

Raising the bar on national climate governance in the EU

How EU policy can help Member States deliver certainty, accountability, consistency, and consensus on the road to net zero



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Ecologic Institute

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Disclaimer

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Executive summary

The success of the EU's ambition to reach climate neutrality by 2050 depends on decisions made at the national level by its Member States. This analysis has mapped existing national governance systems and identified strengths and weaknesses in the way that governments organise climate related policy-making, seek input and support and monitor implementation. EU policy options can help address some of the existing shortcomings. The report identifies 12 concrete recommendations to support national policy-making. Several improvements can be addressed in the upcoming review of the EU Governance Regulation.

The last half-decade of European climate policy has shown that **EU-level actions can spur stronger governance practices at the national level.** This report offers a comparative stocktaking of the tools, institutions, and procedures used by governments for climate policy-making, identifying significant regional differences and common weaknesses (see Figure E1 below).

Main findings from the mapping of national governance systems

- 1. Most Member States have set a long-term goal of climate neutrality providing **certainty** on the direction of the transition. However, full clarity on what "net zero" means in national contexts is missing, due to questions surrounding reliance on removals, a lack of sectoral differentiation in climate targets, and insufficiently detailed strategic planning.
- 2. Robust **accountability** mechanisms are under-developed at national level, despite EU reporting obligations, and institutionalised independent scientific advice and oversight is missing in many Member States.
- **3.** Coordination and mainstreaming provisions to enhance the **consistency** of policy actions exist on paper, but questions remain regarding their effectiveness in practice. A lingering concern is the alignment between short- and long-term climate policy planning.
- 4. National systems do not always ensure early, frequent, and effective participation in climate policy decisions and planning and thus, despite the existence of permanent structures, risk failing to deliver **consensus** and buy-in to governmental actions.

Based on the identification of existing weaknesses, the report identifies **12 EU-level policy options** to improve existing national practices (see Table E1 below) —either by refining existing standards, promoting their uniform application, or offering additional support and guidance.

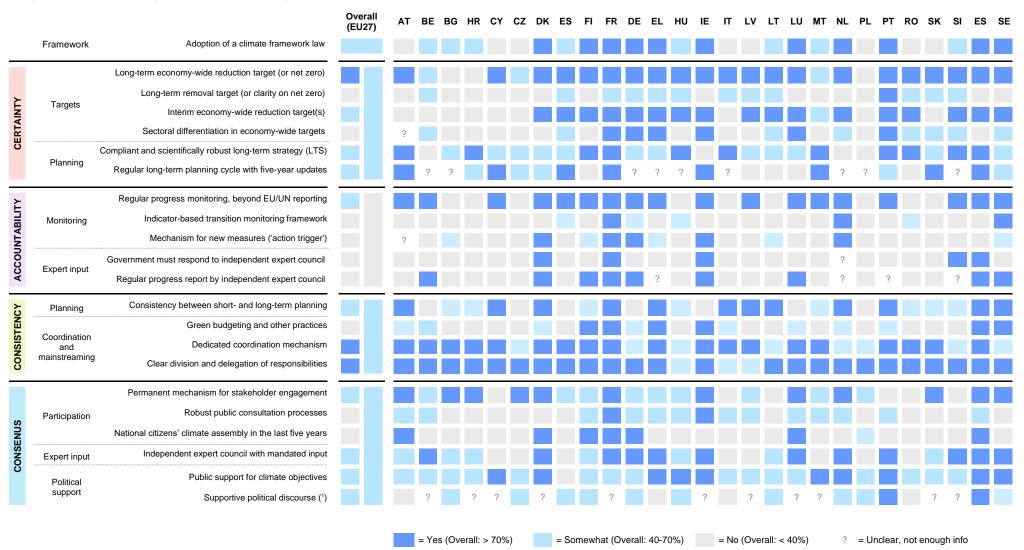
- Enhancing certainty: 1) National long-term carbon dioxide removal (CDR) targets; 2) Specific LTS content requirements, 3) Regular updates to the EU Long-Term Strategy
- Increasing accountability: 4) Reinforce the ESR compliance mechanism; 5) a dedicated indicator-based transition monitoring system; 6) Strengthen monitoring and action trigger in EU Climate Law; 7) Mandatory scientific review for relevant planning
- Ensuring net-zero consistency: 8) Required country-specific recommendations following the EU Climate Law consistency assessment; 9) Full integration of long-term strategy (LTS) and national energy and climate plan (NECP) processes
- **Fostering societal consensus**: 10) Concerted effort to improve mandatory and permanent multi-level climate and energy dialogues.
- Options across all four benefits: 11) Introduction of cross-compliance mechanisms;
 12) Additional EU funding and capacity building support for national institutions

Table E1: Twelve EU-level policy reforms to support national government on certainty, accountability, consistency, and consensus for net zero

Enhancing national certainty about the transition to cli- mate neutrality	Increasing national accountability for long-term cli- mate action
 Binding national long-term carbon dioxide re- movals (CDR) targets either nationally deter- mined or prescribed, with efforts to ensure con- sistency across Member States 	 Reinforce ESR compliance mechanism, through required and more stringent follow-up on 'corrective action plans' and more frequent overall compliance checks by EU.
 Enhanced LTS mandatory content requirements, binding template, and iterative review of LTS drafts for better quality in long-term planning and clarity on net zero in national contexts Regular 5-year full updates to the EU LTS and 	 Dedicated indicator-based transition moni- toring system for climate neutrality to serve as a framework for streamlining national re- porting and checking progress on the enablers of structural change at Member State and EU levels.
more frequent 2- to 3-year updating of under- lying modelling to provide benchmarks against which to measure the consistency of national LTSs and serve as an input and stimulus for na- tional strategy revision.	6. Strengthen monitoring and action trigger in EU Climate Law by obliging the Commission to assess progress and consistency every 2 years (instead of 5) and produce specific policy proposals if progress is found to be lacking. This would serve as a regular top-down signal.
	 Mandatory review/input for national climate planning by 'independent scientific author- ity', i.e., dedicated climate advisory body or other national non-governmental entity, such as a university or research organisation
Ensuring the net-zero consistency of national policies across sectors and over time	Fostering consensus and societal buy-in to a vision for climate neutrality and concerted action to reach it
 Required country-specific recommendations following the EU Climate Law consistency as- sessment of national measures and mandated Member State follow-up Full integration of long-term strategy (LTS) and national energy and climate plan (NECP) processes: <u>Option (A)</u> mandatory 5-year national LTS updates, staggered LTS/NECP submission timing, flexibilities to align existing domestic plan- ning; <u>Option (B)</u> streamline into combined submis- sion 	10. Concerted effort to improve mandatory and <u>permanent</u> multi-level climate and energy dialogues as well as support in terms of capac- ity and guidance, require more detailed report- ing on their effectiveness, and add 'scientific community' as relevant stakeholder group.
Policy reforms that could del	liver across all four benefits
 Introduction of cross-compliance mechanisms, tailed, timely, and compliant national climate planni Additional EU funding and concepts building and 	ng, reporting, and participation processes

12. Additional EU funding and capacity building support for (1) LTS scenario development, (2) to conduct robust public consultations on climate planning, and (3) better data collection

Figure E1: Overview of governance stocktaking results across all features and Member States



Note: EU27 classifications for each governance feature based on unweighted average across countries, where yes = 100%, somewhat = 50%, and no = 0%. Unclear, not enough info omitted from calculation. (1) Assessment based on interviews in 16 of 27 Member States.

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Abbreviations

BEAP8th Environmental Action ProgrammeCCSCarbon Capture and StorageCCUCarbon Capture and UtilisationCCBCarbon Dioxide RemovalCEECentral and Eastern EuropeanCRTCarbon Removal TechnologyDGDirectorate-generalECNOEuropean Climate Neutrality ObservatoryEEAEuropean Climate Neutrality ObservatoryEIAEuropean Environment AgencyEIAEffort Sharing RegulationETSEmissions Trading SystemEUEuropean UnionGHGGreenhouse GasJRCJoint Research CentreKNOCAKnowledge Network on Climate AssembliesLLUCFLand Use, Land-Use Change, and ForestryMFFMultiannual Financial FrameworkMRVMonitoring, Reporting, and VerificationNECPRNational Energy and Climate PlanNGONon-Governmental OrganisationRRFRecovery and Resilience FacilityTSITechnical Support InstrumentUNUnited NationsWEMWith Existing Measures		
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UN United Nations UNFCCC United Nations Framework Convention on Climate Change	RRF	Recovery and Resilience Facility
UNFCCC United Nations Framework Convention on Climate Change	TSI	Technical Support Instrument
Ŭ	UN	United Nations
WEM With Existing Measures	UNFCCC	United Nations Framework Convention on Climate Change
	WEM	With Existing Measures

1 Introduction

The success or failure of the European Union's (EU) climate ambitions depends in large part on decisions made at a national level by its Member States (Duwe et al., 2023; Oberthür et al., 2023). Robust national frameworks that steer policy-making, foster societal and political buy-in, ensure effective implementation, and hold governments accountable are not only an indication that European capitals are on board with the EU's vision for climate neutrality but are essential for its realisation.

Governments have several tools at their disposal to manage tricky policy problems, such as the climate crisis (Bali et al., 2021; Dubash et al., 2022). As with any journey, the transition to a climate neutral society requires a concrete destination and road signs along the way (i.e., targets), a map (i.e., planning), real-time navigation to anticipate and correct wrong-turns (i.e., monitoring), an understanding of who is in the driver's seat and when (i.e., coordination), a compass (i.e., expert input), and communication with fellow travellers (i.e., public and stakeholder engagement). It also helps when there is agreement on the basic conditions of the trip in advance (i.e., legal framework). In other words, effective climate governance uses a set of procedural safeguards to ensure continued and concerted action towards a vision of the future, delivering four main 'benefits': (1) certainty over time, (2) accountability to commitments made, (3) consistency across emitting sectors and over time, and (4) consensus among state and private actors.

In this study we seek to answer two main questions. First, to what degree do EU Member States leverage the four governance 'benefits', and are national governments equipped with the institutions and processes they need to manage the transition? And second, where weaknesses exist, how can the EU help Member States raise the bar by 'levelling up' existing standards or issuing new guidance?

1.1 Status quo: 'baseline standards' for national climate governance

The last half decade of European climate policy has shown that EU-level actions have the potential to spur the uptake of stronger governance practices at national level. However, at present, EU obligations on Member States are limited primarily to four main areas: target-setting (for 2030), planning, progress reporting, and to a lesser extent, participation. Three policies are particularly important in this context.

The **EU Climate Law** (Regulation (EU) 2021/1119) mandates a 2050 climate neutrality target as legally binding for the EU. It includes measures for tracking progress and ensuring national and EU actions align with the net zero objective. Although most provisions are directed at EU institutions, the law calls on Member States to adopt expert advisory bodies (Art. 3.4) and serves as an example for national legislative efforts (Duwe, 2022; Kulovesi et al., 2024).

The **Governance Regulation** (Regulation (EU) 2018/1999), adopted in 2018, requires Member States to establish a set of 'baseline governance standards' at national level (Evans & Duwe, 2021). These include dedicated planning tools, such as national energy and climate plans (NECP) for short-term actions and long-term strategies (LTS) looking 30 years ahead; biennial progress monitoring and reporting; and channels for public and stakeholder participation through multi-level climate and energy dialogues.

Finally, the amended **Effort Sharing Regulation** (ESR, Regulation (EU) 2023/857), imposes yearly greenhouse gas (GHG) emission reduction targets for Member States through 2030. The

ESR applies to sectors not covered by the EU Emissions Trading System (EU ETS1), including domestic transport (excluding aviation), buildings, agriculture, small industry, and waste. In addition to the 2030 national targets, it stipulates annual emission ceilings through 2030, allocated as so-called 'annual emission allowances' (AEAs), and various flexibilities for meeting these, including ETS credits, offsets from land use, land-use change, and forestry (LULUCF), and provisions for banking, borrowing, and trading.¹ The Commission evaluates and reports annually on progress; where a Member State is found to be off track it must submit a so-called 'corrective action plan' to the Commission.

Evidence suggests that some Member States would not have pursued climate planning or reporting on their own without the top-down pressure (Averchenkova & Chan, 2023; Evans & Duwe, 2021; Velten et al., 2022). Still, these EU policies, while important in spurring the creation and arrangement of national institutions, are a starting point. EU obligations aside, there exists a diverse landscape of national climate governance in Europe.² Some Member States exceed the requirements set forth by EU law with comprehensive national legal frameworks and corresponding institutions (Averchenkova, 2019; CAN Europe, 2022; Duwe & Evans, 2020, 2021). In contrast, others struggle to implement the 'baseline' governance standards, especially in regards to sufficiently robust policy planning (Duwe et al., 2019; ECNO, 2024b; European Commission, 2023b; Velten et al., 2022), but also transition monitoring and engaging the public (Didi et al., 2023; Duwe & Spasova, 2021; Faber et al., 2024; LIFE PlanUp, 2021a). Indeed, the European Scientific Advisory Board on Climate Change (EU Advisory Board) has emphasised specifically the need to strengthen EU 'governance and compliance frameworks' and at a minimum called on the European Commission to enforce existing regulation (EU Advisory Board, 2024a). This disparity raises concerns about the adequacy of national climate governance systems regarding their ability to sufficiently contribute to putting the EU on a path towards net zero.

1.2 Purpose of this study: Pinpointing national governance gaps, strengths, and possible EU policy solutions

There exists a crucial and potentially fleeting opportunity to influence national practices through EU policy for the foreseeable future. Both the Governance Regulation and the EU Climate Law include review clauses that demand their performance be assessed by the European Commission within six months of each global stocktake under the Paris Agreement. These reviews could provide the basis for proposals to amend the legislation. The Governance Regulation in particular, while not the sole means to shape national processes, stands as the most direct.

Stil, before delving into potential EU policy enhancements, it is essential to first assess the governance strengths and weaknesses at a national level, their distribution, and how national contexts dictate effective climate governance. To this end, we first conducted a comparative assessment across all EU27, examining governance aspects such as emission reduction targets, monitoring mechanisms, and the incorporation of public, stakeholder, and expert participation in policy-making, among others. From this, we pinpointed common weaknesses and strengths.

Next, we systematically identified those weaknesses that EU policy could address—either through refining existing 'baseline' standards or by promoting their uniform application—taking account of the legal, practical, and to the greatest extent possible, political feasibility. Insights

¹ Also relevant in this context is the LULUCF Regulation (Regulation (EU) 2023/839), which sets national targets for natural sinks through 2030. For more on this see Section 3.2.

² For a brief review of previous assessments of EU and national climate governance systems see Annex III.

from interviews with national experts and officials, as well as dedicated focus groups, helped us gauge national contexts and where a top-down approach may be less effective.

The report is organised as follows: Section 2 outlines the assessment framework used for a stocktaking of national governance systems. Section 3 presents the results of the stocktaking for each governance feature under investigation. Section 4 outlines five key messages gained from the assessment. Section 5 concludes by redirecting the focus to EU-level policy options and cross-cutting issues for further debate.

2 Analytical approach

2.1 Assessing national governance systems in the EU

The assessment framework used in this report draws from past studies of national climate governance or related institutions (c.f., Averchenkova & Chan, 2023; Evans & Duwe, 2021). As depicted in Figure 1, we investigated 22 governance features in total. These can be grouped along eight main functions commonly referred to in the literature: legal frameworks, targets, planning, coordination, financial mainstreaming, monitoring, expert input, and participation (Duwe & Evans, 2020; World Bank, 2020). We considered political support for climate aims and measures as an additional crucial enabling factor. The 22 features for assessment were chosen based on a literature review of *known deficits* in the EU climate policy landscape (see Annex III). As such, some aspects were omitted to narrow the scope of the study.

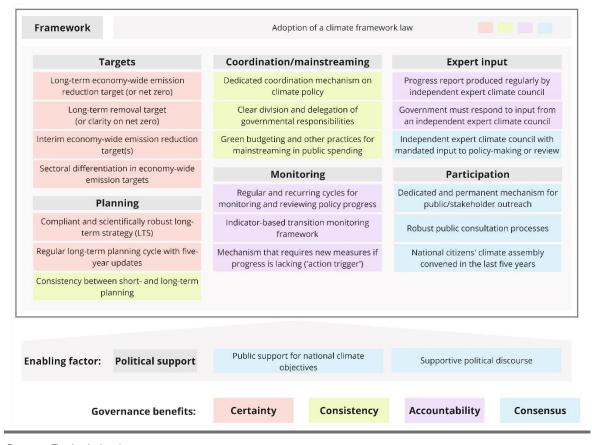


Figure 1: Framework for assessing national climate governance along four 'benefits'

Source: Ecologic Institute

Based on Dubash's (2021) theoretical foundation for the emergence of climate institutions, each governance feature is associated with a 'benefit', i.e., the main way that it adds value to climate policy-making (see Table 1). While some features may deliver more than one benefit, this overarching framing provides the study with a clear theoretical lens and helps to communicate clearly where EU Member States are missing the added-value of effective governance practices.

Table 1: Four benefits of robust	national climate governance
----------------------------------	-----------------------------

Challenge	Description
Certainty	A credible commitment to the long-term transition, signalling to private and state ac- tors the direction and speed of required changes in the economy and society and protecting against backsliding.
Accountability	A clear message on progress towards goals, transparent oversight, and course cor- rections when policies fail to deliver.
Consistency	A coherent ('all-of government') approach to climate policy decisions across sectors and over time.
Consensus	Legitimacy through societal and political buy-in as well as a sound evidence base for policy decisions based on input from the expert community.

Source: Ecologic Institute, drawing on Dubash (2021)

2.2 Data collection, interviews, and outreach on EU policy options

National information was collected from a range of sources, including related studies, online databases and resources, and national documents directly, such as the draft NECP updates submitted by Member States in the second half of 2023. These sources were supplemented in some cases with other national reporting to the EU and United Nations Framework Convention on Climate Change (UNFCCC), such as the Biennial Reports.

Desk research was followed by semi-structured interviews with 23 national experts in 15 Member States to fill gaps and clarify findings. Interviewees were also asked about their perception of climate policy-making in their country generally, including challenges, potential ways EU policy could improve national structures, and the current political discourse surrounding climate action. Information was compiled, organised, and coded in an Excel spreadsheet for further analysis and synthesis of results. To the greatest extent possible the existence of individual governance features was assessed with standardised qualitative scales, e.g., 'yes/somewhat/no' or 'high/medium/low', to allow for cross-country comparison and aggregation of results. For more on methodology, including a detailed overview of the criteria used to assess national governance systems, refer to Annex I.

To investigate EU policy solutions a total of four focus groups were conducted—three with national practitioners, e.g., ministry and agency officials, and one with EU policy and legal experts from research organisations or academia. Three bilateral interviews were used in this stage as well for those who could not take part in a focus group. In total, outreach on EU policy options engaged with 13 individuals from 11 EU Member States, plus three experts focused on EU legal matters generally.

It is important to note a few limitations to the research approach. First, national and EU policy is continuously developing, which restricts the comprehensiveness of this and all assessments of similar scope. Second, even though insights from expert interviews provided some nuance on the national context and practices, due to differences in political culture and quality of implementation, overarching reports like this one, while insightful, cannot tell the whole story. Further

research into specific national cases is necessary to gain a full understanding of the dynamics in each EU Member State. Finally, despite efforts to ensure geographical representation, the research engaged with a small sample of national officials (39 in total), which limits the generalisability of findings.

3 Stocktaking of national climate governance in the EU

The following presents the results of a comprehensive stocktaking of climate governance features across all EU Member States. For an overview of results see section 4.

Each section is accompanied by a list of potential EU policy options to address the gaps identified. Importantly, the policy options elaborated below do not represent an exhaustive list of possible improvements to the EU climate policy framework. These were chosen specifically for their potential to fix weaknesses identified by the assessment. For further discussion see section 5.

3.1 Legal frameworks

3.1.1 Why important?

Legal frameworks, especially in the form of climate framework laws, are used by governments across the world to manage climate policy-making and translate the Paris Agreement into national ambition (Duwe & Bodle, 2020; Muinzer, 2020a). Although there are few studies on the impact of these legislative tools (see, e.g., Averchenkova et al., 2020; McIlhennon & Brennan, 2023), framework laws codify and lend weight to governance processes and thus deliver across all four benefits—certainty, accountability, consistency, and consensus.

Compared to executive actions, strategies, or plans, laws amplify the *certainty* of existing structures over time and are less likely to be dismantled under a change of government (Lockwood, 2013; Manguiat & Raine, 2018; Nash & Steurer, 2019). The process of adopting a framework law can also facilitate political *consensus* around key national objectives, and they often include provisions for stakeholder and public participation (Duwe & Evans, 2021; Nash et al., 2021). Many laws assign responsibilities for planning and reporting to government agencies and ministries, which can enhance coordination and support *consistency* in decision-making. Finally, on *accountability*, often climate framework laws include dedicated provisions, such as an annual reporting obligation to parliament or an independent advisory council with a mandate to provide oversight (Averchenkova et al., 2018; Evans & Duwe, 2021).

3.1.2 State of EU policy

There is no existing EU policy that obliges Member States to pursue framework legislation or codify the way that national climate policy-making is organised. The EU Climate Law, adopted in 2021, serves as a potential exemplary signal for national governments on the kinds of provisions that can be included in legal frameworks. Furthermore, some form of dedicated governance framework could be seen as a prerequisite to fulfil international commitments under the Paris Agreement (see Duwe & Bodle, 2020).

