



Report on policy coherence

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Preface

An effective design of policies is conditioned by access to the best available knowledge. It is aligned with scientific knowledge and what the explicit role of scientific knowledge is in real-world policymaking. The Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC) provide a robust knowledge basis to inform policymaking via thematic and synthesis reports. The aim of this deliverable report is to provide a coherence analysis between the main messages of IPCC and IPBES reports and EU policies. By doing so, we identify and foster synergies between IPCC, IPBES, and the examined policy domains, to provide targeted support to EU policy makers and negotiators.

Summary

This report presents the results of a coherence analysis to examine how EU policies align with IPCC and IPBES messages. First, we extracted policy-relevant messages from recent IPCC and IPBES reports and clustered them according to thematic areas, which provided us with an analytical framework. Second, we contrasted the resulting clusters with policy documents outlining the EU's key policy objectives and instruments to analyse whether the main messages from these scientific assessments are reflected in EU policymaking. We analysed the coherence of policy relevant messages within four EU policy sectors: Climate and energy, biodiversity, agriculture, and trade. In addition, we conducted a round of focused interviews to expand our understanding of relevant policy instruments and implementation practices.

Our results show that IPBES and IPCC messages, especially those related to institutional capacities, alignment with environmental commitments and norms, and knowledge-based policymaking, are largely reflected in the policy objectives promoted under the European Green Deal. However, messages linked to growth-related drivers of climate change and biodiversity loss were under-addressed by the policies, and our interviews pointed to a mismatch between the growth-critical messages of IPBES and IPCC and the political priorities of the European Commission. In particular, interviewees expressed concern that the new Commission's priority would shift towards economic growth and competitiveness, which could compromise the implementation of the European Green Deal. The role of ecological conservation in mitigating climate change and biodiversity loss was also less frequently reflected by the policies. Equity and justice were aspects that IPBES and IPCC highlight as central for addressing the issues around climate change and biodiversity loss. While these are addressed by specific EU policies and the EU treaties, specific objectives or measures on equity and justice are mostly lacking in the EU Biodiversity Strategy.

Our analysis reveals that current EU policies do not challenge conventional economic growth objectives. Drawing on messages from IPBES, we highlight the need to consider post-growth or degrowth approaches as essential to achieving strong sustainability which prioritises the preservation of the critical and non-substitutable components of natural capital, such as biodiversity, ecosystem functions, and planetary life-support systems. It seems that messages calling for more incremental and actionable changes in the society may be met with more positive reception in the short term. However, watering down the urgency of the societal transformation needed for sustainability risks more severe climate change and biodiversity loss in the long term, causing a far bigger overall cost. To avoid an implementation gap, the European Commission should ensure prioritisation of the policies and objectives of the European Green Deal at all levels of governance. In addition, a gap analysis is needed to understand whether the bulk of policies in place for biodiversity loss and climate change mitigation are enough to attain the EU's commitments.

List of abbreviations

CBD	Convention on Biological Diversity
DoA	Description of Action
EC	European Commission
EU	European Union
GBF	Global Biodiversity Framework
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
LULUCF	Land Use, Land-Use Change and Forestry
MEP	Multidisciplinary Expert Panel
PCA	Policy Coherence Analysis
SPI	Science-Policy Interface
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WG	Working Group

1. Introduction

Strengthening the targeted provision of knowledge to inform policies and increasing the dialogue and shared understanding between actors in the policy arenas is key to achieving the global biodiversity goals of the Kunming-Montreal Global Biodiversity Framework (GBF) and the climate goals of the Paris Agreement. The Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC) were created to synthesise the best available knowledge in respective policy domains and inform decision makers on implications and risks related to these environmental problems.

The objective of the intergovernmental panels for climate and biodiversity, IPCC and IPBES, is to synthesise the state of the art of scientific evidence on climate change and biodiversity loss. Despite not offering explicit policy recommendations, they provide a robust knowledge basis to inform policy making via thematic and synthesis reports including summaries for policy makers. It is, however, unknown how EU policies align with the messages offered by IPCC and IPBES. The aim of this deliverable report is to fill that gap to identify and foster synergies between IPCC, IPBES, and the examined policy domains, and to provide targeted support to EU policy makers and negotiators.

While these institutions synthesise existing information on two highly interlinked challenges, their outputs and processes remain isolated from each other, falling short in mobilising inputs from underrepresented regions (IPBES/9/INF/22), scientific disciplines and non-scientific knowledge holders. IPBES, IPCC and other related Science Policy Interfaces (SPI)¹ often operate in parallel, reinforcing the fragmentation between biodiversity and climate governance internationally. The lack of translation, connection, and synthesis of existing information and communication processes at the European, national and local levels hinders knowledge uptake and the provision of an integrated knowledge base that aligns with actual needs.

To address this fragmentation and identify potential to foster integrated procedures, RESPIN organised a joint workshop for IPCC and IPBES assessment authors in September 2024. While the results point to potential conflicts and incoherence, they also highlight the potential to produce co-benefits. In light of multi-actor and multiscale governance, integrated governance arrangements and finance mechanisms are needed to maximise co-benefits and minimise trade-offs. The idea of anticipatory and adaptive decision-making points to the need of more coordinated processes in knowledge generation, evaluation and a revision of policies in all policy domains relevant for biodiversity and climate change. While secretariats and national platforms signal interest in further collaboration, stakeholders expect specific joint activities and routines, as well as dedicated support and focus.

The RESPIN project aims to support the integrated provision and use of IPBES and IPCC processes and outputs. RESPIN has the mandate to support the uptake of IPBES and IPCC outputs within the EU science service mechanism and the development of capacities to incorporate IPBES and IPCC findings into decision making at EU level. Additionally, the project will identify gaps in knowledge provision and develop strategies to address them, improving

¹Others include the Science-Policy Interface of the United Nations Convention to Combat Desertification (UNCCD SPI), the International Resource Panel (IRP), and the emerging Intergovernmental Platform on One Health (IPOS or IPOH). Additional SPIs on pollution and the open sea are currently being developed.

the engagement of diverse knowledge holders, with particular support for underrepresented regions in Central Africa, Central Asia, and Latin America. A key goal of RESPIN is to contribute to support biodiversity and climate policy at the EU level, national and subnational levels, and beyond with particular focus on the interconnections between these two policy areas. This report contributes to RESPIN function 3 which integrates IPBES and IPCC findings into EU decision-making, enhances policy coherence, develops private sector engagement formats, and supports EU delegations in international negotiations.

In this report, we contrast IPCC and IPBES messages with EU policies part of the European Green Deal. As a cross-cutting policy initiative unprecedented in scale, in which biodiversity and climate considerations have been built-in from the beginning, the European Green Deal can be expected to include comprehensive strategies and policies that consider a variety of aspects beyond sectoral boundaries. Therefore, it is the critical task of this report to analyse whether it has succeeded in its task.

1.1. The role of IPCC and IPBES in policymaking

IPBES is an independent intergovernmental body established by States to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development. In addition to its main objective of synthesising knowledge, it is also tasked with, e.g., capacity building, supporting policy, and communication and engagement. It was established in Panama City, on 21 April 2012 by 94 Governments. It is not a United Nations body. However, at the request of the IPBES Plenary and with the authorization of the UNEP Governing Council in 2013, the United Nations Environment Programme (UNEP) provides secretariat services to IPBES. See here for more information on the history of IPBES. It has a governance structure consisting of a Plenary, Observers, Bureau, Multidisciplinary Expert Panel (MEP), stakeholders, expert groups and task forces, and the Secretariat².

IPCC is an intergovernmental body of the United Nations. Its job is to "provide governments at all levels with scientific information that they can use to develop climate policies". The United Nations endorsed the creation of the IPCC in 1988. Between 1990 and 2023, the IPCC published six comprehensive assessment reports reviewing the latest climate science. The IPCC has also produced 14 special reports on particular topics. Each assessment report has four parts. These are a contribution from each of the three working groups, plus a synthesis report integrating the working group contributions. It also contains information from special

²**Plenary:** The governing body of IPBES – made up of the representatives of IPBES member States – usually meets once per year.

Observers: Any State not yet a member of IPBES; the Convention on Biological Diversity (CBD) and other biodiversity-related conventions; related UN bodies; as well as many other relevant organizations and agencies.

Bureau: Comprising the IPBES Chair, four Vice-Chairs and five additional officers who oversee the administrative functions of IPBES.

Multidisciplinary Expert Panel (MEP): Five expert participants from each of the five UN regions, overseeing all IPBES scientific and technical functions.

Stakeholders: All contributors to and end-users of the IPBES outputs.

Expert groups and task forces: Selected scientists and knowledge holders carrying out the IPBES assessments and other deliverables.

Secretariat (includes technical support units): Ensures the efficient functioning of IPBES through support to the Plenary, Bureau and MEP, as well as implementing the Platform's work and administrative functions. Led by the Executive Secretary of IPBES, Dr. Anne Larigauderie. The headquarters of the secretariat is hosted in Bonn by the Federal Government of Germany.

reports produced in that assessment cycle. IPCC has an established position as a trusted authority on climate change and its reports are referred to in several policies at all levels.

The summaries for policymakers have proven to be the most read out of the panels' assessments, as they synthesise all content and are adopted by policymakers in a line-by-line negotiation to assure consensus (de Pryck 2021). IPCC has adapted its procedures to deal with controversies defining a sense of liability and hierarchy, clear procedures and rules for how to assess climate knowledge, which has strengthened the effectiveness and credibility of the platform (de Pryck 2022).

An aspect informing particularly the work of IPBES is the principle of *strong sustainability*, which asserts that natural capital – such as biodiversity, ecosystems, and climate regulation – cannot be substituted by human-made capital and must be preserved in its own right (see IPBES, 2019). Unlike *weak sustainability*, which assumes that different forms of capital are interchangeable, strong sustainability emphasises ecological limits and the non-substitutability of critical environmental functions (Neumayer, 2010).

