementation of Union environmental policies concerning land-based and marine water resources and related ecosystem services.

Regarding geographical diversification, the total volume of financing and investment operations backed by the EU guarantee in any three Member States should not exceed 45% of the total financing amount supported by the InvestEU Fund, across all implementing partners, by the end of the investment period.

The InvestEU Fund is expected to mobilise investments related to natural capital and circular economy. Earmarking/Ring-fencing for nature restoration and nature-based solutions only exists indirectly through the sustainable infrastructure window, nature and biodiversity are an eligible funding area (including nature restoration), however there has not been an uptake for nature as InvestEU is a demand-driven instrument³⁸⁷.

Eligibility Requirements/Selection Criteria

The InvestEU Portal serves as an easily accessible and user-friendly database, the InvestEU Hub as a central entry point.

Selection criteria for projects is not provided in the regulation, however Annex II includes areas eligible for financing and investment operations. Regarding environmental objectives (nature restoration and nature-based solutions related) this covers the enhancement and restoration of

ecosystems and their services through the enhancement of nature and biodiversity by means of green and blue infrastructure projects.

Generally, every effort must be made to ensure that at the end of the investment period a wide range of eligible areas listed in Annex II to the InvestEU Regulation will be covered.

One key challenge outlined by experts observed in the previous MFF was the difficulty in identifying financially viable projects for equity, loans, and repayable support, primarily due to their high risk and cost. This issue persists, particularly for climate resilience and ecosystem restoration projects, which are harder to support compared to climate mitigation projects. The high risk and expense associated with these projects result in high costs from banks for the risk they undertake.³⁸⁸

Funding Allocation

The InvestEU Fund has a €26.2 billion budget guarantee. Specific allocations include €9.9 billion for sustainable infrastructure, €6.6 billion for research, innovation and digitalisation, €6.9 billion for SMEs and €2.8 billion for social investment and skills development.

Monitoring and Evaluation

InvestEU includes climate and environmental proofing, thereby it will be determined whether operations have a negative impact, proofing should minimise detrimental impacts and maximising benefits to climate and environment dimensions and provide adequate information based on guidance provided by the Commission. Furthermore, **projects below a certain size shall be excluded from the proofing and inconsistent projects shall be ineligible**.

Regarding reporting duties, every six months, each implementing partner shall submit a report to the Commission on the financing and investment operations covered by this Regulation, broken down by EU compartment and Member State compartment, as appropriate. Each implementing partner shall also submit information on the Member State compartment to the Member State whose compartment it implements (Art. 28 (4) Regulation (EU) 2021/523). Indicators to report on the progress of the InvestEU Programme towards the achievement of general and specific objectives are set out in Annex III (Art. 28 (1)).

However, experts do not consider intervention fields ideal for tracking InvestEU as they are too general and open to interpretation, lacking legal certainty for banks. It was highlighted that a useful tool for assessing beneficiaries' environmental impact is the Green Gateway Green Checker.³⁸⁹

Leverage for Private Financing

InvestEU supports blending operations where financing or investment proposals are submitted by the implementing partner for approval by the Investment Committee. These operations adhere to InvestEU rules. The blended component from sectoral programmes, which can be in the form of grants or financial instruments, must comply with the sectoral programme's eligibility rules. When the blended component is a financial instrument, it can be combined and share risk equally with the InvestEU guarantee.

³⁸⁸ IV 9

³⁸⁹ IV 9

Horizon Europe, the framework programme for research and innovation

Horizon Europe is an EU funding programme with significant opportunities for biodiversity, including nature restoration. The focus of the funding programme on the environment has increased since the adoption of the European Green Deal.³⁹⁰

It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth. The **programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges**. It supports creating and better dispersing of excellent knowledge and technologies.

Objectives, Priorities and Earmarking

Horizon Europe shall contribute to the achievement of the overall climate target of 30%, and the allocation of 7,5% in 2024 and 10% in 2026 and 2027 to the overall biodiversity objective. Horizon Europe legal base includes a specific climate action spending target of 35% of its total budget.

The programme is structured in 3 pillars and includes missions and specific targeted programmes on defence. Pillar II on Global Challenges and European Industrial Competitiveness, includes various clusters: Cluster 6 on 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' is relevant for nature-based solutions and nature restoration: protecting the environment, restoring, sustainably managing and using natural and biological resources from land, inland waters and sea to stop biodiversity erosion, to address food and nutrition security for all and the transition to a low carbon, resource-efficient and circular economy and sustainable bioeconomy.

The Horizon Europe funding programme is designed to work in synergy with other Union programmes, allowing transfers for those co-financed by ERD, EMFAF, or EAFRD (Art. 15). In exceptional cases, calls for proposals may be restricted to develop additional activities or to add partners to existing actions, particularly enabling legal entities from low R&I performing countries to join selected collaborative actions with consortium agreement (Art. 24 (2)). The 2023-2024 work programme for Cluster 6 "Food, Bioeconomy, Natural Resources, Agriculture and Environment" includes 30 topics on biodiversity with €266 million funding. These topics address the main drivers of biodiversity loss, protection and restoration efforts, mainstreaming biodiversity in society, and the nexus between biodiversity and health. Additionally, the Partnership Biodiversa+ receives €165 million from the EU from 2021 to 2027, with co-funded partnerships in Cluster 6 offering further opportunities.³⁹¹ Key destinations within Cluster 6 include biodiversity and ecosystem services, sustainable food systems, climate action, and innovative governance for the Green Deal. The programme focuses on intent rather than impact³⁹², recognising that measuring specific contributions to climate change or other outcomes is challenging for research and innovation projects.

Eligibility Requirements/Selection Criteria

Eligibility requirements and selection criteria for Horizon Europe generally support a wide range of activities. The programme does not specifically allocate funding for nature-based solutions or nature restoration. Under the Cluster "Food, Bioeconomy, Natural Resources, Agriculture and Environment," areas of intervention include environmental observation, biodiversity and natural resources, agriculture, forestry and rural areas, seas, ocean and inland waters, food systems, bio-based innovation systems in the Union's bioeconomy, and circular systems.

³⁹⁰ Pottier, 'Horizon Europe and LIFE: Financing Opportunities for Nature Restoration'.

³⁹¹ Pottier.

³⁹² IV 3.

Funding Allocation

The Horizon Europe funding for the 2021-2027 period encompasses €95.51 billion. The funding allocation strategy of Horizon Europe involves dynamic budget planning across its operational periods.

Monitoring and Evaluation

Monitoring and evaluation of Horizon Europe are outlined in several articles in the regulation 2021/695. Award criteria and selection focus on excellence, impact, and the quality and efficiency of implementation (Art. 28). The Commission, in close cooperation with Member States, is responsible for drawing up model grant agreements between the Commission or the relevant funding body and the beneficiaries (Art. 33). A single funding rate per action applies to all activities it funds, with the maximum rate fixed in the work programme (Art. 34). Continuous monitoring and reporting are conducted by the Commission, which makes the results publicly available, and interim evaluations are also outlined (Art. 50 and Art. 52).

Leverage for Private Financing

Horizon Europe aims to leverage private funding by addressing market failures or sub-optimal investment situations and boosting investments in a proportionate and transparent manner. The programme's actions are designed to avoid duplicating or crowding out private financing while ensuring clear European added value and public return on investments (Recital 30). Additionally, the programme allows the Union to enter into European partnerships with private and/or public sector partners, further enhancing the potential for private sector engagement and investment (Recital 36).

EMFAF

The EMFAF aims to support the Common Fisheries Policy (CFP), the Union's maritime policy and the Union's international commitments in the field of ocean governance. The EMFAF is **closely connected to the objectives of the EU Biodiversity Strategy**, focusing on the restoration of marine and coastal ecosystems. Its funding is a key enabler for sustainable fisheries and the conservation of marine biological resources.

Objectives, Priorities and Earmarking

Art. 3 Regulation (EU) 2021/1139 outlines the 4 fund-specific priorities for the EMFAF and Annex II the links between the fund-specific and CPR objectives (PO2 and PO5 are particularly relevant to biodiversity and the EMFAF). The EMFAF's priorities support the restoration and conservation of aquatic and biologic resources, in particular through priority 1, but also indirectly through priorities 2-4. The support for protection and restoration of aquatic biodiversity and ecosystems, including implementation of spatial protection measures, restoration/monitoring of Natura 2000 areas, protection of species, is stressed throughout the regulation (for example see recital 37). Art. 25 outlines actions that the EMFAF may support to contribute to the protection and restoration of aquatic biodiversity and ecosystems.

However, the funding program **does not include an obligation to spend a certain amount on restoration**. Generally, the program provides **flexibility to achieve priorities** through outlining supported activities, intervention fields (Annex IV) and core performance indicators (Annex I). There is a **lack of strict earmarking or ring-fencing for nature restoration as well as nature-based solutions**, apart from priorities and supported actions outlined earlier. The program also has a **greater focus on restoration than on nature-based solutions actions/ measures**.

Generally, compared to the EMFF (2014 -2020), the EMFAF has an increased focus on biodiversity.³⁹³

Eligibility Requirements/Selection Criteria

Eligibility criteria for nature restoration processes or nature-based solutions actions/measures are **not pre-defined at EU level**. Therefore, Member States (MS) can develop any action that contributes to the scope of the fund within its priorities and specific objective. Each programme summary fiche by MS is published and builds on the Partnership Agreement. MS select their EMFAF programme priorities based on a SWOT and needs analysis. They must also conduct a SWOT analysis for any priorities not chosen to justify their exclusion.³⁹⁴

Funding Allocation

The total funding for the EMFAF is €6.1 billion for the period 2021-2027, with **28% (€1.5 billion) designated for biodiversity-related projects**, including ecosystem restoration. There is significant variation among Member States in terms of allocation for biodiversity-related projects, ranging from 56% in Denmark and 53% in the Netherlands to 14% in Portugal and 16% in Slovakia.³⁹⁵

Experts highlight that there is a need for better fund administration. Although interest is high, Member States are not fully implementing the programmes. Financial instruments for non-SME processing facilities are underutilised, with only a few MS implementing them.³⁹⁶

Monitoring and Evaluation

Art. 8 Regulation (EU) 2021/1139 outlines how the Commission assesses the proposed MS programme under shared management, this includes maximisation of the programme's contribution to the priorities set out in Article 3 and to the objectives of resilience, green transition and digital transition or its contribution to environmental, economic and social sustainability.

Article 47 (1) **requires beneficiaries to report** the value of relevant result indicators upon completing the operation and before the final payment application. The managing authority will then verify the plausibility of these reported values during the final payment process. Common output and result indicators for the EMFAF are outlined in Annex I, where necessary there are also programme-specific indicators.

According to experts, due to its small size, the fund is easy to monitor and evaluate at an individual investment level, enabling a more detailed analysis and better capability compared to other funds.³⁹⁷ A dedicated unit supports this process with the database Infosys. Infosys is the database structure for collecting and reporting EMFAF monitoring data. Its data combines output and result indicator values.³⁹⁸

Leverage for Private Financing

The EMFAF regulation outlines that support under the EMFAF should address market failures and suboptimal investment situations without duplicating or crowding out private financing or distorting competition. Furthermore, blending operations under the EMFAF must comply with

³⁹³ IV 1

³⁹⁴ Perier, 'European Maritime, Fisheries and Aquaculture Fund (EMFAF)'; European Commission - DG Maritime Affairs and Fisheries, 'Working Paper: EMFAF MEF 2021-2027'.

³⁹⁵ Perier, 'European Maritime, Fisheries and Aquaculture Fund (EMFAF)'.

³⁹⁶ IV 1

³⁹⁷ IV 1

³⁹⁸ European Commission - DG Maritime Affairs and Fisheries, 'Working Paper: EMFAF MEF 2021-2027', 2021-27.

Regulation (EU) 2021/523 and Title X of the Financial Regulation. Regarding blended finance according to experts, DG MARE prioritises projects with maximum public benefit and does not fund projects/interventions that can be replaced by private investment. Emphasis is on artisanal level, supporting local communities, and small-scale fisheries.³⁹⁹

CAP (EAGF/EAFRD)

The CAP aims to support farmers and ensure Europe's food security. It sets out the EU legal framework and funds the support Member States can provide to agriculture, forestry, and rural development. It has both the objective of ensuring Europe's food security and incentivising environmentally friendly agriculture. The CAP has greatly evolved since its creation in 1962.

The **CAP accounts for nearly one third of the total EU's budget**. It operates under shared management between the European Commission and Member States, each of which must prepare a CSP outlining how their interventions align with CAP objectives, including the one on biodiversity.

