bioagora

Bio Knowledge Agora: Developing the Science Service for European Research and Biodiversity

Achieving policy coherence for both biodiversity and sectoral prosperity

D2.4. Report on biodiversity policy mismatches and overlaps with recommendations on how to foster cross sectoral dialogue for transformative Science Service

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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym / Abbreviation	Meaning / Full text
CAP	Common Agricultural Policy
EU	European Union
DG	Directorates-Generals
PES	Payments for Ecosystem Services
SSBD	Science Service for Biodiversity

BACKGROUND: ABOUT THE BIOAGORA PROJECT

BioAgora is a collaborative European project funded by the Horizon Europe programme. It aims to connect research results on biodiversity to the needs of policy making in a targeted dialogue between scientists, other knowledge holders and policy actors.

Its main outcome will be the development of a Science Service for Biodiversity. This new service will fully support the ecological transition required by the European Green Deal and the European Union's Biodiversity Strategy for 2030.

The BioAgora project was launched in July 2022 for a duration of 5 years. It gathers a Consortium of 22 partners, from 13 European countries, led by SYKE, the Finnish Environment Institute. Partners represent a diversity of actors coming from academia, public authorities, SMEs, and associations.

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EXECUTIVE SUMMARY

This document is a deliverable of the BioAgora project, funded under the European Union's Horizon Europe research and innovation programme under grant agreement No 101059438.

The deliverable performs an analysis of policy coherence at EU-level, focusing on the identification of mismatches and overlaps in policies within key sectors that impact biodiversity, namely: climate and energy, agriculture, and forestry. The analysis highlights areas where current policies either lack alignment, or actually conflict, potentially undermining biodiversity conservation efforts. By identifying these policy inconsistencies, this report seeks to offer actionable recommendations that can foster cross-sectoral dialogue. As many economic sectors and activities are directly or indirectly dependent on healthy and resilient ecological systems, biodiversity conservation and restoration is key to support prosperity and wellbeing in Europe.

While agricultural, forest and climate EU policies exhibit substantial alignment with the Biodiversity Strategy for 2030, energy policy documents presented several trade-offs, especially in relation to energy security. Alignment of strategic general goals at EU policy level, however, does not necessarily mean synergic implementation in practice. Often, policies are coherent at the level of objectives, but trade-offs between them appear during the instrumentalization and implementation phases where compromises need to be made.

Improving future policy coherence calls for a cross-sectoral approach, integrating biodiversity considerations early on in sectoral policy processes and fostering collaboration. Moreover, there is a need to strengthen vertical policy integration and implementation, and to reform financial incentives to penalize environmentally harmful activities and promote biodiversity-positive practices.

These recommendations are intended to support the development of the forthcoming Science Service for Biodiversity. This will be the principal EU mechanism facilitating a continuous and targeted dialogue between knowledge holders and policy- and decision-makers. Among its multiple functions, the Science Service also aims at addressing and mitigating policy misalignments, thereby enhancing synergy and coordination across sectors to improve biodiversity outcomes.

NON-TECHNICAL SUMMARY

Biodiversity is foundational to the prosperity of economic sectors and human activities. There is thus a need to ensure that sectoral policies align with biodiversity conservation ones. This document assesses how EU-level policies related to climate, energy, agriculture, and forestry sectors work towards or conflict with biodiversity goals. The goal is to find areas where these policies are not synergic or may even clash, which hampers the implementation of the EU Biodiversity Strategy for 2030.

While the strategic goals of agricultural, forest and climate EU policies mostly align with the Biodiversity Strategy for 2030, energy policies present conflicts with biodiversity objectives. Even when biodiversity and sectoral policies align, mutually beneficial implementation may be hampered in practice. Progress in improving policy coherence requires integrating biodiversity considerations early on in sectoral policies from the design-stage, as well as strengthening the way policies are implemented at national and local level, including the reform of subsidies to environmentally harmful activities in favor to those that promote biodiversity.

By identifying these issues, the report suggests ways to encourage communication and cooperation across these sectors. Beyond identifying specific issues, the report encourages a bigger-picture approach, suggesting that biodiversity should be considered right from the start when designing new policies in these sectors.

The recommendations from this document aim to support the development of the forthcoming Science Service for Biodiversity. This will be the main EU mechanism aimed at improving communication between scientists, experts and other knowledgeable groups and policy- and decision-makers.

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1. Introduction: Why is policy coherence critical for both biodiversity and sectoral prosperity?

The European Union's Biodiversity Strategy for 2030 stresses the urgent need to protect, restore, and enhance biodiversity to ensure ecosystem resilience and sustainable development. However, despite this ambitious goal, existing policies across key sectors — such as climate, energy, agriculture, and forestry (but not limited only to these sectors) — often lack coordination and, in some cases, conflict with one another. This inadvertently impedes biodiversity protection, undermining not only the foundation of life, but the wellbeing and resilience of human society and economy (Hermoso et al., 2022; Lenti et al., 2023). Economic activities, from the sectoral level to the individual business organization, directly depend on biomass production (food, bioenergy), but also on the ecosystem's capacity to transform waste, pollinate crops, mitigate floods, fires risk and pest outbreaks (Booth et al., 2022; D'Amato et al., 2024; TEEB, 2012). These are just some of the benefits that ecosystems provide. Genetic and species diversity is also important to support the resilience of ecosystems, and thus the long-term viability of the sectors that depend on them. Business and sectoral organizations have recognized such dependencies and are interested in finding ways to manage them (SBTN, 2020; The Capitals Coalition, 2016; WBCSD, 2022), as also seen from the increasing role of business actors in policy processes such as the Kunming-Montreal Global Biodiversity Framework, and in business responsibility coalitions such as Business for Nature.

Current sectoral policies, however, frequently focus on their respective objectives, leading to unintended consequences for ecosystems and biodiversity. Continuous increase of production and consumption are still largely promoted at the costs of biodiversity conservation (IPBES, 2026; Enberg and Ståhl, 2025). The lack of a systemic approach to understanding the foundations of our societal and economic wellbeing results in prioritizing productivity of ecological systems and leads, in the long term, to degradation of ecosystem structure and important functions of nature. For instance, policies that incentivize intensive agricultural practices often encourage land conversion, monocultures, and pesticide use, which degrade habitats for pollinators and reduce water quality (Akinsorotan et al., 2023). Similarly, renewable energy policies promoting biofuels may create additional land use pressures, reducing natural habitats crucial for species diversity (OECD, 2024; Gasparatos et al. 2017). Conversely, policies aimed at conserving biodiversity, such as those promoting habitat restoration or buffer zones, may restrict certain agricultural practices, creating friction with food security and immediate rural economic development goals. Without a cohesive framework, this policy decoupling hampers the effectiveness of both biodiversity and sectoral strategies, with inefficiencies and missed opportunities for synergic action (Box 1).

A holistic approach that balances biodiversity conservation with sustainable agricultural and forest production is essential to avoid undermining the biodiversity targets that also support long-term productivity. Along the same lines, as European Union (EU) Member States aim to meet climate and energy targets, there is need for more consideration of the impacts on ecological integrity and long-term resilience of the energy policy.

Box 1. The benefits of coherent sectoral policies

Achieving policy coherence is not merely about reducing conflicts; it is essential for implementing effective, ecosystem-based solutions that leverage the strengths of each sector. Coherent policies allow multiple sectors to work towards shared goals in an integrated way, reducing redundancy and making efficient use of resources.

When policies align, sectors are more capable of developing robust and adaptive solutions to environmental and socio-economic challenges, fostering resilience across ecosystems, landscapes and communities. For instance, incorporating biodiversity safeguards into agricultural and climate policies can enhance carbon storage, while maintaining productive and healthy ecological systems, thus addressing multiple objectives in one holistic approach.

By improving policy coherence, the EU can move closer to realizing its vision for a sustainable and prosperous society. Integrating biodiversity as a foundational consideration in the design of all new policies is not only more effective in addressing complex environmental challenges, but also essential for creating long-term socio-economic viability.

The EU has made an effort to increase coherence between policy objectives by launching the European Green Deal in 2019, which includes the EU Biodiversity, Forest, and Farm to Fork strategies. This is an unprecedented attemptt at cross-sectoral policymaking where climate and biodiversity have been taken into consideration throughout the programme. In addition, the programme aims at promoting synergies between climate and biodiversity policies. However, there is a need to critically analyze whether the policies included in the programme are impactful enough and truly align with each other. Often, policies are coherent at the level of objectives, but trade-offs between them appear during the instrumentalization and implementation phases where compromises need to be made.

This report addresses two significant research gaps: first, the need for a cohesive, cross-sectoral understanding of how EU policies in different sectors impact biodiversity, both positively and negatively; and second, the lack of a structured approach to identifying and resolving policy conflicts to better align socio-economic and biodiversity goals. Furthermore, this deliverable supports the development of the forthcoming Science Service for Biodiversity (SSBD), the main EU mechanism dedicated to connecting knowledge on biodiversity with the needs of policymakers and other decision-makers. Among its multiple functions, the SSBD will strive to support and transform cross-sectoral dialogue and cooperation and mainstreaming of biodiversity in policy- and decision-making. This would mean, for example, fostering a holistic, ecosystems-based approach throughout the policy-cycle, from development to evaluation; supporting actors across sectors in aligning their strategies with biodiversity objectives; enabling policy- and decision-makers to identify and respond to trade-offs and potential synergies early in the decision-making process. By systematically integrating biodiversity data and scientific expertise into sectoral issues, the SSBD could be very helpful in ensuring that policy decisions are informed by ecological considerations from the outset, strengthening both coherence and integration.

2. Conceptual background: what is policy coherence analysis?

2.1. Defining policy coherence

A **fragmented policy landscape** is the result EU policies across sectors, like those related to climate, energy, agriculture, and forestry, being traditionally designed within the specific objectives and priorities of each field. This leads to mutual conflicts and overlaps, ultimately harming biodiversity and ecosystems underpinning the viability of such sectors, rather than enhancing them.

Analyzing policy coherence provides a structured way to identify where these mismatches occur and understand how sectoral policies can either support or undermine biodiversity goals. Policy coherence is broadly understood as the alignment and mutual reinforcement of policies across different sectors to achieve common objectives, reducing contradictions or conflicts that might undermine these goals (Nilsson et al., 2012; OECD, 2020). It is particularly crucial for addressing complex challenges such as biodiversity loss, which intersects with policies across agriculture, climate, energy, forestry, and development. Achieving coherence ensures that sectoral actions support rather than hinder environmental objectives, making it a key strategy for advancing the EU Biodiversity Strategy for 2030.

To clarify the concept of policy coherence, we can draw from several key definitions, each emphasizing different aspects essential to environmental objectives: Policy coherence is often defined as the systematic promotion of mutually reinforcing policy actions across government departments and agencies. This approach seeks to create synergies toward shared goals, ensuring that policies across sectors support rather than undermine each other. This alignment is vital for integrated approaches to biodiversity and ecosystem management, as it minimizes perverse incentives—incentives that might otherwise conflict with environmental objectives (Global Environment Facility, 2018). Through coherence, sectors can work in a coordinated way to achieve common outcomes without hindrance. Another perspective sees policy coherence as the process of ensuring that policies from different sectors do not cancel each other out. This concept underscores the importance of preventing contradictory actions, such as promoting climate action while simultaneously subsidizing fossil fuels, which can counteract emission reduction goals. Here, coherence involves fostering collaboration across departments to align short-term actions with long-term sustainability objectives, thus creating a consistent approach to environmental protection (OECD, 2020). This alignment across sectors and timeframes is integral to developing robust, comprehensive environmental strategies that endure beyond immediate pressures.

Furthermore, policy coherence is essential for integrating biodiversity and climate policies across various international frameworks, reducing redundancy, and ensuring holistic responses to multifaceted environmental challenges. By promoting resource efficiency and avoiding duplication, policy coherence addresses the complexity of biodiversity conservation and sustainable development. In this context, coherence is a mechanism to prevent biodiversity policies from being undermined by conflicting policies in areas like trade and development, facilitating a globally consistent approach to biodiversity protection (CBD, 2018).

In sum, policy coherence ensures that environmental and sectoral policies work in alignment rather than at cross-purposes, fostering better biodiversity outcomes through integrated, synergized efforts across sectors. From these interpretations, policy coherence for biodiversity can be broken down into three main facets, each addressing a unique aspect of alignment and integration across sectors:

- **Systematic synergy**: this dimension of policy coherence involves aligning policies across sectors to ensure they reinforce each other rather than undermine shared goals. In biodiversity conservation, synergy means that agricultural, energy, and climate policies work in concert to protect ecosystems, avoiding contradictions such as incentivizing agricultural expansion at the expense of natural habitats (Nilsson et al., 2012). Systematic synergy is often highlighted in sustainable development contexts, as it helps prevent conflicts between immediate economic priorities and long-term environmental objectives.