1.2. EU policymaking

The EU has been a forerunner in green policies. Climate change and environmental degradation have been recognised as an existential threat to Europe and the world at large. To overcome these challenges, the European Green Deal was set under the previous European Commission to transform the EU into a modern, resource-efficient and competitive economy. As integration of climate and biodiversity into sectoral policies is an explicit goal of the European Green Deal, it contains objectives and goals on protecting biodiversity and ecosystems. These policies are mandated to be based on the best available knowledge and can be expected to take both climate and biodiversity into consideration (European Commission, 2019).

The new European Commission taking office in 2025 set new priorities such as the Clean Industrial Deal (European Commission, 2025), which shifts focus from environmental sustainability and ambitions to competitiveness and industrial growth. The Clean Industrial Deal aims to accelerate the transition to a climate-neutral economy by boosting innovation and green manufacturing, but it also raises questions about whether sufficient attention will continue to be paid to biodiversity and ecosystem protection. The Commission's priorities also reflect wider political fluctuations of the society where economic and security questions have recently risen high on the agenda. In addition, as EU legislation involves the Council, the Parliament, and various stakeholders, the Commission's strategies and proposals are often watered down in the policy negotiations (for an example regarding the Water Framework, see van den Berg & Driessen, 2020). While the recent adoption of the Nature Restoration Regulation marked a win for the European Green Deal by implementing a key element of the EU Biodiversity Strategy, it has also been critiqued for being a compromised product (Cliquet, Aragão, Meertens, Schoukens, & Decler, 2023). Despite this, Cliquet and colleagues note that "The Compromise still provides an appropriate legal basis for upscaling restoration within the EU through clear targets on restoration for different ecosystems and implementation obligations for Member States". Currently, the Member States are required to submit, by mid-2026, national restoration plans defining how targets are met in practice (Regulation (EU) 2024/1991). As the integration of climate and biodiversity into sectoral

policies was a core ambition of the original European Green Deal, it is essential that the new Commission ensures these environmental priorities remain central, using the best available scientific knowledge to guide sustainable development without undermining progress on nature conservation.

International science-policy interfaces such as IPBES and IPCC provide essential insights for complying with international commitments such as the UNFCCC Paris Agreement and the CBD Kunming-Montreal Global Biodiversity Framework (GBF). Both provide comprehensive, policy-relevant assessments based on the latest scientific findings, offering insights into climate change and biodiversity loss. Their reports represent the global scientific consensus and are explicitly intended to inform decision-makers, aligning closely with the European Green Deal's commitment to evidence-based policymaking and the use of the best available knowledge.

2. Methodology

The work presented in this report builds on two main methods - cluster analysis and coherence analysis. First, we gathered main messages from selected IPBES and IPCC reports to gain an understanding of what messages are presented across them. We synthesised the findings via a cluster analysis, creating an analytical framework for the policy coherence analysis. The analytical steps are presented in further detail in the next sections.

2.1. Step 1: Synthesising messages from selected IPBES and IPCC reports

Cluster analysis or clustering is the task of grouping a set of statements in a way that assertions in the same group (called a cluster) are more similar to each other than to those in other clusters (Lewis-Beck et al., 2004). In our study, the goal was to produce a simplified classification that would reduce the complexity and variability of the messages found in the reports. We used cluster analysis as an inductive tool to explore the most important and frequently repeated topics. To limit subjectivity in the qualitative interpretation of data, multiple coders first analysed the content independently. Through iterative feedback loops, categories were then consolidated and merged into robust clusters, with their validity confirmed through expert consensus.

We reviewed key reports from the IPCC and IPBES published since 2018 that focus geographically on our RESPIN target areas and address topics intersecting biodiversity and climate change. For IPBES, we prioritised assessments that addressed a broad range of ecosystem services and biodiversity challenges. As a result, we excluded more specialised reports such as the Sustainable Use of Wild Species and Invasive Alien Species assessments. For the cluster analysis, we examined the policy-relevant key findings and background messages from five IPBES reports and three IPCC reports (Table 1). Policy relevance was determined based on whether the findings or messages carried implications for policy implementation, excluding those that solely conveyed scientific insights without practical applications.

Table 1: IPCC and IPBES reports analysed in this report.

Report	Year	Pages (laid out)	Messages analysed
IPBES Global Assessment Report on Biodiversity and Ecosystem Services	2019	60	15 key messages
IPBES Values Assessment (Methodological assessment regarding the diverse conceptualization of multiple values of nature and its benefits, including biodiversity and ecosystem functions and services)	2022	52	10 key messages
IPBES Regional Assessment on biodiversity and ecosystem services for Europe and Central Asia	2018	52	8 background messages
IPBES Regional Assessment Report on Biodiversity and Ecosystem Services for the Americas	2018	44	16 key messages
IPBES Land Degradation Report	2018	48	14 key messages
IPCC Climate Change 2022 WG1 report: The Physical Science Basis	2021	32	2 key findings
IPCC Climate Change 2022 WG2 report: Impacts, Adaptation and Vulnerability	2022	34	29 key findings
IPCC Climate Change 2022 WG3 report: Mitigation of Climate Change	2022	56	80 key findings

The number of policy-relevant messages varied significantly across reports. For instance, the IPCC WG1 report, focusing on the physical science basis of climate change, included only two policy-relevant key findings, whereas the WG3 report on the mitigation of climate change contained 57. For our cluster analysis, we concentrated on the key findings and messages presented in summaries for policymakers. In cases where IPBES reports featured fewer than ten policy-relevant key messages, we incorporated additional background messages, which form the basis for these key messages, to ensure adequate content for analysis. The IPCC reports followed a slightly different structure, presenting key findings directly; all policy-relevant findings from these were included in the analysis. Throughout this paper, the terms ‘messages’ are used to collectively refer to key findings and background messages.

Our cluster analysis followed an iterative process. Initially, the research team conducted an open coding of the policy relevant messages and grouped them into categories. These emerging clusters were discussed within the team to highlight similarities and differences. After reaching a shared understanding of the primary clusters, the reports were reviewed again to assure comprehensiveness and consistency. To enhance the rigor of the analysis, the reports were coded once more to examine any variations in the clustering results. We then developed guiding questions based on the thematic clusters to be used in the policy coherence analysis. These questions effectively turn the non-prescriptive messages of the IPCC and IPBES reports into checklists for policy analysis.

In addition, we measured how many assessments support a message (or how many potentially conflict with the finding). We used an evaluative approach with a 4-level scale and colours to highlight the thematic foci of the assessment reports (Table 2). It is important to note that the reports varied significantly in length and the number of policy-relevant messages, meaning the number of occurrences per report is not directly comparable. Instead, these categories provide an indication of the varying focal areas across the reports.

Table 2. Evaluative scale for cluster analysis.

Marking	-	+	++	+++
Frequency	0	1–2	3–6	7–
Emphasis	Absent	Minimal	Moderate	Strong

2.2. Step 2: Coherence analysis

We selected EU policy domains with relevance for direct and indirect threats to biodiversity and climate change as indicated by the assessments. These are biodiversity, climate and energy, agriculture, forestry and trade. We then identified key policy documents to be used in the analysis (Table 3). For some policy domains, there was a policy document outlining the sector-specific agenda, e.g., the EU Biodiversity Strategy for 2030. For trade, on the other hand, there is no single policy document outlining the sectoral policy objectives. The policy documents were extracted for the relevant policy objectives. Adding all the policy objectives and legislation together (pieces of legislation counted as promoting one objective each), we wound up with a total of 64 objectives (Annex 1).

Table 3: EU policy documents analysed in this report.

Policy domain	Policy document(s)
Biodiversity policy	EU Biodiversity Strategy for 2030
Climate and energy policy	Chapters 2.1.1. and 2.1.2. of The European Green Deal documentation COM(2019) 640 EU Climate Adaptation Strategy 2021 LULUCF Regulation ((EU) 2018/841, amended by Regulation (EU) 2023/839)
Agricultural policy	Farm to Fork Strategy Common Agricultural Policy for 2023-2027: CAP Strategic Plans at a Glance report
Trade policy	Carbon Border Adjustment Mechanism (Regulation (EU) 2023/956) Deforestation Regulation (Regulation (EU) 2023/1115)

For the coherence analysis, we built our approach based on a policy coherence analysis framework by Nilsson et al. (2012). To facilitate the use of policy coherence analysis with our analytical framework, we made adjustments to the original model by creating a different grading system for policy coherence. For this, we built a matrix and checked each of the selected policy documents for their performance on each of the guiding questions and rated them according to the following scale:

- a. -1 – indicates specific targets that are contradicting/conflicting with guiding questions
- b. -0.5 – indicates targets that raise potential concerns without further clarification
- c. 0 – Does not mention relevant aspects
- d. +0.5 – mentions the aspect without a clear performance target or specification
- e. +1 – indicates a target/aspect in line with the guiding questions

In the coherence analysis, only the specified policy objectives are analysed via the analytical framework and the abovementioned rating system. However, for the analysis of how IPCC and IPBES reports are used for policy, the whole documents are scanned for references. For legal text, also the "whereas" section is analysed as it serves as the preamble to the main legal text. It provides the context, reasoning, and objectives behind the legislation which serve the purpose of the coherence analysis well.

We created aggregations of the analysis results. Numeric aggregations were created by summing up the scores per policy document, divided by the amount of policy objectives in the document. Note that some of the documents included were strategies that consist of a large number of policy objectives. In the case of policy strategies, we scored each policy objective individually vis-à-vis the clusters and divided the score by the total amount of analysed objectives. This offers a proportional score for the policy strategy – i.e., how many of the policy objectives featured the cluster. In contrast, we view legal texts to promote a single main objective; for example, although not included in our analysis, the Nature Restoration Regulation promotes the objective B2.1. of the Biodiversity Strategy: "Propose legally binding EU restoration targets by 2021, and restore significant areas of degraded and carbon rich ecosystems by 2030".