3.1.3 Assessment findings

The assessment counted the number of EU countries with a climate framework law. To qualify in full, laws had to fulfil two criteria: (1) inclusion of a long-term target and (2) some means of

reaching it, i.e., through the establishment of new institutions, assignment of responsibilities, or new policy processes.³ To assess the strength of legal frameworks, the assessment also considered the degree to which each law included the other governance functions under investigation—long-term targets, long-term planning, coordination and mainstreaming, monitoring, expert input, and participation. As such, the approach provides not only an overview of where laws exist but also an indication of the *legal weight* behind any given aspect of national climate governance and the system overall.

Country	Adoption of a climate framework law	Long-term targets	Long-term planning	Coordination and mainstreaming	Monitoring (beyond EU/UN)	Expert input	Participation
Austria	Law expired 2021, under revision						
Belgium	Somewhat, Law Concerning the Governance of Federal Climate Policy (2024)		xx	xxx	х	xx	х
Bulgaria	Somewhat, Climate Change Mitigation Act (2022), under revision			xx	x	х	х
Croatia (1)	Somewhat, Climate Change and Ozone Layer Protection Law (2019); binding LTS		xxx	xx		х	xx
Cyprus	-						
Czechia	-						
Denmark	Yes, Climate Act (2021, 2014)	х	XX	х	xx	XXX	xx
Estonia	Somewhat, binding overarching governmental agenda, doubles as LTS; draft law	xx	xx		х		
Finland	Yes, Climate Act (2022, 2015)	xx	xx	х	xx	х	хх
France	Yes, Law No. 2019-1147 on Energy and Climate (2019, 2015)	xxx	XXX	XXX	xx	XXX	хх
Germany	Yes, Federal Climate Change Act (2021, 2019), under revision	xx		xx	xx	xx	х
Greece	Yes, National Climate Law (2022)	xx		xx	xx	х	хх
Hungary (1)	Somewhat, Law No. XLIV on Climate Protection (2020); binding LTS	(xx)	(x)	(x)			
	Yes, Climate Action and Low Carbon Development (Amendment) Act (2021, 2015)	хх	XX	XX	х	XXX	х
Italy							
Latvia							
Lithuania (1)	Somewhat, binding overarching governmental agenda, doubles as LTS	xxx	xx	xx		х	
Luxembourg	Yes, Law of 15 December Relating to Climate (2020)	хх	XX	х	х	xx	хх
Malta	Somewhat, Climate Action Act (2020)		xx	xx	х		х
Netherlands	Yes, Climate Action Act (2019), under revision	х		XX	XX	XXX	х
Poland	-						
Portugal	Yes, Climate Framework Law (2021)	xxx	XXX	xx	х	х	х
Romania	•						
Slovakia							
Slovenia (1)	Somewhat, Environmental Protection Act (2022); binding LTS	(xxx)	(xxx)	(xx)	(xx)	XX	х
Spain	Yes, Climate Change and Energy Transition Law (2021)	х	XXX	XXX	xx	XXX	XXX
Sweden	Yes, Climate Act and Climate Policy Framework (2017)	ХХ	XX	х	XX	XX	
TOTAL	Yes = 11 Somewhat = 8 No = 8						

Note: xxx = all governance features under investigation are included in law; xx = at least half included in law; x = less than half included in law; (x) = parentheses signify that some features are found in a legally binding LTS in place of or in addition to a law; (1) Member State has legally binding long-term climate strategy (e.g., LTS) adopted by national legislature.

At the time of writing, **eleven EU Member States have a dedicated and comprehensive climate framework law** that meets the two criteria outlined above. Another five have a law that is missing either a concrete long-term target (Belgium, Bulgaria, Croatia, Malta) or clear provisions to manage policy-making over the next decades (Hungary). Estonia and Lithuania have adopted legally binding government agendas that include many of the provisions commonly found in framework legislation but do not have dedicated laws. In each case these double as the national long-term strategy (LTS). Uniquely, Slovenia enshrined both a climate neutrality target and scientific climate council in its Environmental Protection Act adopted in 2022, which governs environmental issues more broadly. Representative of the dynamic nature of climate

³ These criteria follow the definition of climate *framework* laws—as distinguished from other climate-related or sectoral legislative tools—found in, e.g., Huang (2021) and Muinzer (2020b), among others.

governance in the EU, *at least* **nine countries are in the midst of preparing** *or* **revising a climate framework law** (Ecologic Institute, 2024).

As presented in Table 2, national framework laws in the EU vary significantly in their substance. This echoes the evaluation presented in the Climate Framework Law Info-Matrix, a resource managed by Ecologic Institute, which characterises national laws in Europe as being in one of three stages of development, based on the quality of their underlying provisions (Ecologic Institute, 2024).

Three countries—Croatia, Hungary, Slovenia—used national legislature to adopt their LTS submissions, which could add to the legal weight of these planning tools. However, binding LTSs are not the same as concrete overarching frameworks, and it is difficult to ascertain the legal strength of the governance features contained therein as often these are indicative. As such, in Table 2 we flag when governance features are found in a binding LTS versus a law or other form of legal framework.

Across the 22 governance features under investigation in this report, the French Law No. 2019-1147 on Energy and Climate was found to be the most comprehensive, followed by the Spanish, Irish, and Portuguese laws. In comparison, other frameworks are often missing provisions on targets (in most cases long-term clarity on emission removals and sectoral differentiation of emission reductions) as well as long-term planning. Notably, apart from the French and Portuguese laws, the Lithuanian National Climate Change Management Agenda is the only other legal framework that is comprehensive when it comes to target-setting. The legally binding Slovenian LTS includes both sectoral and removals targets, with the national Environmental Protection Act enshrining net zero by 2050.

Interviewees from several countries emphasised that contentious discourse and politicisation of climate issues have hindered progress on adopting a binding legal architecture. Political inertia and conflict could help explain why some countries have been slow in drafting their own laws (or revising, in the case of Austria).

3.1.4 Raising the status quo with EU policy

It is clear from the results that **over half of EU Member States are losing out on the benefits of having a robust legal framework underpinning national climate policy**. This raises the associated risks of backsliding, lack of certainty, and incoherent decision-making across government—and serves as evidence for a lack of seriousness in some Member States on longterm decarbonisation. Furthermore, existing laws come in many forms and not all provide an equal basis for sound policy-making (Averchenkova & Chan, 2023; CAN Europe, 2022; Duwe & Evans, 2020).

Legal frameworks are a limited area for EU influence. In theory, an 'EU Directive on National Climate Frameworks' could require Member States to transcribe common provisions of climate laws through national legislation. However, past research suggests this approach might come with several problems. First, robust national frameworks depend on national ownership. It has been documented that a high degree of domestic political consensus is a valuable pre-requisite for developing effective legislation, and vital to its long-term implementation (Averchenkova, 2019; Duwe & Evans, 2020; Nash & Steurer, 2022). A top-down EU requirement risks undermining broad political buy-in and could pre-empt any national discourse. Second, such a fundamental ask on Member States would require that national capitals be on board, which means catering to the least supportive Member States in the interest of political feasibility. Thus, at least at the start, it is not guaranteed that EU-imposed laws would be as strong in terms of their provisions as nationally determined ones.

Instead, the EU could use a handful of softer options to encourage and support the creation of national climate framework laws in all Member States. The first would be to introduce a provision in the EU's own climate law *inviting* countries to pursue similar legislation or codify climate policy-making and planning processes in existing national law. To promote the benefits of adopting an overarching framework, dedicated guidance on national climate laws could be published as has been done for green budgeting under the EU Green Budgeting Reference Framework. Similarly, the Better Regulation Agenda serves as an opportunity to support the use of climate laws to streamline and organise national processes. Taking things a step further, the EU could raise political attention to frameworks by convening a dialogue on national frameworks, starting with those countries currently in the midst of preparing or drafting legislation.

3.2 Targets

3.2.1 Why important?

Emission reduction and removal targets in the long-term (e.g., with a 30-year time horizon) are an essential ingredient of implementing the Paris Agreement at national level (Duwe & Bodle, 2020). A long-term objective, especially if legally binding, helps to integrate climate action across all pillars of economies, encouraging concerted efforts around a shared goal (Lockwood, 2021; Nash & Steurer, 2019). Concrete targets furthermore signal a 'clear direction of travel' to all actors in government and the private sector as well as an indication of the necessary speed of transformation (Averchenkova et al., 2020). In short, climate targets help climate governance systems deliver *certainty* across the economy and society.

A national system that is missing the long-term perspective risks undermining clarity on national climate ambition, which could lead to backsliding, especially if targets are not made binding through a law or other legislative mechanism (Duwe & Evans, 2020). Moreover, a clear vision for 2050 (see also section 3.3 on planning) is needed to make the right policy decisions in the short-term, ensure a just and cost-effective transition over time, and avoid stranded assets and overreliance on future costly or unsustainable abatement options (Velten et al., 2022).

3.2.2 State of EU policy

The EU Climate Law enshrines the EU-level goal of reaching climate neutrality by 2050, but there is no obligation for Member States to set their own long-term whole economy climate targets. Moreover, Member States do not have individual nationally determined contributions (NDCs) under the Paris Agreement. The Governance Regulation requires information on the 'total reductions and enhancements of removals by sinks' as well as pathways for the main emitting sectors over a 30-year time horizon in national LTSs (Art. 15.3), which must also be consistent with EU-wide climate neutrality (Art. 15.1), however, attempts to incorporate mandatory national climate neutrality goals through EU law have not yet been met with approval by policy-makers. In the short-term, the ESR (Regulation (EU) 2023/857) sets binding 2030 reduction targets for all Member States for emissions not already covered by the EU ETS1, and the LULUCF Regulation (Regulation (EU) 2023/839) sets national targets for natural sinks through 2030.

3.2.3 Assessment findings

In this study we looked at four ways in which post-2030 targets are anchored in national systems: (1) a long-term, economy-wide GHG emission reduction target, such as net zero, (2) a long-term GHG removal target or clarity on the removal component of climate neutrality, (3) interim economy-wide GHG emission reduction targets, and (4) sectoral target differentiation.

A summary of findings across countries can be found in Table 3. To start with a positive development, the number of EU countries with a stated date for reaching climate neutrality has grown steadily since the adoption of the net zero goal at EU level. The current assessment found that **21 EU Member States have a target year for reaching climate neutrality and 14 of these are in a dedicated climate law or legally binding.**⁴ The majority of countries aim for net zero emissions by 2050—with the notable exceptions of Austria (2040), Finland (2035), Germany (2045), and Sweden (2045). The Portuguese climate law includes language on possibly reaching climate neutrality by 2045, and a proposed revision to the Danish law would move the target date from 2050 to 2045 (Klimaraadet, 2023).

The seven net zero targets that are not legally binding come either in the form of a government commitment or as the stated overall objective of a national LTS. Among those countries without a net zero target a couple are worth mentioning. First, although Belgium does not have a climate neutrality target at federal level, the region of Brussels does. Second, the Czechian updated NECP from June 2023 vaguely mentions the intention to 'contribute to EU climate neutrality'.

Country	Climate neutrality date	Legal framework	Long-term reduction target	Legal framework	Long-term removal targets	Legal framework	Interim targets	Legal framework	Sectoral differentiation	Legal framework
Austria	Yes, 2040		-		-		-		Unclear	
Belgium	Somewhat		Somewhat, indicative		Somewhat		-		Somewhat	
Bulgaria (1)	-		-		-		-		-	
Croatia	-		-		-		-		-	
Cyprus	Yes, 2050		-		-		-		-	
Czechia	Somewhat		-		-		-		-	
Denmark (2)	Yes, 2050	х	-		-		Yes	х	-	
Estonia	Yes, 2050	х	-80% (2050 v. 1990)	х	Somewhat		Yes	х	Somewhat	х
Finland	Yes, 2035	х	-90% (2050 v. 1990)	х	-		Yes	х	-	
France	Yes, 2050	х	-83% (2050 v. 1990)	х	Somewhat	х	Yes	х	Yes, budgets	х
Germany	Yes, 2045	х	-		Somewhat	х	Yes	х	Yes, budgets	x
Greece	Yes, 2050	х	-		Somewhat		Yes	х	Yes, budgets	х
Hungary	Yes, 2050	х	-		Somewhat	(x)	Yes	х	-	
Ireland	Yes, 2050	х	-		-		Yes	х	Yes, budgets	х
Italy	Yes, 2050		-		Somewhat		-		-	
Latvia	Yes, 2050		-		Somewhat		Yes		-	
Lithuania	Yes, 2050	х	-100% (2050 v. 1990)	х	Somewhat	х	Yes	х	Somewhat	х
Luxembourg	Yes, 2050	х	-		-		Yes	х	Yes, budgets	х
Malta	-		Somewhat, indicative		-		Somewhat, indicative		-	
Netherlands	Yes, 2050		-95% (2050 v. 1990)	х	-		Yes	х	Somewhat	
Poland	-		-		-		-		-	
Portugal (3)	Yes, 2050	х	-90% (2050 v. 1990)	х	Yes	х	Yes	х	Yes, planning	х
Romania	Yes, 2050		-100% (2050 v. 1990)		Somewhat		Yes		Somewhat	
Slovakia (4)	Yes, 2050		-90% (2050 v. 1990)		Somewhat		-		Somewhat	
Slovenia	Yes, 2050	х	-80-90% (2050 v. 2005)	(x)	Somewhat	(x)	Yes	(x)	Somewhat	(x)
Spain	Yes, 2050	х	-		-		Yes	х	-	
Sweden	Yes, 2045	х	-85% (2045 v. 1990)	х	-		Yes	х	Somewhat	х
TOTALS	Yes = 21 Somewhat = 2 No = 4	14	Yes = 10 Somewhat = 2 No = 15	8	Yes = 1 Somewhat = 12 No = 14	6	Yes = 17 Somewhat = 1 No = 9	15	Yes = 6 Somewhat = 8 No = 12 Unclear = 1	10

Table 3: Long-term climate targets

Note: (1) The proposed Bulgarian climate law would include climate neutrality; (2) A pending revision to the Danish law would move climate neutrality to 2045 and introduce a -110% (2045 v. 1990) emission reduction target. (3) The Portuguese climate law mentions an indicative target of climate neutrality by 2045. (4) The Slovakian draft climate law includes climate neutrality; (x) = parentheses signify that features are found in a legally binding LTS instead of a law.

⁴ In a handful of cases long-term climate targets are made legally binding through the adoption of specific legislative resolutions (e.g., Estonia, Lithuania) or by national parliament adopting the LTS (e.g., Croatia, Slovenia). Most often legally binding targets are enshrined in a dedicated climate framework law.

Overall, these results suggest a promising development compared to past surveys (c.f. Evans and Duwe, 2021), but it is not always immediately clear what position or weight climate neutrality has in the national context if it is not included in a legally binding document. For instance, with a revision to the Austrian climate law stalled due to political inertia, our interview partner noted that the 2040 net zero target found in the LTS is rarely mentioned in national discourse.

As depicted in Figure 2, clarity on climate neutrality requires: a timeline by which to reach net zero, the portion covered by absolute reductions, and how the remaining 'net' emissions are accounted for (i.e., international offsets, technical CDR, or natural CDR) (Meyer-Ohlendorf, 2023). **Only ten EU countries have set a quantitative long-term target**, with eight of these legally binding. Targets range from between -80% to -100% cuts in emissions in 2050 (usually compared to 1990 levels). Two countries—Belgium and Malta—include indicative long-term targets in government plans or strategies. Long-term, economy-wide emission projections must be included in national LTSs, and thus, most remaining countries report scenario outcomes in their strategies. While long-term scenarios provide clarity on emissions pathways, these are not always target-conform (e.g., aligned with net zero), nor are they always legally binding (Velten et al., 2022).

If an absolute reduction target stipulates how much of net zero is actual GHG emission abatement, the other important element is carbon dioxide removals (CDR). At the time of writing, **only <u>one</u> Member State provides a sufficiently clear picture on long-term removals**—Portugal. The Portuguese Climate Framework Law (*Lei de Bases do Clima*) adopted in 2021 established a -90% (2050 vs. 1990) reduction target as well as an accompanying target for the remaining equivalent in natural sinks between 2045 and 2050 (an average of 13 megatons). This functions as a concrete and legally binding vision of what net zero means in Portugal because it leaves no ambiguity on the reliance of technical versus natural CDR.



Figure 2: National clarity is missing from the equation for credible climate neutrality targets

Another 12 national frameworks go partway towards full clarity on this issue but are missing one or more important details. For instance, the French law excludes the use of international offsets thereby setting a 16.7% long-term removals target by default. However, at present the legally binding emission budget for LULUCF removal only goes through 2033 and thus reliance of technical versus natural removals in France is unclear through 2050.⁵ The German Climate Protection Law (*Klimaschutzgesetz*) as revised in 2021 includes concrete LULUCF targets for 2030, 2040, and 2050 (Article 3.1a) but does not prohibit the use of 'intergovernmental' offsets in achieving net zero by 2045 (Article 3.3). Other countries provide part of the picture offering some sense of overall reliance on removals in government plans or state national objectives for the LULUCF sector, including sinks.⁶

When it comes to other emission reduction targets over the next few decades a total of 18 countries have established interim milestones. These often come in the form of economy-

⁵ Decree No. 2020-457 of 21 April 2020, relating to national carbon budgets and the national low-carbon strategy

⁶ On both reductions and removals, national planning documents often include scenario outcomes for 2050, but we have omitted these from the assessment to focus on clear national objectives.

wide emission reduction targets for 2030 and 2040 and in at least 15 cases are legally enshrined in a climate law or some other binding government document.

The final governance feature included under targets is the degree of sectoral differentiation. Compared to the other aspects this was often difficult to assess as it can be achieved in several ways, such as the use of emissions budgets with a sectoral breakout under each period, rigorous sectoral planning, or the sectoral breakdown of economy-wide targets for one or more target years. **Five countries use emission budgets in some recurring cycle to divide future emission reductions by sector**—France, Germany, Greece, Ireland, and Luxembourg. Both Romania and Slovenia state indicative sectoral targets through 2050 in their LTS (in the former case, like the economy-wide target these are the outcome of the 'RO neutral' scenario, which was selected by national authorities to be implemented by mid-century).⁷ A handful of other countries provide some detail on sector emission cuts, either setting targets in a single sector like transport (Estonia, Sweden) or detailing sectoral targets through 2030 but not further. Unique among legal frameworks, the Portuguese climate law requires sectoral planning every five years (as well as sectoral targets relative to 2005).

3.2.4 Raising the status quo with EU policy

The assessment of national long-term climate targets shows that the vast majority of Member States (21/27) have set a date for climate neutrality, but also reveals several weaknesses in this context, of which **two gaps stand out** in particular: **(1) a lack of clarity on what climate neutrality means in national contexts** and **(2) missing sectoral differentiation.** A net zero date alone without clarity on reductions and removals is at best an incomplete vision for decarbonisation and at worst a symbolic gesture (Fankhauser et al., 2022). A process for breaking down emission reductions by sector in the short and long-term would then add an additional level of certainty for national climate policy-making by outlining where in the economy emission reductions need to occur.

Options to fix a lack of clarity on climate neutrality

- a. Binding national long-term carbon dioxide removals (CDR) targets (prescribed or nationally determined) One hard policy fix at EU level that would serve to qualify national climate neutrality targets is a binding obligation for Member States to set long-term carbon removal targets. Importantly, any requirement would need to distinguish between technical and natural removals and allow governments some flexibility on the time horizon, depending on when the country plans to achieve net zero emissions. Another important consideration is the need to ensure that these actually 'add-up' to EU-wide climate neutrality. Thus, alternatively, CDR targets could be prescribed by the EU in a top-down fashion as has been done for natural sinks though 2030 in the amended LULUCF Regulation (Regulation (EU) 2023/839). Indeed, the LULUCF Regulation serves as an important precedent for an EU obligation on carbon removals and, as such, one option would be its extension, adding concrete rules for CDR post-2030. Such an extension was included in the Commission's initial proposal to revise the regulation (Meyer-Ohlendorf, 2023).
- b. Amend mandatory content requirements to improve long-term planning and ensure greater clarity on climate neutrality in national contexts Short of requiring or prescribing targets as discussed above, clarity on net zero could also come from improved detail in national long-term planning (Oberthür, 2024). Despite concrete requirements, in practice, many strategies fail to include quantitative figures on removals, not to mention a

⁷ See Romanian LTS, p. 10.

lack of clarity on technical CDR, rendering a clear vision of net zero impossible (Velten et al., 2022).

The Governance Regulation's mandatory content requirements for LTSs could be amended to include not only a sense of national consistency with net zero but *a clear picture* of climate neutrality in a national context by explicitly calling for all components of the 'net zero equation' (refer to Figure 2). In other words, the mandatory content could be reframed to require clear *quantitative* figures for (1) a net zero date, (2) emission reductions through the target date, and (3) residual emissions, technical/natural, noting in each case whether these are legally binding.

c. Clarity on EU-level climate neutrality – An up-to-date vision for EU climate neutrality is missing from the existing EU policy framework.

A hard solution would be to set an **EU-wide quantitative target for CDR** through 2050, distinguishing between technical and natural removals. This would go a long way to erecting a 'firewall' between reductions and removals, which is necessary to ensure the credibility of the climate neutrality target as a whole (Meyer-Ohlendorf, 2023). The EU's *net* - 55% reductions target for 2030, which sets a limit on how removals that can be used to achieve the goal, is already a template for 2050.