- **Political consistency**: political consistency refers to ensuring that different policies across sectors do not counteract each other. This consistency is particularly critical in reconciling environmental, social, and economic priorities, as it ensures that policy measures do not unintentionally cancel out progress in other areas (OECD, 2019). Political consistency thus helps maintain the integrity of sustainability strategies.

- **Regime complexes**: in biodiversity policy, coherence involves managing "regime complexes," or overlapping international agreements and policies that influence conservation outcomes. This aspect of coherence is crucial to prevent biodiversity objectives from being compromised by trade or development policies under different international frameworks (Raustiala & Victor, 2004). By aligning these regime complexes, policy coherence supports a cohesive global response to biodiversity loss, balancing conservation with other international commitments.

2.2. Evaluating policy coherence

Evaluating policy coherence is essential for identifying how well different policy areas align and support common objectives, especially when addressing complex, cross-sectoral challenges like biodiversity conservation. There are several levels at which coherence can be evaluated: **objectives**, **outputs**, and **outcomes**. Each level provides distinct insights into how policies work together or potentially conflict:

- **Objectives** represent the intended directions or goals of policies. Evaluating coherence at this level involves analyzing whether policy goals across different sectors are aligned or divergent. For instance, an objective to conserve biodiversity might align with agricultural sustainability goals, but it may also conflict if agricultural expansion is prioritized without consideration of ecological impacts.

- **Outputs** are the tangible products that result from policy actions, such as regulations, official statements, or specific policy decisions. Evaluating coherence at the output level involves examining whether the actions and instruments used in various policies support or contradict each other. For example, biodiversity protection policies might encourage habitat preservation, while certain agricultural policies may incentivize land conversion, leading to conflicting outputs.

- **Outcomes** refer to the actual impacts or consequences of policies on the ground. Outcome-level coherence evaluation assesses whether the combined results of policies are achieving their intended effects or producing unintended conflicts. For instance, if biodiversity policies succeed in protecting habitats, but agricultural policies lead to widespread pesticide use that harms these habitats, the outcomes reveal incoherence in achieving ecosystem health goals.

To structure the analysis of coherence, several frameworks have been developed to highlight policy synergies and conflicts. These frameworks help assess whether policies reinforce or undermine each other in their objectives, outputs, or outcomes. Nilsson et al. (2012) provide a framework that examines the interactions among policies, identifying synergies and trade-offs to understand how different policies contribute to or detract from overarching goals. Del Río (2014) proposes an evaluation model focusing on policy consistency and conflict resolution, particularly useful for analyzing alignment between environmental and economic policies. Shawoo et al. (2023) emphasize a systemic approach to coherence, considering how policies can dynamically interact over time to produce either consistent or conflicting results, especially in contexts with high levels of environmental complexity.

In policymaking, **policy coherence** and **policy integration** are two distinct yet complementary approaches. Policy coherence refers to how well policies work together across sectors to avoid contradictions and promote synergistic outcomes. In contrast, **policy integration examines the extent to which elements of one policy domain, such as biodiversity, are embedded within other sectoral policies**. Integration ensures that biodiversity considerations are included from the **early stages of policy development**, influencing objectives, actions, and outcomes in sectors like agriculture, energy, climate, forestry, to name just a few. In this, successful policy integration also leads to improved coherence between the policy domains.

While policy coherence aims to align existing policies, **policy integration embeds biodiversity goals into sectoral policies**, shaping their direction to inherently support biodiversity conservation, promote and support environmental goals. In many cases, sectoral policies fail to consider biodiversity objectives early on, **leading to reactive adjustments rather than proactive, integrated design**. This omission often arises due to prioritization of economic or sector-specific goals and the **lack of a systems-thinking approach to policymaking**, where the interconnectedness of biodiversity with other sectors is undervalued. In other words, we are failing to understand that ecosystems and the natural capital are the foundation of any kind of development. Eroding this capital leads, in the long term, to many structural problems, from economic to health impacts, affecting socio-economic development (IPBES, 2026).

3. Methodology

To evaluate policy coherence effectively, this report uses a dual approach that combines both *EU* and *local level* analyses:

For the EU level policy coherence analysis, we assessed the overarching policy frameworks to evaluate alignment among high-level policy objectives, outputs, and outcomes across sectors. This analysis of different policy documents, objectives, and actions from a strategic top-down perspective, provided a broader understanding of coherence across EU-level policies.

For the local level coherence analysis, we used different case studies to analyze how policies have been implemented in real-world settings and to identify where coherence has been achieved or where conflicts have arisen. Our two case studies provided valuable insights into sectoral interactions and helped us uncover practical barriers to policy coherence at a local and regional level.

Altogether this analytical framework offered us a comprehensive view of policy interactions across governance levels, scales, and sectors, supporting the development of recommendations to promote policy coherence and integration for biodiversity conservation.

3.1. EU level policy coherence analysis

For the EU level policy coherence analysis, we followed an analytical framework laid out by Nilsson et al. (2012), in order to assess the synergies and trade-offs between different policies. The framework is established in the field of research, and the strength of the framework is its easy applicability to coherence analysis in an inter-disciplinary research team. To better suit our purposes and to increase the robustness of analysis, we made specific changes to the original framework, and those changes will be outlined in what follows. The work consisted of four main steps (Figure 1).

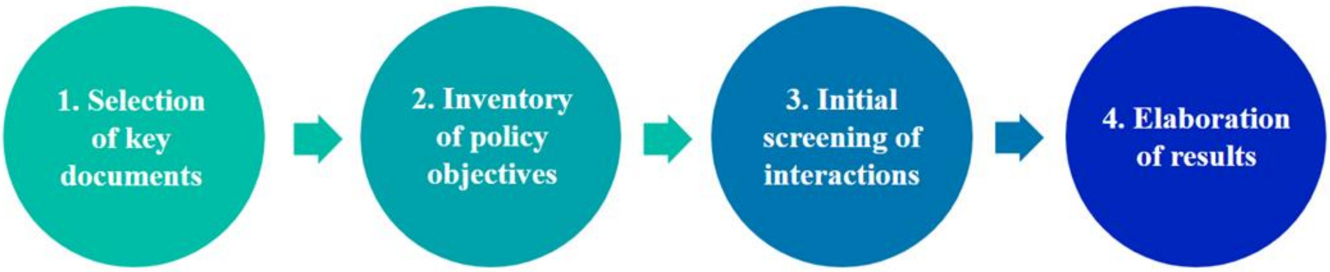


Figure 1: The four main steps of the EU level coherence analysis.

The **first step** of the work was the identification of key documents for each of the policy domains. We selected a total of 10 documents for the five policy domains (Table 1). This meant that each domain was analyzed based on one to three documents. The asymmetricity of the number of documents was a result of how each of them is governed; for example, EU biodiversity policy has a clear strategy that lays out the policy objectives and relevant legislation, whereas an all-encompassing strategy is missing for climate policy. For agriculture, the Common Agricultural Policy (CAP) for 2023-2027 was analyzed to contrast how monetary support for agriculture compares to the policy objectives of the Farm to Fork strategy.

Table 1: The key documents used to assess each policy domain

Biodiversity	Agricultural	Forest	Climate	Energy
EU Biodiversity Strategy for 2030	Farm to Fork Strategy; Common Agricultural policy 2023–2027	EU Forest Strategy for 2030	The European Green Deal; Fit for 55 - The European Green Deal delivering the EU'S 2030 climate targets; EU Climate Adaptation strategy 2021	EU's energy policy (based on Energy Union 2015); Current EU energy targets for 2030 (REPowerEU Plan); Energy Efficiency Directive (Directive (EU) 2023/1791 (EED)

The **second step** was the extraction of all policy objectives from each policy document. To reduce the number of policy objectives used in the coherence analysis, we only retained ones that were related to biodiversity (see Annex 1). By doing so, the number of policy objectives per domain was limited to a maximum of 28. After selecting the policy objectives, the interaction between each sectoral objective and each biodiversity objective was assessed through a structured expert-judgement process. An initial score was assigned on the basis of the wording of the policy objective, its legal and strategic context, and the likely direction of interaction at the level of objectives. The first round of scoring was undertaken separately for each policy domain by the members of the research team working on that domain. The resulting matrices were then internally reviewed to identify entries that required clarification, revision, or retention as uncertain. This means that the scoring process was not based on a single one-off judgement, but included an internal review stage before validation through the expert workshop.

In the **third step**, we performed an initial assessment of interaction between the sectoral policy objectives against the objectives outlined in the Biodiversity Strategy. As stated by Nilsson et al. (2012), the goal of this step is not to achieve an all-encompassing analysis of coherence across sectors but to identify key questions of synergies and trade-offs for further elaboration. This process was conducted individually for each policy area: Biodiversity versus agriculture, biodiversity versus forest policy, biodiversity versus energy, and biodiversity versus climate policies. We assessed the interactions between the objectives mapped in step two, analyzing synergies and trade-offs. To achieve this, we engaged experts from each relevant field and used a coding system to classify interactions: -1 for strong contradiction, -0.5 for weak contradiction, 0 for neutral impact, +0.5 for weak synergy, and +1 for strong synergy. If likely interaction could not be deduced based on the descriptions in the selected policy documents, we marked the interaction with a question mark for potential later elaboration. This was considered a justified deviation from the analytical framework by Nilsson et al. (2012) where uncertain interactions would be marked as 0. (see Annex 2)

A question mark was used only where the interaction could not be robustly inferred from the policy text alone. This applies particularly to objectives formulated in very broad terms, objectives whose biodiversity implications depend strongly on implementation design, or objectives that may generate different outcomes across contexts. In this analysis, the "?" category should therefore not be interpreted as neutral. Rather, it indicates that the available evidence at the level of policy objectives was insufficient to justify assigning a directional score with confidence.

For the **fourth step**, we performed a closer examination of policy coherence through an online workshop. We found this important to increase the robustness of our analysis. We identified experts from our networks working at the intersection of the selected policy domains. We approached the experts via an email invitation describing the purpose of our study and outlining terms of use for the data, including that the workshop participants would not be recognized in the final outputs of the project. A total of 25 of the contacted experts joined the workshop, whereas 20 also participated in breakout room work (Table 2). The total duration of the workshop was 2,5 hours while the breakout room work lasted approximately an hour. The workshop was designed as a validation and refinement step for the initial scoring, rather than as a formal Delphi process. Participants did not complete repeated anonymous rounds of scoring aimed at convergence. Instead, the workshop was used to examine the robustness of the preliminary assessments, identify cases where objective-level coherence diverged from likely implementation effects, and highlight scores that required reinterpretation or more cautious framing. Multiple iterations of scoring were therefore possible within the research team before finalizing the analysis, but the process should be understood as a structured expert assessment with internal review and workshop validation, rather than as a formal Delphi exercise.

Table 2: Participants of the workshop

Total participants	Agriculture vs. biodiversity	Forest vs. biodiversity	Climate and energy vs. biodiversity
25	7	7	6

In the workshop, we presented the results of the initial coherence analysis to the participants and divided the experts into three breakout rooms. As we found that the initial results for climate and energy policy were interesting to assess in tandem, we conjoined the discussion on those in a single breakout room. As a result, we had three breakout rooms: ***i) biodiversity versus agriculture, ii) biodiversity versus forest policy and iii) biodiversity versus climate and energy policy.*** Workshop input was gathered via the Miro board tool and recordings of breakout room discussions. Participants were informed through a privacy statement that discussions would be recorded and anonymized. The analysis incorporated AI-generated transcripts from Microsoft Teams. The discussion was arranged based on the guiding questions laid out in the analytical framework by Nilsson et al. (2012), but changes were made to streamline the work. The main guiding questions were as follows:

a. Key synergies and conflicts:

- What are the main policy interactions at the levels of objectives, instruments, and implementation that demonstrate synergies or conflicts?
- How do these interactions manifest in practice (e.g., supportive, neutral, or conflicting)?
- How strong are these interactions, and what factors influence their outcomes?
- What is the level of confidence in the analysis of these interactions?

b. Opportunities for enhancing synergies and mitigating conflicts:

- Where can efforts be made to reduce policy conflicts and foster more cooperative interactions between policies?
- What specific opportunities exist to strengthen policy coherence and promote synergies among different sectors or areas?

c. Practical and concise recommendations:

- What concrete recommendations can be provided for various stakeholders across a range of issues, including research and monitoring, institutional reforms, and process improvements (e.g., incorporating evidence-based approaches and systems thinking into decision-making)?