To understand more deeply how the messages of the IPCC and IPBES reports are utilised in policymaking, we conducted interviews with 7 representatives of the EC working with the analysed policy domains³. The interviewees were selected based on expertise regarding EC policymaking as well as use of IPCC and IPBES reports in work. The preparation of interview questions was guided by our findings from the policy document analysis (Fig. 1).

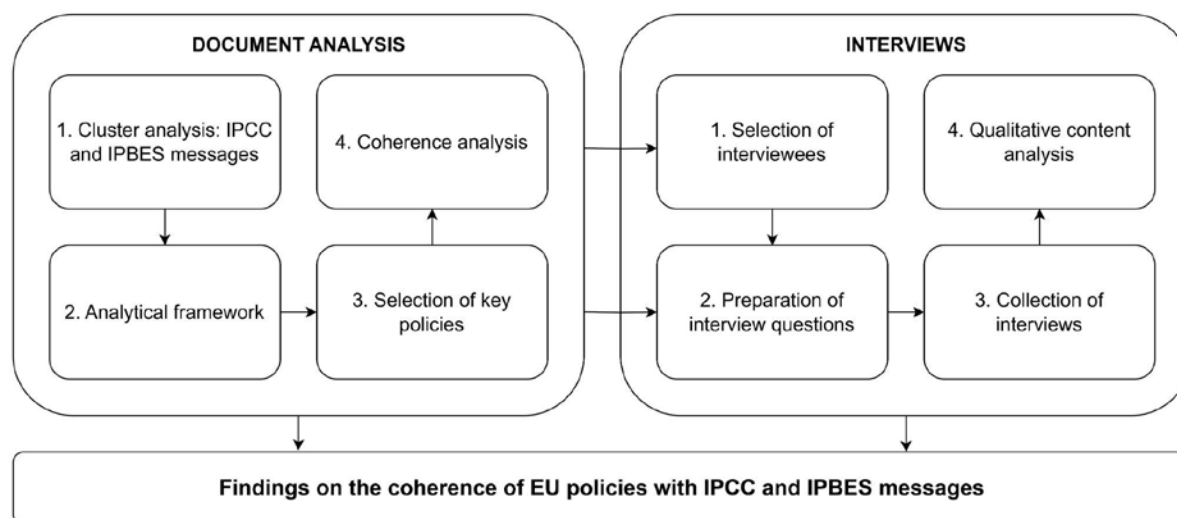


Figure 1. The methodological protocol of the study.

To analyse the interviews, we used qualitative content analysis (Schreier, 2012; Mayring, 2014; Krippendorff, 2018). The interview material was transcribed using Samsung AI. For this report, we used written notes and AI summaries of the transcriptions for analysing the

³The represented DGs were DG AGRI, DG RTD (3 representatives), DG ENV (2 representatives), and DG REGIO.

interviews. This offers a quicker look view of the main points from the interview material. A more in-depth analysis of the interviews will be offered in a subsequent scientific paper.

3. Results

3.1. Cluster analysis

The cluster analysis resulted in the identification of 12 clusters, which were grouped into four overarching categories: drivers, transformative change, the climate-biodiversity nexus, and action (Table 4). Only clusters that appeared across multiple reports were included in the final analytical framework – messages found exclusively in a single report were excluded. To explore how the reports emphasised different clusters, we assessed the frequency with which each cluster appeared in the messages (see Methodology section 2.1).

Table 4: Overview of which assessments support the different clusters.

Section	DRIVERS		TRANSFORMATIVE CHANGE					CLIMATE-BD NEXUS	ACTION			
	Growth	Production	Consistency with norms	Institutional capabilities	Knowledge-based policymaking	Equity & justice	Social learning		Synergies & co-benefits	Scales and arenas	Funding / resources	Technology & opportunities
IPBES Values Assessment	+	-	++	+++	++	++	++	-	-	-	++	-
IPBES ECA	+	++	+	++	-	+++	+	+	++	+	-	+
IPBES Land Degradation	+	+	++	++	+	+	-	+	-	+	-	-
IPBES Americas	+	+++	+	++	+	++	++	++	++	+	+	+
IPBES Global Assessment	-	++	++	+	+	+	-	++	-	+	-	-
IPCC WG1 Physical Science	-	-	-	-	-	-	-	-	-	-	+	-
IPCC WG2 Vulnerability, adaptation	++	+++	++	++	++	++	++	++	++	++	+	+
IPCC WG3 Mitigation	+	+	++	+++	+	+++	++	+++	++	+++	+++	+

The assessments had somewhat varying emphases. For example, while the IPCC WG2 report highlighted addressing drivers of climate change and biodiversity loss linked to production in different sectors the most, the WG3 report had a stronger emphasis on institutional capabilities, synergies between climate, biodiversity and sustainable development, and new technologies and opportunities for achieving climate mitigation targets. In general, institutional capabilities were highlighted the most across all the assessments, followed by equity and justice, production-related drivers of climate change and biodiversity loss, and new technologies and practices. In contrast, drivers of climate change and biodiversity loss related to growth and economic development, and messages related to protection areas and other conservation measures were mentioned the least frequently across the assessments.

The 12 clusters are explained in more detail in Table 5. The clusters have a higher-level section based on the overarching categories with an accompanying question. The clusters have keywords, definitions, guiding questions and examples of messages that belong to the

respective cluster. The guiding questions are used to assess the coherence of EU policies with the messages of IPCC and IPBES assessments in the next section.

Table 5: Clusters with detailed explanations.

Section	DRIVERS		TRANSFORMATIVE CHANGE	
Question	<i>Do policies address drivers?</i>		<i>Do policies refer to the need for transformation?</i>	
Clusters	Growth (population & economy)	Production (sectors)	Consistency with norms	Institutional capabilities
Keywords	Population, economic growth	Agriculture, mining, forestry, fisheries, industry, finance, infrastructure, sectors	Climate targets, biodiversity targets	Capacity building, financial support, financial, social, human capacities
Definition	<i>Refers to general indirect and underlying drivers of climate change and biodiversity loss related to growth, economic development, etc.</i>	<i>Drivers of climate change and biodiversity loss linked to production in different sectors, including agriculture, mining, forestry, fishery, but also indirect influences, such as industry, finance and infrastructure.</i>	<i>Biodiversity or climate aspects are integrated in policies and assessed by the explicit alignment of policies with climate or biodiversity targets and policies.</i>	<i>The ability of institutions at various levels (local, national, international) to effectively manage and respond to climate change or biodiversity loss through adequate policy, governance, and resource allocation.</i>
Guiding questions	Are fundamental challenges of growth including consumption patterns, population growth and economic growth addressed by policies?	Are drivers to climate change and biodiversity loss linked to production and resource use explicitly addressed?	Are climate and biodiversity included in the policies (and consistent with respective climate or biodiversity targets?), operationalised and supported by sufficient capacity and political weight?	Are capacities set aside for assuring the consideration of biodiversity and climate performance via evaluation procedures, integrated planning, etc.?

Example	<p>IPCC WG1 report, C7.1: "In 2019, global direct and indirect emissions from non-residential buildings increased by about 55% and those from residential buildings increased by about 50% compared to 1990. The latter increase, according to the decomposition analysis, was mainly driven by the increase of the floor area per capita, population growth and the increased use of emission-intensive electricity and heat while efficiency improvements have partly decreased emissions. There are great differences in the contribution of each of these drivers to regional emissions. (high confidence) {9.3}"</p>	<p>IPBES Global Assessment, A2: "The great expansion in the production of food, feed, fibre and bioenergy has occurred at the cost of many other contributions of nature to quality of life, including regulation of air and water quality, climate regulation and habitat provision."</p>	<p>IPBES Values Assessment, C1: "Transformative change towards sustainability can be facilitated through policies designed to incorporate sustainability-aligned values into established social conventions, norms and legal rules that shape human-nature relations (well established)."</p>	<p>IPBES Values Assessment, D3: "Enhancing the capacities of decision makers to address conflicting or contradictory values can facilitate the consideration of the diverse values of nature in policy decisions (established but incomplete)."</p>
Section	TRANSFORMATIVE CHANGE			CLIMATE-BIODIVERSITY NEXUS
Question	<i>Do policies refer to the need for transformation?</i>			<i>Do policies address climate and biodiversity synergies?</i>
Clusters	Knowledge-based policymaking	Equity and justice	Social learning	Synergies and co-benefits: climate change, biodiversity, sustainable development
Keywords	IPCC, IPBES, knowledge,	Inclusion, diversity, rights-based,	Social learning, participation,	Synergies, trade-offs

	research, science	participatory approach	knowledge exchange	
Definition	<i>The practice of making decisions based on the systematic collection, analysis, and application of data and knowledge systems related to biodiversity loss or climate change impacts, vulnerabilities, and adaptations.</i>	<i>Concerns the fair distribution of the benefits and burdens of climate change and biodiversity loss and the related processes such as mitigation and adaptation, ensuring that vulnerable and marginalised populations receive particular attention to rectify inequalities.</i>	<i>Encompasses the processes through which different actor group such as communities learn from each other and external sources to improve their understanding and management of biodiversity or climate risks, emphasising participatory approaches and knowledge exchange.</i>	<i>Interactions between climate change, biodiversity and sustainable development, including how climate impacts affect biodiversity and how the conservation of biodiversity can contribute to climate change mitigation and adaptation. Includes the benefits of climate and biodiversity actions to other aspects of sustainable development, such as improvements in public health, economic development, environmental sustainability, and social welfare.</i>
Guiding questions	Are information sources such as IPBES and IPCC referenced in the assessment? Are measures taken to promote knowledge-based governance via, e.g., knowledge production?	Are standards of equity and/or justice referred to? Are diverse values of biodiversity reflected in policies? Are diverse actor groups included in the processes of planning, implementing and evaluating policies?	Are participatory planning, monitoring, evaluation and learning envisioned in the policy?	Are interactions between biodiversity, climate and sustainable development addressed and harnessed for synergistic implementation?