Published in February 2024, the European Commission's proposed Industrial Carbon Removal Strategy details technical removal options through 2040 and 2050, such as carbon capture and storage (CCS), carbon capture and utilisation (CCU), and atmospheric removal and policy options to scale up carbon management (European Commission, 2024). The EU also has strategies for forests and soil with a more short-term focus on 2030 (European Commission, 2021a, 2021b). However, the development of a **comprehensive long-term EU strategy on CDR** that includes pathways through 2050 for *both* natural and technical sinks would help to provide a comprehensive picture, facilitate a discussion and agreement among Member States, and establish concrete and integrated aims for the underlying sectors (Meyer-Ohlendorf, 2021).

Alternatively, clarity can be achieved through **updated economy-wide strategic climate planning** and modelling. The EU LTS published in 2018 is no longer up-to-date and a revised version is needed to provide a top-down vision, especially when it comes to EU-wide reliance on removals and in what form (Duwe et al., 2023). The analysis backing up the impact assessment for the 2040 target proposal published in 2023 is a step in this direction but does not serve the same purpose nor is it given the same level of political attention to guide EU and national policy.

Options to improve sectoral differentiation in emission reductions

d. Better sectoral information via national LTSs – A soft EU policy option for improving sectoral clarity in the non-ETS sectors is through concerted enforcement and bolstering of existing LTS content requirements. The mandatory content for national strategies found in Article 15 of the Governance Regulation, and the *optional* template in Annex IV, include information on the main emitting sectors through 2050. However, information provided in the strategies is often only qualitative or simply missing (Velten et al., 2022). Refining these requirements to explicitly require clear quantitative figures through 2050 on all major sectors may help improve detail on sectoral differentiation in pathways.

Improved information is a step, but it does not hold the same legal weight as national sectoral targets. A harder EU policy fix would either prescribe or require Member States to set sectoral targets. However, there is little precedent for this outside of the LULUCF Regulation. The ESR does not require Member States to divide up annual reductions by sector, and a discussion of binding sectoral targets at national level is likely to be met with pushback. The upcoming amendment to the German climate law, which is set to dismantle the existing system of annual sectoral budgets and progress checks, is illustrative of domestic political realities on this matter.

e. Improved sectoral strategic planning at EU-level – EU-wide sectoral emission reduction targets are delivered to a large degree by existing and new EU policy. The EU ETS 1 already covers the electricity, inner-EU aviation, and large parts of the industry sector, and the new EU ETS 2 now expands coverage to upstream entities in the buildings and transport. By design these EU policies introduce sectoral pathways for climate neutrality and thus set *de facto* sectoral targets based on the annual linear reduction factor (LRF) for the overall cap on emission allowances (Agora Energiewende & Ecologic Institute, 2021). Moreover, discussions are underway for introducing a similar system for the agri-food value chain (see Trinomics, 2023). The gradual expansion of the pricing approach to all main emitting sectors could however be complimented by further improved sectoral strategic planning at EU level. Up-to-date transition strategies or programmes at would provide a clear top-down signal to Member States for their own planning purposes (see also section 3.5 on coordination and mainstreaming).

3.3 Planning

3.3.1 Why important?

Solving the climate crisis requires concerted governmental efforts over a multi-generational timeframe. Therefore, long-term strategic policy planning is a crucial ingredient of any governance system. Strategic policy planning lays out a map for transformational change, provides a signal to investors, informs future policies, and ensures consistency between short-term actions and objectives in both the medium-term and distant future (Duwe et al., 2017). To the extent that it is based on scientifically robust scenarios and pathways, long-term planning further serves a central role in evidence-based policy, helping decision-makers to 'backcast' from an achievable vision of the future (Rüdinger et al., 2018).

Past studies have revealed that long-term policy planning is often neglected and lacks sufficient detail to chart a course towards climate neutrality (NewClimate Institute & CEEW, 2023; Ross et al., 2021; Velten et al., 2022).⁸ Alongside concrete post-2030 targets, strategic planning provides the blueprint for policy decisions and must be given due attention, updated regularly and frequently, and integrated into national governance processes or Member States risk undermining *certainty* and *consistency* in climate action over time.

3.3.2 State of EU policy

Under the Governance Regulation, EU Member States must submit two different strategic policy planning documents: NECPs covering a 10-year timeframe with policy specifics and LTSs covering a 30-year timeframe. Both are due every ten years with an update every five years, which is *optional* for the LTSs, i.e., 'where necessary' (Art. 15.1). The NECPs 'shall be consistent' with the LTSs, which is a crucial requirement considering that near-term policy choices

⁸ At international level, the Paris Agreement, Art. 4 encourages all countries to communicate so-called 'longterm low GHG emission development strategies'. The Glascow Climate Pact from 2021 underscores the need for review and revision, asking parties to update these regularly in line with the best available evidence.

should be in line with the longer-term pathways (Art. 15.6). NECPs undergo an iterative development process with a quality check by the European Commission and a mandatory template plus dedicated technical support. Although the regulation specifies mandatory content, the template for LTSs is voluntary, and there is no country-specific review. Article 15.8 of the Governance Regulation obliges the European Commission to support Member States by 'providing information on the state of the underlying scientific knowledge and opportunities for sharing knowledge and best practices' as well as guidance during the development and implementation of LTSs. Several existing EU programmes support technical capacity building on national climate planning. These include dedicated co-funding under the LIFE programme, such as for scenario development in Slovakia (see Velten et al., 2022, p. 68), as well as the European Commission's Technical Support Instrument (TSI)⁹, the latter of which is focused more on implementation.

At EU level, Article 15.2 of the Governance Regulation requires the Commission to adopt its own EU-wide LTS, which it did in 2018 in the form of the 'Clean Planet for All' Communication (European Commission, 2018). The regulation does not require this be updated with any regularity. Furthermore, Article 10 of the EU Climate Law requires the Commission to engage with those sectors of the EU economy that 'choose' to develop 'indicative voluntary roadmaps' but stops short of making these mandatory or assigning any clear responsibilities.

3.3.3 Assessment findings

Like the assessment for targets above, we focused solely on policy planning with a long-term time horizon. For each country the assessment looked at the existence of a legally compliant LTS, any indication by the government to update these with five-year regularity (e.g., mentioned in a policy document or dedicated legal provision), and evidence of alignment between the process of developing the NECP and LTS. A full analysis of NECP/LTS consistency was beyond the scope of this report.

Eleven EU Member States have a compliant and scientifically robust LTS—i.e., one that has a 30-year time horizon, is compliant in substance with EU regulation, and based on evidencebased scenarios and modelling (see Table 4). Another twelve countries have a strategy that is either missing important information, often on sectoral emissions pathways, or out of date and thus unable to serve as a viable blueprint for present-day policy choices (e.g., both the Czech and German strategies are more than five years old). Relative to other LTSs, the Belgian and Dutch strategies are especially weak in terms of content—and Ireland and Poland have yet to submit an LTS to the European Commission. The assessment further showed that twelve countries incorporate long-term planning into a national legal framework. Notably, in Croatia, Hungary, and Slovenia, it is the LTS itself that is legally binding.

In terms of a cycle of revision it seems that most countries intend to follow the ten year required updates—albeit we could identify only eight countries that are explicit on this. At least another eight Member States have indicated either in policy documents or in law the intention to pursue five-year or more frequent updates, e.g., in Austria, Cyprus, Estonia, France, Ireland, Malta, Slovakia, and Spain. The remaining countries are less clear. The Czech LTS mentions a five-year cycle for revision, but this has yet to be implemented in practice, and Portugal's climate law specifically does not preclude the option.

We used criteria based on Velten et al., (2022) for inferring coherence between long- and shortterm planning tools: the timing of submission between the LTS and first NECP; methodological consistency; cross-referencing between the plans; and common ministerial oversight, i.e.,

⁹ See https://reform-support.ec.europa.eu/what-we-do/green-transition_en, accessed 09 April 2024.

whether the same institution or institutions were responsible for developing both. Our assessment differed from the previous report by further considering integrated planning cycles at national level and insights from expert interviews.

Country	Compliant and scientifically robust long-term strategy (LTS)		Regular long-term planning cycle with five-year updates	Legal framework	Consistency between short- and long-term planning			
Austria	Yes		Yes		Consistent			
Belgium	No, not compliant	Х	No, 10-year updates	Х	Not consistent			
Bulgaria	Somewhat, missing detail		Unclear		Somewhat consistent			
Croatia	Yes	х	No, 10-year updates	х	Somewhat consistent	х		
Cyprus	Somewhat, missing detail		Yes		Mostly consistent			
Czechia	Somewhat, missing detail and out of date		Somewhat, not in practice		Not consistent			
Denmark (1)	Somewhat, missing detail		Somewhat, integrated cycle	х	Mostly consistent	x		
Estonia	Somewhat, missing detail	х	Yes, four-year updates	х	Not consistent			
Finland	Yes	х	No, 10-year updates	Х	Somewhat consistent			
France	Yes	х	Yes	х	Consistent	х		
Germany	Somewhat, missing detail and out of date		Unclear		Not consistent			
Greece	Somewhat, missing detail		Unclear		Consistent			
Hungary	Yes	(x)	Unclear		Somewhat consistent			
Ireland	No, not yet submitted	Х	Yes	х	LTS not yet submitted			
Italy	Yes		Unclear		Mostly consistent			
Latvia (1)	Somewhat, missing detail		No, 10-year updates		Mostly consistent			
Lithuania	Somewhat, missing detail	х	No, 10-year updates	Х	Mostly consistent			
Luxembourg	Somewhat, missing detail	х	No, 10-year updates	Х	Not consistent			
Malta	Yes	х	Yes, four-year updates	х	Somewhat consistent			
Netherlands	No, not compliant		Unclear		Mostly consistent			
Poland	No, not yet submitted		Unclear		LTS not yet submitted			
Portugal	Yes	х	Somewhat, could be 5-year	х	Mostly consistent	х		
Romania	Yes		No, 10-year updates		Somewhat consistent			
Slovakia	Somewhat, missing detail		Yes		Somewhat consistent			
Slovenia	Yes	(x)	No, 10-year updates	Х	Somewhat consistent	(x)		
Spain	Yes	х	Yes	х	Consistent	х		
Sweden (²)	Somewhat, missing detail		Somewhat, integrated cycle	х	Mostly consistent	x		
TOTAL	Yes = 11 Somewhat = 12 No = 4	13	Yes = 8 Somewhat = 4 No = 8 Unclear = 7	14	(Mostly) consistent = 12 Somewhat consistent = 8 Not consistent = 5 Unclear = 2	7		

Note: The Latvian with existing measures (WEM) scenarios do not reach the targets outlined in the strategy; (2) The legal frameworks in Denmark and Sweden do not include a strategy aimed expressly at a 30-year time horizon and instead integrate short- and long-term planning into one cycle; (x) = parentheses signify that features are found in a legally binding LTS instead of a law.

Twelve countries show evidence for consistent or mostly consistent planning over the shortand long-term, but only five of these have an associated provision in a climate law or other form of legal framework. In Austria, a conversation with a national expert revealed that the current LTS has little to no weight in policy discourse and therefore despite coherence on paper may not be relevant enough to inform short-term decisions. Conversations with Italian national experts emphasised that the Italian updated NECP published in the second half of 2023 is not consistent with EU policy following the 'Fit-For-55' policy package. Denmark and Sweden are interesting cases as each has a national cycle for climate planning that pre-dates EU obligations. Because each country's long-term targets must be considered, these national cycles function to some degree as an integrated short- *and* long-term planning instrument, which may serve as evidence for coherence over planning horizons.¹⁰

In several cases coherence may be undermined because separate ministries are responsible for the short-term NECPs and LTSs—often the energy/economic ministry and environmental/climate ministry, respectively. In general, methodological consistency is difficult to ascertain.

¹⁰ For a more detailed discussion on the Danish case see Velten et al., (2022), p. 99.

This includes the degree to which short- and long-term planning are based on the same scenarios, and thus modelling and assumptions. As such, further analysis is necessary to fully understand the degree of consistency in EU national climate planning through 2050 and beyond.

3.3.4 Raising the status quo with EU policy

The results of this assessment echo the findings of past research on the quality of long-term policy planning in EU countries (c.f., Velten et al., 2022). Despite EU and UN obligations, including on the content and timing of LTS submissions, **significant detail is missing; and the overall picture is one of low attention to long-term alignment**, evidenced also by a lack of integration into legal frameworks. While there are structural signs of short- and long-term planning consistency in some countries, a more in-depth and regular evaluation is required, especially accounting for the EU Climate Law provision stating that LTS must be consistent with EU-level climate neutrality. However, the European Commission has yet to assess this requirement or clarify in any detail how it should manifest in national planning (see European Commission, 2023a, pp. 83-88).

Options to fix the insufficient quality of plans

- a. Equal treatment of LTSs and NECPs to boost national attention to long-term planning the EU could require similar standards for LTSs as are already in place for NECPs. This includes a mandatory template that requires explicit detail on sectoral reductions and net zero in national contexts (see also section 3.2.4) as well as an iterative review process by which the Commission assesses and issues country-specific recommendations for national *draft* LTSs (EU Advisory Board, 2024a; Oberthür, 2024).
- b. Improved enforcement of existing national long-term planning requirements, via, e.g., 'cross-compliance' provisions A continued and concerted effort by the European Commission to enforce existing long-term planning requirements on Member States under the Governance Regulation is a potential low-hanging fruit for improving the status quo—including a check for sufficient detail (EU Advisory Board, 2024a). As discussed also in section 3.4.4 in the context of enhancing monitoring compliance under the ESR, additional stringency could be introduced by making relevant EU funding at least in part contingent on the timeliness and quality of LTS submissions ('cross-compliance' provisions) (see also LIFE UNIFY Project, 2021; Oberthür, 2024).
- c. Guidance and review of net zero consistency in national LTSs Article 15.1 of the Governance Regulation requires that national LTSs be consistent with the EU climate neutrality goal, but the EU has yet to release clear guidance on how countries should operationalise this in their plans. Further clarity is needed from the EU on how to ensure (and evaluate) national planning consistency with net zero at EU level, as is an up-to-date vision for climate neutrality at EU level as a benchmark to measure consistency against (see Option E below). Assessing the consistency of national LTSs could be carried out and reported on in the context of the European Commission's consistency checks for national measures, as per Article 7.1a of the EU Climate Law.
- d. Enhanced EU financial and technical support for Member States' in the development of LTSs – National ministries responsible for long-term climate planning differ in technical and administrative capacities (Duwe & Iwaszuk, 2019). To improve the quality of LTS submissions, the EU can take on a more active role supporting Member States by providing additional technical support, such as technical capacity building, common modelling tools or parameters, and funding for inter-governmental exchange. Taking things a step further,

the EU could also provide national authorities with concrete pieces of analysis or scenarios as a basis for LTS development, convening technical working groups, or launching a platform for sharing good practice and regional cooperation among Member States (Velten et al., 2022). Existing support, e.g., under the European Commission's TSI, could be expanded proactively, especially for Member States that might stand to benefit most, such as those with least technical and administrative capacity.

e. Regularly update to EU LTS as guidance for national planning – A regular five-year full update to the EU LTS (currently from 2018) and more frequent 2- to 3-year updating of the underlying modelling would each serve as an important input and stimulus for national planning processes (Duwe, 2022, p. 13). A mandatory cycle for revision would mirror what is expected from Member States and provide a vision for the transition to climate neutrality at EU-level, which is essential for assessing the consistency of individual national planning tools with net zero. This could be anchored in an amendment to Article 15 of the Governance Regulation.

Options to fix NECP/LTS misalignment

f. Revising national climate planning submission schedules – Article 15.6 of the Governance Regulation states that NECPs and LTS should be consistent—ostensibly to ensure that long-term planning provides a clear vision for shorter-term actions. Improving alignment and increasing attention to the long-term dimension might require changes to the current timeline by which Member States are to submit their strategies to the EU. Several potential options are discussed below; each comes with advantages and disadvantages (for additional analysis see Duwe, 2022; Velten et al., 2022).

First, **making the optional five-year LTS updates mandatory** would sync the timing with NECP development and thus may improve consistency between the two planning documents. The current Governance Regulation submission timelines could lead to a situation in some countries where every other NECP submission is based on a strategy that Is five years or older. One potential downside is the added administrative burden of having to produce two plans simultaneously at five-year intervals, but this could be tempered by integrating the process, especially when it comes to the underlying scenarios and methodologies and stakeholder involvement.

Second, to encourage Member States to *use* the process of developing an LTS as a blueprint for their planned actions in the short term, it could be beneficial to **stagger the submission of NECPs and LTSs** by six months or more. To illustrate, every five years, Member States would submit their LTS at the start of the year followed by the NECP towards the end of the same calendar year. As above, one disadvantage is that this draws out the process thereby increasing administrative burden and making it harder to integrate public engagement on both planning tools simultaneously.

g. Full integration of NECP/LTS into a single process – An alternative albeit less explored option would be a full integration of the NECPs and LTSs into a single submission—in essence one national climate plan with a view towards climate neutrality through 2050. While such an approach has the potential to streamline the process, it might risk further relegating the long-term dimension relative to the immediate time horizon if it is not pursued separately. Also, as Velten et al. (2022) show, EU countries often split the responsibilities for NECP and LTS creation between governmental competencies—giving the short-term perspective to an energy or economic ministry and the long-term planning to the environment or climate ministry. Integrating the planning processes could backfire and lead to

lower quality plans at least in the context of climate neutrality if the climate and environment officials are not integrated adequately in the plan's development process.

3.4 Monitoring

3.4.1 Why important?

Reaching climate neutrality by 2050 or earlier is a long-term goal. While policy planning can lay the right foundation, its capacity stops at guaranteeing *accountability* for proper implementation. To judge if plans are implemented and countries are on track to reach their targets, regular, accurate monitoring of progress is necessary (Rüdinger, 2018; Schoenefeld & Jordan, 2020). Recurring cycles for assessing the success of climate actions facilitate timely course corrections and responses to unforeseen economic or political developments. To enhance transparency, progress reports should be made publicly available and subject to parliamentary oversight (World Bank, 2020).

Nowadays, the conventional approach to tracking progress on climate objectives, i.e., monitoring, reporting, and verification (MRV) of headline emission trends is no longer sufficient (Duwe & Spasova, 2021). A more granular approach based on targeted indicators measuring the enablers of structural change is needed to draw conclusions about *why* progress is on track or not (ECNO, 2023; Velten et al., 2021). Indeed, the European Commission has acknowledged this for its own monitoring obligations (European Commission, 2023c, p. 10).

Finally, effective monitoring should be able to trigger targeted policy interventions. A so-called 'action trigger' mechanism can be established to push governments to act in case of non-delivery of adequate climate policies (Duwe & Evans, 2020). For longevity and legal weight, ideally action triggers—in addition to regular progress checks and a comprehensive monitoring system based on indicators—are enshrined in national law (Averchenkova & Chan, 2023).

3.4.2 State of EU policy

EU Member States have a range of climate policy related reporting obligations, starting with a requirement to produce annual GHG inventories under the UNFCCC.¹¹ The Governance Regulation enshrines this annual reporting cycle (Art. 26) as well as biennial progress monitoring in the form of 'integrated national energy and climate progress reports' (NECPRs) (Art. 17) and 'integrated reporting on GHG policies and measures and on projections' (Art. 18). Based on these, the European Commission must then conduct an annual assessment of EU and Member States' progress towards the Paris commitments, ESR targets, and NECP objectives (Art. 29.5). Moreover, the EU Climate Law requires regular checks of EU Member States' 'collective progress' towards climate neutrality by the Commission every five years (Art. 6).

EU countries are further subject to a form of action trigger under ESR compliance rules. When a Member State does not make sufficient progress based on annual GHG emissions reporting it must produce a 'corrective action plan' and submit this to the EU within three months of the Commission's annual assessment under the Governance Regulation (Art. 8). The European Commission assesses compliance and can enforce sanctions. However, there are a number of shortcomings with the current system, including *inter alia* no guarantee of the quality of corrective plans, no hard requirement for the Commission to produce a response ('may issue an opinion', Art. 8.3, ESR), no ramifications for non-compliance over consecutive two-year periods, lack of transparency, and no integration of the corrective actions with NECPs and LTSs (Corradi

¹¹ See https://unfccc.int/topics/mitigation/resources/registry-and-data/ghg-data-from-unfccc, accessed 12 January 2024.

& Mackaill-Hill, 2022). Moreover, if the Commission does issue an opinion, the Member State in question may, but does not have to, revise its plan accordingly, although it must provide justification for not doing so (Art. 8.3). Finally, a compliance review is performed only every five years—once in 2028 for 2021-2025 and for then again for 2026-2030—which risks a lack of accountability for the necessary reductions in the early period (Gores et al., 2019). The five year compliance cycle with a three-year delay combined with the lengthy process of any result-ing EU infringement procedures means that any course correcting measures will likely come far too late (Duwe et al., 2023, p. 18).

Aside from these requirements, EU policy does not impose specific monitoring related actions on the national level. Moreover, the existing EU progress monitoring system focuses on tracking progress on climate objectives and headline emission trends, not the changes underpinning them. Other EU-level frameworks, such as the one assessing progress under the 8th Environmental Action Programme (8EAP), use indicators that could also be employed for climate transition tracking.

3.4.3 Assessment findings

The assessment investigated three aspects of national progress monitoring: (1) recurring monitoring cycles that go beyond EU/UN obligations, (2) frameworks that use indicators to track structural changes in addition to headline emission trends, and (3) binding course correction mechanisms ('action trigger') at national level.