The interpretation of policy interactions in this deliverable was informed not only by the wording of the selected EU policy documents, but also by relevant scholarly literature on policy coherence, biodiversity governance, and sector-specific trade-offs. This is particularly important where a formal policy objective appears broadly aligned with biodiversity at the strategic level, while published evidence points to significant implementation risks or structural tensions in practice.

3.2. Local level policy coherence analysis

The final effect of European policies on biodiversity becomes more visible in the implementation phase. Specific local level incoherences in European policies related to biodiversity often arise from discrepancies between the goals set at the EU level and the realities of national and local implementation. These incoherences reflect challenges in aligning overarching strategies with diverse regional priorities, resources, and governance structures.

Specific local incoherences in European policies related to biodiversity often arise from discrepancies between the goals set at the EU level and the realities of national and local implementation. These incoherences reflect challenges in aligning overarching strategies with diverse regional priorities, resources, and governance structures. The local governments directly face administrative, social, economic and ecological mismatches of policies across the scales. In the consequence, they often prioritize economic development, such as urban expansion or infrastructure projects, over biodiversity conservation, and favour short-term economic gains, such as agriculture intensification, at the expense of long-term ecological sustainability. This contrasts with EU strategies like the EU Biodiversity Strategy for 2030, which emphasizes long-term ecosystem restoration and resilience. Furthermore, also variability in law enforcement across Member States due to lack of resources or political will, and decentralization of decision making, with significant variation in how biodiversity goals are interpreted and pursued, may lead to failures in biodiversity endorsement.

Therefore, it seemed reasonable to deepen analysis of how the directives are operationalized regionally, nationally and locally to fully understand the (in)coherence of policies. For the local analysis, we identified areas of policy conflict and searched for cases with reference to four areas: agriculture, forestry, climate and energy policy. For the analysis, we selected two cases to exemplify what challenges there are for the implementation of EU level strategic objectives at the local level.

4. Results

In this section, we will review the findings of the coherence analysis for each of the examined policy domains separately, starting with results from the document analysis, supplementing them with the workshop findings, and, where applicable, a local level case study.

4.1. EU level policy coherence analysis

For the EU level, a policy coherence analysis was performed between the biodiversity, agricultural, forestry and energy and climate policy domains. We identified the synergies (where policies reinforce each other) and trade-offs (where policies conflict or undermine each other) across objectives, outputs, and outcomes of the selected key documents used to assess each policy domain.

4.1.1. Agricultural policy versus biodiversity policy

The Common Agricultural Policy (CAP) and the Farm to Fork Strategy exhibit substantial potential for alignment with the EU Biodiversity Strategy 2030 (Table 3). Both agricultural policies and the biodiversity strategy share objectives centered on sustainability, nature conservation, and promoting systemic change, reflecting opportunities for synergy. However, these policies also reveal certain trade-offs and challenges that require careful navigation to ensure coherence across goals and actions.

A primary area of **synergy** lies in the shared emphasis on nature protection and restoration. CAP eco-schemes, for example, provide financial incentives for sustainable farming practices such as agroecology and organic farming, which directly support biodiversity by reducing habitat degradation and improving soil and water health. Similarly, the Farm to Fork Strategy's aim to halve pesticide and fertilizer use by 2030 aligns with biodiversity goals by mitigating pollution and fostering healthier ecosystems. These objectives demonstrate clear alignment between agricultural sustainability and biodiversity conservation.

Table 3: Coherence analysis of agricultural and biodiversity policy objectives

Objectives	Farm to Fork					Common Agricultural Policy 2023-2027			
BD2030	Sustainable Food Production	Reducing Food Waste	Healthy and Sustainable Diets	Reducing the Use of Hazardous Chemicals	Promoting Sustainable Food Systems	Economic *fair income* *competitiveness* *food value chain*	Environment & Climate *climate change* *natural resources* *biodiversity*	Social / Rural *generational renewal* *rural jobs & growth* *food & health*	Cross-cutting *knowledge & inovation*
Protecting nature in the EU (Pillar 1)	0.5	0.125	0.375	1	1	?	1	0.5	1
Restoring nature in the EU (Pillar 2)	0.72	0.35	0.34	0.77	0.5	?	0.8	0.4	0.84
Enabling transformative change (Pillar 3)	1	1	1	1	1	?	1	0.5	1

Synergies are highlighted with shades of green, uncertain interactions marked with question mark. Despite potential synergies at objective level, implementation challenges may arise in practice where agricultural productivity conflicts with ecological priorities.

Another key intersection between these policies is their focus on knowledge production and innovation. Both agricultural and biodiversity strategies aim to enhance the monitoring and reporting of environmental indicators. CAP's framework includes systems to track biodiversity on agricultural lands, while the Farm to Fork Strategy promotes research and innovation in sustainable food production and circular economy practices. These shared goals suggest a mutual reinforcement of efforts to advance data-driven approaches to conservation and sustainability. Governance also emerges as an area of potential synergy. The CAP includes participatory elements, involving farmers and stakeholders in the design and implementation of eco-schemes and agri-environmental measures. This inclusivity aligns with the biodiversity strategy's emphasis on stakeholder engagement, offering opportunities for integrated governance frameworks that address both biodiversity and agricultural objectives.

Despite these synergies, challenges arise at national and sub-national level where agricultural productivity goals conflict with ecological priorities. CAP subsidies, for instance, often prioritize productivity and competitiveness, which can incentivize intensive farming practices. These practices may lead to habitat loss and soil degradation, directly undermining biodiversity objectives. Similarly, while the Farm to Fork Strategy focuses on sustainable food systems, its emphasis on food security might drive agricultural expansion into areas critical for biodiversity. Regional variation in implementation also complicates coherence. Agricultural policies are applied differently across EU Member States, reflecting local economic and ecological conditions. In regions with intensive agriculture, balancing productivity with biodiversity conservation becomes particularly challenging. This variability underscores the importance of tailored approaches that reflect local contexts while maintaining overarching EU biodiversity goals.

Further complexities arise from potential conflicts in climate adaptation measures. Certain CAP-supported initiatives, such as bioeconomy projects and bioenergy crop production, may exert additional pressure on marginal lands, often vital for biodiversity. Similarly, the Farm to Fork Strategy's promotion of aquaculture and alternative protein sources could indirectly impact aquatic and terrestrial ecosystems, necessitating careful management to avoid unintended consequences. To address these challenges and strengthen coherence, several policy recommendations emerge. Integrated land-use planning offers a proactive approach to balancing agricultural productivity, biodiversity conservation, and climate adaptation objectives. Developing frameworks that explicitly incorporate biodiversity goals at all levels of governance is essential for ensuring coherence across policies. Improved monitoring and reporting systems are equally important. Enhancing data collection on the impacts of agricultural activities on biodiversity would allow for more accurate assessments of policy effectiveness and inform necessary adjustments. Financial mechanisms such as Payments for Ecosystem Services could be expanded to incentivize biodiversity-friendly farming practices, while reallocating CAP funds toward agroecological and organic farming would better align financial incentives with biodiversity objectives. Knowledge sharing and capacity building also play a critical role in promoting coherence. Strengthening collaboration among researchers, policymakers, and environmental managers can facilitate the exchange of best practices and innovative solutions. Farmer education programs should be expanded to build support for biodiversity-friendly practices and address concerns about the economic implications of sustainable farming. Finally, inclusive decision-making processes are vital for ensuring policy coherence. Establishing participatory mechanisms, such as citizen panels or multi-stakeholder platforms, would allow diverse voices to contribute to the design and implementation of agricultural policies. These platforms could help negotiate priorities and foster broader societal support for biodiversity objectives within agricultural contexts.

The discussion during the expert workshop highlighted significant challenges in aligning agricultural policies with biodiversity goals, emphasizing the need for more nuanced and context-sensitive approaches. Participants agreed that policy coherence is complex, especially when translating high-level objectives into effective on-the-ground implementation. While policies may appear aligned at the EU level, conflicts often arise during national and local application due to differences in priorities, financial mechanisms, and local realities.

One of the central issues discussed was the role of the CAP in supporting biodiversity. Currently, CAP disproportionately funds business-as-usual practices that hinder transformative change. Financial mechanisms within CAP often conflict with biodiversity objectives, such as reducing nutrient losses and meeting restoration targets. However, participants noted that redirecting CAP funding could incentivize sustainable farming practices and support ecological restoration. The success of such a shift depends on designing policies that effectively integrate environmental and economic objectives, ensuring farmers can maintain viable incomes while adopting biodiversity-friendly practices.

A recurring theme was the distinction between high-level policy objectives and their implementation through specific instruments. While strategies like Farm to Fork provide a broad framework, legally binding instruments, such as the Nature Restoration Law, have a more tangible impact on biodiversity outcomes. The participants stressed the need for a focus on instrument-level coherence, as this is where synergies and conflicts become most apparent.

Economic and behavioural factors also play a critical role in determining the success of biodiversity policies. Farmers' income and competitiveness often take precedence over environmental goals, particularly in systems where subsidies prioritize production over sustainability. Market dynamics further complicate this relationship, as consumer demand heavily influences farmers' decisions. Without a shift in consumer preferences and market incentives, farmers may be reluctant to adopt biodiversity-friendly practices.

Real-life examples, such as challenges in the Danube Delta and the UK's transition to ecosystem payment models, illustrated these dynamics. In the Danube Delta, biodiversity strategies have faced practical barriers to implementation, while in the UK, shifting subsidies from production to ecological outcomes has shown promise but raised concerns about farmers' financial stability. These examples underscore the importance of tailoring policies to local contexts while maintaining overarching goals.

The participants also identified critical gaps in the policy landscape, noting the underrepresentation of instruments like seed laws, soil strategies, and regulations on fertilizers and pesticides. These gaps limit the effectiveness of coherence analyses, which often oversimplify the complex interactions between policies. Tools like cognitive mapping and matrices were seen as useful starting points but insufficient to capture the full range of synergies, conflicts, and nuances in policy interactions. To address these challenges, participants proposed several key approaches. Redirecting CAP funding toward ecological farming practices and restoration projects was seen as essential. Strengthening legally binding instruments, such as the Nature Restoration Law, was also emphasized as a way to ensure meaningful biodiversity outcomes. Engaging farmers and local stakeholders in policy design was highlighted as crucial for bridging the gap between high-level objectives and ground-level realities. Moreover, systemic changes that align agricultural and biodiversity policies with broader food systems and market reforms were deemed necessary to achieve transformative change.

The discussion concluded with a consensus that while tools like coherence analyses are valuable, they must be complemented by detailed, field-level data and stakeholder insights. Only by integrating these perspectives can policies effectively balance economic, environmental, and social objectives to foster both agricultural sustainability and biodiversity conservation.

4.1.2. Forest policy versus biodiversity policy

We found mostly synergies or neutral interactions between forest and biodiversity policy objectives (Table 4). Specifically, both the EU biodiversity and forest strategies included nature protection and restoration as their major goals. In addition, forest policy objectives related to improved knowledge production via better forest monitoring, reporting and data collection as well as a strong research and innovation agenda appeared synergistic with the objectives of the biodiversity strategy. The forest strategy also included an explicit policy objective related to an inclusive and coherent EU forest governance framework which appeared highly synergistic with all of the policy objectives of the first pillar of the biodiversity strategy.

The EU Forest strategy aimed at stepping up the implementation and enforcement of various existing EU acquis, the possible synergies and trade-offs of which we were unable to assess (e.g., the Habitats and Birds Directives, the Environmental Liability Directive, the Environmental Crime Directive, the Strategic Impact Assessment Directive and Environmental Impact Assessment Directive, directive on public access to environmental information, EU Timber Regulation, Forest Law Enforcement Governance and Trade Regulation).