Example	IPCC WG2 report, C2: "More relevant, credible and accessible information is needed to allow decision makers, land managers, and purchasers of goods to improve the long-term stewardship of land and sustainability of natural resource use."	IPCC WG3 report, D1.2: "Maximising synergies and avoiding trade-offs pose particular challenges for developing countries, vulnerable populations, and Indigenous Peoples with limited institutional, technological and financial capacity, and with constrained social, human, and economic capital. Trade-offs can be evaluated and minimised by giving emphasis to capacity building, finance, governance, technology transfer, investments, and development and social equity considerations with meaningful participation of Indigenous Peoples and vulnerable populations. (high confidence)"	IPBES Europe and Central Asia Assessment, D: "Long-term societal transformation through continuous education, knowledge-sharing and participatory decision-making characterize the most effective pathways for moving towards sustainable futures."	IPCC WG2 report, C2.5: "Effective Ecosystem-based Adaptation reduces a range of climate change risks to people, biodiversity and ecosystem services with multiple co-benefits (high confidence). Ecosystem-based Adaptation is vulnerable to climate change impacts, with effectiveness declining with increasing global warming (high confidence). Urban greening using trees and other vegetation can provide local cooling (very high confidence). Natural river systems, wetlands and upstream forest ecosystems reduce flood risk by storing water and slowing water flow, in most circumstances (high confidence)."
Section	ACTION			
Question	<i>Do policies address specific action related aspects?</i>			
Clusters	Scales and arenas	Funding/resources	Technology and opportunities	Protected areas and other conservation efforts
Keywords	Multi-level, interdependent, interconnected, teleconnected	Financing, resourcing, funding	Technology, technical, solution, opportunity, practices	Protection, conservation

Definition	<p><i>The relevance and interdependence of different scales - both ecologically and socially. Ecological changes can be inter- or teleconnected with other places or be part of a larger scale. Political and economic intervention options might be conditioned by the influence of other scales, other social or political arenas or even other (telecoupled) places. This cluster relates to messages that emphasise the need to address these other places, scales and arenas in the solution.</i></p>	<p><i>The financial investments and resources allocated for biodiversity-protecting or -enhancing, and climate change mitigation and adaptation projects, emphasising the importance of adequate, sustainable funding mechanisms.</i></p>	<p><i>Messages of a technological change or an alternative management of biodiversity or climate that has the potential to reduce threats to biodiversity and climate, supporting conservation, sustainable use, climate change mitigation and adaptation or other targets.</i></p>	<p><i>Refers to messages and intervention options that are related to the designation and management of protected areas and other conservation measures.</i></p>
Guiding questions	<p>Are coupled effects and interdependencies with other places addressed? Is there coordinated planning with other related policy domains, scales and arenas? Are there cross-references to other policy processes?</p>	<p>Is there an indication on how finance mechanisms are provided and directed in a way that they are consistent with biodiversity and sustainability targets? Is the funding for the promoted objectives specified?</p>	<p>Is there a change in technology and practices to assure biodiversity and/or climate performance?</p>	<p>Is there a reference in the policies to protected areas and how to support them?</p>

<p>Example</p>	<p>IPCC WG3 report, E.4.6: <i>"National policies to support technology development and diffusion, and participation in international markets for emission reduction, can bring positive spillover effects for other countries (medium confidence), although reduced demand for fossil fuels could result in costs to exporting countries (high confidence). There is no consistent evidence that current emission trading systems have led to significant emissions leakage, which can be attributed to design features aimed at minimising competitiveness effects, among other reasons (medium confidence)."</i></p>	<p>IPBES ECA Assessment, E4: <i>"Lack of adequate financing is a major constraint on efforts to achieve biodiversity conservation and ecosystem restoration (well established)."</i></p>	<p>IPCC WG2 report, C2.10: <i>"Climate responsive energy markets, updated design standards on energy assets according to current and projected climate change, smart-grid technologies, robust transmission systems and improved capacity to respond to supply deficits in the medium- to long-term, with mitigation co-benefits (very high confidence)."</i></p>	<p>IPBES ECA Assessment, B3: <i>"Terrestrial species and habitats have long-term declining trends in population size, range, habitat intactness and functioning. This decline is mainly due to land-use change, for example unsustainable agriculture and forest management, infrastructure, urban development or mining, causing habitat loss, modification and fragmentation, and due to climate change (well established) {3.3.2, 3.4}. The conservation status of some habitats and species that benefit from targeted conservation actions (e.g., large felids or some species listed in the European Union Birds Directive) has improved in recent years (established but incomplete)."</i></p>
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3.2 Coherence analysis

For the coherence analysis, we applied the grading system presented in section 2.2 together with the analytical framework including the guiding questions presented in the previous section to analyse individual policy objectives and aspects of legislation from the identified policy documents. In many cases, certain aspects highlighted by the IPCC and IPBES reports might be discussed on a more general level in the policy documents but not as related to the specific policy objectives under analysis here. For example, the European Green Deal discusses the need to decouple economic growth from resource use, but not as related to the objectives under analysis here.

Certain aspects analysed in this report could be addressed by other policy instruments and therefore may not be crucial in, e.g., the Biodiversity Strategy. Nevertheless, the document analysis does reveal what is being emphasised in the policy documents, and whether a minimalist or a comprehensive approach to considering the messages is taken. Here, a minimalist approach to social justice and equity would be to argue that EU legislation already protects human rights and therefore they do not need to be specifically addressed in a biodiversity strategy. A more comprehensive approach, on the other hand, would be to explicitly consider the human rights aspects of the policy objectives.

Another perspective is that while a specific aspect highlighted in IPCC and IPBES messages may not appear in one policy objective, it might be addressed in another. This is because certain policy objectives might have more narrow foci than others. For example, the lack of social learning aspects in the objective of integrating climate resilience in national fiscal frameworks (C4.3) appears understandable due to the specific focus of the policy objective. In contrast, particularly comprehensive policy objectives, such as C5.4. Ensuring the availability and sustainability of freshwater, may cover almost all the clusters. Thus, the apparent lack of consideration of social learning in a specific objective does not necessarily mean that the policy document under-recognizes the importance of social learning as a whole.

3.2.1 Biodiversity policy

For biodiversity policy, we analysed the EU's Biodiversity Strategy for 2030. The Biodiversity Strategy sets the scene for biodiversity policy in the EU until 2030, defining the state of biodiversity within the EU, the biggest challenges, and key policy processes and commitments. To reach the overarching biodiversity goals and commitments, the strategy sets policy objectives and more defined targets within its four key pillars; Pillar 1: Protecting nature in the EU, Pillar 2: Restoring nature in the EU, Pillar 3: Enabling transformative change, Pillar 4: A global biodiversity agenda. As the scope of our analysis is the EU, we focused our analysis on the policy objectives and targets of the first three pillars. The results for biodiversity policy are synthesised in Table 6.

Table 6. Synthesis of results for biodiversity.

Biodiversity		
EU Biodiversity Strategy 2021		
DRIVERS	Growth	Population or economy growth mostly not mentioned.
	Production	Agriculture-related causes of biodiversity loss addressed in B2.4, B2.5, and B2.6. Marine biodiversity addressed by B2.10 and B2.11.
TRANSFORMATIVE CHANGE	Consistency with norms	All the objectives in line with aspects of climate, biodiversity or sustainability targets.
	Institutional capabilities	In general, the objectives have clear capacities or governance mechanisms explicated to promote them.

	Knowledge	IPBES reports mentioned as a basis for the objectives in the introduction, supporting knowledge not explicated in objectives. Some objectives for knowledge production.
	Equity & Justice	Perspectives related to equity and justice or social learning not mentioned in introduction, Pillar 1 or Pillar 2. In Pillar 3 mentioned in two objectives.
	Social learning	Social learning not highlighted in most of the policy objectives in Pillar 2. Present in three of the objectives in Pillar 3.
Climate & Biodiversity NEXUS	Synergies	Synergies were sometimes addressed in Pillar 2. Mostly not present elsewhere.
ACTION	Scales & arenas	Aspects of multi-level governance and actions across the EU mainly defined in Pillar 1. Mostly no mention of scales and arenas elsewhere.
	Funding	Objectives with funding arrangements developed throughout the different Pillars, however funding aspects are also missing for many objectives.
	Technology	New technologies and novel solutions offered throughout the different Pillars.
	Protected areas	All objectives relate to nature protection with defined targets in Pillar 1 and three specific objectives in Pillar 2. Not mentioned in Pillar 3.

The strongest clusters in the Biodiversity Strategy were Consistency with norms, Institutional capabilities, and Technology and opportunities. All the objectives were in line with aspects of climate, biodiversity or environmental sustainability targets which led to a high score for Consistency with norms. In general, the objectives had clear capacities or governance mechanisms explicated to promote them, which meant that institutional capabilities also appeared strong. Finally, new technologies and novel solutions were offered throughout the different Pillars, which led to a high score for technology and opportunities.

The weakest clusters in the Biodiversity Strategy were growth and production-related drivers of climate change and biodiversity loss, equity and justice and social learning. The Commission representatives offered various explanations for the lack of equity and justice considerations in the Biodiversity Strategy. One was that the European Union is based on a

set of core values, and that equity and justice are already included in those. Moreover, equity and justice were seen to be protected by EU legislation. For example, in the case of violation of human rights, the EU court system can be used to intervene. Some interviewees stated that there was, however, room for improvement in the consideration of the issue, noting that during the time of developing the Biodiversity Strategy, justice was not yet as integral a part of the narrative and discussions on a just transition were still emerging.

3.2.2 Climate and energy policy

The climate and energy policies that we analysed were relevant sections from the European Green Deal, the EU Adaptation Strategy 2021, and the LULUCF (Land Use, Land-Use Change and Forestry) Regulation. These documents are heterogeneous in their nature. Namely, the European Green Deal's documentation is the most general, setting high-level policy agenda for climate and energy policy. The Adaptation Strategy is similarly a strategy document as opposed to legally binding material, but its specific focus is on climate adaptation policy, while mitigation has been ruled out. Finally, the LULUCF Regulation is a legally binding piece of legislation, distinguishing it from the other two documents. It provides concrete rules and targets for carbon removals and emissions related to land use and forestry, directly contributing to the EU's climate mitigation goals. The results for climate and energy policy are synthesised in Table 7.