Country	Regular and recurring cycles, beyond EU/UN obligations, for monitoring and reviewing policy progress	Legally framework	Monitoring framework based on indicators tracking struc- tural changes in the real econ- omy	Legally framework	Action trigger	Legally framework
Austria (1)	Yes, annual report		-		Unclear, law expired	
Belgium	Yes, annual report	х	-		-	
Bulgaria	No, follows EU/UN requirements	Х	-		Somewhat, vague	х
Croatia	No, follows EU/UN requirements	Х	-		-	
Cyprus	Yes, biennial reporting, with budget		-		-	
Czechia	No, follows EU/UN requirements		-		-	
Denmark	Yes, annual report	х	-		Yes	х
Estonia	Yes, annual and 4-year reports	х	Somewhat, not climate specific	х	-	
Finland	Yes, annual report	х	-		Somewhat, vague	х
France	Yes, annual and 5-year reports	х	Yes		Yes	х
Germany	Yes, annual & biennial reports	х	Somewhat, multiple non-state		Yes	х
Greece	Yes, annual & 5-year reports	х	-		Somewhat, vague	х
Hungary	No, follows EU/UN requirements		Somewhat, non-state		-	
Ireland	Yes, annual & 'periodic' reports	х	-		Yes	х
Italy	No, but dedicated observatory planned		No, but planned		-	
Latvia	Yes, annual report	х	-			
Lithuania	No, follows EU/UN requirements		-		Somewhat, in practice	
Luxembourg	Yes, annual report	х	-		-	
Malta	Yes, annual report	х	-		-	
Netherlands	Yes, annual report	х	Yes, climate policy dashboard		Yes	х
Poland	No, follows EU/UN requirements		-		-	
Portugal	Yes, two annual reports	х	-		-	
Romania	No, follows EU/UN requirements		Somewhat, LTS implementation		-	
Slovakia	No, follows EU/UN requirements		-		-	
Slovenia	Yes, annual report	х	No, but planned	Х	-	
Spain (2)	Yes, annual report	х	-		-	
Sweden	Yes, annual report	х	Yes, Climate Policy Council		Somewhat, vague	х
TOTAL	Yes = 17 No = 10	18	Yes = 3 Somewhat = 4 No = 20	2	Yes = 5 Somewhat = 5 No = 17	9

Table 5: National progress monitoring systems

Note: (1) Austrian Environment Agency publishes annual Climate Protection Report (*Klimaschutzbericht*). The expired climate law under revision, required both an annual progress report by the Ministry for Climate Action and an annual consistency report by the finance ministry, as well as an action trigger. (2) The 2021 Spanish climate law establishes a Committee of Experts on Climate Change and Energy Transition which should produce an annual progress report sent to parliament—the Committee is not yet operational.

In five countries, progress monitoring directly leads to an action trigger. This means the government needs to act if the monitoring system identifies a lack of progress. In Finland, Greece, and Sweden, the action trigger is mentioned in a climate framework law, but vague language may impede strong compliance. In Lithuania and Ireland, other documents like the NECPs or climate plans foresee an action trigger. In Sweden, the annual progress report assesses whether further action is needed but does not directly trigger political action. In Austria, the past climate law included provisions for an action trigger, but it is unclear the extent to which this has been continued in practice.

3.4.4 Raising the status quo with EU policy

The results of this stocktaking exercise reveal that **national progress monitoring is an underdeveloped aspect of climate governance** in many EU Member States. EU and other higher level reporting requirements under the Governance Regulation serve as a bare minimum and the basis for nearly half of the EU27. This means that a robust discussion around climate policy progress is likely missing in several national contexts. Moreover, very **few countries have in place more robust accountability mechanisms, such as a detailed monitoring framework to track indicators for structural change in the real economy and an action trigger**.

Options to introduce and support detailed, indicator-based monitoring by Member States

a. Mandated EU-wide transition monitoring system that goes beyond headline indicators – One hard policy solution would be the establishment of an overarching and binding framework for monitoring the transition to climate neutrality at EU and Member State level that uses indicators to track progress on the necessary structural shifts and enabling conditions for change (Duwe, 2022; ECNO, 2024a; Kulovesi et al., 2024; Oberthür, 2024). In the 2023 Climate Action Progress report, European Commission itself acknowledged the need for a closer look at the enablers of change (European Commission, 2023c, p. 10).

Such a framework would encompass a harmonised indicator set at EU level with mandated reporting by Member States. While the EU (either the Commission or EEA) could be responsible for a regular (e.g., annual) aggregate report, national-level analysis using the same data could be conducted by the Member States themselves, submitted to the EU, and published in the respective national languages. This step is crucial; national implementation includes not only providing indicator data but also interpreting it in a national context by setting benchmarks and tailoring indicators where necessary to account for national circumstances. National LTSs could provide a concrete and consistent source of benchmarks, but this would require a mandatory template or refined list of mandatory content in the Governance Regulation (see also section 3.3.4 on planning). In place of or supplementary to a report, the EU could manage a web platform that presents data across all countries. This would increase visibility and enhance the transparency of the system, allowing outside observers quick access to national-level data across all indicators.

A comprehensive monitoring system would not need to be developed from scratch. On the contrary, it could function to integrate existing processes, such as those under the European Semester, 8EAP, as well as national reporting under the Governance Regulation and ESR, among other regulations. A harmonised indicator-based approach thus has the potential to streamline and decrease administrative burden on Member States. Furthermore, EU could make use of the existing competencies of the EEA, Joint Research Centre (JRC), and EU Advisory Board for support. For a more detailed discussion see Duwe & Spasova (2021) and ECNO (2024).

b. EU funding and technical capacity support for national level for data collection – An overarching EU monitoring system based on harmonised indicators may require national-level capacity building to ensure first and foremost the validity and availability of data. This requires dedicated EU funding and technical support for data collection, data management, and benchmark setting by national governments. Support could be delivered through existing means, such as the European Commission's TSI or the LIFE funding programme and should be integrated with EU guidance on NECP and LTS development.

Options to promote the uptake of course-correcting 'action triggers' at national level

- d. Invite Member States to adopt their own 'action trigger' in law National mechanisms that trigger additional action when monitoring shows a lack of progress on climate usually come in the form of a legal obligation on government in a climate law. Governments may pursue additional action *in practice* or because of political pressure, but this does not carry the same weight as a binding legal provision. Therefore, for the reasons discussed above, when it comes to national legal frameworks and ownership, EU policy may not be the best channel for a hard fix on action triggers. As such, one soft EU policy option would be to amend the EU Climate Law to *invite* Member States to adopt their own national action trigger in law.
- e. EU support and funding for course correcting provisions at national level The EU could support national governments by providing opportunities for capacity building and exchange between those Member States with strong national monitoring processes and those with systems limited to EU reporting. The EU could also offer dedicated funding for revising plans and policies 'early' (such as those detailed in the NECP) in accordance with a national course correcting mechanism or within the context of the ESR 'corrective action plans'.
- f. Strengthen and enforce the existing ESR compliance mechanism, via, e.g., 'cross-compliance' provisions Existing provisions under the ESR serve as form of action trigger and could be strengthened first and foremost include a 'faster and firmer response to expected non-compliance' (Graichen et al., 2024, p. 75). Additional improvements include a requirement for the European Commission to publish a publicly accessible opinion on insufficient national 'corrective action plans', making the plans more binding through more stringent follow-up procedures, requiring more opportunities for civil society to weigh in on the process, and the introduction of 'cross-compliance' measures through conditional funding from EU sources, such as the Modernisation Fund and Just Transition Fund (Corradi & Mackaill-Hill, 2022; see also Oberthür, 2024).
- g. Strengthen EU-level 'action trigger' in EU Climate Law One option for the EU to lead by example by strengthening the language of the EU's own 'action trigger' under Article 6.3 of the EU Climate Law. Currently, this requires the European Commission to 'take the necessary measures in accordance with the Treaties' if insufficient progress or policy inconsistencies are found following the EU's five-year progress assessments. Stronger language could require the Commission (or EU Advisory Board) to produce specific policy proposals within a certain timeframe or set a concrete process for policy revision in motion.

Other policy options to improve EU and Member State progress monitoring

h. More frequent EU-wide net zero progress and consistency monitoring in the EU Climate Law – Current EU progress and policy consistency monitoring for climate neutrality are limited to every five years as per Article 6 of the EU Climate Law. To set an example for Member State governments and provide a more regular top-down signal of whether the EU is on track, these assessments should be done more frequently, at least every two years (ECNO, 2024a; Evans, Duwe, & Velten, 2023). Notably, the collective EU progress assessment (Art. 6.1a) is based primarily on national reporting under the Governance Regulation, which already occurs every two years.

i. Stronger integration of climate in the European Semester – At present, the links between the European Semester, the EU's main instrument for economic monitoring, coordination, and alignment, and EU climate governance are weak (Simon et al., 2022). New NECPs must take the latest country-specific recommendations issued under the European Semester into account (Governance Regulation, Art. 14.5), and the EU Climate Law requires the Commission to refer to these when assessing the consistency of national measures (Art. 7.3c).

Moreover, the European Semester employs macroeconomic surveillance using a set of indicators and in-depth reviews of country-specific information as a form of 'early warning system'. This system not only serves as an example for more granular monitoring of structural change indicators for climate neutrality but could be leveraged and integrated with progress monitoring on climate, especially on socio-economic related indicators, such as budgetary impacts on emissions, green employment, and climate risks (Simon et al., 2022, p. 25-27). For in-depth analysis of synergies and options see Duwe and Velten (2016) and Simon et al. (2022).

3.5 Coordination and mainstreaming

3.5.1 Why important?

Solving the climate crisis touches all aspects of society and economy, but coordinating and mainstreaming climate across government is a significant challenge (Dubash et al., 2022). A functional governance system must delegate responsibilities for policy planning, implementation, and monitoring to specific institutions and ensure a high degree of communication between competent public authorities. A national system that fails to organise across relevant institutions risks working against itself on its climate objectives. An all-of-government approach ensures policy *consistency*, avoids misaligned priorities, and strengthens the integration (or mainstreaming) of climate action in all governmental decisions, including budgetary measures (Averchenkova & Chan, 2023).

Indeed, public spending is a powerful means for achieving national climate targets, but it can also work in opposition when investments are made in climate-damaging infrastructure or fossil fuels. Climate mainstreaming via green budgeting thus combines the practice of integrating climate finance concerns into regular budget decisions with tools to ensure that public finances are consistent with climate and environmental objectives (Averchenkova & Chan, 2023).

3.5.2 State of EU policy

EU climate policy has influenced national climate governance frameworks in many ways, including the requirement to establish specialised institutions, produce plans and reports, and be accountable to national targets. But, like the case for legal frameworks discussed under section 3.1.4, the EU does not currently make any specific prescriptions about how Member States should organise and coordinate their national climate policy-making among government agencies. Still, there are several ways the EU can influence coordination and mainstreaming at national level. First, the European Commission's required five-year assessment of the consistency of national policy with EU-wide climate neutrality (Art. 7, EU Climate Law) could highlight where national governments are misaligned internally on climate policy. Although the conclusions of the assessment do not have to be compiled in a publicly available report, they could result in country-specific recommendations, which must be made public and complement those issued to the Member State under the European Semester. The EU Climate Law also obliges the European Commission to assess existing (Art. 6.2) and proposed (Art. 6.4) Union measures for their consistency with the EU-wide net zero goal. The assessment for existing measures must be reported in the context of the State of the Energy Union report.

Second, regarding financial mainstreaming, the European Commission has acknowledged the importance of green budgeting for the realisation of the European Green Deal and at the start of 2022 published its Green Budgeting Reference Framework as a 'toolkit for Member States willing to either embark upon implementing green budgeting or upgrade their current practices' (European Commission, 2022). EU law furthermore sets parameters for climate-related spending by the EU itself, e.g., via the Multiannual Financial Framework (MFF) and Recovery and Resilience Facility (RRF), but these do not prescribe obligations for national budgets.

3.5.3 Assessment findings

To assess governmental coordination and mainstreaming on climate policy in EU Member States we first searched for dedicated coordination mechanisms, such as a high-level executive commission or inter-ministerial working groups and committees. In addition, we investigated who is responsible for climate policy-making in each country and the degree to which responsibilities are clearly assigned. On public spending we reviewed the key methods of green budgeting outlined in the European Commission's latest national survey of green budgeting: green/brown budget tagging and *ex ante/ex post* environmental impact assessments (EIA) (European Commission, 2023d). Further included in the assessment were mainstreaming mechanisms for public finance found in national climate laws, such as linking climate reporting to national budget proposals or financial reporting requirements. Although common in many countries, the analysis omits the establishment of a national fund for mitigation and/or adaptation measures, which aims at the direct provision of funding often using ETS auctioning revenues.

National mitigation actions date back decades before the adoption of the Governance Regulation. Following impulses at both international and EU level most EU Member States have longstanding institutional arrangements for climate policy-making, often first developed for compiling and reporting national GHG inventories (Dubash, 2021; Görlach et al., 2016). Despite this, the current study found some variation in how EU countries organise governmental action (see Table 6).

Well over half of EU Member States have a dedicated and permanent coordination mechanism for organising governmental action on climate. This comes most commonly in the form of an inter-ministerial committee or working group. The remaining countries rely on longstanding interservice consultation practices or working groups established temporarily for a specific task, such as producing an NECP.

Although difficult to ascertain in many cases, evidence suggests that only eight of the dedicated, permanent coordinating bodies are enshrined in a legal framework and thus more likely to remain in place over time. Moreover, this assessment says little about how these function in practice. In short, although the longevity or effectiveness of some structures may be called into question, *all* EU Member States pursue some degree of overarching coordination on climate policy matters.

Country	Dedicated coordination mechanism on climate policy (e.g., high-level commission, inter-minis- terial body)	Legal framework	Clear division and delegation of responsi- bility among relevant government ministries/agencies	Legal framework
Austria	National Climate Protection Committee (NKK)		Lead ministry, sectoral responsibilities	
Belgium (1)	Federal Task Force; National Climate Commission	х	Co-lead ministries, sectoral responsibilities	x
Bulgaria (1)	National Expert Council for Climate Change	x	Co-lead ministries, w/ input from others	x
Croatia (²)	Commissions for Intersectoral Coordination	х	Lead ministry, input from others	x
Cyprus (¹)	Ministerial Committee		Co-lead ministries, input from others	
Czechia	Somewhat, ad hoc working groups		Co-lead ministries, input from others	
Denmark	Committee on Green Transition		Lead ministry, roles for other agencies	x
Estonia	Green Policy Steering Committee		Lead ministry, sectoral responsibilities	
Finland	Inter-ministerial Task Force on Climate		Co-lead ministries, sectoral responsibilities	x
France	Ecological Defence Council	х	Lead ministry, roles for other agencies	x
Germany	Somewhat, interservice consultations		Lead ministry, sectoral responsibilities	x
Greece	Government Committee for Climate Neutrality	х	Lead ministry, sectoral responsibilities	x
Hungary	Somewhat, ad hoc working groups	(x)	Lead ministry, unclear on other roles	
Ireland	Climate Action Delivery Board; Cabinet Unit	х	Lead ministry, sectoral responsibilities	x
Italy	Committee on Ecological Transition		Lead ministry, unclear on other roles	
Latvia	National Energy and Climate Council		Lead ministry, unclear on other roles	
Lithuania	Somewhat, ad hoc working groups	х	Lead ministry, sectoral responsibilities	х
Luxembourg	Inter-ministerial Committee for Climate Action		Co-lead ministries, input from others	х
Malta	Climate Action Board; Inter-ministerial Committee	х	Lead ministry, roles for other agencies	х
Netherlands (1) (3)	Somewhat, interservice consultations	х	Lead ministry, input from others	х
Poland (1)	Somewhat, ad hoc working groups		Lead ministry, input from others	
Portugal (1)	Climate Action Commission	х	Lead ministry, sectoral responsibilities	х
Romania	Inter-ministerial Committee on Climate Change		Co-lead ministries, input from others	
Slovakia	Council for the EU Green Deal		Co-lead ministries, input from others	
Slovenia (4)	Somewhat, ad hoc working groups	(x)	Lead ministry, input from others	
Spain	Commission for Coordination of Climate Policies	х	Lead ministry, input from others	х
Sweden	Somewhat, interservice consultations		Lead ministry, roles for other agencies	
TOTAL	Yes = 19 Somewhat = 8	13	Yes = 24 Somewhat = 3	15

Table 6: Coordination and mainstreaming of climate policy decisions

Note: (1) National documents mention the role of a general council of ministers, which may have a coordinating or oversight function across all policy areas, including climate. (2) Croatia has two separate inter-ministerial commissions one for climate policy and one focused on monitoring. (3) The Dutch climate law includes provisions that involve both the Council of Ministers and Council of State in climate planning but there is no dedicated forum mentioned. (4) Article 9.1 of Slovenia's legally binding LTS mentions inter-departmental coordination; (x) = parentheses signify that features are found in a legally binding LTS instead of a law.

The assessment further found that all EU countries delegate and divide responsibilities for climate policy formulation and implementation among relevant governmental institutions. Still, not all governance systems are as clearly defined and there seems to be a variety of approaches. Sixteen countries assign overall responsibility for climate actions to a lead ministry, often an environment ministry or dedicated climate ministry. In nine countries responsibilities seem to be more split between one or more ministries within government—e.g., between environment and energy or economy.

When it comes to other relevant actors in government, such as sectoral ministries (e.g., covering transport or buildings), public authorities, and governmental agencies (such as an energy agency), our analysis suggests that relative to the rest of the EU, fifteen Member States delegate roles in a more concrete way. For instance, many countries with sectoral differentiation in emission reduction targets, either through a budget-based or other system, place the burden of cutting emissions on each respective sectoral ministry. This includes, e.g., Austria, Finland, Germany (under the previous law), Greece, and Ireland. The German government is in the process of revising its national climate framework, which will effectively water down this system of sectoral responsibilities by doing away with a provision requiring action in sectors that show a lack of progress (Expertenrat für Klimafragen, 2023). Overall, the delegation of responsibilities features in 14 legal climate frameworks, but the analysis did not consider where general governmental competencies are enshrined in separate regulation and thus legally binding already.

Country	Green budgeting and other practices for mainstreaming climate in public finance decisions		
Austria	Green/brown budget tagging		
Belgium	System for reporting use of auctioning revenues for climate policy*	x	
Bulgaria			
Croatia	-		
Cyprus	Planned measures		
Czechia	Planned measures		
Denmark	Ex ante/ex post impact assessments		
Estonia			
Finland	Green/brown budget tagging; ex ante EIA		
France	Green/brown budget tagging; ex ante/ex post EIA; risk disclosure*; annual climate finance report*	x	
Germany	Green public procurement requirement*; climate progress reporting connected to state budget*	x*	
Greece	Green/brown budget tagging		
Hungary	-		
Ireland	Green/brown budget tagging; ex ante EIA		
Italy	Green tagging		
Latvia	-		
Lithuania	-		
Luxembourg	Green tagging		
Malta	-		
Netherlands	Ex ante EIA		
Poland	-		
Portugal	Green tagging		
Romania	Planned measures		
Slovakia	-		
Slovenia	Planned measures		
Spain	Green tagging; dedicated provisions in climate law on investments and risks	x *	
Sweden	Green and brown budget tagging; ex ante and ex post EIA; climate progress reporting tied to budget cycle	x*	
TOTALS	Yes = 5 ; Somewhat = 9; No = 13	5	

Table 7: Mainstreaming climate into public finance decisions

A full accounting of how Member States organise institutions and the effectiveness of these *in practice* was beyond the scope of this study. Expert interviewees in three countries—Austria, Netherlands, and Hungary—pointed out that despite existing coordination structures and assigned competencies, coordination remains a significant challenge due to competing priorities and a lack of communication (i.e., 'working in silos'). This re-emphasises the point that simply *having* an institution or governance practice is not the same as putting it to good use. Anecdotes such as this reveal that the assessment may paint too positive a picture and that despite having the right institutional arrangements on paper, many EU Member States could further improve.

Relative to the rest of the EU, five countries show evidence for a well-established and diverse toolbox for mainstreaming climate into public finance decisions—Finland, France, Ireland, Spain, and Sweden. Another nine countries have one or two mechanisms in place but could expand on existing practices. At least four Member States are planning to pursue green budgeting measures in the future (European Commission, 2023d, p. 4).

Table 7 lists green budgeting and other practices across EU Member States based mainly on survey data from 2023. Green and/or brown tagging seems to be the most common tool in use followed by *ex-ante* budget impact assessments. Because the Commission's assessment uses a 'narrow' definition of green budgeting, we expanded the scope by looking at other means of climate mainstreaming in public spending, but only if enshrined in national climate framework laws. Relevant provisions were found in five laws. Both Sweden and Germany link climate progress reporting with the annual budget proposal, which facilitates an integrated debate on both issues. The Belgian law includes a new system for transparency around the use of ETS auctioning revenues. The French law requires the government to produce an annual climate finance report and the Spanish law has specific provisions covering investments and financial risk accounting.