We found specific synergistic policy objectives present in the biodiversity and forest strategy. For example, the forest strategy had a policy objective for creating a new alliance between the tourism professionals and foresters. The promotion of alternative sources of income for forest environments would potentially reduce the pressure to produce timber for income and allow more forests to reach old age, thus benefiting biodiversity. Likewise, the forest strategy includes an objective for advice and technical guidance on the development of ecosystem service payment scheme which would also allow for new sources of income for forest owners. In addition, a policy objective for a legally binding instrument for ecosystem restoration was present in both the forest and biodiversity strategy. This policy objective has since been instrumentalized as the Nature Restoration Law. It is noteworthy that the EU does not have formal competency in forest policy, but does in issues related to climate, environment and agriculture. Thus, the Member States have freedom in national forest policy, but specific forest-related issues become directly part of the EU's competence. This is visible in the Nature Restoration Law where national forest policy is likely to be significantly affected by EU legislation. Due to the EU's lack of competence in forest policy, however, there is high variation across different Member States for forest policy priorities. This also means that while the EU forest policy objectives appear synergistic with biodiversity objectives, it cannot be concluded that forest and biodiversity policies would be synergistic across the Member States.

Table 4: Aggregated results of initial screening of interactions between forest and biodiversity policy objectives

Objectives / EU Biodiversity Strategy for 2030	EU Forest Strategy for 2030: Supporting the socio-economic functions of forests for thriving rural areas and boosting forest-based bio-economy within sustainability boundaries	and enlarging EU's forests to combat climate change, reverse biodiversity loss and ensure resilient and multifunctional forest ecosystems	Strategic forest monitoring, reporting and data collection	A strong research and innovation agenda to improve our knowledge on forests	Inclusive and coherent EU forest governance framework	Stepping up implementation and enforcement of existing EU acquis
Protecting nature in the EU (Pillar 1)	0.25	0.62	0.58	0.41	1	?
Restoring nature in the EU (Pillar 2)	0.14	0.21	0.15	0.1	0.39	?
Enabling transformative change (Pillar 3)	0.35	0.49	0.42	0.19	0.31	?

Synergies are highlighted with shades of green, uncertain interactions marked with question mark. Despite potential synergies at objective level, implementation challenges may arise in practice where forest productivity conflicts with ecological priorities.

In the workshop discussion, it was importantly noted that regional differences in forestry affect coherence between EU Member States. Especially those countries with strong forest industries have to balance multiple expectations on forests, including intensive wood production, carbon sequestration and storage, recreation, and biodiversity. It was highlighted that economic compensation schemes could relieve foresters' pressure for logging, Natura 2000 and Payments for Ecosystem Services (PES) being examples of such. It was also brought up that some aspects of climate change adaptation could interfere with biodiversity objectives. For example, renewing forests with tree species that are more resilient to climate change could be partly at odds with the goal of protecting old growth forests.

As for policy recommendations, it was suggested that development of coordinated land use planning strategies that balance agriculture, forestry and conservation objectives could be used to assess coherence pro-actively. Transferring and sharing knowledge between researchers, environmental managers and policy makers was highlighted as important for promoting coherence. In addition, the experts stated that to strengthen the social license for forest policy, a diversity of voices including society at large should be involved in decision-making processes. An example of this could be citizen panels where the priorities of forest policy and design of policy instruments is negotiated in collaboration with a panel representing citizens who aim to deliberate the questions from a generally utilitarian perspective.

4.1.3. Energy and climate policy versus biodiversity policy

Increasing the EU's climate ambition for 2030 and 2050, advanced by the European Green Deal, was assessed as having mixed interactions with biodiversity objectives (Table 5). It could not be deduced, based on the description offered in the Green Deal alone, whether the objective for a European climate law would have negative or positive interactions with some of the biodiversity objectives, such as placing 30 percent of the EU's land and seas under legal protection. Objectives related to supplying clean, affordable, and secure energy were highlighted as having a potentially negative impact, as the focus on energy security can conflict with biodiversity priorities. The objective of developing a power sector that is based largely on renewable sources, complemented by the rapid phasing out of coal and decarbonizing gas while ensuring that the EU's energy is secure and affordable may conflict with biodiversity objectives especially if renewable energy is to be produced from forest biomass, thus increasing the pressure to extract more wood from forests. Likewise, the objective of increasing offshore wind production may, depending on the implementation, contradict biodiversity objectives. The goal of increasing the EU's climate ambitions positions clean energy as a core strategy, much like biodiversity conservation, is integral to achieving climate goals. However, when the emphasis shifts solely toward ensuring a secure supply of clean energy, the approach becomes more complex and can have unintended negative consequences. Workshop participants noticed a mix of positive and negative biodiversity impacts in case of the objectives "Increasing the EU's climate ambition for 2030 and 2050" and "Supplying clean, affordable and secure energy", resulting from analysis of The European Green Deal. Participants confirmed that while the overarching goals of the strategy provide potential, their generic nature lacks the specificity needed to guide the development of nature-positive policy instruments. More concrete and targeted actions, like those suggested under "Supplying clean, affordable and secure energy", may offer greater clarity but carry the risk of unintended negative consequences if not carefully managed.

Fit for 55 is mostly synergic with biodiversity goals. A specific clarification is needed regarding the interpretation of the Land Use, Land-Use Change and Forestry regulation (LULUCF), which is included in Fit-for-55 and implies the legally binding –55% GHG emissions target by 2030. Although LULUCF contributes to climate-accounting integrity and can create incentives for improved land management, these safeguards should not automatically be interpreted as biodiversity-positive at the level of objectives. The regulation is primarily designed to secure accounting rules and emission-removal balances. Whether biodiversity benefits emerge depends on the concrete land-management pathways chosen in implementation. For this reason, LULUCF should be understood in this analysis as conditional or at best biodiversity-neutral unless accompanied by explicit biodiversity-positive design and implementation measures.

In the 2021 Climate Adaptation Strategy, we identified several potential synergies with the objectives of the Biodiversity Strategy. For instance, the goal of advancing scientific knowledge to support adaptation decision-making aligns closely with the Biodiversity Strategy's objective of establishing a long-term research agenda for biodiversity within the Horizon Europe program. Additionally, the Climate Adaptation Strategy's emphasis on nature-based solutions presents an opportunity to simultaneously promote biodiversity and climate adaptation, depending on how these solutions are implemented.

When considering broader initiatives like "international action for climate resilience", the anticipated impact on biodiversity remains uncertain. Much depends on how effectively these actions are implemented. While these efforts could theoretically yield positive outcomes, their vague and general nature often weakens their effectiveness. Broad international initiatives face additional challenges, including inconsistent implementation across countries, lobbying pressures, and competing national priorities, all of which dilute their potential impact. In summary, while there is potential for positive effects, the success of these efforts depends heavily on clear implementation strategies and consistent application across nations. Without these, the general and non-specific nature of current initiatives risks falling short of their biodiversity and climate objectives. Based on the results of the workshop, it became clear that current climate adaptation strategies focus heavily on carbon sequestration, neglecting the broader ecological role of biodiversity in climate regulation. This leads, for example, to the adoption of simplified nature-based solutions that often degrade biodiversity, creating monocultures or poorly functioning ecosystems. A methodology for quantifying and valuing biodiversity's role in CO_2 reduction could guide more sustainable climate policies.

Table 5: Aggregated results of initial screening of interactions between climate and biodiversity policy objectives

Objectives / EU Biodiversity Strategy for 2030	The European Green Deal		Fit for 55	EU Climate Adaptation strategy 2021			
	Increasing the EU's climate ambition for 2030 and 2050	Supplying clean, affordable and secure energy	Regulation on Land Use, Forestry and Agriculture (LULUCF)	Smarter adaptation: improving knowledge and managing uncertainty	More systemic adaptation: Support policy development at all levels	Faster adaptation: Speeding up adaptation across the board	Stepping up international action for climate resilience
B1. Protecting nature in the EU (Pillar 1)	0	-0.38	0.25	0.63	0.7	0.5	0.19
B2. Restoring nature in the EU (Pillar 2)	0.17	-0.02	0.15	0.31	0.49	0.21	0.24
B3. Enabling transformative change (Pillar 3)	0.19	-0.25	0	0.31	0.63	0.31	0.28

Note: Synergies are highlighted with shades of green, and conflicts with red. Positive values associated with climate-policy objectives should be interpreted as only potential, as positive outcomes on the ground strongly depend on biodiversity-sensitive implementation of climate strategies.

The European energy policy itself is grounded in the Energy Union Strategy, which aims to provide a secure, sustainable, competitive and affordable energy supply for EU households and businesses.

The policy framework primarily focuses on technological, operational and administrative targets, with little to no consideration for biodiversity. In practice, when energy security takes precedence, other objectives, such as sustainability and biodiversity conservation, are often overshadowed or deprioritized (Table 6). Hence, in coherence analysis we focused on renewable energy which targets to decarbonize the economy, thus retaining links to environmental issues, and moving towards a low-carbon economy in line with the Paris Agreement.

Energy policies often have significant adverse impacts on biodiversity. While "clean" technologies like biofuels and solar energy are often championed as sustainable solutions, they can entail significant environmental trade-offs. For example, large-scale solar installations can disrupt local ecosystems, causing deforestation, degradation, and fragmentation of habitats or soil destruction. Also, based on the comments during the workshop, there is a clear distinction between rooftop solar and ground-mounted solar farms. Rooftop solar generally avoids additional land take and is substantially less problematic from a biodiversity perspective. By contrast, ground-mounted solar developments often require fencing, alter habitat structure, fragment ecological connectivity, and may reduce accessibility for non-volant species. Any positive interpretation of solar power in relation to biodiversity objectives is therefore only defensible in clearly low-conflict cases, such as rooftop deployment or installation on already sealed or heavily degraded surfaces.

Well-planned solar farms can incorporate some biodiversity-friendly designs, such as planting native vegetation or creating pollinator habitats beneath solar panels. Ambiguities also exist regarding the impact of ocean energy initiatives, like offshore wind farming, on nature, alongside numerous examples of hydropower causing habitat and species degradation. While renewable energy sources like biofuels and biomass appear to align with biodiversity goals, their operational practices often result in biodiversity loss (e.g., habitat destruction and land-use change). Existing safeguards, such as restrictions on acquiring valuable land for biofuel production, often fail in practice due to the influence of profit motives and inadequate enforcement mechanisms.

Table 6: Aggregated results of initial screening of interactions between energy and biodiversity policy objectives

Objectives	Renewable Energy. Decarbonise the economy and move towards a low-carbon economy in line with the Paris					
EU Biodiversity Strategy for 2030	Share of renewable energy	Offshore wind farming	Biomass, biofuels & hydrogen	Solar power	Ocean energy	Hydropower
Protecting nature in the EU (Pillar 1)	-0.69	-0.63	0.02	0.31	-0.88	-1
Restoring nature in the EU (Pillar 2)	-0.19	-0.27	0.03	-0.02	-0.27	-0.27
Enabling transformative change (Pillar 3)	-0.19	-0.19	0.01	-0.16	-0.19	-0.19

Note: Synergies are highlighted with shades of green, and conflicts with red. Synergies between solar power and nature protection specifically refers to rooftop solar, not to ground-mounted solar farms.

The expert **workshop** confirmed the general observation that current energy policies largely ignore biodiversity concerns, often intentionally. Key examples include energy transmission infrastructure, which removes habitats, and renewable energy sources like biofuels and biomass, which, despite appearing aligned with biodiversity goals, are operationally causing substantial harm. Mitigating measures, such as restrictions on acquiring valuable land for biofuel production, are in place but are often undermined by profit-driven pressures. To address these challenges, participants emphasized the need for societal dialogue through roundtable discussions to determine sustainable solutions. These discussions should focus on identifying lands that can be developed without critical biodiversity loss, while prioritizing protection for ecologically important areas.

Impact assessments, a critical tool for evaluating policy consequences, are frequently conducted with a bias toward justifying investments rather than objectively weighing environmental and social costs. This approach becomes particularly problematic when significant financial resources are at stake, as economic gains are often prioritized over biodiversity and long-term environmental sustainability. Thus, it is critical to ensure that impact assessments are rigorous, unbiased, and prioritize environmental health alongside economic growth, and to implement a system where cascading effects of energy policies—like potential biodiversity loss or ecosystem disruption—are fully considered. This could be made a formal part of policy requirements, particularly for high-impact projects.

Furthermore, even as related policy climate and energy, often lack integration, with multiple initiatives overlapping or functioning in silos. This fragmented approach neglects the cumulative effects of policies, resulting in missed opportunities to create synergies and avoid unintended harm. A coherent framework is essential to ensure that policies collectively contribute to biodiversity conservation and climate resilience, rather than working at cross-purposes.

The shift to renewable energy in one region often displaces environmental burdens to other parts of the world, particularly to countries where materials for solar panels, wind turbines, and batteries are extracted, manufactured, or disposed of. This transfer of impact exacerbates ecological degradation and social inequalities in those regions. A more holistic approach is needed to ensure that the transition to renewable energy is equitable and sustainable, minimizing its global footprint.