Table 7. Synthesis of results for climate and energy policy.

Climate & energy				
		The European Green Deal	EU Climate Adaptation strategy 2021	LULUCF Regulation
DRIVERS	Growth	Fundamental challenges of growth or consumption patterns not governed by any of the objectives	Only objective C5.4 Ensuring the availability and sustainability of freshwater aims at affecting consumption patterns by promoting water conservation and reducing wasting water.	Aspects related to economic or population growth not mentioned.
	Production	C2.1 aims at further decarbonising the energy sector.	Objective C5.4 aims at reducing water consumption in all the different sectors. The need for more knowledge on supply chains mentioned in	Addresses the LULUCF sectors together.

			C3.2 but no clear target explicated.	
TRANSFORMATIVE CHANGE	Consistency with norms	Biodiversity or climate aspects considered in all of the objectives. Objective C2.2 deems the promotion of offshore wind production essential which may conflict with marine biodiversity objectives.	Biodiversity or climate aspects considered in all of the objectives.	The aim is to attain and instrumentalise EU's climate neutrality targets 2021-2030. There are measures to ensure the "do no significant harm" principle is followed by the Member States.
	Institutional capabilities	Mentioned or targets explicated for all objectives except C2.3.	The objectives have clear aspects supporting institutional capabilities, such as legislation, monitoring, reporting and evaluation.	IPCC guidelines used, expectations to provide transparent and verifiable data to the Commission.
	Knowledge	One IPCC and one IPBES report referred to in the introduction but not specifically related to individual objectives.	The strategy refers to two IPCC reports (AR4 and AR5), plus additional IPCC source. In addition, many objectives aim to improve the knowledge base for decision-making or base decisions on the latest science.	IPCC guidelines used, expectations to provide transparent and verifiable data to the Commission.

	Equity & Justice	<p>Fair transition mentioned with the European Climate Law (C1.1). C2.2 highlights that "the clean energy transition should involve and benefit consumers" while C2.3 addresses energy poverty.</p>	<p>C3.1 aims to "draw on science to improve our understanding of the nexus between climate hazards and socioeconomic vulnerabilities and inequalities." All objectives of sections C5 and C6 include equity and justice aspects.</p>	<p>Reference to the need of just and socially fair transition, but guidelines only offered. The Union will provide an assessment of social and labour impacts for the Parliament, including on gender equality and working conditions.</p>
	Social learning	<p>Aspects related to social learning not mentioned.</p>	<p>C3.1 highlights the need "develop effective and inclusive governance mechanisms that ensure dialogue between policymakers and scientists, for example via the biennial European Climate Change Adaptation Conference". Many other objectives mention international dialogues, mutual learning and citizen engagement.</p>	<p>Aspects related to social learning not mentioned.</p>

<p>Climate & Biodiversity NEXUS</p>	<p>Synergies</p>	<p>The climate targets within the European Green Deal do not specify interactions between climate and biodiversity. Brief mention to nature-based solutions in the context of climate adaptation, but no detailed discussion on how biodiversity policy aligns with or complements climate policy.</p>	<p>Included in C4.4 via nature-based solutions. Highlighted in all the objectives of section C5.</p>	<p>National compliance reports to include an assessment of synergies between climate mitigation and biodiversity.</p>
<p>ACTION</p>	<p>Scales & arenas</p>	<p>C1.2 mentions the risk of carbon leakage and C1.3 a carbon border adjustment mechanism to address the issue.</p>	<p>C4.1 notes that robust reporting also supports the implementation of the National Energy and Climate Plans. Links between climate change and security noted in C5.4, C6 and C6.1. Transboundary climate risks addressed in C6.3.</p>	<p>Aspects related to scales and arenas, e.g., coupled effects, not mentioned.</p>
	<p>Funding</p>	<p>Pursuing green finance and investment and ensuring a just transition is its own section in the European Green Deal.</p>	<p>Funding and resources taken into consideration especially in C4, C5 and C6.</p>	<p>Note that MSs should use revenues to tackle climate change, also EU funding can be used toward the target?</p>

	Technology	Objectives related, e.g., to effective carbon pricing, a carbon border adjustment mechanism for carbon leakage, and development of decarbonised gases.	Technological innovations, novel funding mechanisms and clear changes in practice mentioned in most of the objectives.	New logic around achieving climate neutrality by viewing the LULUCF sector together and requiring MSs to balance sinks with emissions.
	Protected areas	Aspects related to protected areas or conservation not mentioned.	Not mentioned in any of the objectives.	Overall logic of LULUCF benefits protected areas?

The strongest clusters for climate and energy policy were Consistency with norms, Institutional capabilities, and Technology and opportunities. Almost all of the analysed objectives aligned with official climate, biodiversity or environmental commitments. The European Green Deal's objective of promoting offshore wind production may cause both positive and negative consequences to biodiversity. The negative impacts are mostly temporary, ranging from habitat disruption to collision risk and sediment transport. An artificial reef effect, creation of fishing exclusion zones and potential for conservation integration, on the other hand, represent potential positive long-term effects. Most of the objectives across the policies promoted institutional capabilities for climate or biodiversity. For example, the LULUCF Regulation uses IPCC guidelines to provide transparent and verifiable data to the Commission, which simultaneously also supports knowledge-based policymaking. For technology and opportunities, there were objectives related to, e.g., effective carbon pricing, a carbon border adjustment mechanism for carbon leakage, and development of decarbonised gases.

The weakest clusters in the climate and energy policies were growth and production-related drivers of climate change and biodiversity loss, and the role of protected areas and environmental conservation. For growth-related drivers, only objective C5.4 "Ensuring the availability and sustainability of freshwater" seeks to influence consumption patterns by encouraging water conservation and minimising water waste. The European Green Deal or EU Adaptation Strategy do not identify any role for environmental protection in their climate or energy objectives. The LULUCF incentivises conservation of carbon-rich ecosystems and discourages conversion of natural land, thereby possibly benefiting environmental protection goals.

3.2.3 Agricultural policy

The documents analysed for agricultural policy consisted of the Farm to Fork strategy and a report highlighting the strategic plans for Common Agricultural Policy for 2023–2027. The Farm to Fork strategy develops a general agenda for agricultural policy whereas CAP relates

to direct economic subsidies that are paid to farmers. The results for climate and energy policy are synthesised in Table 8.

Table 8. Synthesis of results for agricultural policy.

Agriculture			
		Farm to Fork Strategy	Common Agricultural Policy for 2023-2027
DRIVERS	Growth	Consumption patterns governed in objectives A1.3 and A1.5.	The objectives do not address fundamental questions on growth and consumption reduction
	Production	Environmental impacts of agriculture governed via reducing the use of pesticides (A1.1), circular economy (A1.3), and production of alternative sources of protein (A2.1).	Environmental impacts of agriculture governed via reducing the use of pesticides (A4.2) and resource efficiency (A4.4).
TRANSFORMATIVE CHANGE	Consistency with norms	Environmental sustainability as a greater objective included in most objectives.	Farmers must comply with enhanced basic standards for good agricultural and environmental conditions (GAECs) to qualify for income support payments (A4.1). Potential conflict with climate objectives in A4.2 by benefiting livestock systems: "CAP Plans grant support most to land without requirements for specific production, today or in the past. This policy choice benefits livestock systems with extensive and permanent grassland management, contributing to carbon removal and helping maintain carbon stocks."

	Institutional capabilities	Almost all objectives backed with clear institutional capabilities such as policies and legislation	Financial instruments (A4.1), conditionality (A4.2), CAP funded advice, training and knowledge exchange (A4.4) to improve institutional capabilities for environmental sustainability.
	Knowledge	No references to IPCC or IPBES in the strategy, but objectives are sought in part via knowledge production and utilization	No references to IPCC or IPBES in the document. Knowledge exchange mentioned in A4.4.
	Equity & Justice	Most objectives have equity and justice considerations via improving consumers' access to healthy food, accurate nutritional information and preventing harmful marketing.	Equity and justice taken into consideration by, e.g., emphasising support for smaller farms and viable income (A4.1) as well as addressing depopulation, access to and improvement of basic services in rural areas (A4.3).
	Social learning	Social learning promoted via Agricultural Knowledge and Innovation Systems (AKIS) (A2.2) and the development of Green Alliances on sustainable food systems (A3).	Addressed by CAP funded advice, training and knowledge exchange, or enabling farmers' participation in innovation projects (A4.4).
Climate & Biodiversity NEXUS	Synergies	Synergies between, e.g., public health via plant-based diets and environmental sustainability highlighted.	Coupled income support is offered to address challenges in agricultural sectors that are significant for social, economic, or environmental reasons (A4.1). Soil fertility to increase resilience to drought (A4.2).

ACTION	Scales & arenas	Coupled effects and interdependencies noted in A1.3 by highlighting the food industry's influence on consumer choices and therefore environmental and social sustainability.	The integration of conditionality, which applies to 90% of the land, along with specifically targeted instruments covering at least 47% of that land, combined with farm investments and advisory services, supports the EU in advancing the goals of the EU Farm to Fork and Biodiversity Strategies (A4.2).
	Funding	A1.1 and A2.1 include funding and resources considerations.	Funding and resources considered by default.
	Technology	Highlighted in A1.3 via the promotion of new circular business models and in the enabling transition section.	Modernisation investments (A4.1) and support investments in digital technologies and services to optimise resource efficiency (A4.2). CAP basic standards now include measures to protect EU agricultural wetlands and peatlands, aiming to reduce carbon emissions (A4.2).
	Protected areas	No mention of protected areas in any of the objectives.	Objective for protection of peatland and for non-productive sections of farmland (A4.2).