3.5.4 Raising the status quo with EU policy

The results of our analysis suggest that **most EU Member States have relatively well-defined responsibilities for climate governance, including mechanisms to enhance coordination between relevant authorities.** Further, despite the proliferation of green budgeting practices even in just the last two years, national climate governance systems in EU countries stand to benefit from further bolstering this aspect.¹² Countries should employ all the tools at their disposal to ensure that public spending is consistent with climate ambition. Notably, **over half of EU countries shows no evidence for green budgeting**, which represents a critical gap in the national climate governance landscape. This is especially concerning because it has implications for the transparency of public spending on climate across the EU—echoing other assessments showing a blind spot at national level on climate-related investments, not to mention the overall consistency of national spending with EU and national climate targets (see ECNO, 2023).

EU-level policy reforms may be limited on national coordination mechanisms and prescribing how Member States assign responsibilities for climate policy-making. While there is precedence for mandating the creation of climate-related institutions at Member State level, traditionally, Member States have autonomy on how climate policy-making roles are organised. One example is the multi-level climate and energy dialogues under Article 11 of the Governance Regulation, but even on these Member States have flexibility on implementation (see also 3.7.4 on participation). In short, a prescriptive EU policy could be seen as overreach by national capitals, and a harmonised, top-down approach may not be feasible due to varying national circumstances and legal cultures. For these reasons, the options outlined below focus more generally on mainstreaming climate neutrality considerations across policy areas. Nonetheless, many of these options could have the indirect effect of improving national coordination and clarity on responsibilities.

Options to improve coordination in practice between national-level governmental authorities

a. EU-convened sectoral working groups with national representation – To encourage better coordination at national level and facilitate an exchange between Member States, the EU could convene regular sectoral working groups with national ministries. These could take place in the context of enhanced EU support for national climate planning, i.e., on NECPs or LTSs, and/or for the development of EU-level sectoral roadmaps (see Option E below).

Options to accelerate the uptake of green budgeting practices at national level

- b. Making EU funding conditional on national green budgeting practices, using 'cross-compliance' provisions The use of cross-compliance mechanisms that make access to EU funding conditional on the further adoption of green budgeting practices could serve as a strong incentive for national governments. This represents a softer EU policy approach than mandating green budget tools and could be tied specifically to climate-related EU support.
- c. Further guidance and capacity-building support for Member States in the context of the Green Budgeting Reference Framework Continued and expanded efforts under

¹² The Commission conducted its first survey in 2021 (see https://economy-finance.ec.europa.eu/economicand-fiscal-governance/green-budgeting-eu_en, accessed 11 January 2024).

the framework to provide additional technical support for Member States could help accelerate the introduction of green budgeting practices by national governments.

Other options for fostering a consistent, all-of-government approach to net zero at national level

- d. Required country-specific recommendations following the EU Climate Law consistency assessment of national measures The EU Climate Law requires the European Commission to assess the consistency of national measures with EU-wide climate neutrality every five years, but country-specific recommendations on inconsistencies are optional (Art. 7.2). The law foresees that if the Commission chooses to issue recommendations these be made public and require a national response. As such, this mechanism has the potential to be a uniquely powerful tool for mainstreaming climate neutrality across policy areas at national level. Furthermore, *requiring* the Commission to publish the assessment itself would strengthen the transparency of the mechanism.
- e. Regularly updated sectoral roadmaps at EU level Strategic planning across sectors at EU level could enhance coordination among EU institutions, especially if these are used to inform a full-economy strategy in the form of an updated EU LTS. Furthermore, the development of EU-level strategies could provide an opportunity to regular engage with national policy-makers and stakeholders focused on the climate neutrality transition in specific sectors and promote a dialogue at national level.
- f. Streamlining and integration of EU planning processes, e.g., under a single monitoring mechanism Strengthened integration of EU planning processes, such as the EU Semester, RRF, and Governance Regulation, among others, could further mainstream climate considerations across relevant policies. The creation of an EU-wide monitoring framework could go a long way to streamlining these processes, especially for national reporting purposes (see also 3.4.4). For a more in-depth discussion see Duwe and Spasova (2021) and ECNO (2024).
- g. Remove inconsistencies in the Sustainable Finance Taxonomy The EU Sustainable Finance Taxonomy (Regulation (EU) 2020/852) establishes criteria for economic activities consistent with climate neutrality. In a highly contentious decision, the current criteria promote new investments in nuclear and gas-fired power plants and thus send the wrong signal to economic actors, national policy-makers, and EU institutions alike (WWF, 2023).¹³ Removing these inconsistencies could help to align a range of public spending decisions at both EU and national level, especially in the context of the EU's Green Budget Reference Framework.

3.6 Expert input

3.6.1 Why important?

Independent expert input for governmental action on climate is an important policy innovation that has started to spread among European countries really only in the last decade (EEA, 2021;

¹³ See also https://www.e3g.org/news/when-is-gas-green-according-to-the-eu-taxonomy/, accessed 10 April 2024.

Elliott et al., 2021). In 2021, the EU followed suit with the EU Advisory Board, which released its first work programme in 2022.¹⁴

Often established by climate framework laws, independent expert councils are usually composed of scientists and researchers from a range of academic fields who work *outside of government* (Abraham-Dukuma et al., 2020). They can serve multiple functions, including an advisory role for evidence-based policy, a watchdog and progress oversight role, and in some cases also facilitate wider stakeholder engagement (Evans & Duwe, 2021). Studies show that in their work, expert councils can enhance the *accountability* of governmental action and build *consensus* on climate policy decisions (Averchenkova et al., 2018; Weaver et al., 2019).

3.6.2 State of EU policy

The EU Climate Law specifically calls on Member States to establish their own analogous expert body to the EU Advisory Board, but this does not amount to a legal obligation (Art. 3.4). The EU Advisory Board has itself signalled interest to engage with national counterparts (and has started a dialogue with existing councils) and called for their mandatory adoption at EU level (see EU Advisory Board, 2024).

3.6.3 Assessment findings

The assessment counted which national governments have established an institution for expert input on climate policy. To qualify in full these had to fulfil two criteria: (1) membership must be limited to external, scientific experts (i.e., no government or private interest representation) and (2) the council must have a mandated input to policy-making. These two criteria have been shown to important factors for policy impact as well as the perceived legitimacy of the institution as a credible and objective voice (see, e.g., Evans & Duwe, 2021). For the fully independent, scientific bodies, we further investigated whether the government is obliged to respond and the degree to which the council provides a progress monitoring function (i.e., as a watchdog).

As outlined in Table 8, our assessment shows that **eleven EU Member States have established an independent expert climate council** composed solely of members of the academic and research community, although in a handful of cases these are not yet fully operational (i.e., Belgium, Greece, Portugal, Slovenia, Spain). Despite being independent, the Finnish Climate Panel, the Lithuanian Climate Change Committee, and the Dutch Scientific Climate Council have no clearly mandated input to policy-making in their respective national governance contexts. Five institutions failed to qualify either because of governmental and/or private interest membership (in addition to scientific representation). These institutions seem to simultaneously fulfil multiple governance roles overlapping with either inter-ministerial coordination (e.g., the Austrian National Climate Protection Committee or Slovak Council for the European Green Deal), stakeholder engagement (e.g., the National Expert Council for Climate Change in Bulgaria), or both. Of the 19 national institutions found in total, 15 are enshrined in a legal framework.

Only five national governments are required by law to respond to input from their independent expert council—Denmark, France, Ireland, Slovenia, and Spain—even though this might be more common in practice. In Denmark the government must submit its position on the Danish Climate Council's recommendations each year to parliament with the annual climate programme. In France, after the High Council on Climate issues an opinion on compliance with the current carbon budget and low-carbon strategy, the government must respond 'before

¹⁴ See https://climate-advisory-board.europa.eu/, accessed 22 December 2023.

parliament'. Likewise in Ireland, if the government diverges from the carbon budget proposal of the Climate Change Advisory Council, it must clearly state its reasons for doing so.

Country	Independent expert council with concrete input in policy-making cycle	Legal framework	Government must respond to input from an independent expert council	Legal framework	Progress report produced regu- larly by independent expert coun- cil (i.e., watchdog)	Legal framework
Austria	Somewhat, not independent		-		-	
Belgium (1)	Yes, Committee of scientific experts	х	-		Yes	х
Bulgaria	Somewhat, not independent	х	-		-	
Croatia	Somewhat, not independent	х	-		-	
Cyprus	-		-		-	
Czechia (2)	-		-		-	
Denmark	Climate Council	х	Yes	х	Yes	х
Estonia (3)	-		-		-	
Finland	Somewhat, no mandated input	х	-		Yes	
France	High Council for Climate	х	Yes	х	Yes	х
Germany	Council of Experts on Climate Change	х	-		Yes	х
Greece	Scientific Committee on Climate Change	х	-		Unclear, not yet operational	
Hungary	Somewhat, not independent	(x)	-		-	
Ireland	Climate Change Advisory Board	х	Yes	х	Yes	х
Italy	-		-		-	
Latvia			-		-	
Lithuania	Somewhat, no mandated input	х	-		-	
Luxembourg	Climate Policy Observatory	х	-		Yes	х
Malta	-		-		-	
Netherlands (⁵)	Somewhat, no mandated input		-		Unclear, not in first work programme	
Poland	-		-		-	
Portugal	Climate Action Council	х	-		Unclear, not yet operational	
Romania			-		-	
Slovakia	Somewhat, not independent		-		-	
Slovenia (4)	Climate Council	х	Yes	х	Unclear, not yet operational	
Spain	Committee of Experts on Climate Change	х	Yes	Х	Yes	х
Sweden	Climate Policy Council	х	-		Yes	х
TOTAL	Yes = 11 Somewhat = 8 No = 8	16	Yes = 5 No = 22	5	Yes = 9 No = 14 <i>Unclear = 4</i>	8

Note: (1) National committee not yet operational; regional Walloon Committee of Climate Experts; (2) national modelling is done by academic consortium; (3) Estonian Climate Council formed ad hoc for development of national climate law (includes special interests); (4) The Slovenian Climate Council is established under Art. 145 of the Environmental Protection Act and must produce an annual report of its own work. It is, however, unclear to what extent this will serve as a progress report on national climate policy; (5) Although technically a government agency, the Dutch Environmental Assessment Agency (PBL) has a clear mandate in the Climate Act, including an annual progress report to which the government must respond. The Dutch Government *must* also consider the advice of the Council of State, which consists primarily of legal experts and local officials; (x) = parentheses signify that features are found in a legally binding LTS instead of a law.

A total of **nine independent expert councils have a progress monitoring and oversight role as a watchdog** for the government, although only eight of these are mandated to do so by law. This accountability function provides an important check on the government's claims when it comes to the state of climate action. In Greece, Portugal, and Slovenia, it is too early to tell whether the newly established expert bodies will take it upon themselves to provide this function. Likewise, annual reporting was not included in the first work programme of the recently established Dutch Scientific Climate Council (*Wetenschappelijke Klimaatraad*) but might be pursued in the future. It is worth mentioning, however, that the pre-existing Environmental Assessment Agency, while technically a governmental body, operates semi-independently as a scientific watchdog in the Dutch context with a clear mandate in the Climate Act. Moreover, the Dutch Government *must* also consider the advice of the Council of State on climate matters, which is the oldest national advisory council consisting primarily of legal experts and local officials.

3.6.4 Raising the status quo with EU policy

In sum, less than half of EU countries have a governance system that institutionalises independent and scientific expert advice for climate policy-making. This is a clear weakness, especially in light of the fact that the EU Climate Law specifically calls on Member States to establish their own analogous expert body to the EU Advisory Board, and that the EU Advisory B has itself signalled interest to engage with national counterparts and called for their mandatory adoption (EU Advisory Board, 2023, 2024a). It must be said that technical and scientific expertise on climate policy issues is unevenly distributed across EU Member States and thus capacity constraints may be a barrier. Many countries also rely on private research and academic institutions, which were omitted from our analysis but provide valuable policy recommendations and in some cases are solicited by national governments (e.g., as in Czechia and Poland on scenario modelling). Nevertheless, institutions created 'by government, for government' to inject scientific evidence into policy choices and with a concrete mandated role in the policy-making process may be better positioned for impact, especially when there is a legal requirement for the government to listen and respond (Evans & Duwe, 2021).

Options to further the spread of independent national scientific climate advisory bodies

- a. Strengthen the language in the EU Climate Law to require the creation of national institutions - Article 3.4 of the EU Climate Law invites Member States to establish expert advisory bodies. Still, as the stocktaking analysis shows, many countries have yet to adopt a national institution. One option for advancing expert input to policy-makers could be strengthening the language in the EU Climate Law to make the creation of a scientific advisory institution on the national level mandatory for all countries. As mentioned, the establishment of climate advisory councils to complement the already mandatory multilevel climate and energy dialogues was also suggested by the EU Advisory Board in its 2024 progress report (EU Advisory Board, 2024a, p. 274). The law could further impose on countries the need to respond to a council's recommendations. Still, it is uncertain how detailed the EU Climate Law can prescribe such obligations, and a top-down approach might undermine national ownership. As such, it is guestionable if a legal obligation would lead to the desired outcome of impactful, well-researched scientific expert input. A simple ticking-the-box exercise by Member States might not lead to policy impact, and, in the worst-case scenario, national governments might install 'independent' councils in name only, that operate within governmental structures and influence and thus do not fulfil the function of objective scientific input.
- b. Encourage national institution creation through guidance from the European Commission on scientific input to policy-making A softer option could take the form of well mapped-out guidance from the European Commission for Member States on how to integrate scientific input in policy-making. For example, the EU's Better Regulation Guide-lines could incorporate a set of principles and good practices for the creation of impactful institutionalised expert input. This might include recommendations on diverse composition and mandated input to specific policy-making processes. Although not practice at EU level for the EU Advisory Board, guidelines could also call for a transparent governmental response to the advisory body's recommendations. These and other principles of credible scientific input to policy-making could also be housed in an amendment to the EU Climate Law itself or in a separate Communication from the European Commission.
- c. Dedicated EU funding and support for the creation of new national scientific advisory bodies – Direct funding from the EU could help Member States overcome any budgetary limitations to pursuing more institutionalised scientific advice. Resources could go

towards national technical capacity building and the establishment of the necessary infrastructure, i.e., secretariat, research staff, and could also fund national exchange on best practice.

Options to foster best practice on scientific advice and evidence-based climate policymaking

- d. Amend the Governance Regulation to require a review by an independent scientific national 'authority' for NECPs and LTS development Aside from requiring or encouraging institution creation at national level, the scientific advisory *function* of a dedicated body could be articulated via stronger requirements on the evidence base for Member States' NECPs and LTSs. At present, the Governance Regulation requires that these planning documents be subject to public consultations, including the multi-level climate and energy dialogues (detailed in Art. 11). Moreover, it specifically obliges the EU Commission to support Member States in their LTS development by providing information on the state of scientific knowledge (Art. 15.8). However, language on *who* Member States should consult on climate planning could be expanded to include existing national scientific 'authorities'—i.e., academic and research institutions. Of course, should the EU Climate Law or other EU policy mandate the national establishment of dedicated scientific advisory councils in the future, as suggested under Option A above, a link to NECP and LTS development could be made explicit.
- e. Add 'scientific community' to the list of relevant stakeholders for multi-level climate and energy dialogues – Article 11 of the Governance Regulation prescribes the national establishment of so-called multi-level climate and energy dialogues, which bring together a diverse group of stakeholders to discuss progress towards the EU climate neutrality target, and national long-term scenarios used. It gives the option to use the format for a debate on the NECPs. Currently, the dialogues must include 'local authorities, civil society organisations, business community investors and other relevant stakeholders'. Although the scientific community ostensibly falls in the 'other' category, to ensure scientific insights are considered in these dialogues, Article 11 could explicitly include the 'scientific community' as a relevant stakeholder group.
- f. Amend the EU Climate Law to mandate EU Advisory Board input to key EU policy processes - Since its adoption in 2021, the EU Advisory Board has produced reports and recommendations on a range of EU climate policy issues. Among those foreseen by law included input on the EU 2040 target setting process (Art. 4.5) and, as implied in Art. 8.3, an opinion on the EU Commission's progress and consistency assessments (Art. 8.3). Otherwise, the EU Advisory Board's mandate is relatively open. Moreover, the law does not require the Commission to address or respond to recommendations made by the expert body. As evidence at the national level shows, a vague mandate and lack of required governmental response may limit the future impact of the board and its ability to guide policy-making (Evans & Duwe, 2021). If expert input is not well directed, the uptake of the EU Advisory Board's recommendations could well depend on how well they align with policy-makers' own agenda. To serve as a good example for national level institutions, the EU Climate Law could mandate concrete areas for scientific input, such as on a revision of the EU LTS or for setting the 2030-2050 indicative carbon budgets (Kulovesi et al, 2024). To further strengthen impact, the EU Commission should be required to respond to the EU Advisory Board's opinions publicly, especially when it deviates from specific recommendations.

g. Include targeted outreach and engagement with national counterparts in the EU Advisory Board's mandate – Two of the EU Advisory Boards tasks outlined in Article 3.2 of the EU Climate Law are: 'contributing to the exchange of independent scientific knowledge' and 'stimulating dialogue and cooperation between scientific bodies within the Union'. To date, the EU Advisory Board has taken it upon itself to engage directly with national peer groups, with plans to continue 'nurturing a network or climate advisory bodies across the EU' (EU Advisory Board, 2024b, p. 13). Still, enshrining outreach to national bodies more concretely in the mandate could encourage the EU Advisory Board to expand activities further. Importantly, this task would require additional funding support from the Commission.

3.7 Participation

3.7.1 Why important?

Frequent, early, and effective participatory processes that allow for outside input on policy decisions are crucial to build consensus on both the ends and means of governmental climate action (Finnegan, 2022; Jager et al., 2020). Whether in the form of online consultations, ad hoc workshops, permanent advisory bodies, or citizens' climate assemblies, avenues for participation serve to inform public authorities on the views of those who stand to be affected by policies and enhance transparency in policy-making and planning (EEB, 2023b). Limited attention to participation by governments can undermine trust in national policy decisions and make it harder to implement substantive emissions reduction policies, especially when important actors in the private sector and at local level are not fully on board (Liu et al., 2019; Perlaviciute & Squintani, 2020).

3.7.2 State of EU policy

Several EU policies aim to promote meaningful consultations with stakeholders and the public. First, as parties to the Aarhus Convention, EU Member States have clear obligations under international law concerning public consultations, access to justice, and access to information on environmental decision-making. These standards are implemented at EU and national levels by the Aarhus Regulation (Regulation (EU) 2021/1767), which was revised in 2021 to broaden the scope of EU decisions subject to Aarhus rights.

Article 10 of the Governance Regulation echoes core requirements of Aarhus, requiring Member State to facilitate 'early and effective' opportunities for public consultation in the preparation of climate policy plans and strategies. Article 11 obliges national governments to establish 'multi-level climate and energy dialogues' that should go beyond public consultations and foster a conversation on broader policy scenarios and progress, including the NECPs and LTSs. The dialogues are referred to as 'permanent' in Recital 30 of the regulation, but this qualification is left out of the body of the regulation. Article 11 further lists relevant stakeholder groupings to include.

Although not directed at Member States, Article 9 of the EU Climate Law calls on the European Commission to engage with 'all parts of society' and facilitate processes at national, regional, and local level to this end, including the national multi-level dialogues. The law also obliges the Commission to leverage the European Climate Pact, which is the EU's main ongoing channel for raising citizen awareness and action on climate with a focus on community-led initiatives (European Commission, 2020).

3.7.3 Assessment findings

To assess participation in national climate policy-making we first considered the existence of a dedicated and permanent body for continuous stakeholder engagement. We also identified the number of Member States that convened a national citizens' climate assembly in the last five years. Finally, we reviewed and synthesised the results of four previous in-depth assessments to provide an overarching measure of the quality of public and stakeholder engagement in each country.

As listed in Table 9, **less than half of EU Member States have a permanent engagement platform dedicated to stakeholder input on climate matters.** While another six countries make use of an existing forum, these either have a broader environmental or sustainability focus or are more specifically aimed at energy or adaptation. A handful of countries have a stakeholder body with representation limited to a specific group, such as youth in Poland or indigenous peoples in Finland. In Latvia the National Energy and Climate Council is made up almost exclusively of governmental and industry members, but the country also has an Environmental Advisory Council with a broader remit. It is important to note that even if no permanent body exists there is in almost all cases ad hoc engagement through temporary working groups, often developed for a specific task, e.g., to advise on NECP development.