The CAP budget is divided between the **EAGF** and the **EAFRD**. The EAGF primarily supports farmers through income subsidies, eco-schemes and market measures, while the EAFRD focuses on rural development, including natural resource management as well as GAECs and ecoschemes.

Objectives, Priorities and Earmarking

For the period 2023-27, the CAP is built around ten Specific Objectives (Art. 6, Regulation 2021/2115):

- to support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union;
- to enhance market orientation and increase farm competitiveness both in the short and long term, including greater focus on research, technology and digitalisation;
- to improve the farmers' position in the value chain;
- to contribute **to climate change mitigation and adaptation**, including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy;
- to foster **sustainable development and efficient management of natural resources** such as water, soil and air, including by reducing chemical dependency;
- to **contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes**;
- to attract and sustain young farmers and new farmers and facilitate sustainable business development in rural areas;
- to promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including the circular bio-economy and sustainable forestry;
- to improve the response of Union agriculture to societal demands on food and health, including high-quality, safe and nutritious food produced in a sustainable way, to reduce food waste, as well as to improve animal welfare and to combat antimicrobial resistance.
- modernise agriculture and rural areas through fostering and sharing knowledge, innovation and digitalisation, and by encouraging their uptake by farmers through improved access to research, innovation, knowledge exchange and training.

Three out of ten Specific Objectives support biodiversity conservation directly or indirectly. Member States' CAP Strategic Plans should contribute to other EU policies including environmental ones.

³⁹⁹ IV 1

For three specific objectives (SO 4, 5, and 6, which pertain to climate change, natural resources, and biodiversity), this entails identifying and addressing the objectives of the WFD and RBMPs, as well as the needs of biodiversity and Nature legislation, where relevant, within the interventions outlined in the CAP Strategic Plan. Specific sections of the CAP Strategic Plans require a description of how the Strategic Plans contribute to the targets of the EU Green Deal, in particular those arising from the EU Farm to Fork and Biodiversity Strategies on landscape features, organic farming, pesticide and nitrate pollution.

Eligibility Requirements/Selection Criteria

As part of conditionality, direct payments, eco-schemes and most area and animal based rural development payments to support farmers are granted on the condition that they implement “good agricultural and environmental conditions” (**GAEC**) and the Statutory Management Requirements. For example, GAEC 8 is aimed at maintaining non-productive feature and area to improve on-farm biodiversity, through e.g., measures for avoiding invasive plant species, or retaining non-productive features, ban on cutting hedges and trees during the bird breeding and rearing season.

Further, still part of **conditionality**, three **Statutory Management Requirements (SMRs)** contribute to water management including SMR1 relating to requirements from the Water Framework Directive (controls on diffuse sources of phosphates and controls on abstraction and impoundment), as well as SMR2 with regards to meeting the requirements of the Nitrates Directive and SMR8 relating to the Sustainable Use of Pesticide Directive.

Funding Allocation

€387 billion in funding will be allocated to the CAP for the 2023-27 period. In order to achieve the objectives, the following instruments are introduced:

- Conditionalities relating to the climate and the environment, including water, soil and biodiversity of ecosystems, for receiving area and animal related CAP payment;
- Eco-schemes for voluntary schemes for the climate, the environment and animal welfare that go beyond the conditionalities;
- Interventions for rural development, in particular for environmental, climate-related and other management commitments that go beyond the conditionalities, area-specific disadvantages resulting from certain mandatory requirements, as well as certain investments in case they are nature positive.

Monitoring and Evaluation

CAP legislation lays down a common set of indicators as part of a new performance, monitoring and evaluation framework. The indicators will be monitored through annual performance reports and a biannual review of the performance of CAP Strategic Plans to assess the progress of EU countries in reaching their targets and the objectives of the CAP. Under Special Objective 6, the following indicators can be highlighted:

- I.21 Enhancing provision of ecosystem services: Share of agricultural land covered with landscape features;
- R.34 Preserving landscape features: Share of utilized agricultural area (UAA) under supported commitments for managing landscape features, including hedgerows and trees.

Overall, the CAP 2023-2027 puts higher emphasis on tracking outcomes by setting an annual performance report and a biannual review process for national plans, assessing progress towards their goals and the ten CAP overarching objectives.

Leverage for Private Financing

CAP direct payments are found to positively affect farmers access to other financing sources⁴⁰⁰. Direct payments provide certain security in regard to cash flow stabilisation, making the projects more creditworthy, predictable and viable for private finance. In some Member States, the support from the CAP funds can be considered a form of guarantee for the bank or other financiers.

LIFE

LIFE is the only EU programme dedicated exclusively to the environment, nature conservation and climate action with a budget of €5.4 billion for the period of 2021-2027; €2.7 billion of this budget is contributing to the biodiversity sub-programme. Established in 1992, LIFE has co-financed over 6,000 projects across the EU and beyond.

The programme is structured in four sub-programmes, including the **sub-programme on Nature and Biodiversity, Circular Economy and Quality of Life, Climate Change Mitigation and Adaptation and Clean Energy Transition**. The sub-programme on Nature and Biodiversity focuses on the protection and restoration of Europe's natural ecosystems and halting biodiversity loss. It supports projects that implement best practices, pilot innovative approaches, and demonstrate solutions for nature conservation, particularly concerning biodiversity, habitats, and species. **Continued funding and efforts are needed in the upcoming MFF** to support biodiversity initiatives as this program not only fosters cross-border collaboration and knowledge exchange but also enables projects that might not otherwise be realised without EU co-financing.

The Multiannual work programme for 2021-2024 was adopted in July 2021. Types of activities funded under LIFE include grants such as action grants (Standard action projects (SAPs), Strategic Nature Projects (SNAPs), Strategic Integrated Projects (SIPs), Technical Assistance (TA), and other actions (OA) – including Coordination and Support Actions (CSAs) and operating grants⁴⁰¹. Other forms of funding include procurement, prizes and blending. Co-financing rate of 60% maximum except for project targeting priority and non-priority habitats and/or species where co-financing may be up to 75%.

Objectives, Priorities and Earmarking

One of the objectives of the LIFE programme is to help develop, implement and enforce EU environmental and climate policy and legislation by co-financing projects with European added value.

On June 1, 2018, the European Commission put forward a regulation that suggests the establishment of a new programme for the period from 2021 to 2027. This programme aims to achieve the following objectives:

- Foster the transition towards an eco-friendly, circular, energy efficient, low-carbon, and climate-resilient economy, including the adoption of clean energy sources.
- Safeguard and enhance environmental quality.
- Take measures to **stop and reverse the decline of biodiversity**, thus contributing to sustainable development.

⁴⁰⁰ fi-compass (2020) Financial needs in the agriculture and agri-food sectors in the European Union. Summary report

⁴⁰¹ CINEA: <https://assets.gov.ie/199801/3d059cc8-d4b3-44d6-9ad3-895c1d2c7a17.pdf>

Eligibility Requirements/Selection Criteria

Eligibility for applicants extends to all EU Member States, as well as potentially associated countries, such as the United Kingdom. Eligible applicants include public bodies, private commercial organisations, and private non-profit organisations, including NGOs.

The basic eligibility check involves for most EU programmes if the content of the proposal is in line with the topic description and if it involves participants coming from the right countries.

Additional criteria depend on the programme or specific topic (i.e. minimum consortium composition, type of participant, geographic location of the project activities, coordinator from an EU country, etc.)

Funding Allocation

The Commission recommends allocating €5.45 billion in current values to this new program, which is organised into two main segments: Environment and Climate Action. For the current multiannual programme, €3.5 billion is assigned to environmental projects and the remaining €1.9 billion to climate action projects.

Monitoring and Evaluation

According to Article 20 of the LIFE Regulation, a **mid-term evaluation** and a **final evaluation** are to be conducted by the European Commission:

- “The Commission shall perform the mid-term evaluation of the LIFE Programme once there is sufficient information available about its implementation, but no later than 42 months after the start of the implementation of the LIFE Programme, making use of the indicators as set out in accordance with Annex II.”
- “At the end of the implementation of the LIFE Programme, but no later than four years after the end of the period specified in the second paragraph of Article 1, the Commission shall carry out a final evaluation of the LIFE Programme.”

Article 19 of the LIFE Regulation 2021/783 specifies the **monitoring and reporting requirements** for LIFE projects. Direct output indicators and tracking requirements set out in the regulation’s Annex II should be complemented by aggregation of specific project level indicators to be described in multiannual work programmes or calls for proposals, inter alia regarding Natura 2000. The European Commission verifies the data and evaluates the project's progress and success

Leverage for Private Financing

The LIFE Programme requires co-funding from national / local partners, which can involve private financing.

The LIFE program seeks to support the innovation and commercialisation of solutions and products developed by start-ups within a risk-free incubation environment. This approach enables companies to bring their solutions to market securely, with the backing of sufficient financial, technical, and commercial resources. Private companies can also co-finance their participation in the project through own or other sources.

ANNEX 7. LIST OF REFERENCES

- Convention on Biological Diversity (n.d.), GBF Home, Target 19. <https://www.cbd.int/gbf/targets/19>
- Convention on Biological Diversity (n.d.). GBF Home – Target 18. <https://www.cbd.int/gbf/targets/18>
- DG Environment (2023) European funds dedicated to support biodiversity action and funds supporting inter-regional cooperation
- European Climate, Infrastructure, and Environment Executive Agency (CINEA). (n.d.). Retrieved from <https://assets.gov.ie/199801/3d059cc8-d4b3-44d6-9ad3-895c1d2c7a17.pdf>
- European Commission (2024), 'Statement of Estimation of the European Commission – For the financial year 2025'. [Statement of estimates 2025 - European Commission \(europa.eu\)](#).
- European Commission (n.d.) Biodiversity financing. [Biodiversity financing - Environment - European Commission \(europa.eu\)](#)
- European Commission (n.d.) Biodiversity financing. [Biodiversity financing - Environment - European Commission \(europa.eu\)](#)
- European Commission, 'Phasing out Environmentally Harmful Subsidies'. [Phasing out Environmentally Harmful Subsidies - European Commission \(europa.eu\)](#)
- European Commission. (2022). Biodiversity financing and tracking – Final report. Directorate-General for Environment, Publications Office of the European Union. <https://data.europa.eu/doi/10.2779/950856>.
- European Commission. (2022). Biodiversity financing and tracking – Final report. Directorate-General for Environment, Publications Office of the European Union. <https://data.europa.eu/doi/10.2779/950856>
- European Commission. (2024). *Statement of Estimation of the European Commission – For the financial year 2025*.
- European Commission. (2024, June). COM(2024) 300. Retrieved from https://eur-lex.europa.eu/document/440301ce-9d87-4884-ad7f-33658e99b6d3_en
- European Commission. (2024, October 24). *Presentation ENEA-MA meeting*.
- European Commission. (n.d.). *Climate mainstreaming*. Retrieved from <https://ec.europa.eu/climate-actions/climate-mainstreaming>
- European Commission. (n.d.). *LIFE - Performance*. Retrieved from <https://ec.europa.eu/environment/life/performance>
- European Commission. (n.d.). *Recovery and Resilience Facility*. Retrieved from https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en
- European Investment Bank (EIB). (2023). Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe. [Investing in nature-based solutions \(eib.org\)](#)
- Expert Interview IV.I
- Expert Interview IV.II
- Expert Interview IV.III
- Expert Interview IV.IV
- Expert Interview IV.VII
- Freisinger et al. (2023), 'Biodiversity on the Brink: What's Holding Back Financing for Nature in the EU?'. Bankwatch Network. [Biodiversity on the brink: What's holding back financing for nature in the EU? - Bankwatch](#)
- GoNaturePositive (n.d.). Co-creating a Nature-Positive World <https://www.gonaturepositive.eu/>
- Horizontal Interview IV 1
- Horizontal Interview IV 7

- IEEP (2023). Exploring policy options for funding nature restoration in the next MFF: report of a workshop discussion. Institute for European Environmental Policy. Brussels.
- Kallio et al. (2016), Systematic methodological review: developing a framework for a qualitative semi-structured interview guide.
- Kupilas, Benjamin, et al. (2024): Compilation of existing guidance on ecosystem restoration. Ecologic Institute, Berlin
- Mendes, A., Martínez Hernández, L., Badoz, L., Slobodian, L., Rabaça, J.E. (2022), 'Towards a Legal Definition of Ecological Restoration: Reviewing international, European and Member States' case law', *RECIEL Review of European, Comparative & International Environmental Law*, Vol. 32, No. 1, <https://doi.org/10.1111/reel.12476>.
- NATURANCE, Deliverable 3.1 (2023). Governance/Policy enablers/barriers for scaling nature-based solutions . [D3.1 - Enablers and Barriers.pdf \(cmcc.it\)](#)
- [Regulation \(EU\) 2021/1060](#), Common Provisions Regulation. Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy. PE/47/2021/INIT
- Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869. [Regulation - EU - 2024/1991 - EN - EUR-Lex \(europa.eu\)](#).
- UNEP (2021). State of Finance for Nature 2021. <https://www.unep.org/resources/state-finance-nature-2021>
- Van Raalte, D., & Ranger, N. (2023). Financing nature-based solutions for adaptation at scale: Learning from specialised investment managers and nature funds. Global Center on Adaptation and Environmental Change Institute, University of Oxford.