Biodiversity is often treated as an incidental casualty of climate and energy policies rather than a fundamental element of resilience and adaptation strategies. This underrepresentation limits its perceived importance and results in policies that fail to capitalize on biodiversity's role in stabilizing ecosystems and mitigating climate change. Incorporating biodiversity as a central policy pillar could enhance the effectiveness of climate actions and provide long-term environmental and social benefits. The absence of a system to economically value the role of biodiversity diminishes its visibility and perceived importance in policy-making processes. Developing mechanisms to assign economic value to biodiversity could help integrate it into climate and energy decisions, ensuring that its benefits are fully recognized and preserved.

Current EU energy efficiency regulations emphasize product-level efficiency, such as appliances or vehicles, without addressing overall energy consumption patterns. For example, artificial lighting regulations fail to consider the broader issue of light pollution, which adversely impacts nocturnal biodiversity and ecosystems. Effective policies must go beyond technical efficiency to include measures that address consumption behavior and its environmental consequences.

Climate and energy policies are generally designed and implemented at national or transnational levels, while biodiversity conservation and restoration require localized or regional actions tailored to specific landscapes. This scale mismatch hampers the effectiveness of biodiversity initiatives within broader climate frameworks. Efforts should focus on fostering better alignment between these scales, leveraging local expertise and involvement while ensuring coherence with national and global goals.

4.2. Local level policy coherence analysis

The challenge of aligning local biodiversity policies with broader sustainability goals is particularly visible in local scales where economic priorities and environmental conservation urgency meets on the ground, i.e. in cities like Łódź, Poland, and natural regions such as the Danube Delta in Romania. These cases reflect a broader trend where local-level decision-making often prioritizes short-term economic gains, undermining long-term ecological resilience and biodiversity protection. It also results from nexus problems arising when multiple development goals, with unequal revenue values, are to be fitted in particular, limited area, and when concrete lobbies are in real power over a land.

In Łódź, the urban expansion and increasing emphasis on renewable energy highlight the growing tension between development goals and biodiversity conservation. Agricultural lands in urban and peri-urban areas, often the last refuges for wildlife, are being repurposed for solar farms. These projects, labeled as "temporary" and "low impact," fragment habitats, block wildlife corridors, and exacerbate soil degradation. Weak enforcement of environmental regulations and permissive spatial planning mechanisms further contribute to biodiversity loss. This mirrors broader patterns in urbanized regions where land-use decisions frequently prioritize development at the expense of ecosystem integrity (WWF, Łódź Planning Authority Reports, and EU Biodiversity Strategy Analysis).

Similarly, in the Danube Delta, the expansion of agriculture is supported by national legislation and European subsidies, prioritizing farmland over wetland conservation. These incentives perpetuate the conversion of ecologically critical areas into agricultural land, resulting in habitat fragmentation and a significant loss of biodiversity. Wetlands, which provide essential ecosystem services like flood control and water purification, are increasingly degraded. While initiatives such as the EU Biodiversity Strategy for 2030 advocate for wetland restoration, their effectiveness is undermined by entrenched legal and financial frameworks that favor agricultural development (WWF Romania, European Commission CAP Reports, and Danube Delta Strategy).

These cases underscore a broader lack of integration between local, national, and European policies. Without cohesive planning frameworks and stronger mechanisms to enforce environmental protections, biodiversity will remain at risk in both urban and natural settings. This misalignment not only accelerates habitat loss but also jeopardizes long-term environmental sustainability and the resilience of local communities.

4.2.1. Case Study: the City of Łódź (Poland) - Climate and Energy vs Biodiversity

Reference Policies: Spatial planning (Local Plans), the Green Deal, and the promotion of renewable energy (Directive (EU) 2018/2001

Spatial planning in Polish cities is structured around three key documents: **i) City Master Plan** - a document outlining general development directions and identifying functional areas; ii) **Local Plans** - highly detailed and potentially restrictive documents that specify conditions for land development or protection; iii) **Building Conditions** – a non-binding document that becomes a powerful tool for land transformation in the absence of a Local Plan Urbanization has led to deteriorating environmental conditions, including a declining groundwater table.

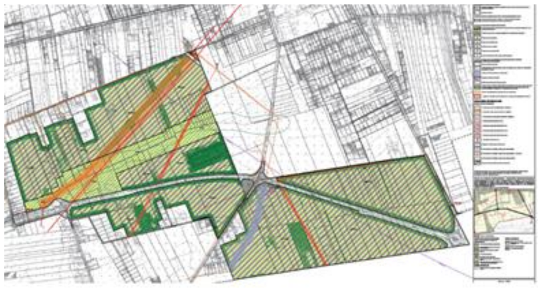
Suburban agriculture often provides insufficient income for landowners, prompting them to seek alternatives. In the absence of legal restrictions, many sell their land to investors, fueling suburban sprawl. When development is restricted by regulations, landowners frequently challenge these restrictions in court, demanding compensation for lost opportunities. Polish law is ineffective in prosecuting environmental crimes and lenient regarding nature protection. To avoid costly litigation, cities often diversify development options for agricultural land to satisfy landowners. A recent strategy involves permitting solar power plants on agricultural land.

These projects are labeled "temporary", with their environmental impact deemed "low" and "reversible." However, initiatives like the Green Deal and Directive (EU) 2018/2001, which promote renewable energy and subsidize land conversion, have accelerated this trend. In urbanized areas, agricultural land often serves as the last refuge for biodiversity, regardless of formal conservation status. Permitting solar farms under local plans strips critical habitats, fragments landscapes, blocks green corridors, and accelerates soil degradation.

For example, figure 2 highlights an agricultural area in southeastern Łódź. This site, already disrupted by expressways, functions as a wildlife corridor and habitat for species such as European hares, roe deer, wild boar, and birds of prey. Newly adopted local plans designate this area for solar energy production (hatched area), threatening to isolate remaining populations within the city. Solar farms would fence off agricultural land, further fragmenting habitats and restricting wildlife access to essential resources.

This local case reinforces an important conclusion of the EU-level analysis: renewable-energy objectives cannot be treated as automatically synergetic with biodiversity conservation. While decarbonisation goals may be strategically aligned with biodiversity in broader terms, the coherence assessment must distinguish between different implementation models. In the case of solar energy, the Łódź example confirms that ground-mounted installations can directly conflict with conservation objectives through habitat conversion, fencing, and fragmentation.

A. City of Łódź (Poland) blue-green network map and a site located right on the city boundary designated for solar energy production marked with arrows.



B. The area designated for solar energy production closes completely the entry point if implemented.

C. The land use of the site

Figure 2: The map of the city of the City of Łódź (Poland) blue-green network and the location of a site designated for solar energy production

4.2.2. Case Study: The Danube Delta (Romania) – Agriculture and Biodiversity

Reference Policies: EU Common Agricultural Policy (CAP), National Legislation on Land Use (Romania), EU Biodiversity Strategy for 2030

Land management in the Danube Delta reflects conflicting objectives, with agricultural development often prioritized over environmental protection. Policies supporting agriculture include: **National Land Use Laws**: Legislation prohibits the reconversion of agricultural land into wetlands, reinforcing land use changes initiated during the communist era; **EU Common Agricultural Policy (CAP)**: Subsidies introduced after Romania's EU accession in 2007 promote the transformation of wetlands into farmland. For example, in 2023, €4.5 million in EU subsidies were allocated to convert 36,000 hectares of reeds into farmland. Approximately 40,000 hectares of wetlands have already been converted into agricultural land, resulting in the loss of critical biodiversity (Figure 3).

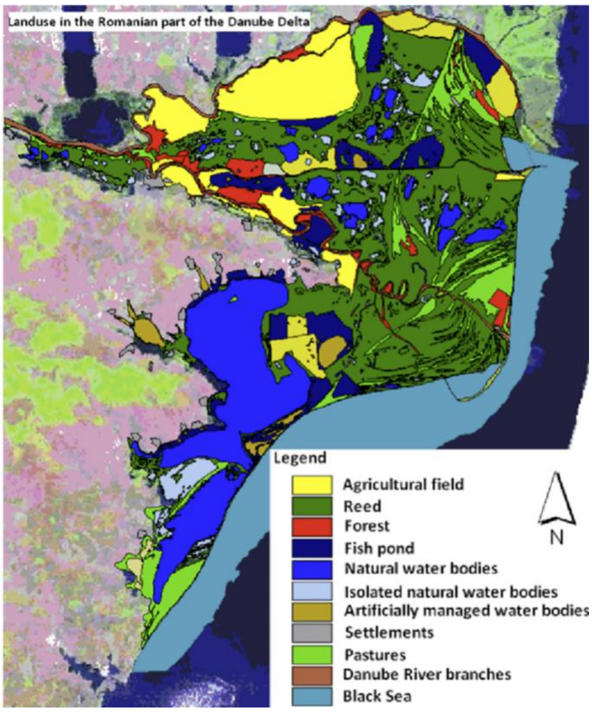


Figure 3: Danube Delta land cover changes from wetlands to agriculture

Agricultural development fragments ecosystems, disrupts green corridors, and isolates wildlife populations. Wetlands, which serve as essential habitats, are particularly at risk. Farms in the Delta benefit from significant economic incentives. For instance, a 900-hectare farm generates €1.8 million annually, incentivizing further land conversion; Landowners are often motivated by short-term gains, overlooking the long-term environmental costs. Soil fertility in reclaimed agricultural areas has collapsed, while fish populations crucial to local livelihoods have declined. Wetland loss reduces ecosystem services such as flood control and water purification, further threatening the region's resilience (WWF Danube Delta Overview)

Efforts to mitigate these impacts include EU initiatives under the Biodiversity Strategy for 2030, emphasizing wetland restoration and sustainable land management. However, these efforts are undermined by the ongoing financial and legislative support for agricultural development.

5. Conclusions & Recommendations

Aligning sectoral and conservation policies is essential for creating long-term socio-economic viability, enabling sectors to develop more effective solutions to interlinked environmental and socio-economic challenges. Based on our analysis of policy coherence, agricultural, forest and climate, EU policies exhibit substantial alignment with the Biodiversity Strategy for 2030, while energy policies presented several trade-offs, especially in relation to energy security. The Common Agricultural Policy (CAP), the Farm to Fork Strategy, and the EU Forest Strategy 2030 present potential synergies with biodiversity objectives, with Potential trade-offs likely were productivity goals conflict with ecological priorities. The EU Climate Adaptation strategy and Fit for 55 also exhibit potential for synergies with biodiversity objectives, whereas the European Green Deal presents more mixed results. Energy policies such as the EU energy policy, REPowerEU Plan, and the Energy Efficiency Directive have clearer trade-offs with biodiversity at objective level.

EU policies in the agriculture and forest sectors show potential synergies with biodiversity objectives, but their actual effects largely depend on how these policies are implemented in practice. A similar pattern can be observed in the climate sector, where potential synergies also exist, although concrete outcomes remain strongly implementation-dependent; at the same time, some trade-offs may arise, particularly in relation to energy security. By contrast, the energy sector shows clearer trade-offs with biodiversity objectives, as current policies do not sufficiently address the biodiversity impacts of renewable energy development.

Importantly, alignment of strategic general goals at the EU level does not necessarily mean a synergic implementation in practice, with objectives not always translating into effective, coordinated implementation, especially when considering the national and local levels. This consideration is central to the correct interpretation of the findings presented in this deliverable. The analysis assesses coherence at the level of stated policy objectives. However, some objectives that appear broadly compatible at a strategic level may still generate significant biodiversity risks when translated into concrete implementation choices. For example, CAP subsidies often prioritize productivity and competitiveness, which can incentivize intensive farming practices. While the CAP includes instruments that could in principle support biodiversity objectives, these opportunities depend strongly on the ambition, design, and implementation of the policy architecture. In particular, Pe'er et al. (2022) argue that the post-2023 CAP contains potential entry points for biodiversity action, but does not by itself ensure biodiversity-positive outcomes, especially where productivity, income support, and competitiveness remain dominant drivers of implementation. Similarly, biomass-oriented bioeconomy strategies can lead to trade-offs between wood production and biodiversity, climate change mitigation and other ecosystem services (Hetemäki et al., 2024, Penca & Tanasescu 2025). Forest policy is highly fragmented across the EU due to the lack of EU competence in this domain. While powerful instruments like the LULUCF Regulation and the Nature Restoration Law complement the new Forest Strategy, thus influencing forest policy, their effectiveness is undermined by disjointed implementation across Member States (Pecurul-Botines et al., 2025; Penca and Tănăsescu, 2025; Siiskonen et al., 2025). Trade-offs emerge when climate mitigation and energy-security objectives are pursued through implementation pathways that increase pressure on land, forests, wetlands, or marine ecosystems. In this context, the LULUCF Regulation should not be interpreted as automatically biodiversity-positive. Similarly, renewable-energy deployment, including solar and bioenergy, may conflict with biodiversity objectives unless biodiversity-sensitive siting, safeguards, and implementation measures are in place (Gómez-Catasús et al., 2024; Santangeli et al., 2016). Strategic alignment can be supported when integrated land-use planning, restoration, ecosystem-based adaptation, and biodiversity-supporting knowledge and governance are explicitly promoted.