Table 9: Public and stakeholder participation

Country	Dedicated and permanent mechanism for stakeholder outreach and engagement	Legal framework	National citizens' climate as- sembly convened in the last five years	Legal framework	Robust public consultation processes (¹)	Legal framework
Austria	National Climate Protection Committee		Yes (2022)		High-medium	
Belgium	Somewhat, broader focus on sustainability		No, only regional level		Medium-low	х
Bulgaria	National Expert Council for Climate	х	-		Low	
Croatia	Commission for Intersectoral Coord.	х	-		Low	Х
Cyprus	-		-		Low	
Czechia	Platform for Climate and Energy Strategies		-		Low	
Denmark	Climate Dialogue Forum	х	Yes (2021)		Low	Х
Estonia	Somewhat, specific focus on energy		-		Low	
Finland	Somewhat, limited representation	х	Yes (2021)		Medium	Х
France	National Council for the Ecological Transition	х	Yes (2020)		Hiah	х
Germany (2)	Somewhat, specific focus on energy; unclear		Somewhat, civil society initiative		Medium-low	х
Greece	Somewhat, specific focus on adaptation	х	-		Medium-low	Х
Hungary (3)	Somewhat, broader focus on environment		-		Medium-low	
Ireland	National Dialogue on Climate Action		Over five years old		High	х
Italy	-		-		Medium-low	
Latvia	Somewhat, limited representation/broader focus		-		Medium	
Lithuania	-		-		Low	
Luxembourg	Climate Action and Energy Transition Platform	х	Yes (2022)		Medium	х
Malta	Somewhat, limited representation	х	-		Medium	
Netherlands	National Climate Platform		No, but planned		High-medium	х
Poland	Somewhat, limited representation		Somewhat, civil society initiative		Low	
Portugal	-		-		Medium	Х
Romania	-		-		Low	
Slovakia (4)	Council for the EU Green Deal		-		Low	
Slovenia	_		-		Low	х
Spain	National Council on Climate Change	х	Yes (2022)	х	Medium-low	х
Sweden	Fossil Free Sweden		-		Low	
TOTAL	Yes = 12 Somewhat = 9 No = 6	9	Yes = 6 Somewhat = 2 No = 19	1	High = 2 High-medium = 2 Medium = 5 Medium-low = 6 Low = 12	13

Note: (1) National public and stakeholder participation is rated on a five-point scale high, high-medium, medium, medium-low, or low based on a synthesis of results across four past studies. See Annex I for more information on methodology. (2) It is unclear whether the German stakeholder platform 'Aktionsbündnis Klimaschutz' is still in operation; (3) The Hungarian Panel on Climate Change was not established by government but also plays a role for stakeholder engagement on national climate policy; (4) The full name of the Slovakian body is 'Council of the Government of the Slovak Republic for the European Green Deal and Low-Carbon Transformation'. When it comes to outreach to the public, far fewer countries have pursued a more institutionalised approach. **To date, only seven citizens' climate assemblies have been convened by national governments** with the oldest occurring in Ireland in 2016-2018. A national assembly on energy poverty was organised by civil society in Poland in 2022, and according to the Knowledge Network on Climate Assemblies (KNOCA) over 100 have been convened at local and regional level across Europe (KNOCA, 2023). Only one country, Portugal, enshrines this relatively new governance innovation into national law, although an interviewee warned that this is likely to be a one-off occurrence. The German assembly in 2021 was not convened by government but by a non-governmental organisation (NGO) coalition composed of Bürger-Begehren Klimaschutz and Scientists for Future, Germany.

Finally, to assess the overall quality of public and stakeholder consultations on climate matters we conducted a systematic quantitative review of four past assessments of national reporting on national LTS development (Velten et al., 2022), the first NECPs (Duwe et al., 2019; Marsden, 2021), and implementation of the multi-level dialogues (Faber et al., 2024).¹⁵ For a full description of this process and the studies included refer to Annex I.

The assessment placed countries on a five-point scale based on the strength of reported participation processes measured using a %-index—high (at least 85%), high-medium (75-84%), medium (65-74%), medium-low (55-64%), and low (less than 55%). As the results show, **only four countries, France, Ireland, Austria, and the Netherlands could be assessed as having relatively robust avenues for public participation** in domestic climate policy. Most countries fall in the medium-low to low range, and the average score for the EU was 59%. Public participation provisions feature in the legal frameworks of 13 Member States, but based on our analysis, this does not seem to be associated with the strength of participation processes in practice.

3.7.4 Raising the status quo with EU policy

All in all, the assessment of participation processes in Member States highlights **substantial room for improvement across almost all EU countries**. Dedicated stakeholder engagement platforms exist in nearly half of EU Member States, but only in a handful of cases are these enshrined in law. Other instruments for public participation, such as climate assemblies, could become a promising form of engagement if pursued with regularity. The synthesis of results from past studies showed substantial diversity in the quality of public and stakeholder consultations in general and pointed to a lack of governmental attention in over half the EU27.

Public participation is one governance area where the EU can and does have a potentially large influence on national practices, including precedence for the mandatory creation of institutions and processes for stakeholder engagement.

Options to improve the implementation of participation processes in national climate policy-making

a. Reinforce mandatory and *permanent* multi-level climate and energy dialogues – To encourage further uptake of robust channels for regular stakeholder engagement at

¹⁵ Two limitations to this approach are worth explaining. First, all past studies were based on national reporting, meaning results may be skewed to benefit those countries that do a better job communicating on engagement efforts. Second, three of the four studies are based on national submissions from 2019-2021 and thus may be somewhat out of date. For instance, the European Commission's assessment of the 2023 NECP updates points to Lithuania, specifically, as an example of good practice, which differs from our assessment (see European Commission, 2023). However, aside from this report, which provides little further detail, we were not aware of a comprehensive assessment of consultations on the 2023 NECP updates.

national level, the EU could strengthen the requirements on Member States when it comes to establishing multi-level dialogues. First, a requirement that these be *permanent* structures could be introduced in Article 11—currently any mention of 'permanence' is only in Recital 30.

Further options for improvements include explicit mention of the scientific community as a key stakeholder group (see also section 3.6.4) and making input/consultation on national planning and reporting processes to the EU more clearly mandatory, where currently this is only implied (i.e., LTS, NECPRs) or left up to Member States (i.e., NECPs).

- b. Enforce better reporting and transparency on the effectiveness of multi-level dialogues and public consultations on NECP and LTS development As with planning (section 3.3.4) and monitoring (section 3.4.4), one low-hanging option for improving national practices is enhanced efforts by the EU to enforce existing requirements under the Governance Regulation. Most importantly, this includes better reporting on the effectiveness and impact of participation—i.e., which recommendations were taken on board and whether there was a clear response by government.
- c. Dedicated EU funding to support and build capacities at national level for public and stakeholder consultations Effective and regular participation, especially proactively sought by government, requires resources and time. The EU could support Member States through targeted funding and trainings.
- d. Regular EU-organised exchange between permanent stakeholder engagement bodies – As Member States establish multi-level dialogues pursuant to national rules and practices, the EU could function in a convenor role by bringing these structures together either across all countries or with a regional focus to facilitate engagement and discourse on matters of mutual relevance. Such outreach could be pursued in the context of the European Climate Pact as a conference. As with outreach by the EU Advisory Board to parallel institutions at national level, regular opportunities for exchange between national dialogue bodies could provide a soft incentive for those countries without a relevant institution to create one.
- e. Anchor Aarhus rights concretely in Governance Regulation A stronger anchoring of Aarhus rights in the Governance Regulation could serve to raise standards on participation overall. This would require either a dedicated section or amendments to relevant Articles 10 and 11, adding direct links to the three pillars of the Aarhus Convention—access to environmental information, public participation, and access to justice (for a full discussion see Robert, 2023).
- f. Leverage the European Climate Pact to its full potential Launched in 2021, the European Climate Pact is an initiative designed to engage citizens and communities at national and local levels on action towards climate neutrality. This process can be used to further stimulate support and perceived ownership of the climate neutrality transition by EU citizens. The European Climate Pact serves as a good forum to link communities from different Member States facing similar challenges to facilitate mutual learning and exchange.

3.8 Enabling factor: Political support

3.8.1 Why important?

The transition to climate neutrality requires buy-in from all corners of the society and economy. While political support is necessary to pass legal requirements or adopt plans towards climate neutrality, public support is a prerequisite thereof. If public support for climate policy is strong, pressure on the government to take action increases (Schaffer et al., 2022). At the same time, as shown by the 2018 yellow vest movement in France and the more recent 2023 debate over gas heaters in Germany, pursuing ambitious plans without public support can lead to resistance and ultimately a backlash against climate measures (Hockenos, 2023; Mehleb et al., 2021). On the other hand, an approach to climate policy-making that emphasises fairness and social cobenefits is less likely to be met with pushback from the public (Bain et al., 2016).

Cross-party political support is beneficial not only for enacting regulations, but for prioritising climate change on the political agenda, leading to debates and, ideally, tangible outcomes. Pushing too hard for ambitious climate policies without having the necessary political support can drive a wedge between parties, and even increase resistance. Climate governance based on political agreement is more likely to be perceived as credible because all sides have effectively 'bought-in' (Lockwood, 2021; Nash et al., 2021). To this end, evidence shows that it is better to focus discourse around what political parties have in common, as correlating positions do exist, even among more conservative parties (Hess & Renner, 2019).

3.8.2 State of EU policy

Political support is different from the other governance functions investigated in this report. As an important enabling condition for effective governance, it cannot be simply mandated by EU law and instead must be fostered through other types of actions. Nevertheless, the European Green Deal has at its foundation the integration of social considerations with the climate neutrality transition and came with a range of measures aimed at ensuring that 'no person and no place [is] left behind'. Most important among these, the EU Just Transition Fund (Regulation (EU) 2021/1056) and Social Climate Fund (Regulation (EU) 2023/955) provide EU funding to Member States to support regions and portions of society disproportionately affected by the climate crisis and its solutions (for the latter more specifically the upcoming EU ETS2). These policies also require Member States to produce Social Climate Plans and Territorial Just Transition plans and incorporate socio-economic considerations into their NECPs.

Moreover, as mentioned above, in 2020, the European Commission set up the European Climate Pact, which seeks to create further support for climate policy through so-called community 'climate ambassadors' or individuals committing to pursuing local action and promoting the principles of the European Green Deal.

3.8.3 Assessment findings

To assess the level of public support for ambitious national and EU climate policy, we refer to the Eurobarometer survey on climate change. The percentages shown in Table 10 below are an aggregate of five questions, measuring public opinion on: (1) the seriousness of climate change; (2) whether responsibility for saving the climate lies with the national government; (3) the importance of national renewable targets; (4) the importance of national energy efficiency targets; and (5) the EU goal of climate neutrality.

Ten EU countries reached at least 85% on the composite indicator, indicating a 'high' degree of public support for national climate objectives and measures. Among the highest were Cyprus, Greece, and Malta, all hitting the 90% mark. Most countries, sixteen in total, fall

into a 'medium' category on public opinion (70-84%). Estonia is the only country ranked as 'low', with a 68% average on public support. Interestingly, the lowest rates of agreement are found on the question about whether it is the national government's responsibility for solving climate change. In sum, the results suggest that while on average citizens in most EU countries (26 out of 27) support ambitious measures for tackling climate change, they tend disagree on who is responsible.

Country	Public support for ambitious national and EU climate policy	Productive political discourse (1)
Austria	Medium, 76%	Low, lack of consensus and cooperation on law revision and NECP; general political inertia
Belgium	Medium, 82%	NA
Bulgaria	Medium, 79%	Medium, general support for aims but lack of consensus on means
Croatia	Medium, 84%	NA
Cyprus	High, 91%	NA
Czechia	Medium, 72%	Medium-low, support limited to marginal parties; consensus only on role for nuclear
Denmark	High, 87%	ŃA
Estonia	Low, 68%	Medium, general support for aims but lack of support for means and further ambition
Finland	Medium, 77%	Medium, previously more progressive; current focus on business not environmental priorities
France	Medium, 83%	NA
Germany	Medium, 81%	Medium, consensus on goals not solutions; high-profile conflict on fossil fuel boilers
Greece	High, 91%	Low, half the parties currently in government do not mention climate in their programmes
Hungary	High, 86%	Medium-low, lack of political will but no active push for regressive policies
Ireland	High, 87%	NA
Italy	Medium, 82%	Low, lack of support from current right-wing government; no consensus on aims or timeline
Latvia	Medium, 72%	NA
Lithuania	Medium, 83%	Medium-low, not a priority under recent political situation despite little outright opposition
Luxembourg	Medium, 79%	NA
Malta	High, 95%	NA
Netherlands	High, 86%	High-medium, consensus on goals, conflict on most contentious policy proposals
Poland	Medium, 78%	Medium, new government no longer stalling action; will move slowly for fear of backlash
Portugal	High, 87%	High, consensus among larger parties, disagreement only on contentious policy proposals
Romania	Medium, 70%	Low, not proactive; mostly transposition of EU law under infringement threat
Slovakia	Medium, 80%	NA
Slovenia	Medium, 78%	NA
Spain	High, 85%	High, current government strongly committed, only extreme parties in disagreement
Sweden	High, 89%	High-medium, current parties in power aligned on importance of issue; 7/8 parties in support
TOTAL	High = 10 Medium = 16 Low = 1	High = 2 High-medium = 2 Medium = 5 Medium-low = 3 Low = 4
		No interview/assessment = 11

Table 10: Political and societal support for climate policy

Note: (1) NA = no interview, not included in analysis

To gauge whether national political discourse helps or hinders climate policy-making we consulted our interview partners. While we are aware that their answers come with personal biases, this approach was favoured over a discourse analysis of party programmes or evaluation of election results across all 27 Member States. However, because we only conducted interviews in 15 countries, 11 Member States were left out of the analysis on this question.

A lack of political support was a frequently mentioned reason for why climate policy on the national level is not more ambitious. This clearly underlines the role of political support as an enabler for effective climate governance. Notably, based on interview answers it seems that public support has not necessarily translated to political support in some cases. Greece, showing one of the highest rates in public backing, is governed by a coalition where half of the parties do not mention climate issues in their programme. Both Italy and Austria show reasonable levels of public support, while the political discourse is less productive. In four cases (Netherlands, Portugal, Spain, and Sweden), the progressive sentiment from society seems to be more mirrored in the political sphere. Interview partners in several countries emphasised that while there is general political support for the ends or objectives of national climate policy, disagreement on the means hinders progress on several fronts.

3.8.4 Raising the status quo with EU policy

Despite a high level of popular support for ambitious climate action among EU citizens in almost all Member States, the political discourse in many national contexts is contentious. In several countries, policy-makers tend to agree on overarching objectives, but progress is hindered by conflict over specific measures or the overall politicisation or de-prioritisation of the climate issue. Still, these findings should not be taken as representative of the EU, and more in-depth analysis is needed to elaborate on country dynamics.

Meaningful and regular governmental engagement with the public and stakeholders is closely linked to fostering public support and thus EU policy options outlined above under participation are relevant in the context of fostering public/political support. It may be difficult for the EU to sway public sentiment at a Member State level, as these are driven largely by domestic concerns and depend on national politics. Nevertheless, there are several things that could be done (or continued) at EU level that might have a positive influence across EU countries.

- a. Ensure integration of social considerations in national climate policy planning Integrating social dimensions into national climate planning means accounting for the socioeconomic impacts of climate policies on different segments of the population and anticipating inequities that might arise. Both the LTS and NECP templates and mandatory content require some information on relevant issues, such as energy poverty and socio-economic impact, but new EU policy tools under the European Green Deal aimed at a just and fair transition are new and remain relatively untested, (e.g., the Social Climate Plans and Territorial Just Transition Plans). These obligations on Member States to incorporate social elements in climate planning could be an important driver of political and public support at national level. Still, a recent study showed that some Member States are failing to link these planning tools adequately, risking fragmentation in implementation (see Kögel, 2024).
- b. Capacity-building and support for Member States on socio-economic data collection – Case study evidence suggests that a comprehensive evidence base is missing in some national contexts, making it difficult to assess the social impact of climate policies (Kögel, 2024). The Commission can help national governments by supporting enhanced information collection for use in climate planning. Information on socio-economics impacts is included in the LTS template but often missing from the strategies themselves (see Velten et al., 2022). Data collection efforts could be connected to a more integrated and detailed EU system for monitoring the transition to climate neutrality, which also considers just transition, skills, and employment, among other core social considerations (see also section 3.4.4).
- c. Continued high-level political attention to the principles of the European Green Deal and a positive vision of climate neutrality – The EU plays a central role in agendasetting for economic and social policy throughout Europe. Maintaining high-level political attention on basic principles of the European Green Deal can help to ensure that climate action remains a priority in national policy arenas. This includes the underlying foundations of social solidarity and a just transition. To build societal confidence and trust, messaging from the European Commission should be concretely informed by existing public participation processes, such as the European Climate Pact as well as Member States' national multi-level dialogues.

4 Synthesis of stocktaking results and key messages

An examination of all 22 climate governance features side-by-side reveals shared strengths and weaknesses among national systems in the EU. Figure 3 aggregates the findings of the stocktaking exercise to provide an overarching view across all Member States.

Overall, the evidence suggests that national governance is most advanced on providing certainty over the long-term transition and has come a long way towards promoting a consistent approach. However, there are clear shortcomings on national accountability and consensusbuilding, especially when it comes to detailed progress monitoring and meaningful and permanent channels for public and stakeholder participation. Several key messages are worth looking at in more depth.

Key message 1: Evidence for a 'two-track' EU when it comes to the development of climate policy-making institutions and procedures.

As shown in Figure 4, there are apparent regional disparities on climate governance when it comes to delivering certainty, accountability, consistency, and consensus. Central and western EU Member States as well as the Scandinavian countries in the north tend to exhibit more of the 22 governance features under investigation compared to others. This suggests that regardless of EU 'baseline' standards for climate governance, Member States are operating on at least two tracks of development, which resembles in many ways the results of a 2021 survey by the authors, in which countries were grouped into one of three tiers (c.f. Evans & Duwe, 2021).

National political and economic circumstances differ, as do legal cultures and methods of policy-making. As such, a diverse landscape on climate governance should come as no surprise. However, it could pose a risk to climate neutrality as an EU-wide project if some countries are operating with a less robust toolbox for governing the transition relative to others. Achieving climate neutrality is already a challenge when Member States have different timelines and levels of ambition—but becomes even more so if there are disparities in the quality of policy planning, means for checking progress and depth of monitoring, and coordination among national officials. Most crucially, when it comes to societal buy-in to the net zero project, the EU population is the sum of its national parts. A lack of avenues for effective participation at national level, leading to or exacerbating existing political backlash or inertia, could hinder or even derail progress at EU level.

Key message 2: By setting a date for climate neutrality, national governments have come a long way on providing a sense of <u>certainty</u> about the long-term transition. However, clarity on what climate neutrality means in national contexts is missing, due to uncertainty surrounding reliance on removals, a lack of sectoral differentiation in longterm reductions, and insufficiently detailed LTSs.

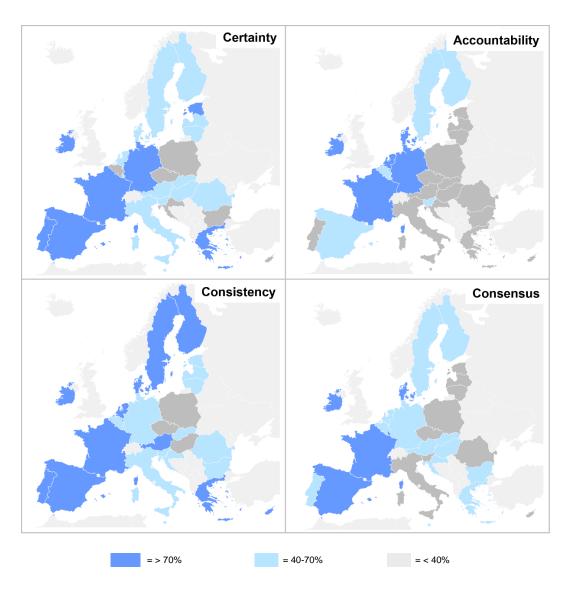
In total, 21 of 27 EU Member States have taken it upon themselves to set a date for reaching net zero emissions. Fourteen of these are legally binding at national level. Still, despite this progressive dynamic, there remains uncertainty around the substance and integrity of national net zero ambition.

Figure 3: Overview of governance stocktaking results across all EU Member States

			Over (EU2	all 27)	AT	BE	BG	HR	СҮ	cz	DK	ES	FI	FR	DE	EL	HU	IE	ΙТ	LV	LT	LU	мт	NL	PL	РТ	RO	sĸ	SI	ES	SE
	Framework	Adoption of a climate framework law																													
		Long-term economy-wide reduction target (or net zero)																													
≻		Long-term removal target (or clarity on net zero)																													
VINT	Targets	Interim economy-wide reduction target(s)																													
CERTAINTY		Sectoral differentiation in economy-wide targets			?																										
ö		Compliant and scientifically robust long-term strategy (LTS)																													
	Planning	Regular long-term planning cycle with five-year updates				?	?								?	?	?		?					?	?				?		
≿		Regular progress monitoring, beyond EU/UN reporting																													
BILI'	Monitoring	Indicator-based transition monitoring framework																													
NTA		Mechanism for new measures ('action trigger')			?																										
ACCOUNTABILITY		Government must respond to independent expert council																						?							
AC	Expert input	Regular progress report by independent expert council														?								?		?			?		
C	Planning	Consistency between short- and long-term planning																													
CONSISTENCY	0	Green budgeting and other practices																													
NSIS	Coordination and	Dedicated coordination mechanism																													
CO	mainstreaming	Clear division and delegation of responsibilities																													
		Permanent mechanism for stakeholder engagement																													
10	Participation	Robust public consultation processes																													
SUUS		National citizens' climate assembly in the last five years																													
CONSENUS	Expert input	Independent expert council with mandated input																													
Ō	Political	Public support for climate objectives																													
	support	Supportive political discourse (1)				?		?	?		?			?				?		?		?	?					?	?		
						= Ye	s (Ov	erall:	> 70%	6)		= Sor	mewh	at (O	verall:	40-7	0%)		= No	(Ove	rall: <	40%))	?	= Un	clear,	, not e	nougl	n info		

Note: EU27 classification for each governance feature based on unweighted average across countries where yes = 100%, somewhat = 50%, and no = 0%. Unclear, not enough info omitted from calculation. (1) Assessment based on interviews in 16 of 27 Member States.

Figure 4: Map of governance stocktaking results by Member State



Note: Country classifications based on unweighted average across governance features where yes = 100%, somewhat = 50%, and no = 0%. Unclear, not enough info omitted from calculation.