List of further references that informed this chapter

- Aubert, et al. (2022). How to fund the Trans-European Nature Network – LIFE Programme factsheet. Natura Connect. IEEP.
- Barbuto, F. G. (2023). Green Budgeting in the EU budget. *Workshop on financing nature restoration*. DG BUDG – Budget Performance and Policy Mainstreaming.
- Barova, S., Beaz, V., De Menna, E., Faivre, N., Kwiatkowski, C., Kuzmickaite, V., Le Boulter, G., Noukas, P., Palomo, L., Pozza, A., Tavares, R., Tenerelli, P., Vasileva, B., Zocchi, A., & Witschke, M. (2023, November 27). *Projects on nature-based solutions: Horizon 2020, Horizon Europe, LIFE programmes* [Portfolio session].
- Biber, A., Raffel, T., Tockner, K., & Niamir, A. (2024). The Biodiversity Advantage; Business Solutions and Investment Opportunities for Nature (Version 1). FERI AG | FERI Cognitive Finance Institute. <https://doi.org/10.5281/zenodo.11525019>.
- Climate Action Network (CAN) Europe (2018). Climate Mainstreaming and Climate-Proofing: The Horizontal Integration of Climate Action in the EU Budget - Assessment and Recommendations.
- CONCORD - European NGO Confederation for Relief and Development. (2020, August). *Green deal, human development, and NDICI programming*. [Green Deal, human development and NDICI Programming - CONCORD \(concordeurope.org\)](#).
- Cooper, G., & Trémolet, S. (2019). Investing in nature: private finance for nature-based resilience. *The Nature Conservancy and Environmental Finance*. London, United Kingdom.

- Directorate-General for Agriculture and Rural Development. (2024). *Nature-based solutions and hybrid-infrastructure financing: Workshop report: Pathways to overcome barriers - Upscaling the use of nature as an infrastructure or in conjunction with grey infrastructure*. Meeting Room: Room L130B & virtual, Rue de la Loi 130, Brussels, Belgium.
- EU Biodiversity Platform. (2023). *Scaling up biodiversity financing: Opportunities under MFF and other sources, technical assistance and capacity support tools*. Ad hoc session on biodiversity financing.
- EU Biodiversity Platform. (2023). *Non-paper: Financing biodiversity protection and restoration in the EU*. Ad hoc session on biodiversity financing.
- European Environment Agency (EEA) (2022). *Financing nature as a solution*. Briefing. [Financing nature as a solution – European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/en/financing-nature-as-a-solution).
- European Environment Agency (EEA) (2021). *Nature-based solutions in Europe: Policy, knowledge and practice for climate change adaptation and disaster risk reduction*. EEA Report.
- European Commission, European Investment Bank (2024). *EC/EIBG Expert Group on Biodiversity - Final report*.
- European Commission. (2023). *EU Policymaking Hub e-Talk - Nature-based solutions: Key allies for nature, for climate, for all of us* [Booklet]. Includes contributions by Lepori, P., Van Ooststroom Brummel, F., Hart, S., & Lemaître, F.
- European Commission (n.d.) Biodiversity mainstreaming. https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/horizontal-priorities/green-budgeting/biodiversity-mainstreaming_en.
- European Commission (n.d.), Just Transition Mechanism - Performance. https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/programme-performance-statements/just-transition-mechanism-performance_en.
- European Commission (2023). Nature Restoration Law proposal & Common Agricultural Policy.
- European Commission – Directorate-General for Maritime Affairs and Fisheries, Unit D.3. Caillart, B., Hamza, C., Jensen, P. S., Macfadyen, G., Rudh, M., Salz, P., Schmuedderich, S., Vesers, R., & Sanopoulos, A. (2023). *FAMENET Support Unit, working paper on EMFAF MEF 2021-2027 update*. https://oceans-and-fisheries.ec.europa.eu/publications/working-paper-emfaf-monitoring-and-evaluation-framework-2021-2027_en.
- European Commission (2022). COMMISSION STAFF WORKING DOCUMENT: Climate Mainstreaming Architecture in the 2021-2027 Multiannual Financial Framework.
- European Commission: Directorate-General for Climate Action, Forster, D., Laan, J., Tippmann, R., Illes, A., Eichler, L., Williams, R., Tweed, J., Nesbit, M., & Menadue, H. (2017). *Climate mainstreaming in the EU budget: preparing for the next MFF: final report*, Publications Office. <https://data.europa.eu/doi/10.2834/218038>.
- European Commission: Directorate-General for Research and Innovation, (2023). *Assessing European partnerships against European policy priorities: developing and illustrating a methodology for assessing the relevance of European Partnerships as instruments to address current and future European policy priorities*, Publications Office of the European Union. <https://data.europa.eu/doi/10.2777/62770>
- European Committee of the Regions (2020). *Financing biodiversity action: opportunities and challenges for EU subnational governments*. Commission for the Environment, Climate Change and Energy

- European Parliament: Directorate-General for Internal Policies of the Union, Begg, I., Corti, F., & Liscai, A. (2024). Performance framework for the EU budget: concepts and practices, Publications Office of the European Union. <https://data.europa.eu/doi/10.2861/027487>.
- European Parliament: Directorate-General for Internal Policies of the Union, Levarlet, F., Alessandrini, M., Schratzenstaller-Altzinger, M., & Franceschelli, N. (2022). Climate mainstreaming in the EU budget: 2022 update, European Parliament. <https://data.europa.eu/doi/10.2861/446639>.
- Fern. (2024). *Financing continuous cover forestry: Case studies from Finland, France, Ireland, and Latvia*. https://www.fern.org/fileadmin/uploads/fern/Documents/2024/Fern_Financing_continuou_s_cover_forestry.pdf.
- French Biodiversity Agency. (2023). *National experience with the use of EU funds*. Ad hoc session on biodiversity financing
- Gann, G. D., McDonald, T., Walder, B., Aronson, J., Nelson, C. R., Jonson, J., Hallett, J. G., Eisenberg, C., Guariguata, M. R., Liu, J., Hua, F., Echeverría, C., Gonzales, E., Shaw, N., Decler, K., & Dixon, K. W. (2019). International principles and standards for the practice of ecological restoration (2nd ed.). *Restoration Ecology*, 27(S1), S1-S46. <https://doi.org/10.1111/rec.13035>.
- Gómez, S., López Portillo Purata, V., & Rodríguez, S. E. (2023). *Pathways to unblocking private financing for nature-based solutions*. World Resources Institute. <https://www.wri.org/update/pathways-unblocking-private-financing-nature-based-solutions>.
- Green Finance Institute (2024). *Assessing the Materiality of Nature-Related Financial Risks for the UK*. [Assessing the Materiality of Nature-Related Financial Risks for the UK \(greenfinanceinstitute.com\)](https://greenfinanceinstitute.com).
- Hauser, R. (2023). *EU biodiversity governance survey: Highlights from survey responses on financing for biodiversity*. EU Biodiversity Platform (EUBP) - Ad hoc session on biodiversity financing.
- Invest4Nature. (2023). How EU Taxonomy supports investments in Nature. Retrieved from <https://invest4nature.eu/2023/04/13/how-eu-taxonomy-supports-investments-in-nature/>.
- Kettunen, M. et al. (2017). Opportunities for innovative biodiversity financing in the EU: ecological fiscal transfers (EFT), tax reliefs, marketed products, and fees and charges. A compilation of cases studies developed in the context of a project for the European Commission (DG ENV) (Project ENV.B.3/ETU/2015/0014). Case Study Report.
- Kobašić, A. (2023). *National experiences with the use of EU funds - Croatia*. Ministry of Economy and Sustainable Development. Ad hoc session on biodiversity financing.
- Löfqvist, S., Garrett, R. D., & Ghazoul, J. (2023). Incentives and barriers to private finance for forest and landscape restoration. *Nature Ecology & Evolution*, 7(4), 707–715. <https://doi.org/10.1038/s41559-023-02037-5>.
- OECD (2021), “Biodiversity, natural capital and the economy: A policy guide for finance, economic and environment ministers”, *OECD Environment Policy Papers*, No. 26, OECD Publishing, Paris, <https://doi.org/10.1787/1a1ae114-en>.
- Oginski, P. (2021). *Programming of the EU funds to achieve the biodiversity targets*. Europarc seminar on protected areas. Unit "Nature Protection," DG Environment.
- Perier, H., & Barbuto, F. (2023). *Biodiversity spending in the EU budget 2021-2027: State of play and gaps*. EU Biodiversity Platform (EUBP) - Ad hoc session on biodiversity financing.

- Perier, H., Oginski, P., & Kavvadas, I. (2023). *REGIO-DG ENV training on biodiversity and nature-based solutions*. DG ENV.D.2 Natural Capital and Ecosystem Health, DG ENV.D.3 Nature Conservation, ENV.C1 Sustainable Freshwater Management.
- Runhaar, H., Probstl, F., Heim, F., Cardona Santos, E., Claudet, J., Dik, L., de Queiroz-Stein, G., Zolyomi, A., & Zinngrebe, Y. (2024). Mainstreaming biodiversity targets into sectoral policies and plans: A review from a biodiversity policy integration perspective. *Earth System Governance*, 20, 100209. <https://doi.org/10.1016/j.esg.2024.100209>.
- Runhaar, H., & Zinngrebe, Y. (2024). The governance of biodiversity recovery: From global targets to sectoral action: Editorial. *Earth System Governance*, 20, 100206. <https://doi.org/10.1016/j.esg.2024.100206>.
- Ryfisch, S., Seeger, I., McDonald, H., Lago, M., & Blicharska, M. (2023). Opportunities and limitations for nature-based solutions in EU policies – Assessed with a focus on ponds and pondscapes. *Land Use Policy*, 135, 106957. <https://doi.org/10.1016/j.landusepol.2023.106957>.
- Smith, J., Kochar, R., Baker, K., Canas da Costa, L., Goedicke den Hertog, R., & Blin, A. (2024, July). *Input paper for G20 Sustainable Finance Working Group: Recommendations for scaling finance for Nature-based solutions*. UNEP Finance Initiative. Reviewed by Pisupati, B., Fraser, M., van Ast, L., Feller, E., & Deau, R. <https://g20sfwg.org/wp-content/uploads/2024/06/P4-G20-SFWG-UNEP-Recommendations-for-designing-regulatory-frameworks-to-scale-finance.pdf>.
- Španiček, B., Thomson, D., & Freisinger, T. (2023). *Led by nature: Projects to protect and restore biodiversity in Europe*. CEE Bankwatch Network. <https://bankwatch.org/publication/led-by-nature-projects-to-protect-and-restore-biodiversity-in-europe>.
- Tas, M. (2023). Cohesion Policy Supporting Nature Restoration. *Workshop on financing nature restoration*. DG Regio, Unit G1 Smart and sustainable growth.
- UNEP (2023). State of Finance for Nature: The Big Nature Turnaround – Repurposing \$7 trillion to combat nature loss. Nairobi. doi.org/10.59117/20.500.11822/44278.
- United Nations Environment Programme Finance Initiative. (2023). Engaging Private Finance in the NATURE-BASED SOLUTIONS AP Review and Implementation: Sign posts for policymakers. UNEP FI. Retrieved from <https://www.unepfi.org/publications/engaging-private-finance-in-the-nature-based-solutions-ap-review-and-implementation-sign-posts-for-policymakers/>.
- UNEP-WCMC, FFI and ELP (2020). Funding Ecosystem Restoration in Europe: A summary of funding trends and recommendations to inform practitioners, policymakers and funders.
- Vermeeren, R. (2023). EU Emissions Trading System – The use of auction revenues and financing opportunities for ecosystem restoration. *Workshop on financing nature restoration*. DG CLIMA.
- Viti, M. M., Gkimtsas, G., Liqueste, C., Dubois, G., Borg, J., Dalla Costa, S., Teller, A., Hauser, R., & Robuchon, M. (2024). Introducing the progress monitoring tools of the EU Biodiversity Strategy for 2030. *Ecological Indicators*, 164, 112147. <https://doi.org/10.1016/j.ecolind.2024.112147>.
- World Bank. (2024). *Blueprints for private investment in ecosystem restoration: Lessons from case studies*. International Bank for Reconstruction and Development / The World Bank. <https://documents1.worldbank.org/curated/en/099031424202517999/pdf/P1777061820a410fa1a50e1580bed5ade8a.pdf>.