Promote a cross-sectoral approach

To improve policy coherence, there is a need for a systemic approach that recognizes the interconnectedness of nature and economic sectors (IPBES, 2026). Policy incoherence may not necessarily arise from political disagreements, but from insufficient coordination between policy areas. For example, older policies or legislation may not align with recent objectives, leaving policymakers with unclear or contradictory signals. A proactive, integrative approach to governance, like the one initiated by the European Green Deal, is needed (Palear, 2024). One example is the increasing integration of climate and biodiversity policies in the EU’s legislative framework, such as in the LULUCF Regulation and the Nature Restoration Law. Policy incoherencies should be addressed before implementation, and inform the entire policy-making cycle, integrating biodiversity considerations directly into sectoral policies from the design phase. Early negotiation of trade-offs between climate, energy, and biodiversity objectives could improve the process and its outcomes. Dialogue, exchange and collaboration between different science, policy and practice is needed at EU and national level (D’Amato et al., 2025). The establishment of the forthcoming SSBD will be instrumental to this end (Box 2).

Strengthen vertical policy integration and implementation:

Integrating biodiversity considerations at all levels of decision-making—EU, national, and local—is essential. Efforts should focus on ensuring that policies across sectors are effectively integrated and implemented at national and local level, by bridging the gap between strategic objectives and national local priorities. Importantly, there is a need to integrate feedback from local-level implementation considerations into national and EU policies. Prioritizing funding towards biodiversity-positive practices, enhanced monitoring, and stronger legal instruments such as the Nature Restoration Law are critical to ensuring a more coherent and effective implementation of EU policies by Member States (Hermoso et al., 2022; Lenti et al., 2025; Viti et al., 2024). Mechanisms to tackle some of these challenges include multi-level governance platforms, capacity building and knowledge sharing, strengthening of national science-policy-society interfaces., engagement with a diversity of local stakeholders.

Box 2. Recommendation for the Science Service for Biodiversity

The three main functions underpinning the forthcoming Science Service for Biodiversity (SSBD) should consider and integrate cross-sectoral policy coherence aspect within their activities.

The SSBD should make sure that all knowledge requests are addressed by interdisciplinary teams, including expert knowledge in addition to scientific knowledge. Cross-sectorality should be considered at the initial stages of co-developing policy requests with policy-makers, as well as when providing policy recommendations in any of the SSBD outcomes.

The SSBD should further develop its Agora to engage stakeholders from different societal realms. The SSBD should promote cross-sectoral dialogues with a diverse range of societal actors and raise awareness on biodiversity with Directorates-Generals (DG). For example this could be done by organizing info events and capacity building opportunities, as well as by promoting policy collaboration and planning across DGs. The activities could focus, in particular, on those DGs and sectors presenting the most incoherent policies with biodiversity.

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Annexes

Annex 1. List of overarching objectives and specific objectives selected for policy coherence analyses

Biodiversity

<u>EU Biodiversity Strategy for 2030</u>

B1. Protecting nature in the EU (Pillar 1)

B1.1. Legally protect at least 30% of the EU's land area and 30% of its seas.

B1.2. Strictly protect at least a third of the EU's protected areas

B1.3. Create and integrate ecological corridors as part of a Trans-European Nature Network

B1.4. Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately

B2. Restoring nature in the EU (Pillar 2)

B2.1. Propose legally binding EU restoration targets by 2021, and restore significant areas of degraded and carbon rich ecosystems by 2030

B2.2. Ensure habitats and species show no deterioration in conservation trends and status; and at least 30% reach favourable conservation status or at least show a positive trend

B2.3. Reverse the decline of pollinators

B2.4. Ensure that at least 10% of agricultural area is under high-biodiversity landscape features

B2.5. Place at least 25% of agricultural land under organic farming management, and significantly increase the uptake of agro-ecological practices

B2.6 Reduce the loss of nutrients from fertilizers by 50%, resulting in the reduction of fertilizer use by at least 20%

B2.7. Plant three billion new trees in the EU, in full respect of ecological principles

B2.8. Make significant progress in remediating contaminated soil sites

B2.9. Restore at least 25,000 km of free-flowing rivers

B2.10. Substantially reduce the negative impacts of fisheries and extraction activities on sensitive marine habitats and species, including on the seabed in support of achieving good environmental status

B2.11. Adopt ambitious Urban Greening Plans for cities with at least 20,000 inhabitants

B2.12. Minimise or eliminate the use of pesticides in sensitive areas such as urban green areas

B2.13. Halve the number of Red List species threatened by invasive alien species

B3. Enabling transformative change (Pillar 3)

B3.1. Establish a strengthened European biodiversity governance framework

B3.2. Launch a new initiative for sustainable corporate governance and support a European Business for Biodiversity movement

B3.3. Strengthen the Commission's biodiversity proofing framework to ensure that EU funding contributes to, and does not harm, biodiversity

B3.4. Unlock at least €20 billion a year for nature and ensure that a significant proportion of the 30% of the EU budget dedicated to climate action is invested in biodiversity and nature-based solutions

B3.5. Establish a common classification of economic activities that contribute to biodiversity, supported by the Renewed Sustainable Finance Strategy

B3.6. Introduce a new long-term strategic research agenda for biodiversity in the future Horizon Europe programme, set up a dedicated Biodiversity Partnership and a Knowledge Centre for Biodiversity

B3.7. Propose a Council Recommendation on education for environmental sustainability

B3.8. Use the new Skills Agenda to help biodiversity restoration and sustainable management, as well as a fair and inclusive transition to a green economy

Agriculture

Farm to Fork Strategy

A1. Sustainable Food Production

A.1.1. Encouraging sustainable agricultural practices that prioritize biodiversity conservation, soil health, and water management.

A.1.2. Promoting organic farming and agroecological approaches to reduce the use of synthetic pesticides and fertilizers.

A.1.3. Supporting farmers in transitioning to more sustainable production methods through incentives, training, and research.

A2. Reducing Food Waste

A.2.1. Setting targets to reduce food waste at all stages of the food supply chain, from production and processing to distribution and consumption.

A.2.2. Implementing measures to improve food labeling, storage, and distribution practices to minimize waste.

A.2.3. Encouraging the development of innovative technologies and business models to repurpose surplus food and reduce waste.

A3. Healthy and Sustainable Diets

A.3.1. Promoting balanced and nutritious diets that are based on a variety of foods, including fruits, vegetables, whole grains, and sustainably-produced proteins.

A.3.2. Raising awareness about the health and environmental benefits of plant-based diets and reducing the consumption of highly processed foods.

A.3.3. Providing consumers with transparent information about the nutritional content and environmental impact of food products to make informed choices.

A4. Reducing the Use of Hazardous Chemicals

A.4.1. Phasing out the use of harmful pesticides and antibiotics in agriculture to protect human health, biodiversity, and ecosystem services.

A.4.2. Implementing strict regulations on the use of chemicals in food production and processing, with a focus on reducing residues in food products.

A.4.3. Supporting research and innovation to develop alternative pest and disease management strategies that minimize reliance on chemical inputs.

A5. Promoting Sustainable Food Systems

A.5.1. Strengthening local and regional food systems to enhance resilience, reduce greenhouse gas emissions, and support rural development.

A.5.2. Encouraging short food supply chains, direct sales, and alternative distribution models to connect producers with consumers and promote local food economies.

A.5.3. Fostering collaboration and knowledge-sharing among stakeholders across the food supply chain, including farmers, processors, retailers, and consumers.

Common Agricultural policy

A6. Economic

A6.1. SO1. Supporting viable farm income

A6.2. SO2. Increasing competitiveness

A6.3. SO3. Improving farmers' position in the value chain

A7. Environmental & climate

A7.1. SO4. Contributing to climate change mitigation

A7.2. SO5. Efficient natural resource management

A7.3. SO6. Halting and reversing biodiversity loss

A8. Rural /societal

A8.1. SO7. Generational renewal

A8.2. SO8. Jobs, growth and equality in rural areas

A8.3. SO9. Responding to societal demands on food & health

A9. Cross-cutting

A9.1. CCO. Fostering knowledge & innovation

Forest

EU Forest Strategy for 2030

F1. Supporting the socio-economic functions of forests for thriving rural areas and boosting forest-based bio-economy within sustainability boundaries

F1.1. As part of the Common Agricultural Policy and to increase forest support, provide new means to share information on good practices on best design and implementation of forest-relevant interventions.

F1.2. As part of the review of the construction products regulation establish a standard, robust and transparent methodology to quantify the climate benefits of wood construction products and other building materials, reflecting the most advanced dynamic life cycle analysis techniques.

F1.3. Review, complement and update the Taxonomy Climate Delegate Act technical screening criteria for forestry and bioenergy where necessary to take better into account biodiversity friendly practices that are under development such as close to nature forestry. Consider including sustainable activities related to harvesting, production and use of wood products in the forthcoming delegated acts of the Regulation Taxonomy38 on other environmental objectives.

F1.4. Promote the use of the Natura 2000 logo for non-wood forest-based products and services.

F1.5. Create a new alliance between the professionals of tourism and foresters, involving the World Tourism Organisation and the network for Europe’s natural and cultural heritage.

F1.6. Build a toolkit to help Member States to establish life-long programs and advice to foresters and adapt education and training to the challenges and needs of today’s forest needs and realities, and develop employment opportunities.

F1.7. Encourage forest and forestry stakeholders to establish a skills partnership under the Pact for Skills and make use of the European Social Fund Plus to work together to increase the number of upskilling and reskilling opportunities in forestry.

F2. Protecting, restoring and enlarging EU's forests to combat climate change, reverse biodiversity loss and ensure resilient and multifunctional forest ecosystems

F2.1. Together with the Member States and in close cooperation with different forest stakeholders, identify the additional indicators as well as thresholds or ranges for sustainable forest management, and assess how these could best be used, starting on a voluntary basis, by the Q1 2023.

F2.2. Develop a definition and adopt guidelines for closer-to-nature-forestry practices, by Q2 2022, as well as voluntary closer-to-nature forest management certification scheme, by Q1 2023.

F2.3. Promote forest-related interventions in the future CAP (2023-2027) in relation to the European Green Deal objectives, in particular the set-up of ecosystem services payment schemes and roll-out of carbon farming practices, and in other EU financial instruments (e.g. Cohesion Policy, LIFE, Horizon Europe, EU crossborder cooperation programs (Interreg)

F2.4. Promote forest-related remuneration schemes in an action plan for both carbon farming and carbon removal certification, to be adopted by the end of 2021.

F2.5. Carry out a study on behavioral science regarding the uptake of public funds by foresters to better identify further policy improvement routes.

F2.6. Identify and address possible hurdles posed by current EU legislation and the State Aid Guidelines to grant adequate public support to services beneficial for the public interest.

F2.7. Develop guidelines on the definition of primary and old-growth forests, including their definition, mapping, monitoring and strict protection, by the end of 2021.

F2.8. Propose a legally binding instrument for ecosystem restoration, including forest ecosystems, by the end of 2021.

F2.9. Provide guidance and promote knowledge exchanges on good practices on climate adaptation and resilience, using inter alia the Climate-ADAPT platform.

F2.10. Supplement the revision of the legislation on forest reproductive material with measures to promote the production and marketing of forest reproductive material suitable for future climatic conditions, by the end of 2022.

F2.11. Develop guidelines on biodiversity friendly afforestation and reforestation, by Q1 2022.

F2.12. Provide advice and technical guidance on the development of ecosystem service payment scheme, by November 2021.

F3. Strategic forest monitoring, reporting and data collection

F3.1. Put forward a proposal for a new legislative proposal on EU Forest Observation, Reporting and Data Collection to ensure a coordinated EU forest monitoring, data collection and reporting system. As part of this, Member States competent authorities would prepare Strategic Plans for Forests for forests and the forest based sector, in full respect of the subsidiarity principle and the Treaty, by Q1 2023.