The strongest clusters for agricultural policy were institutional capabilities, equity and justice, and technology and opportunities. Almost all objectives of the Farm to Fork strategy were backed with clear institutional capabilities such as policies and legislation. For the CAP report, the promotion of institutional capabilities was related, i.a., to financial instruments (A4.1), conditionality (A4.2), and CAP funded advice, training and knowledge exchange (A4.4). For the Farm to Fork strategy, most objectives had equity and justice considerations via improving consumers' access to healthy food, accurate nutritional information and preventing harmful marketing. In the strategic plans for CAP, equity and justice were taken into consideration by, e.g., emphasising support for smaller farms and viable income (A4.1) as well as addressing depopulation, access to and improvement of basic services in rural areas (A4.3). New technologies and opportunities were highlighted in the Farm to Fork strategy in A1.3 via the

promotion of new circular business models and in the enabling transition section. For the CAP report, there were plans for modernisation investments (A4.1) and support investments in digital technologies and services to optimise resource efficiency (A4.2). In addition, CAP basic standards were now to include measures to protect EU agricultural wetlands and peatlands, aiming to reduce carbon emissions (A4.2).

The weakest clusters for agricultural policy were growth-related drivers of climate change and biodiversity loss, scales and arenas, and objectives related to environmental protection and conservation. In the Farm to Fork strategy, consumption patterns are governed in objectives A1.3 and A1.5., but the objectives of the CAP do not address fundamental questions on growth and consumption reduction. For the scales and arenas cluster, the Farm to Fork strategy addresses coupled effects and interdependencies in A1.3 by highlighting the food industry's influence on consumer choices and thereby environmental and social sustainability. The strategic objectives of CAP promoted the integration of conditionality, which also supported the EU in advancing the goals of the EU Farm to Fork and Biodiversity Strategies (A4.2). Finally, the Farm to Fork strategy had no mention of environmental conservation or protected areas or in any of the objectives, whereas the CAP strategic plans report highlighted an objective for protection of peatland and for non-productive sections of farmland (A4.2).

3.2.4 Trade policy

For trade policy, the policies that we analysed were two pieces of legislation - the Carbon Border Adjustment Mechanism (CBAM) and Regulation on Deforestation-Based Products. This is due to the nature of trade policy where trade is not governed via an overarching strategy, but is largely based on legislations and individual trade agreements. To analyse the legislations, we also examined the preambles for justifications that related to the clusters. The results for trade policy are synthesised in Table 9.

Table 9. Synthesis of results for trade policy.

Trade			
		CBAM	Deforestation Regulation
DRIVERS	Growth	No explicit mention of consumption patterns, while the CBAM could indirectly affect customer prices.	Identifies the EU's consumption as a major driver of deforestation and forest degradation globally (Recital 8). Aims at shifting consumption patterns.

	Production	The CBAM is expected to promote the adoption of less polluting technologies both in the EU and third countries, thereby reducing emissions related to production (Recital 14).	Agricultural expansion identified as a significant driver of deforestation and forest degradation (Recitals 12 & 16) which is aimed to be halted via the Regulation.
TRANSFORMATIVE CHANGE	Consistency with norms	The CBAM aligns itself with the Paris agreement (Recital 2), and as part of the EU's 'Fit for 55' package, aims to prevent carbon leakage and support the Union's goal of climate neutrality by 2050 in alignment with the Paris Agreement (Recital 10).	Specifies alignment with the European Green Deal and its strategies (Recital 10), the Paris Agreement (Recital 13), CBD (Recital 14) as well as the need to step up action to achieve the UN Sustainable Development Goals (Recital 11).
	Institutional capabilities	The CBAM aims to promote the EU's ability to address carbon emissions within its borders and carbon leakage together.	Strengthens institutional capacity to integrate biodiversity and climate considerations by, e.g., mandatory Due Diligence, geological tracking, and risk-based classification.
	Knowledge	Refers to IPCC's 2018 special report as scientific evidence for the need to mitigate climate change and step up climate action (Recital 6).	References scientific knowledge on deforestation and forest degradation (e.g., Recitals 1 to 6). Recital 3 refers to IPCC special report on climate change and land of 2019.

	Equity & Justice	Emphasises that the transition to a carbon-neutral economy should maintain social cohesion by considering the specific challenges of outermost regions and island states in future revisions (Recital 17).	Seeks to protect environmental human rights defenders (Recital 7). Acknowledges the role of indigenous peoples and local communities in protecting forests and emphasizes the importance of their participation in partnerships and cooperation mechanisms (Article 30).
	Social learning	The Commission promotes social learning and cooperation by coordinating authorities, issuing guidelines, and facilitating the exchange of best practices for the effective implementation of CBAM (Recital 58).	Stresses the need for inclusive and participatory dialogue, including indigenous peoples, towards national legal and governance reform processes to enhance forest governance and address deforestation (Article 30). Knowledge exchange encouraged (Article 15).
Climate & Biodiversity NEXUS	Synergies	Refers to the wider targets of the European Green Deal including synergies between climate, biodiversity and sustainable development but not the CBAM's specific role in attaining them.	Incentivising moving away from meat-based diets argued to have both health and environmental benefits (Recital 17). Respecting the rights of indigenous peoples seen as benefiting both human rights and environmental protection (Recital 57).

ACTION	Scales & arenas	Risk of carbon leakage potentially undermining the EU's emission reduction efforts and increasing global emissions (Recital 9). Addressed by incentivising third-country producers to adopt cleaner technologies, extending the CBAM's impact beyond its borders (Recital 14).	Via the Regulation, the EU has the potential to influence the global market instead of only supply chains to the Union (Recital 18).
	Funding	Notes that the CBAM requires long-term financial predictability to support industry investment in decarbonization, with a clear framework for its gradual expansion to additional sectors (Recital 13).	Member States have the possibility to supplement public financing by recovering costs from economic operators when carrying out checks on non-compliant commodities and products (Recital 64). Also encouraged to use opportunities and support available at the Union level, including cohesion funds and capacity-building instruments (Recital 76).

	Technology	Promotes the deployment of new technologies by encouraging third-country producers to adopt more efficient, low-emission technologies and replacing existing carbon leakage mechanisms that weakly incentivise investment in decarbonisation (Recitals 14 & 11).	Emphasises the use of digital technologies and geospatial information to monitor deforestation and forest degradation (Recital 29). This includes the use of Earth observation data from the Copernicus program and other sources (Article 18).
	Protected areas	Refers to The European Green Deal as aiming to protect, conserve and enhance the Union's natural capital (Recital 1), but not the CBAM's explicit role in promoting those goals.	Notes that current global action on conservation is not sufficient to stop deforestation and the Regulation is needed to step it up (Recital 11). The role of indigenous peoples seen as important for environmental protection (Recital 57).

According to the preambles, the Reforestation Regulation appeared to have taken into account all the different aspects of the analytical framework (see Table 9). While it should be studied critically whether the ambitious aims of the Regulation are truly attained, it appears to at least have considered a great variety of aspects recommended by scientific outputs. However, its application has been postponed. Initially set to apply from 30 December 2024 for large operators and traders, and from 30 June 2025 for small and micro-enterprises, the implementation dates have been extended by one year. Now, large operators and traders must comply by 30 December 2025, while small and micro-enterprises have until 30 June 2026. This delay was agreed upon by EU ambassadors on 16 October 2024, in response to pressures from member states and major exporters like Brazil and Malaysia.

The Carbon-Border Adjustment Mechanism (CBAM) similarly presented a wide variety of perspectives related to the clusters in its preambles. However, in comparison to the Deforestation Regulation, the CBAM featured more clusters at the level of a mention without clear indication how the objective will be promoted by the Regulation. Such clusters were social learning, climate-biodiversity nexus, funding, and the role of environmental conservation. For example, the CBAM refers to The European Green Deal as aiming to protect, conserve and enhance the Union's natural capital (Recital 1), but not the CBAM's

explicit role in promoting those goals. In addition, the CBAM had no explicit mention of growth-related drivers of climate change and biodiversity loss, while it could indirectly affect customer prices. However, due to lacking any clear references to the cluster within the Regulation text, this aspect was coded as missing.

3.2.5 Cross-comparison of the policy domains

We aggregated the results to create a synthesis of the varying emphases between the policy documents (Table 10). The logic for the aggregation is explained in the Methodology section 2.2. The results can be found in more detail in Annex 2 where the results are not aggregated.

Table 10: Aggregation of the results from the cluster analysis. The aggregation was created by summing up the scores per policy document, divided by the amount of policy objectives in the document. The depth of green represents how many percent of the objectives in each document featured the cluster (0–24.99% = white, 25–49.99% = green 1, 50–74.99% = green 2, 75–100% = green 3).

		Biodiversity	Climate and energy			Agriculture		Trade	
		EU Biodiversity Strategy 2021	The European Green Deal	EU Climate Adaptation strategy 2021	LULUCF Regulation	Farm to Fork Strategy	Common Agricultural Policy for 2023-2027	Carbon Border Adjustment Mechanism	Deforestation Regulation
DRIVERS	Growth	0,5/27	0/7	1/16	0/1	2,5/9	0/4	0/1	1/1
	Production	5,5/27	1/7	1,5/16	1/1	4/9	2,5/4	1/1	1/1
TRANSFORMATIVE CHANGE	Consistency with norms	27/27	5,5/7	16/16	1/1	6/9	2,5/4	1/1	1/1
	Institutional capabilities	25,5/27	4,5/7	16/16	1/1	8/9	3,5/4	1/1	1/1
	Knowledge	16,5/27	3,5/7	11,5/16	1/1	5/9	0,5/4	1/1	1/1
	Equity & Justice	1,5/27	2,5/7	11,5/16	1/1	7/9	2,5/4	1/1	1/1
	Social learning	5,5/27	0/7	8/16	0/1	3,5/9	1/4	0,5/1	1/1
C & B NEXUS	Synergies	9/27	0/7	8/16	0,5/1	5/9	2,5/4	0,5/1	1/1
ACTION	Scales & arenas	10,5/27	2/7	5/16	0/1	2/9	1/4	1/1	1/1
	Funding	10/27	2,5/7	10/16	1/1	2/9	4/4	0,5/1	1/1
	Technology	19/27	4,5/7	10,5/16	1/1	4,5/9	3/4	1/1	1/1
	Protected areas	7/27	0/7	0/16	1/1	0/9	1/4	0,5/1	1/1

A cross-comparison of the policy domains and clusters shows that the clusters most frequently reflected in the policies were Consistency with norms, Institutional capabilities, and Knowledge-based policymaking. On the other hand, growth-related drivers of climate change and biodiversity loss and the role of protected areas and environmental conservation were least often emphasised in the examined policies.