- World Bank Group (2020). *Unlocking Private Finance for Nature*. [Unlocking Private Finance for Nature \(worldbank.org\)](https://www.worldbank.org/).
- World Economic Forum. (2020). *New nature economy report II: The future of nature and business*. In collaboration with AlphaBeta. [WEF The Future Of Nature And Business 2020.pdf \(weforum.org\)](https://www.weforum.org/publications/2020/01/19/new-nature-economy-report-ii-the-future-of-nature-and-business/).
- World Economic Forum. (2020, January 19). *Nature risk rising: Why the crisis engulfing nature matters for business and the economy*. New Nature Economy series. In collaboration with PwC. [Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy | World Economic Forum \(weforum.org\)](https://www.weforum.org/publications/2020/01/19/nature-risk-rising-why-the-crisis-engulfing-nature-matters-for-business-and-the-economy/).
- World Economic Forum. (2023). *Biodiversity credits: Demand analysis and market outlook* (Insight Report). In collaboration with McKinsey & Company. [WEF 2023 Biodiversity Credits Demand Analysis and Market Outlook.pdf \(weforum.org\)](https://www.weforum.org/publications/2023/01/19/biodiversity-credits-demand-analysis-and-market-outlook/).
- World Economic Forum. (2020). *Nature risk rising: Why the crisis engulfing nature matters for business and the economy*. *New Nature Economy series*. https://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf
- Yada, J., Berhami Sintomer, A., Cesaro, P., Eichler, T., Kuzmanova, T., Ciatti, D., Ahmed, E., Carlucci, M., Godinot, S., & Lillevalli, U. (2024, March). *Investing in Europe's prosperity: A vision for financing the transition to sustainability 2024–2030*. E3G, ShareAction, WWF. <https://wwfeu.awsassets.panda.org/downloads/e3g-shareaction-wwf-report-investing-in-europes-prosperity.pdf>.
- Yokoi-Arai, M., & Mullan, M. (2024). *G20/OECD report on approaches for financing and investing in climate-resilient infrastructure*. OECD, in support of the Brazilian G20 Presidency. https://www.oecd.org/en/publications/g20-oecd-report-on-approaches-for-financing-and-investing-in-climate-resilient-infrastructure_8f6d436a-en.html.
- European Commission. (2022, June 22). *Commission staff working document: Impact assessment accompanying the proposal for a Regulation of the European Parliament and of the Council on nature restoration* (SWD(2022) 167 final). [EUR-Lex - 52022SC0167 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022SC0167).
- Atitar de la Fuente, A. (2023, September 26). *New biodiversity tracking methodology for the CAP*. EU Biodiversity Platform - Ad hoc session on biodiversity financing.
- European Supervisory Authorities. (2024, June 18). *Joint ESAs opinion on the assessment of the Sustainable Finance Disclosure Regulation (SFDR)* (JC 2024 06). [JC 2024 06 Joint ESAs Opinion on the assessment of the Sustainable Finance Disclosure Regulation \(SFDR\) \(europa.eu\)](https://www.esa.europa.eu/press/pr/2024/jc-2024-06).

Appendix 3. ANNEXES TO CHAPTER 4 “OPTIONS FOR INTEGRATING NATURE-BASED SOLUTIONS”

ANNEX 8. BROCHURE “GOOD PRACTICE EXAMPLES OF NATURE-BASED SOLUTIONS ACROSS SECTORS IN THE EU”

See separate file.

Appendix 4. ANNEXES TO CHAPTER 5 “OPTIONS FOR IMPROVING FUNDING FOR DECARBONISATION OF INDUSTRIAL FACILITIES AND CLEAN TECHNOLOGIES”

ANNEX 9. SUMMARY OF KEY CHARACTERISTICS OF FUNDS COVERED IN THE CHAPTER

Annex 9 contains an overview of a selection of the results of this exercise. Please note that this information is by no means complete or comprehensive – the aim is to distil the essence of the funds to provide an overview of the key characteristics of the various funding opportunities for industry and clean tech.

ETS-related funds (summary of some key characteristics)

	General objective	Decarbonisation a stated objective	Clean technologies a stated objective	Energy infrastructure a stated objective	Size of funding	Scope - what is funded?
Innovation Fund (IF)	Funding programme for companies covered by ETS, for low- and zero-carbon techniques, processes and technologies.	Yes, explicitly	Yes, explicitly	No	Funded by ETS, with an overall size of 530 million allowances for the period 2021-2030. Based on a carbon price of 75 EUR/ton -> 40 billion Euro from 2020-2030	Projects focussing on: - Innovative low-carbon technologies and processes in energy-intensive industries, including products that can substitute carbon-intensive ones - Carbon capture and utilisation - CCU - Construction and operation of carbon capture and storage (CCS) facilities - Innovative renewable energy generation - Energy storage
Modernisation Fund (MF)	Supports the modernisation of energy systems and the improvement of energy efficiency in 13 lower-income Member States.	No	Yes, explicitly	Yes, explicitly	Funded by ETS: each low-income MS receives a set percentage of allowances auctioned within the period 2021-2030.	Priority areas: - Renewable energy generation and use - Energy efficiency - Energy storage and modernisation of energy networks - Just transition through reskilling, education etc.

Funds included in the MFF (summary of some key characteristics)

	General objective	Decarbonisation a stated objective	Clean technologies a stated objective	Energy infrastructure a stated objective	Size of funding	Scope - what is funded?
Just Transition Fund (JTF)	Supports territories most affected by the transition towards climate neutrality to address the social, employment, economic and environmental	Yes, implicitly	Yes, implicitly	Yes, implicitly	From MFF: €7,5 billion Other sources: €10 billion from revenue of ERI	Activities that are linked to the JTF specific objective such as - productive investments in small and medium-sized enterprises - the creation of new firms - environmental rehabilitation - investments in clean energy

	General objective	Decarbonisation a stated objective	Clean technologies a stated objective	Energy infrastructure a stated objective	Size of funding	Scope - what is funded?
	impacts of this transition .					upskilling and reskilling of workers job-search assistance active inclusion of jobseekers programmes the transformation of existing carbon-intensive installations 1. 2.
InvestEU	Support financing and investment operations that contribute to, i.a.: competitiveness of the EU; growth and employment, sustainability; social resilience; internal market and cohesion; economic recovery after COVID-19.	Yes, implicitly	Yes, implicitly	Yes, explicitly	From MFF: €2,8 billion An EU budget guarantee of €26,2 billion euros, which is expected to mobilise at least €372 billion of public and private investment. The budget is divided as follows: - Sustainable infrastructure: €9,9 billion - Research, innovation and digitalisation: €6,6 billion - SMEs: €6,9 billion - Social investment and skills: €2,8 billion	Policy areas: - Sustainable infrastructure - Research, innovation and digitalisation - Small and medium-sized businesses (SMEs) - Social investment and skills
European Regional Development Fund (ERDF)	Strengthen economic, social and territorial cohesion in the EU by enabling investments)	Yes, explicitly (PO2)	Yes, explicitly (PO1) and implicitly (PO2)	Yes, explicitly (PO2)	From MFF: €200,4 billion, allocated to MSs based on GDP. Each region and MS has to direct at least 30% of their allocation to PO2 and has to concentrate spending on PO1.	5 policy objectives (POs), two relevant here: - A more competitive and smarter Europe (PO1) - A greener, low-carbon transitioning (PO2)

	General objective	Decarbonisation a stated objective	Clean technologies a stated objective	Energy infrastructure a stated objective	Size of funding	Scope - what is funded?
Cohesion Fund (CF)	Provide support to MSs with a gross national income (GNI) per capita below EU-27 average to strengthen the economic, social and territorial cohesion of the EU.	Yes, explicitly (PO2)	Yes, implicitly (PO2)	Yes, explicitly (PO2)	From MFF: €48 billion, of which €20,3 billion is planned to be spend on PO2.	Policy objectives PO2 and PO3 as described under the ERDF.
Interreg (part of ERDF)	Promote cooperation between regions and countries to help their economic and social development and tackle the obstacle of borders.	Yes, explicitly (PO2)	Yes, explicitly (PO1) and implicitly (PO2)	Yes, explicitly (PO2)	From MFF: 8 billion (as part of ERDF), divided over different strands: - Cross-border (A): 72,2% - Trans-national (B): 18,2% - Interregional (C): 6,1% - Outermost region's cooperation (D): 3,5%	- Investments in infrastructure; - Activities for applied research and innovation; - Investments in access to services; - Productive investments in SMEs and investments aiming at safeguarding existing jobs and creating new jobs; - Equipment, software and intangible assets; - Networking, cooperation, exchange of experience and activities ; - Information, communication and studies; - Technical assistance.
Connecting Europe Facility (CEF)	To build, develop, modernise and complete the trans-European networks in the transport, energy and digital sectors and to facilitate cross-border cooperation in the field of renewable energy.	Yes, implicitly	No	Yes, explicitly	From MFF: 37,1 billion of which for: - CEF Transport: €25,8 billion - CEF Energy: €5,8 billion - CEF Digital: €2 billion	For infrastructure interconnectivity the CEF Programme is relevant. In the case of CEF-Energy, projects must be a Project of Common or Mutual Interest (PCIs or PMIs) or a Cross-border Renewable Energy Project (CB RES). Eligible cross-border infrastructure categories include: electricity, smart electricity grids (including transmission, offshore grids and smart grids) and storage, CO2

	General objective	Decarbonisation a stated objective	Clean technologies a stated objective	Energy infrastructure a stated objective	Size of funding	Scope - what is funded?
						networks, hydrogen networks and electrolyzers, cross-border RES projects. The climate contribution of CEF-Energy is above 90% CEF Transport is supporting the development of the transport infrastructure on the TEN-T, including railway, maritime and inland ports, navigation, roads. About 70% of the funding goes to the railways which is the greenest mode of transport. CEF transport also supports large-scale deployment of alternative fuels infrastructure for all transport modes.
Horizon Europe (including the European Innovation Council)	To deliver scientific, technological, economic and societal impact from the Union's investments in R&I.	Yes, explicitly (Pillar II and III)	Yes, explicitly (Pillar II)	No	From MFF: €86,1 billion divided over 4 pillars For industrial decarbonisation and clean tech, the most relevant parts of this fund are: - Pillar II iv) 'Digital, Industry and Space' (€13,5 billion euro) - Pillar II v) 'Climate, energy and mobility' (€13,5 billion euro) - Pillar III i) European Innovation Council (€8,8 billion euro)	For industrial decarbonisation, the most relevant parts of this fund are: - Pillar II iv) 'Digital, Industry and Space' (€13,5 billion euro) - Pillar II v) 'Climate, energy and mobility' (€13,5 billion euro) - Pillar III i) European Innovation Council (€8,8 billion euro)
Recovery and Resilience Facility (RRF), including NGEU	A temporary instrument that is the centrepiece of Next Generation EU with the objective to promote the Union's economic, social and territorial cohesion.	Yes, implicitly (mainly Pillar 'green transition')	Yes, implicitly (mainly Pillar 'green transition')	Yes, implicitly (mainly Pillar 'green transition')	From MFF: €767 million. Additional allocation from NextGenerationEU: €672 billion	Six pillars, industrial decarbonisation is mainly included in 'Green transition', and in 'Smart, sustainable and inclusive growth'

	General objective	Decarbonisation a stated objective	Clean technologies a stated objective	Energy infrastructure a stated objective	Size of funding	Scope - what is funded?
LIFE Programme	To support environmental, natura conservation and climate action projects throughout the EU, implemented via two fields: Environment & Climate Action.	Yes, implicitly	Yes, implicitly	Yes, implicitly	From MFF: €4,8 billion of which – Nature and Biodiversity: €2,1 billion euro – Circular Economy and Quality of Life: €1,3 billion euro – Climate Change Mitigation and Adaptation: €0,9 billion euro – Clean Energy Transition: €1,0 billion euro	Industry is in scope of the latter three fields, most notably under the headings of circular economy, climate change mitigation and clean energy transition. However, industrial decarbonisation is not the only sector addressed by the LIFE Programme. The protection, maintenance and restoration of the Union's natural capital in its marine, freshwater and terrestrial ecosystems is within the scope of the programme, together with actions in the areas of circular economy, reduction of waste and zero pollution. The support to governance at all levels, in particular by enhancing the capacities of public and private actors and the involvement of civil society for facilitating implementation and enforcement of relevant policies and legislation is also within the scope of the programme.