The EU Climate Law states unequivocally in Article 2.1 that 'Union-wide' GHG emissions and removals 'shall be balanced' by 2050 at the latest. However, not all countries are clear on whether their national climate neutrality target excludes international offsets and thus pertains only to a domestic balance. At present, Germany, and Sweden both include limited use of international offsets for national objectives. This sets up the potential for future misalignment because all Member States are legally bound to net zero *within the borders* of the EU, but some plan to achieve climate neutrality domestically through international offsets. Notably, short-term targets under the ESR must be met solely with domestic reductions and built-in EU flexibilities.

Regardless, net zero requires deep cuts in emissions and many EU Member States could be more concrete about attaching a quantitative figure to long-term reductions. Critically, most EU Member States are vague on the role that removals will play through 2050, not to mention what form these will take, i.e., natural sinks or technical alternatives (carbon removal technology, CRT). While several countries provide projections through 2050 in their LTS (especially for the LULUCF sector), few have binding removals targets and only Portugal enshrines a legally binding overarching CDR target that corresponds with its net zero target. In addition, only a handful of countries have concrete sectoral differentiation of long-term reduction targets. Even if long-term scenarios and pathways provide an understanding of where emission cuts are envisioned, this does not carry the same weight as a sectoral emission budgeting system or binding sectoral reductions. This ambiguity surrounding the integrity of national climate neutrality objectives is exacerbated by a lack of attention to detailed long-term planning and thus clarity on a national vision for 2050 and beyond (see also Velten et al., 2022). Significantly, less than a third of Member States have indicated concrete plans to update their LTS in line with the NECP cycle every five years. This creates a risk that many short-term actions over the next decade will be based on out-of-date scenarios and ambition.

Key message 3: Robust mechanisms to enhance <u>accountability</u> are severely under-developed at national level, despite EU reporting obligations.

The stocktaking points to **limited and weak accountability mechanisms as one of the most apparent national governance deficiencies**. A third of EU Member States set out to fulfil only EU and UN reporting obligations, such as those under Articles 17 and 18 of the Governance Regulation, and do not have their own integrated national progress monitoring systems. Based on available information, indicator-based monitoring of the transition occurs in only three countries, and legally binding action triggers that automatically hold governments to account for new measures are not common.

A point raised in numerous interviews was that EU reporting for climate and energy policy is already comprehensive and that further requirements could be seen by Member State officials as an additional, unnecessary burden. This suggests the need for further streamlining of EU reporting obligations to free up national capacities. However, a routine report to the European Commission does not necessarily carry the same weight as a regular national progress statement that is debated in a national context (Duwe & Evans, 2020).

In terms of independent, evidence-based oversight, **expert councils play a 'watchdog' role in only a third of EU Member States** by issuing regular progress checks. However, the number of councils to which the national government *must* respond is lower. These two characteristics—mandated watchdog function and governmental response—are described in the literature as especially important for policy impact (Averchenkova et al., 2018; Elliott et al., 2021; Evans & Duwe, 2021). Considering the number of countries with some form of institutionalised scientific input to policy-making, the present findings suggest a range of institutional maturity. Even though independent expert bodies can be designed to serve an important accountability role, only a fraction of those currently in existence in the EU seem best positioned to do so. Key message 4: Coordination and mainstreaming provisions to enhance the <u>con-</u> <u>sistency</u> of governmental actions exist on paper, but questions remain regarding their effectiveness in practice.

The four governance features we investigated that enhance consistency do so in different ways. These are: *horizontal* consistency between governmental and sectoral competencies, the consistency of *public spending* with climate objectives, and consistency *over time*. On horizontal consistency, most Member States delegate responsibilities among relevant authorities and have also established permanent coordination mechanisms for climate action. Given that national climate policies, not to mention GHG emission inventories and reporting, go back years, this is not a surprising finding as such. Still, **further research is needed to assess the extent to which existing coordination arrangements have been effective in promoting a truly all-of-government approach.** For instance, roughly a third of EU countries split the mandate on climate between two ministries. Past studies claim that this may be in part due to the EU regulatory architecture, which integrates energy and climate planning over two time horizons (Velten et al., 2022). This approach only becomes a problem if NECPs and LTSs are not pursued in a collaborative way, emphasising again the importance of inter-ministerial consultation.

Financial mainstreaming through green budgeting and other related practices enhances the consistency of public spending with climate objectives. The results, based primarily on European Commission assessments, show that green budgeting is a weak but developing feature in national systems. Finally, on consistency over time it is difficult to assess the longterm coherence of national policy processes. The EU has not produced a comprehensive assessment of the required consistency between NECPs and LTS. Although the stocktaking did not conduct an in-depth quantitative analysis, it did find evidence of structural inconsistencies between short- and long-term climate planning in roughly half of Member States based on criteria, such as the timing of submission and common underlying methodologies. This finding coupled with the deficits under accountability—especially on a sufficiently granular national progress monitoring system—suggests that Member States may find it increasingly hard to make informed policy decisions; many may be essentially operating blind. Some incoherence is simply a structural issue with EU submission schedules. One interviewee highlighted that the Spanish draft NECP update from summer 2023 includes a more ambitious long-term vision than the country's LTS produced two years prior. Even though long-term thinking should inform short-term plans, this anecdote is a positive sign of no backsliding.

Key message 5: National systems do not always ensure meaningful participation for climate policy-making and thus, despite the existence of permanent structures, risk failing to deliver <u>consensus</u> and buy-in to policy actions.

Despite the existence of some form of permanent stakeholder engagement mechanism in most Member States, the stocktaking suggests that national **participatory processes are weak in implementation**. The qualitative review of existing studies highlighted the absence of government follow-up and reporting on the impact of participation. As a novel approach, **citizens' climate assemblies have yet to take hold in the EU**, and thus far in no case has a national assembly been repeated or designed to occur regularly.

Expert councils with a concrete and integrated advisory role are becoming more and more common and are, at present, found in over a third of Member States. However, many national institutions that provide scientific policy advice may be limited in their objectivity and ability to speak independently because their composition includes private sector interests. Indeed, several countries treat the scientific community as a stakeholder group alongside youth, business, non-government, and advocacy organisations. For example, interviewees in both Bulgaria and

Estonia pointed to the outsized voice of the business and private sector in policy advice. Both countries combine scientific and other stakeholder input institutionally.

Looking forward, a lack of attention to consensus-building will become more and more of a problem in this crucial decade for policy implementation. Societal and political backlash against climate actions in Europe has begun to creep up in several countries and is linked in many cases to a rise in anti-EU sentiment.¹⁶ Keeping citizens and stakeholders genuinely engaged in policy processes is a crucial means of engendering buy-in for a generation to come.

In sum, the stocktaking showed that while EU national governance systems are stronger when it comes to delivering certainty and consistency (mostly horizontally between ministries and agencies within government), they are lagging on accountability and in critical areas on consensus. This dynamic across the EU reflects to some degree the emergence of climate institutions *within* countries, by which national structures arise through the re-arrangement of existing institutions for an express purpose (e.g., higher-level GHG reporting, transposition of EU law) and then develop through growing consensus toward complex and more accountable structures (Averchenkova & Chan, 2023; Dubash, 2021).

Through common provisions for planning, monitoring, and participation, EU regulation has nurtured and likely accelerated this process in many Member States (Duwe, 2022; Oberthür et al., 2023). Therefore, EU policy should be seen as a potential means for raising the bar further on national climate governance in the coming years. In the next section we boil down the wide variety of potential EU policy solutions discussed above under each respective governance function to arrive upon a list of key priority areas for raising national governance standard

¹⁶ See, e.g., https://www.politico.eu/article/discontent-eu-green-deal-climate-change-backlash/, accessed 12 January 2024.

5 Main options for reform: Where can EU policy fix deficits and help countries leverage the governance benefits?

The analysis above outlines a long list of EU policy options aimed at filling gaps in national governance and improving practice overall. These include new mandatory requirements on Member States and EU institutions, streamlined guidance from the EU for national governments, and dedicated technical and financial support to enhance national implementation.

This section distils the above recommended policy actions into a shortlist of **twelve key areas for EU policy reform.** As depicted in Table 11, each of the twelve reforms would help national governments deliver on the four governance benefits that form the theoretical basis of this study: certainty, accountability, consistency, and consensus.

Naturally, there is a lot of overlap when it comes to the added-value across the four benefits. For instance, mandatory input by the academic community at some stage in national climate planning (option 7) would provide accountability through scientific oversight of the plans, but could also improve planning quality, and thus has the potential to impact consistency and certainty. Likewise, strengthening accountability provisions in the EU Climate Law—i.e., more frequent consistency checks as per Articles 6 and 7 and a mandated course correction mechanism (option 6)—could also enhance the consistency of EU and national measures. Importantly, two policy options for reform have the potential to deliver across all governance benefits at national level: cross-compliance mechanisms or conditional funding (option 11) and EU funding and support for capacity building (option 12). These policy solutions are not aimed at a specific governance gap and instead aim to fill multiple gaps by improving national implementation.

To compile this list, we conducted targeted outreach to national policy-makers, which took place in the form of focus group dialogues, each composed of between 2-5 representatives of national climate ministries, environmental agencies, and other relevant authorities (see also Annex 1 for more detail on methodology). The aim of the focus groups was to gauge the perceptions of national officials, i.e., those who would be impacted by any reform to EU policy.

Additional insights were gained from a workshop with representatives of the EU climate policy research and advocacy community convened by the European Climate Foundation, which took place March 2024 in Leuven, Belgium. Both during the workshop and in the focus group exercises, participants were asked about (1) the perceived added-value of fixing key weaknesses at national level and (2) the perceived degree to which an EU-level policy form could help. The engagement with practitioners and policy experts highlighted **several cross-cutting issues**. These were considered when developing the list of policy options in Table 11.

Hard versus soft EU governance and national ownership

The first cross-cutting consideration is the strength of EU policy fixes and implications for national ownership. Options for policy reform are not limited to regulatory changes and can be understood as falling on a hard-soft continuum, extending from mandatory EU standards for national governance or for the EU itself (hard) to funding and support for capacity building to improve implementation or non-binding or voluntary provisions (soft) (Oberthür, 2019). Naturally, some policies, such as conditional funding to enhance enforcement or country-specific recommendations and follow-up, would fall somewhere in between (Knodt & Schoenefeld, 2020).

Table 11: Twelve EU-level policy options to raise the bar on national climate governance
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	Enterning actional containty should the transition to align to prove the								
	Enhancing national certainty about the transition to climate neutrality	Increasing national accountability for long-term climate action							
1. 2. 3.	tionally determined or prescribed, with efforts to ensure consistency across Mem- ber States Enhanced LTS mandatory content requirements, binding template, and iterative review of LTS drafts for better quality in long-term planning and clarity on net zero in national contexts	 Reinforce ESR compliance mechanism, required and faster follow-up on 'corrective action plans' and more frequent compliance review by EU Dedicated indicator-based transition monitoring system for climate neutrality to serve as a framework for streamlining national reporting and checking progress on the enablers of structural change at Member State and EU levels. Strengthen monitoring and action trigger in EU Climate Law by obliging the Commission to assess progress and consistency every 2 years (instead of 5) and produce specific policy proposals if progress is found to be lacking. This would serve as a regular top-down signal. Mandatory review/input for national climate planning by 'independent scientific authority', i.e., dedicated climate advisory body or other national non-governmental entity, such as a university or research organisation 							
Ens	suring the net-zero consistency of national policies across sectors and over time	Fostering consensus and societal buy-in to a vision for climate neutrality and concerted action to reach it							
8.	Required country-specific recommendations following the EU Climate Law consistency assessment of national measures and mandated Member State follow-up	10. Concerted effort to improve mandatory and <u>permanent</u> multi-level climate and energy dialogues as well as support in terms of capacity and guidance, require more detailed reporting on their effectiveness, and add 'scientific commu- nity' as relevant stakeholder group.							
9.	Full integration of long-term strategy (LTS) and national energy and climate plan (NECP) processes: Option (A) mandatory 5-year national LTS updates, stag- gered LTS/NECP submission timing, flexibilities to align existing domestic plan- ning; Option (B) streamline into combined submission								
	Policy reforms that could del	liver across all four benefits							
	 Introduction of cross-compliance mechanisms, i.e., making EU fu pliant national climate planning, reporting, and participation processes 								
	 Additional EU funding and capacity building support for (1) LTS scenario development, (2) to conduct robust public consul- tations on climate planning, and (3) better data collection 								

The choice of a harder or softer EU fix comes with potential advantages and disadvantages and has implications for national ownership and political feasibility. On the one hand, a common insight from our exchanges with national officials was that the EU standards laid forth in the Governance Regulation have been invaluable to overcome political inertia on climate policy planning and monitoring. This finding mirrors other anecdotal evidence from interview-based analyses in, e.g., Averchenkova and Chan (2023) and Velten et al. (2022).

However, a top-down EU approach may not always be desirable. For instance, when it comes to promoting national institutions, such as legal frameworks or independent scientific advisory bodies, a trade-off might exist between the benefits of a consistent harmonised approach across countries and the risk of undermining national ownership and agency. In a similar fashion, for public and stakeholder outreach to be seen as trustworthy, it is important that consultations are given adequate attention by national governments and not implemented as a boxticking exercise. Another consideration is the perception of EU overreach, which could lead to backlash and fuel EU-scepticism in domestic discourse.

These considerations guided the formulation of EU policy options, specifically on mandatory scientific input to climate planning (option 7) and renewed effort by the Commission to reinforce the existing multi-level dialogues (option 10). Both softer approaches were favoured over requiring new institutions.

Capacity bottlenecks highlight simultaneous need for additional EU support and further streamlining of requirements

In the focus group dialogues, several national officials, especially those from smaller CEE countries, pointed to a lack of technical and administrative capacity as a main barrier to producing sufficiently detailed LTSs and NECPs as well as a challenge for robust participatory processes. A lack of national-level data collection was also discussed as a challenge to progress monitoring.

As such, **additional resources from the EU** (option 12), both in terms of dedicated funding to implement the 'baseline' standards set forth in the Governance Regulation as well as targeted country-to-country exchanges and guidance for technical capacity building, **would improve the quality of climate planning (and reporting)** through more robust underlying scenario development and technical expertise for data management. Specifically, on the requirement for multi-level climate and energy dialogues, additional administrative support from the EU would help smaller national governments establish permanent platforms and organise regular meetings. In this context, it is important that EU funding not only be used by national governments to outsource climate policy-making tasks. External consultations can play a role in policy-making, but a dependence on non-governmental expertise could undercut capacity building by national institutions in the long-run.

Some of the policy options outlined in this paper have the potential to **simplify and streamline existing planning and reporting requirements on Member States, and in turn reduce ad-ministrative burden**. The European Commission's 2024 Work Programme emphasises better regulation through 'burden reduction and rationalisation of reporting' (European Commission, 2023a, p. 4). The European Council reaffirmed the aim to 'ambitiously reduce the bureaucratic and regulatory burden' in its Strategic Agenda 2024-2029, published in June 2024 (European Council, 2024, p. 6). Although much of the focus has been on reducing reporting burden for the private sector, the argument for better regulation could be extended to national governments.

First is the introduction of an overarching system of monitoring indicators to track progress towards net zero both at EU and Member State levels (option 5). As discussed in section 3.4.4 under monitoring, such a system could be designed to integrate across climate planning,

reporting, and assessment processes with a single set of indicators, including the European Semester (Simon et al., 2022), the 8EAP, as well as processes under the Governance Regulation: NECPs, LTSs, NECPRs, annual GHG inventories, and the PAMs and projections reporting (Duwe & Spasova, 2021; ECNO, 2024a). The paradigm shift marked by the European Green Deal and the EU's cornerstone goal of climate neutrality provide an impetus for holistic economic, social, and climate (environmental) monitoring building on information synergies that exist.

Another area for reform that has the potential to simplify existing requirements is the integration of LTS and NECP development (option 9), either by revising the Governance Regulation to align the frequency of planning schedules and treat the LTS similarly as the NECP or, alternatively, combining these into a single submission on a five-year schedule (essentially a 'long-term NECP').

Cross-compliance mechanisms could enhance implementation through stricter enforcement, but further discussion is needed

Several studies have made compelling arguments for the use of 'cross-compliance' mechanisms to enhance the enforcement of national obligations (LIFE UNIFY Project, 2021b; Oberthür et al., 2023; Oberthür, 2024; Pisani-Ferry et al., 2023). These provisions would limit EU funding to Member States conditional on adequate and timely climate planning submissions or reports, for example. In theory, cross-compliance mechanisms could be used to address a number of the deficits in national governance identified in this stocktaking, and thus we have included it tentatively as an overarching policy reform (option 11).

Still, cross-compliance through conditional funding is a policy option that warrants further discussion as it has implications also for EU economic and social policy and their interlinkages with climate. For one, such a mechanism would need to be designed so as not to undermine other important policy goals, such as cohesion policy.

Political feasibility and final remarks

The twelve options for reforms would begin to fill many of the governance gaps identified in stocktaking assessment in this report. However, these policy solutions must be considered in the context of EU climate policy developments generally, including changes to EU-level ambition, further harmonisation of mitigation efforts through further broadening of the EU ETS1 and ETS2, as well as other questions of political feasibility. **The European Parliament elections in mid-June 2024 and resulting shift-up of the political landscape could make it harder to pursue climate measures at EU level in the immediate future**. Although it is not likely the European Green Deal will be dismantled altogether, the new makeup of the European legislature could have a chilling effect overall.¹⁷

Should EU institutions take a step back from climate to prioritise other policy areas, this only reaffirms the importance of national level practices and ownership. The good news is that the existing EU 'baseline' standards set forth in law, while imperfect, provide a strong basis and have already served to raise the bar across the EU27. Moreover, as discussed above, the emphasis on better regulation and decreasing administrative burden found in the 2024-2029 Strategic Agenda of the European Council is not necessarily at odds with climate policy. On the contrary, it could serve as an impulse to streamline and integrate existing national requirements.

Additional work and exploration are necessary to pinpoint where exactly these policy reforms could be integrated into the existing EU policy framework. The utility of EU policy to spur better

¹⁷ See https://www.nature.com/articles/d41586-024-01742-w, accessed 13 June 2024.

practice on climate governance in Member States depends on the political will at both EU and national levels, especially when it comes to new binding requirements. However, where there is not appetite for introducing new legislation, much could already be achieved through improved national implementation (and EU enforcement) of existing standards.

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Annex I: Note on methodology

Analytical framework

Four benefits of climate governance after Dubash (2021)

Dubash (2021) argues that national climate governance is basically an agenda-setting (or certainty), consensus, and coordination problem. Governments must simultaneously foster buy-in to a long-term transition that affects all areas of society, albeit unequally, and provide a clear signal for its direction and speed. They must also decide and implement climate actions ensuring consistency both horizontally across the economy and vertically from national efforts down to local and municipal decisions. Conceiving of climate governance as an effort to overcome these three interlocking challenges underscores the integrated economic, societal, and temporal scope of the climate crisis.

We employ Dubash's (2021) conceptual framing for the emergence of climate institutions as an analytical starting point for the assessment of EU national governance systems, albeit with three key changes. First, instead of challenges to overcome we refer to these as the 'benefits' of climate governance. Second, we have replaced coordination with consistency underscore the temporal dynamics of climate policy-making, in addition to the horizontal and sectoral scope across the economy.

A review of the 'good governance' literature in an EU context (see, e.g., Umpfenbach, 2015; Averchenkova et al., 2020) further suggested the need to add a fourth dimension, namely, that of accountability. Climate policy decisions have implications spanning multiple decades. This means that national governments must deliver not only certainty and consensus about key policy goals but engage in deliberate and regular checks along the way. Accountability, including the ability to course correct when progress is found to be lacking or off track, requires a robust oversight apparatus that monitors the effectiveness of policies and enhances transparency in relevant information and reporting (Duwe et al., 2017). The four benefits of effective climate governance are summarised in Table 1 in the body of the report.

Climate governance 'functions'

Governments have a range of tools at their disposal to deliver the benefits to policy-making described above. These include (1) **targets** and related target-setting processes; (2) short-term action and strategic long-term **planning**; (3) progress **monitoring** and reporting; (4) **coordina-tion** within government and among relevant ministries; (5) **expert input** and oversight; (6) **mainstreaming**; and (7) public **participation** and stakeholder engagement (Averchenkova & Chan, 2023; Duwe & Evans, 2020).

The degree to which any of the above functions is legally enshrined in an overarching (8) **framework**, such as a climate framework law, is often considered an additional, separate characteristic of governance (Duwe et al., 2017; Muinzer, 2020a).

Finally, research also emphasises the importance of domestic structural factors like public sentiment and political discourse (Dubash et al., 2022). To capture this additional context, we also investigate **public and political support** as an underlying 'enabling factor'.

Most EU Member States have each of these *main governance functions* in some form—EU requirements dictate national action on targets (short-term), planning, participation, and monitoring, among other things. However, the underlying details vary significantly by country. For example, targets might include economy-wide short and long-term emissions reduction targets,

sectoral differentiation in targets or other sector-specific goals, interim target-setting, and budget-based approaches. As such, each governance functions can be investigated closer by looking at the *features* of how it is operationalised at a national level.

In this study we investigated a total of 22 different features of national climate governance, each of which can be categorised as belonging to one of the functions listed above. A full list and illustration of the analytical framework is found in Figure 1 in the report.