The interviewees reflected the lack of consideration of growth-related drivers of climate change and biodiversity loss by EU policies, noting that messages questioning the growth paradigm do not align with the political priorities of the European Union. This is because the Commission's work programme emphasises competitiveness and growth. It was specifically mentioned by two interviewees that the new Transformative Change assessment by IPBES is too far from the Commission's priorities that it would be hard to use it in policymaking.

A more general risk pinpointed by the interviewees was the waning support for the European Green Deal by the current Commission. Some interviewees perceived the current situation merely as the implementation phase of the European Green Deal and that the Clean Industrial Deal and the Innovation Compass do not replace the European Green Deal or jeopardise its implementation. Others, however, argued that there is currently much less political will in the Commission to fully follow through with the priorities of the European Green Deal, and that sustained support in the form of funding and implementation is needed for it to have sufficient impact.

4. Discussion

Our results show that many **IPBES and IPCC messages are reflected by policies promoted under the European Green Deal, especially ones related to the need to develop institutional capacities, align policies with environmental commitments and norms, and foster knowledge-based policymaking.** We only detected two policy objectives that are directly conflicting with the clustered messages. The first of these related to a policy choice of the CAP that benefits large livestock systems, and the second to the European Green Deal's objective of promoting offshore wind production which may have localised negative impacts, especially in the short term, to biodiversity⁴.

Besides the direct incoherences, there are gaps where EU policies do not address the message clusters from IPBES and IPCC reports. Based on the document analysis and the supplementing interviews, we found the strongest disparity to be related to the concept of growth. Messages related to the problematic nature of the growth paradigm do not align well with the EU's political agenda which is more focused on "green growth" and decoupling economic development from resource use. The IPCC and IPBES reports call for a more critical view of growth in general and place emphasis on degrowth, whereas the EU focuses on finding new ways to continue economic growth. There are critical studies pointing out that decoupling may not be possible to the extent imagined (Haberl et al., 2020; EEA, 2021). The new Transformative Change and 'Nexus'⁵ assessments of IPBES (2024a; 2024b) highlight the need to transform our societies in an even stronger fashion, calling into question the very foundations of current economic systems that prioritise continuous growth. These

⁴The first one of these was a potential conflict with climate objectives in A4.2 by benefiting livestock systems: "CAP Plans grant support most to land without requirements for specific production, today or in the past. This policy choice benefits livestock systems with extensive and permanent grassland management." Benefiting livestock systems rather than a transition toward plant-based diets does not support climate objectives. In addition, objective C2.2 deems the promotion of offshore wind production essential which may conflict with marine biodiversity objectives especially in the short-term via disrupting aquatic ecosystems. However, in the long-term offshore wind units may even provide benefits to aquatic species as artificial reefs.

⁵Report on the Interlinkages among Biodiversity, Water, Food and Health.

assessments emphasise that incremental changes within the existing framework may be insufficient to address the biodiversity and climate crises effectively. Instead, they call for deeper structural transformations, including shifts in consumption patterns, governance models, and economic priorities. Such recommendations challenge the prevailing policy focus on green growth, suggesting that **strong sustainability (see chapter 1.1.) requires rethinking economic objectives beyond decoupling, and instead embracing post-growth or degrowth approaches.**

Another apparent disparity was linked to the role of ecosystem conservation in mitigating biodiversity loss and climate change. The cluster refers to messages and intervention options that are related to the designation and management of protected areas and other conservation measures for biodiversity and/or climate benefits. For example, the IPCC Working Group II report states that protecting and restoring ecosystems is essential for maintaining and enhancing the resilience of the biosphere. Key biodiversity legislation, such as the EU Habitats Directive and Birds Directive – collectively known as the Nature Directives – establish legal obligations and frameworks for ecosystem protection and restoration. However, few of the examined policies promoted ecosystem protection as part of their objectives. This suggests that ecosystem protection and restoration is still, to some degree, perceived as belonging to the specific domain of biodiversity policy and is not considered as an option by climate, energy, or agricultural policies. The recently adopted Nature Restoration Law (NRL) aims to transform this landscape by setting legally binding targets to restore degraded ecosystems across Europe, thereby fostering greater integration of ecosystem restoration into external policy sectors. This compartmentalisation undermines the potential for synergistic policy outcomes and reflects a broader issue in environmental policy integration. **Despite growing recognition of the interdependence between biodiversity, climate resilience, and sustainable resource use, sectoral policies often operate in silos, failing to integrate environmental objectives across domains.**

Justice and equity were also under-recognised in the Biodiversity Strategy. Our findings point to a minimalistic approach to the theme in which existing legislation and EU Treaties are relied on to address justice and equity questions sufficiently. This may not be enough to tackle the inherent challenges that arise from a transformative change and should be proactively addressed by policies. These are, for example, re-skilling workers involved in unsustainable activities, ensuring fair access to the benefits of biodiversity conservation, and engaging marginalised communities in decision-making processes. Without deliberate efforts to integrate such social dimensions, transformative biodiversity policies risk reinforcing existing inequalities or generating new ones. Moreover, sidelining justice concerns may undermine public support and legitimacy, especially among those most affected by the transition. **Addressing equity and justice proactively by policies is therefore not only an ethical imperative but also a strategic one to ensure long-term policy effectiveness and resilience.**

In our interviews, it was stated that messages that diverge too far from the political priorities of the European Commission are hard to use in policymaking processes. This finding highlights that the usability of IPCC and IPBES assessments is not only up to their merit, but considerably depends on political will. It seems that messages calling for more incremental and actionable changes in the society may be met with more positive reception in the short term. However, **watering down the urgency of the societal transformation needed for**

sustainability risks more severe climate change and biodiversity loss in the long term, causing a far bigger overall cost (IPBES, 2024).

Perceptions of bias in scientific knowledge can threaten trust between science and policy. We found that especially questions belonging to the domain of social sciences, such as justice and equity, were seen by some interviewees as politically partial. IPBES and IPCC increasingly include messages derived by social scientific analysis in their assessments. While this reflects a growing recognition of the complex human dimensions of environmental issues, it also exposes the assessments to claims of bias or ideological influence. This is particularly true when social science findings challenge existing power structures or advocate for redistributive policies. As a result, some stakeholders may question the neutrality of the science-policy interface, potentially undermining the legitimacy of the assessments themselves. To maintain credibility, **it is essential that assessment bodies remain transparent about their methodologies, the diversity of knowledge systems they include, and the normative assumptions underlying their conclusions.** Acknowledging the value-laden nature of many social science questions does not weaken scientific rigor – it strengthens its relevance to real-world decision-making. Likewise, **it is imperative that policymakers do not impose a hierarchy of sciences in their assessment of credibility where natural sciences are perceived as politically neutral and social sciences as normative.**

The interviews pointed to shifting political priorities with the new European Commission, leading to a possible implementation gap in the objectives of the European Green Deal. Thus, ambitious policy objectives alone are not enough to attain nature and climate targets. **To avoid an implementation gap, the European Commission should ensure sufficient funding and prioritisation of the policies and objectives at all levels of governance.**

5. Limitations and outlook

Policy coherence challenges cannot be entirely revealed by document analysis alone. This is due to at least two main reasons. First, although policy objectives often appear coherent on paper, research on policy coherence and integration shows that objectives frequently fail to translate into coherent implementation that incorporates biodiversity, climate, or other sustainability concerns (Runhaar et al., 2024). Often, rather than resolving contradictions between competing objectives in an anticipatory manner, policymaking tends to add new goals and layers of complexity without addressing inherent conflicts, a pattern described as “more of everything” in governance responses (Lindahl et al., 2017). This occurs especially when objectives are developed in sectoral silos. Inherent conflicts between sectoral goals – such as between agricultural productivity and biodiversity conservation – may then remain hidden until policies are operationalised and implemented. It is during implementation, when concrete instruments are applied and societal demands compete for land and resources, that these tensions become visible (Nilsson et al., 2012). Second, policy documents generally do not reveal the underlying political and procedural dynamics through which priorities are negotiated and trade-offs are made. These documents tend to present streamlined, often consensus-based summaries of policy positions. As a result, they obscure the deliberative processes and argumentation that shape policy outcomes, making it difficult to trace how scientific evidence, political interests, or institutional constraints have influenced the final policy content. To

supplement the information offered here, **a comprehensive, forward-looking gap analysis across sectoral policies is needed to understand whether the bulk of policies in place for biodiversity and climate are enough to attain the EU's commitments.** While frequent progress reports exist for individual policies or headline targets – like climate neutrality and broader Green Deal objectives (see European Commission Joint Research Centre [JRC], 2023) – a real challenge remains in conducting integrated analyses that consider multiple policies simultaneously, including their synergistic and antagonistic effects. Such a gap analysis can reveal missing policy instruments, insufficient coverage of key sectors, or areas where ambition does not translate into actionable measures. By systematically identifying these gaps, policymakers can better understand where additional legislative action, improved implementation mechanisms, or strengthened targets are needed.