ANNEX 10. FURTHER ELABORATION OF THE RESEARCH QUESTIONS

In Annex 10, the five key assessment topics are developed further. As the overview of the current funds and funding programmes illustrates, they all have different objectives, focus, scope and funding mechanisms. Only very few have climate as their key focus, and the analysis should take this context into account.

The aim of this exercise was to develop a sound basis for the interviews with experts and stakeholders, as well as for further literature analysis.

'Market compatibility' of support provided by the funding programmes.

This topic primarily relates to the extent to which the funding programmes distort the EU internal market. However, based on past experience and discussions with stakeholders, a number of additional issues to address were added under this heading that also relate to market compatibility, albeit in a different sense. This leads to the following list of topics to explore further.

In industry, state aid rules play a prominent role in ensuring a proper functioning of the internal market. At the same time, however, industry often points to another side to this coin: state aid rules can act as a barrier to government support for investments in industrial decarbonisation or clean technologies projects⁴⁰².

The key questions to address here are:

- What are currently the main issues with the funding programmes and the state aid rules. Potential topics to address: the identification of IPCEIs, the recent state aid revisions.
- Could market compatibility potentially be increased under the next MFF so there will be less issues with receiving state aid? Could this lead to increased risk of distortions to the internal market, for example by creating a disadvantage to Member States with less fiscal space for state aid?

Under this heading of 'market compatibility', we will also assess whether there are any potentially significant administrative barriers to apply for funding, in the various programmes. This may not only result in inefficiencies in the system, it may also create a disadvantage for companies with less means to invest their time and funds in these applications (e.g. smaller or newer companies), or less in-house knowledge about these funding opportunities, compared to larger companies. The key questions to assess here are:

- Is the application process perceived to be too (unnecessarily) complex or time consuming? Is this a barrier for companies that could be eligible (and perhaps even the target of a fund) to apply for funding?
- How could this be improved?

Leveraging private investments

Leveraging private investments is considered to be a key objective of EU funding in industry, since private funding will need to play a much larger role in the financing of the investments needs for the transition to a low-carbon EU industry than public funding.

Two aspects were mentioned in the ToR here: (i) is the design of the instrument aimed at leveraging private funding; and (ii) how much actually leverage happened so far, to see if this potential is being realised in practice.

⁴⁰² see also Common Market Law Review 61: 1–12, 2024.

<https://www.universiteitleiden.nl/binaries/content/assets/rechtsgeleerdheid/instituut-voor-publiekrecht/europees-recht/cola2024001.pdf>

Since the project is primarily aimed at identifying options for improvements rather than gathering and analysing data, we propose to change the focus slightly and rephrase these questions, as follows:

- Is the design of the instruments aimed at leveraging private funding, and how is this achieved?
- Has this worked in practice? Are there data on the leveraging of private investments, to illustrate this point (preferably target vs realisation)?
- What can be improved in the funding methodology of the funds, to increase leverage?

In view of the large diversity of funds and funding mechanisms within these fund (e.g. grants, loans or guarantees, etc.), the aim of this assessment will be to identify the most important issues that experts and stakeholders are aware of.

Interaction/interplay with national funding.

Most if not all EU Member States have some form of national funding of industry in place – grants for R&D, subsidies for investments for low-carbon technologies, etc. These may be aimed at the same sectors, regions or even companies as the EU funding, leading to the question of whether the interplay between EU and national funding is optimal, or whether it can be improved.

Given the resource limitations, this will only be a high-level assessment, based on existing evaluations and the conclusions we draw from the interviews we will conduct with experts (see below). It will also focus on options to improve the EU funding programmes to better align with national funding, not vice versa. A more in-depth assessment at national level is outside the scope of this study.

We therefore propose to include the following general question in the analysis:

- Are there any specific barriers or concerns regarding the interaction between these EU funds and national funding?

This will not result in a comprehensive overview of issues, but we do expect that this will result in the identification of specific examples and experiences, both from the literature analysis and in the interviews, which may be helpful for the design of future funding programmes.

Potential synergies with other sustainability objectives

A number of key measures for GHG mitigation in industry are likely to have impacts on other sustainability topics as well. Electrification of heat production, for example, is likely to replace fossil fuel combustion processes, thereby reducing emissions of air pollutants (with potential benefits for health and biodiversity). Replacing fossil feedstocks with biomass will also contribute to a circular economy. However, it should be noted that trade-offs on biodiversity and other environmental indicators may also occur in this example, unless a mechanism is put in place to ensure that the biomass meets sustainability criteria.

It is therefore useful to assess the following

- How can funding EU industrial decarbonisation and clean technologies lead to other environmental benefits by looking for synergies with notably air pollution (AAQD, NECD, IED) and circular economy.
- Do the funds have a methodology in place to take into account potential synergies, and maximise these? Can this be improved?

We focus on identifying options for improving the synergies, but will, of course, also gather any information on potential trade-offs and how to reduce these that we may find during this research.

The overall funding landscape and interaction/interplay across funding programmes

This is a somewhat different topic than the others, since this concerns an overall overview of all funds. The key questions here are focussing on whether support provided by different EU funding programmes is consistent and whether the current mix of funding programmes is optimal. Does the current funding landscape cover all (or most) key technologies and investments needed for the decarbonisation of industry and if there are there any significant gaps? This is a key issue that has been recognised also by the EU, which has led to the development and launch of the STEP platform.

This analysis first calls for a benchmark of what the funding policies should do or achieve, i.e. insight in what the key technologies and investments are that require EU funding during the next MFF period. A second issue to be addressed here is whether the funding opportunities provide the right type of financial support, from the perspective of the EU internal market as well as from the perspective of industry needs.

This analysis result in an overview of the objectives of the funding in this sector: what goals and developments does the EU want to achieve in this sector?

We can then use these results to compare the current funding landscape with. This analysis will include an assessment of the following statement made in the GDIP: *to date, these EU funds have largely benefitted R&I and deployment of renewable energy and related infrastructure, rather than targeting manufacturing capacity in the sector.*

The key guiding questions for this assessment (literature and interviews) will be:

- Is the support provided by different EU funding programmes consistent?
- Does the current funding landscape cover all (or most) key technologies and investments needed for the decarbonisation of industry and if there are there any significant gaps? Looking at the next MFF period, should there be a shift in focus?
- Do the funds provide the right type of support, given the market needs? This relates to the mix of CAPEX and OPEX support, R&D grants, loans and guaranties, etc., as well as the more general topics of internal market and state aid rules.

ANNEX 11. ILLUSTRATIVE OVERVIEW OF DECARBONISATION PROJECTS AND ONGOING PROJECTS IN THE EU STEEL INDUSTRIES

Annex 11 provides more background information on national and EU funding of a selection of projects on decarbonisation of the EU steel industry, which is one of the two case studies conducted.

Please note that this is not intended to be a complete overview of all sustainability projects in the EU steel industry. It is intended to illustrate the variety of decarbonisation projects that are ongoing. The status of the projects varies, with some only in the first stages of planning and others already in project execution. This overview was drafted in July 2024, please note that since then, some of these projects and investment decisions have been delayed.

Sources:

- - CE Delft, Analysis of Tata Steel's future plans (in Dutch), 2024
- - [Innovation Fund projects - European Commission \(europa.eu\)](https://ec.europa.eu/innovation-fund/projects)

Country	Location	Owner	If grant?Project name	Current production capacity	Select ed proces s	Project costs (current data)	Subsi dy grant ed
			Project name	Million tons of steel per year		million Euro	million Euro
Austria	Linz	Voestalpine		6	HBI import with EAF	1,500	not yet known
Austria	Donawits	Voestalpine		1.6	HBI import with EAF		
Belgium	Gent	ArcelorMittal		5	DRP-EAF with CCU (steelanol) and sustainable carbon source (Torero)	1,100	280
Finland	Raahe	SASB		4.9	EAF with HBI from Gallivare	1,250	500
France	Duinekerken	ArcelorMittal		12	DRP-EAF	1,700	850
France	Fos-sur-Mer	ArcelorMittal			EAF and CCU (Steelanol)		
Germany	Dillingen en Volklingen	SHS		6	DRP-EAF	3,500	2,600
Germany	Bremen	ArcelorMittal		3.8	DRP-EAF; Blast furnace on natural gas	2,550	1,300
Germany	Eisenhuttenstadt	ArcelorMittal		2.4	EAF with HBI from Bremen	incl, in Bremen	incl. in Bremen
Germany	Salzgitter	Salzgitter		5.2	DRP-EAF	2,000	1,000

Country	Location	Owner	If grant?Project name	Current production capacity	Select ed process	Project costs (current data)	Subsi dy grant ed
Germany	Duisburg	Thyssenkrupp		11.6	DRP-EAF	3,000	2,000
Great Britain	Port Talbot	Tata Steel		4.9	Scrap-EAF	1,250	500
Great Britain	Scunthorpe	British steel		3.2	Scrap-EAF	1,500	not yet known
Italy		Acciaierie Bertoli Safau Spa	CUSTARD	small scale project	CCU		4
Netherlands	Velsen-noord	Tata Steel		6.5	DRP-Eaf		not yet known
Sweden and Finland	Gallivare	SSAB, LKAB	HYBRIT	1.35 (new)	New DRP plant	1,750	275
Sweden and Finland	Oxelösund	SSAB		1.7	EAF with HBI from Gallivare	550	-
Sweden and Finland	Lulea	SSAB		2.2	EAF with HBI from Gallivare	1,250	-
Sweden and Finland	Boden	H2GreenSteel	H2GreenSteel	5 (new)	DRP-EAF	4,200	250

Appendix 5. EXCLUSIONS”

ANNEXES TO CHAPTER 6 “ANALYSIS OF GREEN

ANNEX 12. MAPPING OF EXISTING EXCLUSIONS

Table 8.10 presents a mapping of current exclusions and exceptions from EU fund regulations of the MFF 21-27, and from other European financing institutions, such as the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD). EU external funds such as NDICI – Global Europe and IPA III are also excluded from the analysis.

Table 8.10 Mapping of current exclusions

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
EBRD	Qualifying principles and criteria	Non-road mobile machinery (NRMM), such as construction and agricultural equipment, inland waterway vessels, railcars and locomotives, should meet the emission standards as defined in the EU NRMM Regulation. The fuel quality in the country should be taken into account when determining the applicable air emission standards for NRMM.	Some flexibility in terms of achieving EU standards may be allowed for public sector projects. Specifically, this may apply to municipal environmental infrastructure projects that result in material environmental benefits, but that cannot be structured to achieve full compliance with EU environmental standards due to limited financial resources and constraints on affordability. In those cases, the project team should engage – at an early stage in the project development – with the relevant sector specialists in order to discuss the performance standards that the project will achieve and its GET eligibility.	Climate change mitigation	General	Nature of the activity	Bank exclusions
EMFAF	Article 13.h	Investments that could lead to overcapacity and overfishing, by defining specific eligibility rules	(1) Direct restocking, except explicitly provided for as a reintroduction measure or other conservation measures in a Union legal act or in the case of experimental restocking. (2) operations that increase the fishing capacity of a fishing vessel, unless otherwise provided for in Article 19;	Biodiversity	Fishing sector	Nature of the activity	EU funds
CAP	Article 73.3.f	Investments in large-scale infrastructure, as determined by Member States in their CAP Strategic Plans, not being part of the community-led local development strategies.	Except for broadband and flood or coastal protection preventive actions aimed at reducing the consequences of probable natural disasters, adverse climatic events or catastrophic events.	Climate change adaptation	Agriculture	Process-based	EU funds
ERDF and CF	Article 7	Investment in airport infrastructure	Except for outermost regions for environmental impact mitigation measures	Climate change mitigation	Transport	Nature of the activity	EU funds
ERDF and CF	Article 7	Investment in disposal of waste in landfill	Exemptions: - for the outermost regions, in duly justified cases only; - for investments for decommissioning, reconverting or making safe existing landfills provided that such investments do not increase their capacity;	Circular economy and waste	Waste management	Nature of the activity	EU funds
CAP	Article 73.3.d	Purchase of animals, and purchase of annual plants and their planting	Except for: (i) restoring agricultural or forestry potential following natural disaster, adverse climatic events or catastrophic event; (ii) protecting livestock against large predators or being used in forestry instead of machinery; (iii) rearing endangered breeds as defined in Article 2, point (24), of Regulation (EU) 2016/1012 of the European Parliament and of the Council(45) under the commitments referred to in Article 70; or (iv) preserving plant varieties under threat of genetic erosion under the commitments referred to in Article 70;	Biodiversity	Agriculture	Nature of the activity	EU funds
ERDF and CF	Article 7	Investment increasing the capacity of facilities for the treatment of residual waste	Except for: (i) the outermost regions in duly justified cases only;(ii) investment in technologies to recover materials from residual waste for circular economy purposes;	Circular economy and waste	Waste management	Benchmark-based	EU funds
ERDF and CF	Article 7	Investment related to production, processing, transport, distribution, storage or combustion of fossil fuels (coal, oil, natural gas)	Except for: the replacement of solid fossil fuels fired, namely coal, peat, lignite, oil-shale, heating systems with gas-fired heating systems for the purpose of: (i) upgrading district heating and cooling systems	Climate change mitigation	Heating	Nature of the activity	EU funds