F3.2. As part of the Forest Information System for Europe (FISE), on the basis of improved Copernicus products, other remote-sensing data and ground-based monitoring, strengthen the existing monitoring of climate effects and other natural or humaninduced disturbances on forests.

F3.3. Prepare and publish regular reports and lay summaries on the forests in the EU with the support of a broader European forest science partnership.

F4. A strong research and innovation agenda to improve our knowledge on forests

F4.1. Develop a "Planning our Future Forests" research and innovation agenda together with Member States and stakeholders by jointly identifying research gaps and future priorities for forestry and the forest-based sector.

F4.2. Support the evidence-based design and implementation of forest restoration strategies with engagement of the society and in different ecological and socio-economic settings, including through the planned research and innovation mission on soil health for forest soils.

F4.3. Enhance EU cooperation by proposing a Research and Innovation partnership on forestry, including flagships for testing and demonstrating solutions on selected key strategic domains.

F4.4. Through the Horizon Europe Civil Security for Society programme, implement complementary actions in support of Disaster Risk Reduction policies (including forest fires), to enhance capacities in risk and resilience management and governance.

F4.5. Develop a Citizens' science Programme for forest biodiversity, notably engaging citizens and civil society in monitoring forest biodiversity.

F5. Inclusive and coherent EU forest governance framework

F5.1. The Commission will propose an EU forest governance system that promotes policy coherence and synergies between the different functions a sustainable and climate neutral European economy requires forests to deliver, and allow for an inclusive space for Member States, forest owners and managers, industry, academia and civil society to discuss forest policy matters, while avoiding overlapping structures.

F6. Stepping up implementation and enforcement of existing EU acquis

F6.1. Stepping up implementation and enforcement of existing EU acquis

Climate

The European Green Deal

C1. Increasing the EU's climate ambition for 2030 and 2050

C1.1. The Commission will propose the first European 'Climate Law' by March 2020. This will enshrine the 2050 climate neutrality objective in legislation. The Climate Law will also ensure that all EU policies contribute to the climate neutrality objective and that all sectors play their part.

C1.2. By summer 2020, the Commission will present an impact assessed plan to increase the EU's greenhouse gas emission reductions target for 2030 to at least 50% and towards 55% compared with 1990 levels in a responsible way.

C1.3. The Commission will propose a carbon border adjustment mechanism, for selected sectors, to reduce the risk of carbon leakage. This would ensure that the price of imports reflect more accurately their carbon content. This measure will be designed to comply with World Trade Organization rules and other international obligations of the EU. It would be an alternative to the measures10 that address the risk of carbon leakage in the EU's Emissions Trading System.

C2. Supplying clean, affordable and secure energy

C2.1. Further decarbonising the energy system is critical to reach climate objectives in 2030 and 2050. The production and use of energy across economic sectors account for more than 75% of the EU's greenhouse gas emissions. Energy efficiency must be prioritised. A power sector must be developed that is based largely on renewable sources, complemented by the rapid phasing out of coal and decarbonising gas. At the same time, the EU's energy supply needs to be secure and affordable for consumers and businesses. For this to happen, it is essential to ensure that the European energy market is fully integrated, interconnected and digitalised, while respecting technological neutrality.

C2.2. The clean energy transition should involve and benefit consumers. Renewable energy sources will have an essential role. Increasing offshore wind production will be essential, building on regional cooperation between Member States.

Fit for 55

C3. Regulation on Land Use, Forestry and Agriculture (LULUCF)

C3.1. LULUCF regulations

EU Climate Adaptation strategy 2021

C4. Smarter adaptation: improving knowledge and managing uncertainty

C4.1. Pushing the frontiers of knowledge on adaptation Decision-making and acting in the face of climate uncertainty can be facilitated by anchoring decisions in the latest science.

C5. More systemic adaptation: Support policy development at all levels and sectors

C5.1. Upgrade adaptation monitoring, reporting and evaluation by using a harmonised framework of standards and indicators

C5.2. Promoting nature-based solutions for adaptation

C5.3. Propose nature-based solutions for carbon removals, including accounting and certification in upcoming carbon farming initiatives

C5.4. Develop the financial aspects of nature-based solutions and foster the development of financial approaches and products that also cover nature-based adaptation

C5.5. Continue to incentivise and assist Member States to rollout nature-based solutions through assessments, guidance, capacity building, and EU funding

C6. Faster adaptation: Speeding up adaptation across the board

C6.1. Implement the planned Horizon Europe Mission on 'Adaptation to Climate Change' and other adaptation-relevant Missions, including on soil health, climate-neutral cities, and oceans once these are endorsed

C6.2. Integrate adaptation in the update of Natura 2000 and climate change guidance, and in guidelines on biodiversity-friendly afforestation and reforestation, and in the forthcoming Forest Strategy

C6.3. Develop an EU-wide climate risk assessment and strengthen climate considerations in EU disaster risk prevention and management

C6.4. Help ensure climate-resilient, sustainable use and management of water across sectors and borders by improving coordination of thematic plans and other mechanisms, such as water resource allocation and water-permits

C6.5. Help reduce water use by raising the water-saving requirements for products, encouraging water efficiency and savings, and by promoting the wider use of drought management plans as well as sustainable soil management and land-use

C7. Stepping up international action for climate resilience

C7.1. Include climate change considerations in the future agreement on the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction

C7.2. Support partner countries in the design of policies and incentives to promote climate resilient investment, including in nature-based solutions

Energy

Renewable Energy. Decarbonise the economy and move towards a low-carbon economy in line with the Paris Agreement

E1. Share of renewable energy

E1.1 An increase in the share of renewable energies in final energy consumption to 42.5%, with the aim of achieving 45%

E1.2. The principles of the EU's renewable energy policy include the diversification of its energy supply, the development of local energy resources in order to ensure security of supply and the reduction of its external energy dependency.

E2. Offshore wind farming

E.2.1. Offshore wind: "On 19 November 2020, the Commission published an EU strategy on offshore renewable energy aiming to increase the EU's production of electricity from offshore renewable energy sources from 12 GW in 2020 to over 60 GW by 2030 and 300 GW by 2050. (In January 2023, MS agreed on higher non-binding goals for offshore renewable energy generation of 111 GW and 317 GW by 2030 and 2050.)"

E3. Biomass, biofuels & hydrogen

E3.1. Biomass, biofuels and hydrogen. The Renewable Energy Directive ((EU) 2018/2001) includes a target of 1% by 2025 and 5.5% by 2030 for advanced biofuels, biogas and renewable fuels of non-biological origin (RFNBO) in the transport sector.

E3.2 Biomass, biofuels and hydrogen. 2) October 2023, the Renewable Energy Directive established the indicative target of 42% of renewable hydrogen in total hydrogen consumption by 2030 and 60% by 2035 for industry.

E3.3. biofuels, bioliquids and biomass fuels qualify for the incentives only where it is guaranteed that agricultural raw material does not originate from biodiverse areas or, in the case of areas designated for nature protection purposes or for the protection of rare, threatened or endangered ecosystems or species....

E3.4. It is therefore appropriate... to require Member States to set a specific and gradually decreasing limit for biofuels, bioliquids and biomass fuels produced from food and feed crops for which a significant expansion of the production area into land with high-carbon stock is observed.

E3.5. Land should not be converted to accommodate the production of agricultural raw material for biofuels, bioliquids and biomass fuels if its carbon stock loss upon conversion could not, within a reasonable period, taking into account the urgency of tackling climate change, be compensated for by the greenhouse gas emission savings resulting from the production and use of biofuels, bioliquids and biomass fuels.

E3.6. Member States should be able to prepare a single plan for all renewables acceleration areas and renewable energy technology, or technology-specific plans which designate one or more renewables acceleration areas. Each plan should be subject to an environmental assessment pursuant to Directive 2001/42/EC

E3.7. Grids projects in such dedicated infrastructure areas should avoid to the extent possible Natura 2000 sites and areas designated under national protection schemes for nature and biodiversity conservation, unless, due to the specificities of grid projects, there are no proportionate alternatives for the deployment of such projects. When assessing proportionality, Member States should take into account the need to ensure the economic viability, the feasibility and the effective and accelerated implementation of the project with a view to ensuring that the additional generation capacity of renewable energy

E4. Solar power

E4.1. Solar power. The REPowerEU plan introduced a strategy to double solar photovoltaic capacity to 320 GW by 2025 and install 600 GW by 2030

E4.2. Solar power. introduces the European Solar Rooftop Initiative anchored around a legally binding EU solar rooftop obligation for certain categories of buildings

E5. Ocean energy

E5.1 Ocean energy.In January 2014, the Commission published its blue energy action plan to support the development of ocean energy, including that generated by waves, tidal power, thermal energy conversion and salinity gradient power.

E6. Hydropower

E6.1. Hydropower

Annex 2. Screening matrices

In the matrices below, rows correspond to the objectives of the EU Biodiversity Strategy for 2030, while columns correspond to the objectives extracted from the sectoral policy documents analysed in this deliverable. Each cell records the assessed interaction between one biodiversity objective and one sectoral objective at the level of policy objectives. The scoring scale used throughout the analysis is as follows: +1 = strong synergy; +0.5 = weak synergy; 0 = neutral or no clear interaction; -0.5 = weak contradiction or trade-off; -1 = strong contradiction or trade-off; ? = uncertain interaction, used where the available policy text was too general, ambiguous, or dependent on future implementation choices to support a robust directional score. The aggregated values presented in Tables 3–6 are derived from these cell-level assessments. Full names of the objectives in the matrices can be found in Annex 1.

Agriculture vs. Biodiversity

	A1.	A1.1.	A1.2.	A1.3.	A2.	A2.1.	A2.2.	A2.3.	A3.	A3.1.	A3.2.	A3.3.	A4.	A4.1.	A4.2.	A4.3.	A5.	A5.1.	A5.2.	A5.3.	A6	A6.1.	A6.2.	A6.3.	A7	A7.1.	A7.2.	A7.3.	A8	A8.1.	A8.2.	A8.3.	A9	A9.1.
B1.	**0.5**				**0.125**				**0.375**				**1**				**1**				**?**				**1**				**0.5**				**1**	
B1.1.		0.5	0.5	0.5		0	0	0		0	0.5	0.5		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B1.2.		0.5	0.5	0.5		0	0	0		0	0.5	0.5		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B1.3.		0.5	0.5	0.5		0	0	0		0	0.5	0.5		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B1.4.		0.5	0.5	0.5		0.5	0.5	0.5		0.5	0.5	0.5		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.	**0.72**				**0.359**				**0.346**				**0.77**				**0.5**				**?**				**0.8**				**0.4**				**0.846**	
B2.1.		0.5	0.5	0.5		0	0	0		0	0	0		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.2.		1	1	1		0.5	0	0		0	0	0		1	1	1		0.5	0.5	0.5		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.3.		1	1	1		0.5	0.5	0.5		0.5	0.5	0.5		1	1	1		0.5	0.5	0.5		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.4.		1	1	1		0.5	0.5	0.5		0.5	0.5	0.5		1	1	1		0.5	0.5	0.5		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.5.		1	1	1		0.5	0.5	0.5		0.5	0.5	0.5		1	1	1		0.5	0.5	0.5		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.6		1	1	1		0.5	0.5	0.5		0.5	0.5	0.5		1	1	1		0.5	0.5	0.5		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.7.		0	0	0		0	0	0		0	0	0		1	1	1		0	0	0		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.8.		1	1	1		0.5	0.5	0.5		0.5	0.5	0.5		1	1	1		0.5	0.5	0.5		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.9.		0	0	0		0	0	0		0	0	0		0	0	0		0	0	0		?	?	?		0	0	0		0	0	0		0
B2.10.		0	0	0		0	0	0		0	0	0		0	0	0		0	0	0		?	?	?		0	0	0		0	0	0		0
B2.11.		0.5	1	1		1	1	1		1	1	1		0	0	0		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.12.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B2.13.		1	1	1		0	0	0		0	0	0		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.	**1**				**1**				**1**				**1**				**1**				**?**				**1**				**0.5**				**1**	
B3.1.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.2.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.3.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.4.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.5.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.6.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.7.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1
B3.8.		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		?	?	?		1	1	1		0.5	0.5	0.5		1