Additionally, the analysis highlights a missed opportunity for more robust horizontal and vertical policy integration. While some cross-policy synergies (e.g. biodiversity-climate co-benefits) are acknowledged, they are often mentioned in preambles or implementation annexes rather than embedded into the design of the policy objectives themselves. References to IPBES or IPCC are uneven, and in some cases even seemingly symbolic – used in introductory sections rather than linked to concrete targets. The interviews and interactions with EU policy officials elucidated that IPBES and IPCC reports have, in some cases, informed policy design substantially despite generic references. **More concrete links to knowledge sources, however, would both increase the legitimacy of the EU's policy objectives and make the science-policy interface more transparent.**

6. Conclusion and recommendations

The report suggests several entry points: first, strengthening institutional mechanisms for uptake of critical and cross-sectoral science; second, earmarking resources for implementation and enforcement to avoid a policy-performance gap; third, complementing this analysis with a gap assessment to understand which drivers and leverage points are still unaddressed by EU instruments; and finally, fostering reflexive policy design that accounts for uncertainty, dissenting evidence, and emerging value systems.

In the following list, we offer recommendations for the course of action. As our analysis revealed that current EU policies do not challenge conventional economic growth objectives, **we draw on IPBES reports to highlight the need for rethinking economic priorities in the first two recommendations. The subsequent points are based on our own analysis and conclusions.**

- Drawing on the IPBES Nexus and Transformative Change reports, strong sustainability requires economic objectives to be thoroughly reconsidered regarding their coherence with sustainability objectives. New approaches beyond decoupling are needed, such as embracing post-growth or degrowth approaches.
- As emphasised by IPBES, delaying the societal transformation needed for sustainability risks more severe and irreversible climate change and biodiversity loss, leading to significantly higher long-term costs. In addition, the cost of inaction escalates over time, outweighing any short-term economic benefits from delay.

- We highlight that assessment bodies (such as IPBES and IPCC) must remain transparent about their methodologies, the diversity of knowledge systems they include, and the normative assumptions underlying their conclusions.
- Policymakers have the power to remove hierarchies of knowledge systems in their assessment of credibility where natural sciences may be perceived as politically neutral and social sciences as normative
- Addressing equity and justice proactively by policies is not only an ethical imperative but also a strategic one to ensure long-term policy effectiveness and resilience.
- To avoid an implementation gap, the European Commission would have to ensure sufficient funding and prioritisation of the European Green Deal's policies and objectives at all levels of governance to ensure its implementation.
- A comprehensive, forward-looking gap analysis across sectoral policies is needed to understand whether the bulk of policies in place for biodiversity and climate are enough to attain the EU's commitments.
- More concrete links to knowledge sources in policy documents would both increase the legitimacy of the EU's policy objectives and make the science-policy interface more transparent.
- To enable transformative change, EU institutions must go beyond symbolic references to science and actively integrate its specific recommendations into policy design and implementation. This includes seriously engaging with the IPBES Transformative Change messages – currently sidelined in policies despite their central importance to achieving long-term sustainability.

RESPIN, and this deliverable, offer critical building blocks for a more engaged science-policy interface that helps **to improve policy coherence and the alignment of policies with scientific findings**. But coherence should not be mistaken for convergence. Addressing the structural gaps between what science recommends and what policies enact remains a key frontier for EU-level sustainability governance.

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Annexes

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

Biodiversity policy

EU Biodiversity Strategy for 2030

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 (Bring nature back to agricultural land)

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 fertilisers 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. Eliminate or reduce the by-catch of species to a level that allows their recovery and conservation

B2.12. Adopt ambitious Urban Greening Plans for cities with at least 20,000 inhabitants

B2.13. Minimise or eliminate the use of pesticides in sensitive areas such as urban green areas

B2.14. Halve the number of Red List species threatened by invasive alien species

B2.15. Create win-wins for energy generation

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 policy

Farm to Fork Strategy

A1. Sustainable Food Production

A1.1. Ensuring sustainable food production

A1.2. Ensuring food security

A1.3. Stimulating sustainable food processing, wholesale, retail, hospitality and food services practices

A1.4. Promoting sustainable food consumption and facilitating the shift to healthy, sustainable diets

A1.5. Reducing food loss and waste

A1.6. Combating food fraud along the food supply chain

A2. Enabling the transition

A2.1. Research, innovation, technology and investments

A2.2. Advisory services, data and knowledge sharing, and skills

A3. Promoting the global transition

A4. Common Agricultural Policy for 2023-2027: 28 Cap Strategic Plans at a Glance

A4.1. Advancing on economic sustainability and fairness of support

A4.2. Advancing on the environmental and climate sustainability

A4.3. Advancing on social sustainability

A4.4. Improving knowledge, innovation and digitalisation

Climate policy

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.

Member States will present their revised energy and climate plans by the end of 2019. In line with the Regulation on the Governance of the Energy Union and Climate Action¹¹, these plans should set out ambitious national contributions to EU-wide targets. The Commission will assess the ambition of the plans, and the need for additional measures if the level of ambition is not sufficient. This will feed into the process of increasing climate ambition for 2030, for which the Commission will review and propose to revise, where necessary, the relevant energy legislation by June 2021. When Member States begin updating their national energy and climate plans in 2023, they should reflect the new climate ambition. The Commission will continue to ensure that all relevant legislation is rigorously enforced.

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.

C2.3. The risk of energy poverty must be addressed for households that cannot afford key energy services to ensure a basic standard of living. Effective programmes, such as financing schemes for households to renovate their houses, can reduce energy bills and help the environment. In 2020, the Commission will produce guidance to assist Member States in addressing the issue of energy poverty.

C2.4. The transition to climate neutrality also requires smart infrastructure. Increased cross-border and regional cooperation will help achieve the benefits of the clean energy transition at affordable prices. The regulatory framework for energy infrastructure, including the TEN-E Regulation¹², will need to be reviewed to ensure consistency with the climate neutrality objective. This framework should foster the deployment of innovative technologies and infrastructure, such as smart grids, hydrogen networks or carbon capture, storage and utilisation, energy storage, also enabling sector integration. Some existing infrastructure and assets will require upgrading to remain fit for purpose and climate resilient.

EU Climate Adaptation strategy 2021

C3. Smarter adaptation: improving knowledge and managing uncertainty

C3.1. 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.

C3.2. More and better climate-related risk and losses data

C3.3. Making Climate-ADAPT the authoritative European platform for adaptation

C4. More systemic adaptation: Support policy development at all levels and sectors

C4.1. Improving adaptation strategies and plans

C4.2. Fostering local, individual, and just resilience

C4.3. Integrating climate resilience in national fiscal frameworks

C4.4. Promoting nature-based solutions for adaptation

C5. Faster adaptation: Speeding up adaptation across the board

C5.1. Accelerating the rollout of adaptation solutions

C5.2. Reducing climate-related risk

C5.3. Closing the climate protection gap

C5.4. Ensuring the availability and sustainability of freshwater

C6. Stepping up international action for climate resilience

C6.1. Increasing support for international climate resilience and preparedness

C6.2. Scaling up international finance to build climate resilience

C6.3. Strengthen global engagement and exchanges on adaptation

Fit for 55

C7. Regulation on Land Use, Forestry and Agriculture (LULUCF)

Trade policy

T1. Carbon Border Adjustment Mechanism

T2. Regulation on Deforestation-Free Products

Annex 2. Screening matrices

Annex 2.1. Screening matrix for biodiversity policies.

Objectives	Clusters											
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
B1.	0/4	0/4	4/4	3,5/4	2/4	0/4	0/4	1/4	3/4	1,5/4	2/4	4/4
B1.1.	0	0	1	1	0,5	0	0	0	1	0	0	1
B1.2.	0	0	1	0,5	0,5	0	0	1	0	0	0	1
B1.3.	0	0	1	1	0,5	0	0	0	1	0,5	1	1
B1.4.	0	0	1	1	0,5	0	0	0	1	1	1	1
B2.	0,5/15	5/15	15/15	14/15	10/15	0/15	2,5/15	7/15	3/15	4,5/15	10/15	3/15
B2.1.	0	0	1	1	0,5	0	0	1	0,5	0	0	0
B2.2.	0	0	1	1	0,5	0	0	1	1	0	0	1
B2.3.	0	0	1	1	0,5	0	1	0	0	0,5	1	0
B2.4.	0	1	1	1	0,5	0	0	0	0	1	1	0
B2.5.	0	1	1	1	0,5	0	0	0	0	1	1	0
B2.6.	0	1	1	1	0,5	0	0	0	0,5	0	1	0
B2.7.	0	0	1	1	0,5	0	1	1	0	1	1	0
B2.8.	0	0	1	1	1	0	0	1	0	0,5	0	0
B2.9.	0	0	1	0,5	0,5	0	0	0	1	0,5	0,5	0
B2.10.	0	1	1	1	0,5	0	0	1	0	0	1	1
B2.11.	0	1	1	1	1	0	0	1	0	0	1	1
B2.12.	0,5	0	1	1	0,5	0	0,5	0	0	0	1	0
B2.13.	0	0	1	1	0,5	0	0	0	0	0	0,5	0
B2.14.	0	0	1	0,5	0,5	0	0	0	0	0	0	0
B2.15.	0	0	1	1	1	0	0	1	0	0	1	0
B3.	0/8	0,5/8	8/8	8/8	4,5/8	1,5/8	3/8	1/8	4,5/8	4/8	7/8	0/8
B3.1.	0	0	1	1	0,5	0	1	0	1	0	1	0
B3.2.	0	0,5	1	1	0,5	1	0	0	0	0	0,5	0
B3.3.	0	0	1	1	0,5	0	0	0	0	0,5	1	0
B3.4.	0	0	1	1	0,5	0	0	1	1	1	0,5	0
B3.5.	0	0	1	1	0,5	0	0	0	0,5	1	1	0
B3.6.	0	0	1	1	1	0	0	0	1	1	1	0
B3.7.	0	0	1	1	0,5	0	1	0	0	0	1	0
B3.8.	0	0	1	1	0,5	0,5	1	0	1	0,5	1	0