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
			to the status of 'efficient district heating and cooling' as defined in point (41) of Article 2 of Directive 2012/27/EU; (ii) upgrading combined heat and power installations to the status of 'high-efficiency co-generation' as defined in point (34) of Article 2 of Directive 2012/27/EU; (iii) investment in natural gas-fired boilers and heating systems in housing and buildings replacing coal-, peat-, lignite- or oil shale-based installations;				
RRF	By derogation from several Articles ⁴⁰³	Reforms and investments categorised as harmful	The principle of "do no significant harm" shall not apply to the reforms and investments under paragraph 3, point (a), of this Article, subject to a positive assessment by the Commission that the following requirements are met: (c) the measure does not jeopardise the achievement of the Union's 2030 climate targets and the objective of EU climate neutrality by 2050, based on qualitative considerations;	Other	General	Mainstreaming tool based	EU funds
InvestEU	ANNEX V B.13	13) investments in facilities for the disposal of waste in landfill. This exclusion does not apply to investments in: (a) on-site landfill facilities that are an ancillary element of an industrial or mining investment project and where it has been demonstrated that landfilling is the only viable option to treat the industrial or mining waste produced by the activity concerned itself; (b) existing landfill facilities to ensure the utilisation of landfill gas and to promote landfill mining and the reprocessing of mining waste	This exclusion does not apply to investments in: (a) on-site landfill facilities that are an ancillary element of an industrial or mining investment project and where it has been demonstrated that landfilling is the only viable option to treat the industrial or mining waste produced by the activity concerned itself; (b) existing landfill facilities to ensure the utilisation of landfill gas and to promote landfill mining and the reprocessing of mining waste	Circular economy and waste	Waste management	Nature of the activity	EU funds
InvestEU	ANNEX V B.15	15) investments in incinerators for the treatment of waste. This exclusion does not apply to investments in: (a) plants exclusively dedicated to treating non-recyclable hazardous waste; (b) existing plants, where the investment is for the purpose of increasing energy efficiency, capturing exhaust gases for storage or use or recovering materials from incineration ashes, provided such investments do not result in an increase of the plants' waste processing capacity.	This exclusion does not apply to investments in: (a) plants exclusively dedicated to treating non-recyclable hazardous waste; (b) existing plants, where the investment is for the purpose of increasing energy efficiency, capturing exhaust gases for storage or use or recovering materials from incineration ashes, provided such investments do not result in an increase of the plants' waste processing capacity.	Circular economy and waste	Waste management	Nature of the activity	EU funds
InvestEU	ANNEX V B.14	14) investments in mechanical biological treatment (MBT) plants. This exclusion does not apply to investments to retrofit existing MBT plants for waste-to-energy purposes or recycling operations of separated waste such as composting and anaerobic digestion	This exclusion does not apply to investments to retrofit existing MBT plants for waste-to-energy purposes or recycling operations of separated waste such as composting and anaerobic digestion	Circular economy and waste	Waste management	Nature of the activity	EU funds
InvestEU	ANNEX V B.12	12) investments related to mining or to the extraction, processing, distribution, storage or combustion of solid fossil fuels and oil, as well as investments related to the extraction of gas. This exclusion does not apply to: (a) projects where there is no viable alternative technology; (b) projects related to pollution prevention and control; (c) projects equipped with carbon capture and storage or carbon capture and utilisation installations; industrial or research projects that lead to substantial reductions of greenhouse gas emissions as compared with the applicable EU Emission Trading System benchmarks	This exclusion does not apply to: (a) projects where there is no viable alternative technology; (b) projects related to pollution prevention and control; (c) projects equipped with carbon capture and storage or carbon capture and utilisation installations; industrial or research projects that lead to substantial reductions of greenhouse gas emissions as compared with the applicable EU Emission Trading System benchmarks	Climate change mitigation	Fossil fuels	Nature of the activity	EU funds

⁴⁰³ Article 5(2), Article 17(4), Article 18(4), point (d), and Article 19(3), point (d), the principle of "do no significant harm" shall not apply to the reforms and investments under paragraph 3, point (a), of this Article, subject to a positive assessment by the Commission that the following requirements are met: (c) the measure does not jeopardise the achievement of the Union's 2030 climate targets and the objective of EU climate neutrality by 2050, based on qualitative considerations.

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
ERDF and CF	Article 7	Decommissioning or the construction of nuclear power stations	N/A	Zero pollution	Nuclear	Nature of the activity	EU funds
ERDF and CF	Article 7	Investment in the expansion and repurposing, conversion or retrofitting of gas transmission and distribution networks provided that such investment makes the networks ready for adding renewable and low carbon gases, such as hydrogen, biomethane and synthesis gas, into the system and allows to substitute solid fossil fuels installations;	N/A	Climate change mitigation	Fossil fuels	Relative improvement of the activity	EU funds
CAP	Paragraph 90	The EAFRD should not finance investments in irrigation which do not contribute to the achievement, or the preservation, of good status of the associated water body or bodies	N/A	Water	Agriculture	Practice-based	EU funds
CAP	Paragraph 90	The EAFRD should not finance investments in afforestation which are not consistent with environmental and climate-related objectives in line with sustainable forest management principles.	N/A	Other	Agriculture	Practice-based	EU funds
CAP	Article 73.3.g	Investments in afforestation which are not consistent with environmental and climate-related objectives in line with sustainable forest management principles, as developed in the Pan-European Guidelines for Afforestation and Reforestation.	N/A	Biodiversity	Agriculture	Practice-based	EU funds
InvestEU	ANNEX V B.11	11) the decommissioning, operation, adaptation or construction of nuclear power stations	N/A	Other	Nuclear	Nature of the activity	EU funds
JTF	Paragraph 18	The JTF support should be conditional on the effective implementation of a transition process in a specific territory in order to achieve a climate-neutral economy. In that regard, Member States should prepare, in social dialogue and cooperation with the relevant stakeholders, in accordance with the relevant provision of Regulation (EU) 2021/ 1060 on partnership, and supported by the Commission, territorial just transition plans, setting out the transition process, consistent with their integrated national energy and climate plans.	N/A	Climate change mitigation	General	Process-based	EU funds
JTF	Article 7.1	Where a Member State has not made a commitment to implement the objective of achieving a climate-neutral Union by 2050, only 50 % of the annual allocations for that Member State set out in accordance with Articles 3(4) and 4(3) shall be made available for programming and included in the priorities. By way of derogation from Article 10(1) of this Regulation, the remaining 50 % of the annual allocations shall not be included in the priorities. In such cases, the programmes supported from the JTF and submitted in accordance with Article 21 of Regulation (EU) 2021/1060 shall include only 50 % of the annual JTF allocations in the table referred to in point (g)(ii) of Article 22(3) of that Regulation. The table referred to in point (g)(i) of Article 22(3) of that Regulation shall identify separately the allocations available for programming and those allocations that shall not be programmed.	N/A	Climate change mitigation	General	Practice-based	EU funds
JTF	Article 9.a	The decommissioning or the construction of nuclear power stations	N/A	Other	Nuclear	Nature of the activity	EU funds

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
JTF	Article 9.d	Investment related to the production, processing, transport, distribution, storage or combustion of fossil fuels	N/A	Climate change mitigation	Fossil fuels	Nature of the activity	EU funds
EBRD	Specific exclusions	Project components of greenfield or capacity-increase projects consisting of: environmental protection measures required under applicable national law and regulations or measures to mitigate or offset biodiversity impacts to achieve no net loss of biodiversity	N/A	Biodiversity	General	Practice-based	Bank exclusions
EBRD	Specific exclusions	projects involving fossil-fuel extraction ^{6, 7} and associated facilities dedicated to fossil-fuel transportation	N/A	Climate change mitigation	General	Nature of the activity	Bank exclusions
EBRD	Specific exclusions	greenfield construction or the lifetime extension of large-scale industrial installations (in accordance with the EU Industrial Emissions Directive Best Available Techniques Reference documents) involving technologies that either increase the use of coal or fuel oil, or lock the installation into the use of coal or fuel oil.	N/A	Climate change mitigation	General	Benchmark-based	Bank exclusions
EBRD	Specific exclusions	projects involving the production of single-use plastic products for consumer applications (not for medical purposes) as defined in Parts A and B of the Annex to the EU Directive on the reduction of the impact of certain plastic products on the environment, ⁹ due to the significant negative impacts at the end of their lifetime	N/A	Circular economy and waste	General	Nature of the activity	Bank exclusions
EBRD	Specific exclusions	non-renewable marine extractive industries (such as offshore oil and gas and deep-sea mining)	N/A	Other	General	Nature of the activity	Bank exclusions
EBRD	Specific exclusions	projects, components or activities involving the use of substances banned under the EU regulation on fluorinated gases, which have a material impact on the project	N/A	Circular economy and waste	General	Nature of the activity	Bank exclusions
EBRD	Specific exclusions	Upstream and midstream activities in the fossil-fuel industry. Upstream activities involve exploration or the production of fossil fuels, while midstream activities include natural gas processing, storage, transportation, liquefaction and regasification, and crude oil refining. Activities that are otherwise eligible, but support these activities, such as carbon capture and utilisation for enhanced oil recovery, are also not eligible. Exceptions are the use of waste gas and reduction of fugitive emissions from existing gas infrastructure.	N/A	Climate change mitigation	General	Nature of the activity	Bank exclusions
EBRD	Specific exclusions	Electricity generation from coal or peat.	N/A	Climate change mitigation	General	Nature of the activity	Bank exclusions
EBRD	Specific exclusions	Activities that lead directly or (where feasible to assess) indirectly to deforestation over time are also ineligible, other than small-scale tree clearance.	N/A	Biodiversity	General	Nature of the activity	Bank exclusions

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
EIB	Bank-wide excluded activities	Activities not aligned with the principles and goals of the Paris Agreement, as defined in the EIB Group Climate Bank Roadmap. In terms of mitigation goals, this excludes a range of highly emission-intensive activities in sectors such as energy, transport, industry and the bioeconomy. In terms of adaptation goals, this excludes activities with a very high residual risk to current and future climate change	N/A	Climate change mitigation	General	Mainstreaming tool based	Bank exclusions
EIB	Bank-wide excluded activities	Any activity involving significant degradation, conversion or destruction of critical habitats	N/A	Biodiversity	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Conversion of natural forests into plantations. This includes irrigated forests, logging, clear cutting or degradation of (and commercial concessions over) tropical natural forests or high conservation value forests in all regions, as well as the purchase of logging equipment for this purpose	N/A	Biodiversity	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Unsustainable fishing methods (such as drift net fishing in the marine environment using nets in excess of 2.5 km in length and blast fishing)	N/A	Biodiversity	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Extraction of mineral deposits from the deep sea	N/A	Circular economy and waste	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Extraction or mining of conflict minerals and metals	N/A	Circular economy and waste	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Production of or trade in products containing PCBs	N/A	Zero pollution	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Production of or trade in pharmaceuticals, pesticides/herbicides and other hazardous substances subject to international phase-outs or bans	N/A	Zero pollution	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Production of or trade in ozone depleting substances subject to international phase out	N/A	Zero pollution	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Trade in wildlife or production of or trade in wildlife products regulated under CITES	N/A	Biodiversity	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Transboundary movements of waste prohibited under international law	N/A	Circular economy and waste	General	Nature of the activity	Bank exclusions