Forest vs. Biodiversity

	F1.	F1.1.	F1.2.	F1.3.	F1.4.	F1.5.	F1.6.	F1.7.	**F2.**	F2.1.	F2.2.	F2.3.	F2.4.	F2.5.	F2.6.	F2.7.	F2.8.	F2.9.	F2.10.	F2.11.	F2.12	**F3.**	F3.1.	F3.2.	F3.3.	**F4.**	F4.1.	F4.2.	F4.3.	F4.4.	F4.5.	**F6**	F5.1.	**F6**	F6.1.
B1.	**0.25**								**0.62**													**0.58**				**0.41**						**1**		**?**	
B1.1.		?	0	0.5	0	1	0.5	0		1	0.5	1	0	0.5	?	1	0.5	0	?	0.5	1		1	0	0.5		0.5	0.5	?	0	0		1		?
B1.2.		?	0	0.5	0	0.5	0	0		1	0	1	0	0.5	?	1	0.5	0	?	0	1		1	0	0		0.5	0.5	?	0	0		1		?
B1.3.		?	0	0.5	0	0.5	0	0.5		1	1	1	0	?	?	0	1	0.5	?	1	1		1	0	0.5		0.5	0.5	?	0	0		1		?
B1.4.		?	0	0.5	0	0	0.5	0.5		1	1	1	0	0.5	?	1	1	0	?	0.5	0.5		1	1	1		1	0.5	0.5	1	1		1		?
B2.	**0.15**								**0.23**													**0.16**				**0.1**						**0.42**		**?**	
B2.1.		?	0	0.5	0	0.5	0	0.5		1	0	1	0	?	?	1	1	0.5	?	1	1		1	0	0.5		0.5	1	0.5	0	0		1		?
B2.2.		?	0	0.5	0	0.5	0	0.5		1	1	1	0	?	?	1	0.5	0.5	?	1	1		1	0	1		0.5	0.5	0.5	0.5	0.5		1		?
B2.3.		?	0	0.5	0	0.5	0	0		0	0	0.5	0	0	?	0	0	0	0	0	1		0	0	0		0	0	0	0	0		1		?
B2.4.		?	0	0	0	0.5	0	0		0	0	0.5	0	0	?	0	0	0.5	0	0	1		0	0	0		0	0	0	0	0		0		?
B2.5.		?	0	0	0	0	0	0		0	0	0	1	0	?	0	0	?	0	0	0.5		0	0	0		0	0	0	0	0		0		?
B2.6		?	0	0.5	0	0.5	0	0		0	0	0	?	0	0	0	0	0	0	0	0		0	0	0		0	0	0	0	0		0		?
B2.7.		0.5	0.5	0	0	0.5	0.5	0.5		1	0.5	0.5	0	?	0	0	0.5	0.5	?	1	0		0.5	0.5	0.5		0.5	0.5	0.5	0	0		1		?
B2.8.		0	0	0	0	0.5	0	0		0	0	0	0	0	0	0	0	0	0	0	0		0	0	0		0	1	0	0	0		0.5		?
B2.9.		0	0	0	0	1	0	0		0	0	0	0	0	0	0	1	0	0	0	0		0	0	0		0	0	0	0	0		0		?
B2.10.		0	0	0	0	0.5	0	0		0	0	0	0	0	0	0	0.5	0.5	0	0	0		0	0	0		0	0	0	0	0		0		?
B2.11.		0	0	0	0	0.5	0	0		0	0	0	0	0	0	0	0	1	0	0.5	0.5		0	0	0		0	0	0	0	0		0		?
B2.12.		0	0	0	0	0.5	0	0		0	0	0	0	0	0	0	0	0	0	0.5	0		0	0	0		0	0	0	0	0		0		?
B2.13.		0	?	0.5	0	1	0	0		1	1	1	0	0	0	1	1	0	0	0	1		0.5	0.5	0.5		0	0	?	0	0		1		?
B3.	**0.35**								**0.49**													**0.4**				**0.19**						**0.31**		**?**	
B3.1.		?	0	0.5	0.5	0.5	0.5	0.5		1	1	1	0	1	1	1	1	0	?	1	1		1	1	1		0.5	0.5	?	0.5	0		1		?
B3.2.		0	0	1	1	1	0	0		1	0.5	0	0	0	?	0	0	0	0	0	0.5		0	0.5	0		0	0	0	0	0		1		?
B3.3.		?	0	1	0	0.5	0	0		1	1	1	0	0	1	0.5	0.5	0	?	0.5	1		0	1	0.5		0	0	0.5	0	0		0.5		?
B3.4.		?	?	1	0.5	1	0.5	0.5		0.5	1	1	0	1	0	1	1	1	?	1	1		0	0.5	0		0.5	0	0.5	0	0		0		?
B3.5.		0	-0.5	1	?	0.5	0	0		1	1	0.5	0	0	0.5	0	0	0	0	0	1		0	1	0		0	0	0	0	0.5		0		?
B3.6.		0	0	0	0	0	0.5	0.5		1	0.5	1	0	1	0.5	0	0.5	0	0.5	1	1		0.5	1	1		1	0	1	0	1		0		?
B3.7.		0	?	0	0	0.5	0.5	1		0	1	0	0	0	0	0	0	0	?	0	0		0	0.5	0		0	0	0	0	0.5		0		?
B3.8.		?	0	?	0	0.5	1	1		0.5	1	0.5	0	?	0	0.5	1	0.5	0.5	0.5	1		0	0.5	0		0.5	0	0	0	0		0		?

Climate vs. Biodiversity

	C1.	C1.1.	C1.2.	C1.3.	**C2.**	C2.1.	C2.2.	C3.	C3.1.	**C4.**	C4.1	**C5.**	C5.1.	C5.2.	C5.3.	C5.4.	C5.5.	**C6**	C6.1.	C6.2.	C6.3.	C6.4.	C6.5.	**C7.**	C7.1.	C7.2.
B1.	**0**				**-0.38**			**0.25**		**0.63**		**0.7**						**0.5**						**0.19**		
B1.1.		?	0	0		-0.5	-0.5		?		0.5		0	1	0.5	1	1		1	1	0.5	0	0		0.5	0
B1.2.		?	0	0		-0.5	-0.5		?		0.5		0	1	0.5	1	1		1	1	0.5	0	0		0.5	0
B1.3.		?	0	0		0	0		0.5		1		0	1	0.5	1	1		1	1	0.5	0	0		0	0
B1.4.		?	0	0		-0.5	-0.5		0		0.5		0	1	0.5	1	1		1	1	0.5	0	0		0.5	0
B2.	**0.17**				**-0.02**			**0.15**		**0.31**		**0.49**						**0.21**						**0.24**		
B2.1.		0.5	1	0		-0.5	0		0.5		0		0	1	0.5	1	1		1	1	?	0	0		0	0
B2.2.		0	0	0		0	-0.5		0		0.5		0	1	0.5	1	1		1	1	0	0	0		0	0
B2.3.		0	0	0		0	0		0		0.5		0	1	0.5	1	1		1	1	0	0	0		0	1
B2.4.		0.5	0.5	0		0	0		0.5		0.5		0	1	1	1	1		1	0	0	0	0		0	1
B2.5.		0.5	0.5	0		0	0		0.5		0.5		0.5	1	1	1	1		1	0	0	0	0		0	1
B2.6		0	0	0		0	0		0		0		0	?	1	?	?		0	0	0	0	0		0	1
B2.7.		0.5	1	0		0.5	0				1		0	1	1	1	1		1	1	0	0	0		0	0.5
B2.8.		0	0	0		0	0		0		0		0	1	0	1	1		0	0	0	0	0		0	0.5
B2.9.		0	0	0		0	0		0		0		0	0	0	0	0		0	0	0	0	0		0	0
B2.10.		0	0	0		0	0		0		0		0	0	0	0	0		0	0	0	1	0		?	0
B2.11.		0.5	1	0		0	0		0.5		1		0.5	1	0	1	1		1	0.5	1	0	0		0	1
B2.12.		0	0	0		0	0		0		0		0	0	0	0	0		0	0	0	0	0		0	0
B2.13.		0	0	0		0	0		0		0		0	0	0	0	0		0	0	0	0	0		0	0
B3.	**0.19**				**-0.25**			**0**		**0.31**		**0.63**						**0.31**						**0.28**		
B3.1.		0	0	0		-0.5	-0.5		0		0.5		1	1	0	1	1		0.5	1	0	0	0		0	0.5
B3.2.		0.5	0.5	1		0	0		0		0		0	1	0	1	1		0.5	1	0	0	0		0	0
B3.3.		?	0	0.5		-0.5	-0.5		0		0.5		0	1	0	1	1		0.5	1	0	0	0		0	1
B3.4.		?	?	0		-0.5	-0.5		0		0.5		0.5	1	1	1	1		1	1	1	0	0		1	1
B3.5.		0	0	0.5		-0.5	-0.5		0		0.5		0.5	1	0	1	1		0.5	1	0	0	0		0	1
B3.6.		0	0	0		0	0		0		0.5		0.5	1	0	1	1		1	1	0	0	0		0	0
B3.7.		0.5	0.5	0		0	0		0		0		0	0	0	0	0		0	0	0	0	0		0	0
B3.8.		0	0	0		0	0		0		0		0	1	0.5	1	1		0.5	1	0	0	0		0	0

Energy vs. Biodiversity

	E1.	E1.1.	E1.2.	**E2.**	E2.1.	**E3.**	E3.1.	E3.2.	E3.3.	E3.4.	E3.5.	E3.6.	E3.7.	**E4.**	E4.1.	E4.2.	**E5.**	E5.1.	**E6.**	E6.1.
B1.	**-0.69**			**-0.63**		**0.02**								**0.31**			**-0.88**		**-1**	
B1.1.		-1	-0.5		-1		0	-0.5	0	0.5	0.5	0	0.5		-0.5	1		-1		-1
B1.2.		-0.5	-0.5		-0.5		0	0	0	0.5	0.5	0.5	-0.5		0	1		-1		-1
B1.3.		-1	-1		-0.5		-0.5	-0.5	0	0	0.5	0	-0.5		-0.5	1		-0.5		-1
B1.4.		-0.5	-0.5		-0.5		-0.5	-0.5	0.5	0	0.5	0	-0.5		-0.5	1		-1		-1
B2.	**-0.19**			**-0.27**		**0.03**								**-0.02**			**-0.27**		**-0.27**	
B2.1.		0	-1		-1		-0.5	-0.5	0	1	0.5	0	0		-0.5	1		-1		-1
B2.2.		-1	-0.5		-1		-0.5	-0.5	1	1	1	0.5	-0.5		-0.5	1		-0.5		-0.5
B2.3.		0	-0.5		0		-0.5	-0.5	0	0	0	0	0		-0.5	0		0		0
B2.4.		-0.5	-0.5		0		-0.5	-0.5	1	0.5	0.5	0	0		-0.5	0		0		0
B2.5.		0.5	-0.5		0		-0.5	-0.5	0.5	0.5	0.5	0	0		-0.5	0		0		0
B2.6		0	0		0		-0.5	-0.5	0	0	0	0	0		0	0		0		0
B2.7.		0	0		0		0	0	0	0	0	0	0		0	0		0		0
B2.8.		0.5	0.5		0		0.5	0.5	0	0	0	0	0		0	0		0		0
B2.9.		-1	-1		0		0	0	0	0	0	0	0		0	0		-1		-1
B2.10.		0	0		-1		0	0	0	0	0	0	0		0	0		0		0
B2.11.		0	0		0		0	0	0	0	0	0	0		0	0		0		0
B2.12.		0	0		0		0	0	0	0.5	0	0.5	0		0	0		0		0
B2.13.		0	0		-0.5		-0.5	-0.5	0	0	0	0	0		0	0		-1		-1
B3.	**-0.19**			**-0.19**		**0.01**								**-0.16**			**-0.19**		**-0.19**	
B3.1.		0	0		0		0	0	0	0	0	0	0		0	0		0		0
B3.2.		0.5	0.5		0.5		0.5	0.5	0	0	0	0	0		0	0.5		0.5		0.5
B3.3.		-0.5	-0.5		-0.5		-0.5	-0.5	0.5	1	1	0.5	0		-0.5	-0.5		-0.5		-0.5
B3.4.		-1	-1		-1		-1	-1	0.5	0	0	0	0		-1	0		-1		-1
B3.5.		-0.5	-0.5		-0.5		-0.5	-0.5	0	0	0	0	0		-0.5	-0.5		-0.5		-0.5
B3.6.		0.5	0.5		0.5		0.5	0.5	0	0	0	0	0		0.5	0.5		0.5		0.5
B3.7.		0	0		0		0	0	0	0	0	0	0		0	0		0		0
B3.8.		-0.5	-0.5		-0.5		-0.5	-0.5	0	0	0	0	0		-0.5	-0.5		-0.5		-0.5