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
EIB	Bank-wide excluded activities	Production or use of or trade in unbonded asbestos fibres or asbestos-containing products	N/A	Zero pollution	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Activities prohibited by host country legislation or international conventions relating to the protection of biodiversity resources or cultural heritage	N/A	Biodiversity	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Drift net fishing in the marine environment using nets in excess of 2.5 km. in length	N/A	Biodiversity	General	Nature of the activity	Bank exclusions
EIB	Bank-wide excluded activities	Shipment of oil or other hazardous substances in tankers which do not comply with IMO requirements	N/A	Climate change mitigation	General	Process-based	Bank exclusions
RRF	See Annex 6 in JRC study ⁴⁰⁴	Gas - extraction	N/A	Climate change mitigation	General	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Gas - Power and/or heat generation	Exception on a case by case basis for Member States that face significant challenges in the transition away from carbon-intensive energy sources, provided that this support would contribute to the EU's decarbonisation objectives for 2030 and 2050	Climate change mitigation	General	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Gas - transmission and distribution infrastructure	Exception: if they enable at the time of construction the transport (and/or storage) of renewable and low-carbon gases. Targeted exemption, on a case by case basis, when necessary and proportionate to meet immediate security of supply needs in the frame of REPowerEU.	Climate change mitigation	General	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Gas - District Network (heat and cooling)	Exception if the facility meets the requirements of 'efficient district heating and cooling' systems (as defined in Article 2(41) of the Directive 2012/27/EU) and meets the conditions for natural gas-based heat/power generation. District heating and cooling networks that obtain heat/cool from facilities using natural gas. Exception if: they are part of 'efficient district heating and cooling' systems (as defined in Article 2(41) of the Directive 2012/27/EU), obtaining heat/cool from existing facilities that meet the conditions for natural gas-based heat/power generation as described in the first bullet; or investments in the heat/power generation facility start within three years of the modernisation of the network, aim at making the whole system efficient (as defined in Article 2(41) of the Directive 2012/27/EU) and meet the conditions for natural gas-based heat/power generation as described in the first bullet.	Climate change mitigation	General	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Gas - Equipment for heat generation	Exception for natural gas-based boilers and heating systems (and related distribution infrastructure), if: they are either in line with Article 7(2) of the Energy Labelling Framework Regulation (EU) 2017/1369(1) or are being installed in buildings that are part of a wider energy efficiency or building renovation programme, in line with	Climate change mitigation	General	Nature of the activity	EU funds

⁴⁰⁴ Beltran Miralles, M., Gourdon, T., Seigneur, I., Arranz Padilla, M. and Pickard Garcia, N. The implementation of the 'Do no significant harm' principle in selected EU instruments, Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/18850, JRC135691. See: <https://publications.jrc.ec.europa.eu/repository/handle/JRC135691>

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
			long-term renovation strategies under the Energy Performance of Buildings Directive, leading to a substantial improvement in energy performance, and lead to a significant decrease in GHG emissions; and lead to a significant improvement of the environment (notably due to pollution reduction) and public health, in particular in areas where the EU air quality standards set by Directive 2008/50/EU are exceeded or risk being exceeded, such as when replacing coal- or oil-based heating systems and boilers.				
RRF	See Annex 6 in JRC study	Solid Fossil Fuels - Heat / power generation	N/A	Climate change mitigation	General	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Oil infrastructure & facilities	Targeted exemption, on a case by case basis, when necessary and proportionate to meet immediate security of supply needs in the frame of REPowerEU for Member States that have been subject to the exceptional temporary derogation in Article 3m(4) of Council Regulation (EU) No 833/2014(12).	Climate change mitigation	General	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Landfills	N/A	Circular economy and waste	Waste management	Nature of the activity	EU funds
JTF	See Annex 6 in JRC study	Landfills	Only interventions within the scope of the fund, such as: (i) investments in regeneration and decontamination of brownfield sites, land restoration and including, where necessary, green infrastructure and repurposing projects, taking into principle; (j) investments in enhancing the circular economy, including through waste prevention, reduction, resource efficiency, reuse, repair and recycling;	Circular economy and waste	Waste management	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Mechanical biological treatment (MBT) plants	Actions under this measure in existing mechanical biological treatment plants, where the actions under this measure are for the purpose of increasing energy efficiency or retrofitting to recycling operations of separated waste to compost bio-waste and anaerobic digestion of bio-waste, provided such actions under this measure do not result waste processing capacity or in an extension of the lifetime of the plants; for which evidence is provided at plant level.	Other	General	Nature of the activity	EU funds
ERDF and CF	See Annex 6 in JRC study	Mechanical biological treatment (MBT) plants	Exclusion of investments increasing the capacity of facilities for the treatment of residual waste. Exceptions: (i) the outermost regions in duly justified cases only; (ii) investment in technologies to recover materials from residual waste for circular economy purposes;	Other	General	Nature of the activity	EU funds
JTF	See Annex 6 in JRC study	Mechanical biological treatment (MBT) plants	Only interventions within the scope of the fund, such as: (i) investments in regeneration and decontamination of brownfield sites, land restoration and including, where necessary, green infrastructure and repurposing projects, taking into a principle; (j) investments in enhancing the circular economy, including through waste prevention, reduction, resource efficiency, reuse, repair and recycling;	Other	General	Nature of the activity	EU funds
InvestEU	See Annex 6 in JRC study	Mechanical biological treatment (MBT) plants	Exceptions: investments to retrofit existing MBT plants for waste-to-energy purposes or recycling operations of separated waste such as composting and anaerobic digestion	Other	General	Nature of the activity	EU funds

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
RRF	See Annex 6 in JRC study	Incinerators	Exception: Actions under this measure in plants exclusively dedicated to treating non-recyclable hazardous waste, and to existing plants, where the actions under this measure are for the purpose of increasing energy efficiency, capturing exhaust gases for storage or use or recovering materials from incineration ashes, provided such actions under this measure do not result in an increase of tprocessing capacity or in an extension of the lifetime of the plants; for which evidence is provided at plant level.	Circular economy and waste	Waste management	Nature of the activity	EU funds
ERDF and CF	See Annex 6 in JRC study	Incinerators	Exclusion of investments increasing the capacity of facilities for the treatment of residual waste. Exceptions: (i) the outermost regions in duly justified cases only; (ii) investment in technologies to recover materials from residual waste for circular economy purposes;	Circular economy and waste	Waste management	Nature of the activity	EU funds
JTF	See Annex 6 in JRC study	Incinerators	Only interventions within the scope of the fund, such as: (i) investments in regeneration and decontamination of brownfield sites, land restoration and including, where necessary, green infrastructure and repurposing projects, taking into account the 'polluter pays' principle; (j) investments in enhancing the circular economy, including through waste prevention, reduction, resource efficiency, reuse, repair and recycling;	Circular economy and waste	Waste management	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Airport infrastructure	Exception: only measures related to low-carbon airport infrastructure such as investments in energy- efficient airport buildings, on-site renewable grid connection upgrades of airport infrastructure and related services.	Climate change mitigation	Transport	Nature of the activity	EU funds
JTF	See Annex 6 in JRC study	Airport infrastructure	Only actions within the scope of the fund, such as: (h) investments in digitalisation, digital innovation and digital connectivity;	Climate change mitigation	Transport	Nature of the activity	EU funds
RRF	See Annex 6 in JRC study	Vehicles using fossil fuels	Exception within the RRF (not including REPowerEU chapters): Light duty vehicles (cars, categories M1 and N1): allow low-emission vehicles (<50g CO2/km). Heavy duty vehicles (e.g. trucks, categories N2 and N3): allow low-emission trucks. Low-floor buses (urban buses, M2 and M3 categories): plug-in hybrid buses. High-floor buses (inter-urban coaches, M2 and M3 categories): allow all coaches that comply with the latest step with respect to pollutant emissions from heavy-duty vehicles under EURO VI (EURO VI-E).	Climate change mitigation	Transport	Nature of the activity	EU funds
ERDF and CF	See Annex 6 in JRC study	Vehicles using fossil fuels	Exception. Investment in: clean vehicles as defined in Directive 2009/33/EC of the European Parliament and of the Council for public purposes; and vehicles, aircraft and vessels designed and constructed or adapted for use by civil protection and fire services.	Climate change mitigation	Transport	Nature of the activity	EU funds
JTF	See Annex 6 in JRC study	Vehicles using fossil fuels	N/A	Climate change mitigation	Transport	Nature of the activity	EU funds

Fund	Article	Exclusion	Exception to Exclusion	Cluster	Sector	Type of exclusion	Source
RRF	See Annex 6 in JRC study	Activities covered by the EU Emission Trading System (ETS).	Exception: activities with projected CO2 equivalent emissions that are substantially lower than the relevant benchmarks established for free allocation.	Zero pollution	General	Nature of the activity	EU funds
ERDF and CF	See Annex 6 in JRC study	Activities covered by the EU Emission Trading System (ETS).	N/A	Zero pollution	General	Nature of the activity	EU funds
JTF	See Annex 6 in JRC study	Activities covered by the EU Emission Trading System (ETS).	Condition to be eligible: If they contribute to the transition to a climate-neutral economy of the Union by 2050 and go substantially below the relevant benchmarks established for free allocation under Directive 2003/87/EC of the European Parliament and of the Council and if they result in the protection of a significant number of jobs.	Zero pollution	General	Nature of the activity	EU funds

ANNEX 13. ASSESSMENT OF DIFFERENT TYPES OF EXCLUSIONS AND EXCEPTIONS

Based on the typology presented in section 6.3, the following table analyses the potential performance of each type of exclusion regarding different factors or criteria that were found most relevant for this study.

Table 8.11 Analysis of different types of exclusions and exceptions

Type	Context-dependency / universality	Administrative costs	Clarity for applications	Raising ambitions	Additional considerations
Nature of the activity	Cannot account for context-dependency; thus, there is only a limited number of investments with universal agreement on their negative impacts that can be excluded through this type	Low administrative costs since there is no further detailed assessment needed	High clarity, no “surprises” of applicants who may have planned with the funding while waiting for results from further detailed assessments	- No effect on raising ambitions. Since those investments are generally not funded, no ambitious performance-conditions can be attached to them. - Instead, investments may be funded by other sources, without any environmental/climate performance ambitions	/
Performance-based	Can only to a limited extent account for context-dependency; while performance and benchmarks of the specific investments are defined, those performance- and benchmark thresholds may not account for the case-by-case	Medium administrative costs for applying the methodology behind the defined threshold, and potentially for auditing the compliance.	Medium clarity, since eligibility-criteria are clearly defined but still performance needs to be assessed.	Can raise ambitions, since investments which are deemed necessary by beneficiaries are conditional to a certain environmental / climate performance	- There is little difference between those exclusions and e.g. a DNSH assessment with clearly defined screening criteria - Can only be applied to investments for which performance or benchmark
Benchmark-based					

Type	Context-dependency / universality	Administrative costs	Clarity for applications	Raising ambitions	Additional considerations
	counterfactual in all situations ⁴⁰⁵				thresholds ⁴⁰⁶ are defined
Relative improvement of the activity	Can to a high extent account for context-dependency since the counterfactual is also defined (if it takes the local context into account) and the improvement is then assessed against the counterfactual	High administrative costs since in applying the methodology behind the defined threshold, and potentially for auditing the compliance, the counterfactual performance needs to be assessed	Medium clarity, since eligibility-criteria are clearly defined but still performance needs to be assessed	Can raise ambitions, however, ambitions also depend on the baseline and thus run the risk of being uneven	
Practice-based	- Depends on the quality of the practice / process - Can potentially to a high extent account for context-dependency, where the practices and processes are defined in a way that takes into account local circumstances - The opposite can be true	- Low to high administrative costs - Low if there is a the assessment only consists of verifying if a label is issued⁴⁰⁷ (i.e. label that certifies that a certain practice or process is followed) - High, if the evidence for following the practice / process has to be produced by the beneficiary (and for EC in case of auditing)	- Depends on the quality of the practice / process - Potentially low clarity, where the practices / processes are ambiguous - Potentially medium clarity, in cases where practices /processes are clearly defined (in which case, however, performance still needs to be assessed)	Can raise ambitions, since investments which are deemed necessary by beneficiaries are conditional to a certain environmental / climate performance	- The suitability of those exclusions depends to a large extent on the quality of the practices / process - Relying on a label could be a sub-types for this type of exclusions; this would entail excluding a certain type of investment unless they are certified with a specific label
Process-based					

⁴⁰⁵ Such as regulatory environment, possible measures addressing the potential harmful effect, the environmental performance of the situation that would be replaced by the investment. See also chapter 2 in Porsch et al., (2022).

⁴⁰⁶ Besides the taxonomy work on criteria for significant contribution and for DNSH this could e.g. include the eco-design requirements under the upcoming Ecodesign for Sustainable Products

Regulation, BAT reference documents, other more sectorial processes such as Level(s) European framework for sustainable buildings¹²⁵, STECF recommendations for sustainable seafood products, and other comparable processes

⁴⁰⁷ Assuming that the labelling process is done outside the funding.

Type	Context-dependency / universality	Administrative costs	Clarity for applications	Raising ambitions	Additional considerations
Location-based	Can to a medium extent account for context-dependency; while most of the context may be linked to location, there are still likely additional contextual factors which are not accounted for	Low administrative costs, since the location of an investment can usually easily be determined	High clarity, no "surprises" of applicants who may have planned with the funding while waiting for results from further detailed assessments	Potentially, but not possible to generalise	- This could be split into two sub-types; one based on socio-economic location considerations (e.g. outermost regions; poorer regions), and one based on environmental location considerations (e.g. within a Natura 200 area; outside city limits to avoid urban sprawl) - To be noted that no location-based exclusion based were identified in the mapping; however, location-based exemptions were identified which were designed to lower ambitions in certain regions (e.g. excluding investments in disposal of waste in landfills, except in the outermost regions)

ANNEX 14. ASSESSMENT OF SUITABILITY OF EXCLUSIONS IN SPECIFIC CONTEXTS AND/OR SECTORS

Based on the results of Table 8.11 above, Table 8.12 assesses the suitability or relevance of the different types of exclusions and exceptions for different types of investments and sectors (see last column), based on a coloured performance-based matrix.

Table 8.12 Performance of exclusions for different criteria and recommendations

Type	Context-dependency / universality	Administrative costs	Clarity for applications	Raising ambitions	Main features of investments that could best be excluded per type of exclusion
Nature of the activity					- For investments where there is universal agreement on negative environmental / climate impacts, no matter the context - For investments where even the setting of conditions (e.g. minimum performance thresholds) would still lead to negative impacts
Performance-based					- For investments where there is strong certainty that if they do not meet certain thresholds this would have negative environmental / climate impacts, no matter the context - For investments where clear performance targets or parameters are defined
Benchmark-based					
Relative improvement of the activity					- For large-scale (for proportionality of administrative burden) investments with high context-dependency - For investments / contexts where it is challenging to define a fix performance target across the whole EU
Practice-based	Uncertain	Uncertain	Uncertain		- For investments where high quality, clear practices / processes exist, which also take case-by-case contexts of investments into account - Potentially this can be linked to trusted labels / certification schemes
Process-based					
Location-based					- For exclusions based on environmental location considerations: for investments where there is strong certainty that a potential environmental / climate negative impact would only arise if they are performed in specific locations - For exclusions based on socio-economic location considerations: for investments where the level of ambition may be considered too high in specific contexts

Legend: Red / amber / green: Low / medium / high positive relevance with the criterion

**Appendix 6. ANNEXES TO CHAPTER 7 "GREEN
MAINSTREAMING TOOLS"**

ANNEX 15. GREEN ENABLING CONDITIONS

This Annex provides background information on enabling conditions as currently defined in the Common Provisions Regulation and in particular on Green Enabling Conditions as a green mainstreaming tool.

Enabling conditions as a tool under the Common Provisions Regulation

Enabling conditions are stipulated by the Common Provisions Regulation (Regulation (EU) 2021/1060), which lays down common provisions for the following EU funds:

- European Regional Development Fund (ERDF)
- European Social Fund Plus (ESF+)
- Cohesion Fund
- Just Transition Fund (JTF)
- European Maritime, Fisheries and Aquaculture Fund (EMFAF)

As explained in recital 21 of the CPR, the objective of the enabling conditions is to ensure the necessary prerequisites for the effective and efficient use of EU funds. The arrangements around enabling conditions are laid down in Article 15 of the CPR.

Each enabling condition is linked to a specific objective. When this objective is supported under one of the above-mentioned funds, the enabling condition automatically applies. An enabling condition is fulfilled when the related criteria are met, which should be justified by the Member State. As long as not all of the enabling conditions are fulfilled, expenditure related to the specific objectives will not be reimbursed by the Commission.

The enabling conditions should remain fulfilled throughout the programming period, to be ensured by the Member State.

As the enabling conditions often relate to certain strategies and planning documents being in place, it is important that the operations supported by the funds are actually implemented consistently with those strategies and planning documents.

There are two types of enabling conditions: the horizontal enabling conditions (Annex III) and the thematic enabling conditions (Annex IV). The latter only apply to the ERDF, ESF+ and Cohesion Fund.

Annex III includes four horizontal enabling conditions, related to public procurement, state aid rules and human rights. There is no specific link with climate or environmental objectives.

The thematic enabling conditions in Annex IV are linked to the policy objectives that apply to the ERDF, the ESF+, the Cohesion Fund and the EMFAF, listed in Article 5(1) of the CPR.

Green enabling conditions

The second policy objective – a greener, low carbon Europe in short – reads: “a greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation, risk prevention and management, and sustainable urban mobility”. We consider the enabling conditions linked to this second policy objective to be the ‘green enabling conditions’. This terminology is not formally used, but it is clear that these are the enabling conditions relevant for this study, which focuses on mainstreaming climate and environmental objectives, while the other enabling conditions focus on other policy objectives.

Thus, from Annex IV of the CPR it follows that there are seven green enabling conditions, which only apply for support from the ERDF and the Cohesion Fund:

1. A strategic policy framework to support energy efficiency renovation of residential and non-residential buildings. Criteria for this enabling condition are 1) a national long-term renovation strategy and 2) energy efficiency improvement measures

2. Governance of the energy sector. This enabling condition requires notification to the Commission of the Member State's NECP, in accordance with the Governance Regulation.

3. Effective promotion of the use of renewable energy across sectors and across the Union. As fulfilment criteria, measures should be in place which ensure 1) compliance with the 2020 and 2030 renewable energy targets and 2) an increase of the share of renewable energy in heating and cooling.

4. Effective disaster risk management framework. Required is a disaster risk management plan, including a description of key risks, measures to address the key risks and information on financing resources.

5. Updated planning for required investments in water and wastewater sectors. For each or both sectors, a national investment plan should be in place, including 1) an assessment of the current state of implementation of the relevant directives, 2) the identification and planning of public investments required to implement those directives, 3) an estimate of investments needed to renew existing infrastructure and 4) an indication of potential sources of public financing.

6. Updated planning for waste management. One or more waste management plans should be in place, including 1) an analysis of the current waste management situation, 2) an assessment of existing waste collection schemes, 3) an investment gap assessment and 4) information on location criteria for future site location identification.

7. Prioritised action framework for the necessary nature conservation measures. This framework should be in line with the requirements following from the Habitats Directive and the agreed template.

It is important to note that almost all green enabling conditions are directly linked to existing environmental legislation. The enabling conditions do not introduce new legal requirements to Member States, but identify certain provisions from the environmental acquis as prerequisite for the Member State to receive funding from the ERDF and the Cohesion Fund in the same policy area.

ANNEX 16. EXAMPLES FOR THE PROPOSED TYPOLOGY OF REFORMS

In the tables below, we present examples of current reforms for each of the proposed sub-categories of our adjusted typology of reforms.

Table Examples of reforms per category for thematic area of climate mitigation

First category	level	Second category	level	Reform code	Content of reform
Reforms related to government		Design phase of policies		PT-C[C14]-R[r29]	Create a national hydrogen strategy
		Legislative acts		IT-C[M2C2]-R[R3]	A tax reform for sustainable transport
		Implementation of policies		EIR: Climate Action (10)	Implement reforms in regions with a carbon-intensive energy sector (coal regions).
		Monitoring and evaluation		EL-C[1,4]-R[16979]	Establishment of a new water and wastewater regulatory body
Reforms related to the government itself		Institutional, governance or administrative reforms		EL-C[3,2]-R[16913.b]	Upgrading Greece's Upskilling and Reskilling System – Green skills, jobs, economy
		Public investments		FI-C[P3C2]-R[R1.b]	Launch of the first call for applications for the provision of training to strengthen digital skills and/or green skills.

Table Examples of reforms per category for thematic area of climate adaptation

First category	level	Second category	level	Reform code	Content of reform
Reforms related to government		Design phase of policies		SI-C[C3]-R[RBL]	Create a flood risk management plan
		Legislative acts		FR-C[C10]-R[R3]	Revised thermal regulation of new buildings
		Implementation of policies		CSRs: CY_2024_4	Improve implementation of climate adaptation measures
		Monitoring and evaluation		PT-C[C08]-R[r20]	Reorganisation of the Land Property Registry System and Land Cover Monitoring System
Reforms related to the government itself		Institutional, governance or administrative reforms		SK-C[C5]-R[R1]	Improve land-use planning documentation and approval processes for the authorisation of buildings and activities
		Public investments		X	X

Table Examples of reforms per category for thematic area of circular Economy

First category	level	Second category	level	Reform code	Content of reform
Reforms related to government	Design phase of policies			LT-C[C2]-R[B-1-5-.B-1-5-]	Develop a circular economy model and an action plan for Lithuania's transition to a circular economy
		Legislative acts		FR-C[C2]-R[R2]	Adoption of implementing acts in an existing law on the transition towards a circular economy
		Implementation of policies		EIR: Waste Management (1)	Ensuring that national waste management plans are in line with the revised Waste Framework Directive
		Monitoring and evaluation		IT-C[M2C1]-R[R1.2] b)	Monitoring of the National Program for Waste Management
Reforms related to the government itself		Institutional, governance or administrative reforms		IT-C[M2C1]-R[R1.3]	Technical support for local authorities for the implementation of regulation on waste management
		Public investments		IT-C[M2C2]-R[R1]	Including social and environmental criteria in public procurement for cultural events funded, promoted or organised by the public authority

Table Examples of reforms per category for thematic area of pollution prevention and control

First category	level	Second category	level	Reform code	Content of reform
Reforms related to government	Design phase of policies			IT-C[M2C4]-R[R3.1]	Adoption of a national program on air pollution control
		Legislative acts		PL-C[B]-R[3.2]	Create legislation in order to remove organisational and legal barriers to the comprehensive elimination of the negative environmental impact of large-scale post-industrial areas
		Implementation of policies		EIR: Waste Management (25)	Continue implementing dedicated programmes on pesticides
		Monitoring and evaluation		BE-C[C33]-R[R-307] (ii)	Adopting an IT-system for NOx emission data
Reforms related to the government itself		Institutional, governance or administrative reforms		PL-C[B]-R[3.2]	Create legislation in order to remove organisational and legal barriers to the comprehensive elimination of the negative environmental impact of large-scale post-industrial areas

First category	level	Second category	level	Reform code	Content of reform
		Public investments		LT-C[C2]-R[B-1-2-.B-1-2-1-]	Support for the purchase of clean vehicles by the public sector and business

Table Examples of reforms per category for thematic area of water

First category	level	Second category	level	Reform code	Content of reform
Reforms related to government		Design phase of policies		BG-C[C9]-R[R2]	Continuation of the water sector reform
		Legislative acts		CZ-C[C2.9]-R[R1]	An amendment of the Water Management Act, so as to define a framework for prevention and monitoring of droughts, the responsibilities of relevant authorities and control mechanisms
		Implementation of policies		EIR: Water Quality and Management (3)	Tackle nutrients pollution, especially nitrates from agriculture, through the implementation of the Nitrates Directive.
		Monitoring and evaluation		HR-C[C13]-R[R3]	Introduction of a benchmarking system for monitoring and reporting the operational and financial performance of water service suppliers
Reforms related to the government itself		Institutional, governance or administrative reforms		EL-C[1,4]-R[16979]	Establishment of new water and wastewater regulatory authority
		Public investments		HR-C[C1.3]-R[R1]	Development of a multiannual investment programme for water and wastewater infrastructure

Table Examples of reforms per category for thematic area of biodiversity and nature

First category	level	Second category	level	Reform code	Content of reform
Reforms related to government		Design phase of policies		AT-C[C4]-R[4B1]	Development of a soil protection strategy
		Legislative acts		FI-C[P1C5]-R[R1]	Modernisation of the nature conservation legislation

First category	level	Second category	level	Reform code	Content of reform
		Implementation of policies	of	EIR: Water Quality and Management (6)	Complete implementation of the Urban Waste Water Treatment Directive for all agglomerations, by building up the necessary infrastructure.
		Monitoring and evaluation	and	CZ-C[C2.9]-R[R1]	Defining the framework for prevention and monitoring of droughts, the responsibilities of relevant authorities and control mechanisms
Reforms related to the government itself		Institutional, governance or administrative reforms	or	SK-C[C5]-R[R1]	Improve land-use planning documentation and approval processes for the authorisation of buildings and activities
		Public investments		X	X

Getting in touch with the EU

In person

All over the European Union there are hundreds of Europe Direct centres. You can find the address of the centre nearest you online (european-union.europa.eu/contact-eu/meet-us_en).

On the phone or in writing

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696,
- via the following form: european-union.europa.eu/contact-eu/write-us_en.

Finding information about the EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website (european-union.europa.eu).

EU publications

You can view or order EU publications at op.europa.eu/en/publications. Multiple copies of free publications can be obtained by contacting Europe Direct or your local documentation centre (european-union.europa.eu/contact-eu/meet-us_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

EU open data

The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