National data gathering: Desk research and interviews

Information on national governance systems was compiled and organised in two distinct steps: (1) desk research of existing studies and data sets, including a closer look at national policy documents and plans, especially the draft updated national energy and climate plans (NECPs) due in June 2023, and (2) targeted interviews. The process for collection national data got progressively narrower in focus. Thus, if after the initial review of previous studies and resources there were significant information gaps, we aimed to fill these by looking at further national policy documents and the interviews. Because we only conducted interviews for 15 of 27 Member States, some information gaps were to be anticipated.

Step 1: Desk research

Initial desk work was based on previous work by Ecologic Institute, including an assessment of European climate governance in 2021 (Evans & Duwe, 2021), an assessment of national long-term strategies (LTSs) in the EU published in 2022 (Velten et al., 2022), the Climate Framework Laws Info-Matrix published in 2023 (Ecologic Institute, 2024) and the first flagship report by the European Climate Neutrality Observatory (ECNO, 2023). On specific governance features we consulted further sources, including the Eurobarometer 2023 Climate Change Survey, the European Commission's 2023 survey of green budgeting practices in EU Member States, as well as relevant initiatives like the Knowledge Network on Climate Assemblies (KNOCA), the Carbon Gap Tracker, and Carbon Future. The assessment for public consultation processes was based on a synthesis of results across four previous assessments (Duwe et al., 2019; Faber et al., 2024; Marsden, 2021; Velten et al., 2022).

Official documents submitted by Member States to the EU (NECPs, LTSs, integrated progress reports) or the UNFCCC (Biennial Reports, National Communications) were drawn on in a supplementary manner. Most important among these were the draft updated NECPs due in June 2023, as they represent the most up to date reporting by EU Member States on their national processes. Annexes I and IV of the Governance Regulation provide general templates for both the NECP and LTS. In the case of the NECPs we expected to find any usable information in sections 1.1 through 1.4; for the LTSs section 1 provides an overview of the development of the strategy. The level and quality of information differs significantly country to country in each case, especially considering that the LTS template only serve as a guide.

Step 2: Semi-structured interviews with national experts to fill in information gaps

A total of 21 semi-structured interviews for 15 countries supported our research by filling in information gaps, providing clarifications, and adding nuance on national contexts (refer to Table A2 in the following section). Most interviews were conducted in-person, virtually using Zoom or other software, and lasted 45 min to one hour. Three participants opted to provide written responses in place of an interview. Questions were sent to all interview partners in advance. The interview structure consisted of four standard items asked of all interviewees (see list below) and 7 to 15 country-specific questions. Participants were drawn from the authors' professional network and represented civil society, academia, and government. Due to the inclusion

of government officials who spoke on the condition of anonymity, all identifying information was left out of the report.

Standard questions on national climate policy asked of all national experts:

What are the most critical barriers or challenges to effective climate policy-making in your country?

How could national climate policy-making in your country be most improved?

How has EU-level regulation or policy already impacted national climate policy-making in your country?

How could EU-level regulation or policy further improve national climate policy-making in your country?

Data collection and assessment

To facilitate information collection across 27 Member States, detailed descriptions, including references, excerpts from primary sources and transcribed interview answers, were collected in a single Excel datasheet. The information was then coded using standardised scales wherever possible. This approach allowed for more easily aggregable/comparable data points and facilitated the creation of a comprehensive summary table across all countries. Information was coded in one of the following ways (see

Table A1 for full detail on all governance features): *dichotomous*, e.g., 'yes/no'; *range*, e.g., 'high/medium/low'; *descriptive*, e.g., 'green budget tagging'; *open-ended*, e.g., short text description. It was also possible to note a lack of information with *unclear*, *not enough information*.

Supporting or justifying information was included for all coding in a notes field to provide context for the narrative of the report. Missing or unclear information was noted directly in the Excel datasheet, which in turn served to inform the list of questions for semi-structured interviews at a later stage. This supported more efficient interviews and more targeted questioning based on where there were gaps or clarifications needed.

Function	Feature		Assessment	
Legal framework	Adoption of a climate framework law	Yes, law includes long-term tar- get and establishes planning, monitoring, and/or new institu- tions for achieving it	Somewhat , law missing long-term target and/or means of achieving it; other form of legal framework, i.e., binding strategy	No , law not yet adopted or expired
	Long-term economy-wide emission reduction target (or net zero)	Yes, concrete economy-wide tar- get or climate neutrality date at national level	Somewhat, indicative economy- wide target or climate neutrality date (e.g., vague mention of net zero in national document)	No, target does not exist
ets	Long-term removal target (or clarity on net zero)	Yes, clear overall long-term re- movals target and technical/natu- ral breakdown	Somewhat, some clarity on long- term removals (e.g., technical CDR only, LULUCF for 2050)	No , only short-term (2030) or little clarity on removals
Targets	Interim economy-wide emission reduction tar- get(s)	Yes, concrete economy-wide in- terim target(s)	Somewhat, indicative economy- wide interim target(s)	No, target does not exist
	Sectoral differentiation in economy-wide emission targets	Yes, sectoral breakdown of econ- omy-wide reduction targets via a budget system, setting sector tar- gets, or dedicated sectoral plan- ning	Somewhat , indicative sectoral breakdown of economy-wide reduction targets (e.g., in individual sectors, for 2030, or in planning instruments)	No, little or no sectoral dif- ferentiation of economy- wide reduction targets
Planning	Compliant and scientifi- cally robust long-term strategy (LTS)	Yes, LTS has a 30-year time hori- zon, is compliant with mandatory content requirements in the Gov- ernance Regulation, and based on evidence-based scenarios and modelling	Somewhat , LTS is missing im- portant detail or out of date (i.e., older than five years)	No , LTS is not compliant or does not exist
	Regular long-term	Yes, clear intention to pursue	Somewhat, integrated short- and	No, ten-year updates (as

Table A1: Assessment methodology for climate governance 'features'

Function	Feature			Assessme	ent				
	planning cycle with five- year updates	regular five-year (or more f quent) long-term planning u dates		long-term national intentions on five-y does not follow thro	ear update or	required by EU regulation) or unclear			
	Consistency between		the pla	ns, and (4) common		hodological consistency, (3) ight, (5) short/long-term inte			
	short- and long-term plan- ning	Consistent, evidence of at least four criteria ful- filled	-	of at least three cri- lfilled	Somewhat con- sistent, evidence at least two criteri fulfilled	criteria tuitilled			
eaming	Dedicated coordination mechanism on climate policy (e.g., high-level commission, inter-minis- terial body)	Yes, permanent coordination mechanism in government cated to climate policy form tion and implementation	dedi-	Somewhat, ad hoo or use of existing g ice consultations		No , effor	lack of any coordination t		
Coordination and mainstreaming	Clear division and dele- gation of governmental responsibilities	Yes, clear institutional arrant ments and assigned roles f mate policy formulation and plementation	or cli-	Somewhat, aside t sponsibility rather u tional arrangement	unclear institu-		division and delegation sponsibilities is lacking		
Coordi	Green budgeting and other practices for main- streaming in public spending	Yes, multiple forms of gree budgeting or other finance streaming measures in use least 3)	main-	Somewhat, limited budgeting or other streaming measure	finance main-	No, none or only planned measures			
	Regular and recurring cy- cles for monitoring and reviewing policy progress (beyond EU/UN obliga- tions)	Yes, national progress reporduced regularly in addition higher level obligations (e.g. nual)	to	Somewhat , nationa porting 'periodically regularity in additio obligations	' or without clear	No, national progress re- porting largely implements EU/UN obligations			
Monitoring	Indicator-based transition monitoring framework	Yes, evidence of governme system in place for monitor progress towards climate ta based on indicators that me structural changes in the re economy	ing argets easure	Somewhat, eviden ernmental initiative progress based on measure structural real economy	for monitoring indicators that	No, little evidence of indica- tor-based monitoring or planned measures			
	Mechanism that requires new measures if progress is lacking ('action trigger')	Yes, concrete requirement government to formulate ar plement additional measure progress is found to be insu cient after regular check	nd im- es if	Somewhat, vague ment on governme tional measures; m practice	nt to pursue addi-	No , action trigger does not exist			
	Independent expert cli- mate council with man- dated input to policy-mak- ing or review	Yes, government-establish visory body composed sole scientific experts that opera dependent from governmen a mandated input to nationa mate policy planning, formu or monitoring	ely of ates <i>in-</i> nt with al cli- ulation,	private interest gro sory body does not	es public officials, ups) and/or advi- t have mandated	-	advisory body for ex- input does not exist		
Expert input	Government must re- spond to input from an in- dependent expert climate council	Yes, legal requirement for g ernment to respond to inpu an <i>independent</i> expert advi body on climate policy, esp when actions differ from rea mendations	t from isory ecially	N	Ą	quire (mig	No , government not re- quired to respond to input (might still happen in prac- tice)		
	Progress report produced regularly by independent expert climate council (i.e., watchdog)	Yes, <i>independent</i> expert at body serves a watchdog ro producing regular progress toring report, whether or no is part of its formal mandate	le by moni- ot this	N	A	No, no progress reporting by independent expert advi- sory body (or unclear be- cause not yet fully opera- tional)			
Participa- tion	Dedicated and perma- nent mechanism for pub- lic/stakeholder outreach	Yes, permanent mechanisr stakeholder engagement o mate policy		Somewhat, perma for stakeholder eng broader environme cific topics (e.g., er limited representati	gagement on ntal issues, spe- nergy), and/or with	does	permanent mechanism s not exist (stakeholder agement pursued ad		

Function	Feature				Assessment			
	National citizens' climate assembly convened in the last five years	Yes, citizens' clima convened in last fir	ate assembly	vene	ewhat, citizens' assen d on other climate-rela as energy or environn	ated topic,	sem	citizens' climate as- bly not yet convened, ned, or older than five s
	Robust public consulta- tions processes	tations in EU Mem 2022). Qualitative scoring systems a for each country. (dium-low, low) bas ised scores to con High ,	ber States (Duv results in two st cross studies we Countries were t sed on their scol	ve et a udies ere the hen ra re 0-10 udy co	al., 2019; Faber et al., were coded into quan en min-max normalise inked on a five-point s	2024; Mai titative co d and ave cale (high	rsden untry erageo n, high vas pe -low,	scores. The different I into a composite score I-medium, medium, me- erformed on the normal-
Political support	Public support for na- tional climate objectives	special survey on mate change', (2) QC8.1 - 'public sup ergy efficiency targ High ,	climate change QC3 - 'responsi oport for nationa gets', (5) QC10	(Europ bility f al rene - 'publ Medi	average) across five s bean Commission, 20 or solving climate' - % wable targets', (4) QC ic support for EU clima um, -84% on composite in	23b): (1) (who say i 9.1 - 'pub ate neutra	QC2R nation lic suj lity'. Low ,	- 'seriousness of cli- nal government, (3)
۵.	Supportive political dis- course				ion asking national ex n the scale: high supp			

Focus groups on EU policy options and national priorities

To investigate the potential for EU policy fixes a total of four focus groups were conducted three with national governmental officials, in most cases from environment/climate ministries or agencies, and one with EU policy experts from research and advocacy organisations (see Table A2). As with the interviews, participants were chosen from the researchers' own networks, accounting for regional representation. In addition, three bilateral interviews were conducted with those who were unable to take part in the focus groups. Overall, outreach engaged with 13 individuals from 11 EU Member States, plus three focused on EU policy generally.

Focus groups consisted of between 2 and 5 participants, were implemented virtually using Zoom software, and followed a set approach. First, participants heard a presentation of preliminary findings from the stocktaking of national governance systems followed by an opportunity to pose questions. Second, participants took part in an interactive questionnaire asking them to prioritise national governance gaps and rate the suitability of EU-level policy fixes. Next survey responses were elaborated upon in a moderated discussion. All conversations took place under Chatham House rules and thus no identifying information was included in the report.

Affiliation	Format						
Data gathering							
Academia	In person (virtual)						
Government	Written						
Non-governmental organisation (NGO)	Written						
Research institution/think tank	In person (virtual)						
Non-governmental organisation (NGO)	In person (virtual)						
Non-governmental organisation (NGO)	In person (virtual)						
Research institution/think tank	In person (virtual)						
Non-governmental organisation (NGO)	In person (virtual)						
Government	In person (virtual)						
Research institution/think tank	In person (virtual)						
Non-governmental organisation (NGO)	Written						
Research institution/think tank	In person (virtual)						
Government	In person (virtual)						
	Data gatheringAcademiaGovernmentNon-governmental organisation (NGO)Research institution/think tankNon-governmental organisation (NGO)Non-governmental organisation (NGO)Research institution/think tankNon-governmental organisation (NGO)GovernmentGovernmentResearch institution/think tankNon-governmental organisation (NGO)GovernmentResearch institution/think tankNon-governmental organisation (NGO)GevernmentResearch institution/think tankNon-governmental organisation (NGO)Research institution/think tank						

Table A2: Interviews and focus groups

Netherlands	Non-governmental organisation (NGO)	In person (virtual)
Netherlands	Government/research institution	In person (virtual)
Poland	Research institution/think tank	In person (virtual)
Portugal	Research institution/think tank	In person (virtual)
Spain	Government	In person (virtual)
Spain	Research institution/think tank	In person (virtual)
Sweden	Government	In person (virtual)
Sweden	Government	In person (virtual)
E	U policy options and national priorities	
EU-focus (three participants)	Research institution/think tank	Focus group
Belgium, Denmark, Germany, Lithuania, Poland (<i>five partici-</i> <i>pants</i>)	Government	Focus group
Austria, Finland, Netherlands (<i>three participants</i>)	Government	Focus group
Bulgaria, Slovakia (<i>two partici-</i> <i>pant</i> s)	Government	Focus group
Germany	Government	In person (virtual)
Poland	Government	In person (virtual)
Romania	Research institution/think tank	In person (virtual)

Annex II: Selected focus group insights

Function	Selected insights from the focus groups with Member State officials		
Targets	A representative from Germany mentioned that too much attention on removal targets risks a watering down of mitigation ef- forts. Regarding sectoral targets, a Lithuanian participant remarked that the EU discussion on targets needs to consider the different levels of agricultural production in the Member States, and a Danish discussant noted that the debate about sectoral targets should be held on the national level rather than being imposed by the EU.		
	Most participants viewed a long-term removal target as highly valuable; however, there was disagreement on whether it should be mandated by the EU. Representatives noted that simply setting a target was insufficient – clear pathways needed to be out- lined for achieving it, such as how natural and technical carbon sinks could complement each other. Others questioned the ne- cessity of national CDR targets if an EU-wide target was in place, ideally applicable to all member states. The value of the target itself and the EU's involvement were among the most debated and discussed items in the focus groups.		
Planning	There was a high level of agreement on the need to improve national planning processes. Representatives noted that the EU requirements have not been implemented consistently over the years, complicating national compliance. A better alignment between both documents was desired, as there was a perceived gap between the 'top-down' long-term strategies (LTSs) and the 'bottom-up' national energy and climate plans (NECPs). Also mentioned was a general trend towards more unionisation of governance, and that this should be reflected in the design of common-template plans.		
Monitoring	Discussions showed that national monitoring systems were seen as contributing well to climate governance standards. While generally in favour of monitoring systems, the Dutch representative noted that the choice of indicators might differ among Member States.		
	The Finnish participant deemed an action trigger to be useful, as the European compliance mechanisms are often not efficient enough to impact the national level processes.		
Expert input	The policy solution with the most agreement among national representatives was the introduction of independent expert councils with a clear role in the policy process. Participants considered this option valuable for national climate policy and manageable by the EU, potentially through an obligation to establish such bodies. Only one participant deemed it less effective to impose an expert council from the EU, suggesting instead that the existing EU Advisory Board could provide recommendations for Member States in addition to its EU-level perspective.		
ш	A representative from Belgium mentioned that the format of an expert council is crucial for its effectiveness: The number of members needs to be sufficient, and they need to come from multiple disciplines instead just climate science.		
	Robust public consultation processes were generally seen as valuable, though not the highest priority among the policy gaps to fix. Participants further agreed that it is not necessarily best to implement them at the EU level. Imposing an obligation could di-		
Participation	minish the benefits of stakeholder inclusion, turning it into a box-ticking exercise. A better approach would be to guide and sup- port member states in their implementation of consultation processes rather than prescribing a single method.		
	A representative from Slovakia favoured a guiding role of the EU instead of prescribing the full process of public consultation. There was disagreement among participants about the impact of climate assemblies. One participant brought up that they can only work effectively if paired with educational measures.		

Annex III: Literature review of national governance deficits

Past research has uncovered a variety of national climate governance structures in EU Member States. A subset of this literature focuses specifically on climate framework laws in European countries as essential and impactful tools for managing the long-term transition to climate neutrality (Averchenkova et al., 2020; CAN Europe, 2022). Comparative assessments suggest that not all laws are on equal footing when it comes to providing a strong framework for climate policy-making — often they are missing either a strong signal in the form of a long-term target or concrete means of reaching one (Duwe & Evans, 2020; Evans, Duwe, Kögel, et al., 2023; World Bank, 2020). In a recent study on frameworks, Averchenkova and Chan (2023) found that many national laws in Europe also fail to incorporate in particular provisions on finance provision, coordination, independent scientific advice, and horizonal mainstreaming across sectors. Published in June 2023, the first flagship report by the European Climate Neutrality Observatory (ECNO) highlighted that while there are positive trends in the uptake of climate framework laws to provide an overarching legal basis for national processes (and often new institutions), planning and progress monitoring for long-term climate objectives remain weaknesses in most EU Member States (Velten et al., 2023, Chapter 13).

A separate body of research has investigated national planning processes in significant detail (see e.g., Duwe et al., 2019 for a cross-country comparison). The LIFE PlanUp project, which came to an end in 2021, followed the development of the first round of national energy and climate plans (NECPs), assessing individual countries both in terms of the substance of the draft plans as well as the processes (e.g., participation) involved in their development (see, e.g., LIFE PlanUp, 2019b, 2019a). Across two sets of case studies the project found that many plans lacked concrete details on *how* reductions would be achieved, such as clear policies and measures. Further case studies pointed to a lack of transparency in participation surrounding the development of the NECPs, including a missing attention to local-level and municipal engagement (Didi et al., 2023; Energy Cities, 2020). More recent studies show that the situation has not improved much in the latest batch of draft updates to NECPs (CAN Europe, 2023b, 2023b; ECNO, 2024b; EEB, 2023a).

Many of the same deficits have been found for national long-term planning. Velten et al., (2022) assessed national long-term strategies (LTSs) submitted as of 2022 and revealed that many strategies lack a concrete vision for a climate neutral future, especially regarding the role for carbon dioxide removals (CDR). Furthermore, the study showed that strategies were not always grounded in robust scientifically-rigorous scenarios and found evidence for a lack of consistency between short- and long-term climate planning at national level. It further shed light on weaknesses in participation and stakeholder consultation in strategy development. These findings were replicated by an earlier study for a smaller sample of EU Member States (c.f., LIFE UNIFY Project, 2021).

Notably, despite these weaknesses EU policy, and the Governance Regulation in particular, requires basic baseline standards of Member States. Evans and Duwe (2021) group European countries into three tiers based on the specificity, formality, and accountability of their systems, showing that nearly half of EU countries has systems defined largely by EU policy standards (so-called 'Tier 1'). This means that two thirds of EU countries go beyond what is required under EU law. Furthermore, Averchenkova and Chan (2023) find anecdotal evidence that EU policy transfer has been crucial in the design and functioning of current national laws. Table A3

summarises 'known deficits' in national climate governance as identified in past research organised by key governance dimensions.

Governance function	Known deficit	Source(s) of evidence	
	Missing legally binding, long-term, economy-wide GHG reduction target (including net zero)		
Targets	Missing sectoral differentiation	Ecologic Institute (2023); Velten et al. (2022)	
	Limited use of emissions budget approach		
	Lack of clarity on long-term role for removals		
	Substance of NECPs (lack of detailed information)	CAN Europe and ZERO (2020); Duwe et al. (2019); ECNO (2024); LIFE PlanUp (2019a, 2021b)	
	Substance of LTSs (lack of detailed information)	LIFE UNIFY Project (2021); Ricardo-AEA (2019); Ross et al. (2021); Velten et al., (2022)	
Planning	Likely misalignment between technical capacity and plans	Velten et al. (2022)	
	LTS updates are not frequent enough	Duwe (2022); ECNO (2023)	
	Likely inconsistencies between LTS and NECPs, lack of integrated approach in development	Velten et al. (2022)	
	LTS process not embedded in national governance	Velten et al. (2022)	
	Limited use of 'action triggers' (making up for lack of progress)	Ecologic Institute (2023); Evans and Duwe (2021)	
Monitoring	Lack of a scientifically robust, indicator-based moni- toring	Duwe and Spasova, (2021); Velten et al., (2021)	
Monitoring	Few national progress accountability 'moments' (e.g., debate in parliament)	Ecologic Institute (2023); Evans and Duwe (2021)	
	Independent scientific councils as watchdogs could be expanded	Elliott et al., (2021); Evans and Duwe (2021); Nachtigall et al. (2022); Weaver et al. (2019)	
Coordination	Lack of a coordinating commission/mechanism in- side government (especially one that is permanent, legally enshrined)	Averchenkova and Chan (2023)	
Expert advice	No requirement to consult; government does not have to respond; lack of a clear role in policy-making cycle; lack of resources; limited interface with the EU Advisory Board	EEA (2021); Weaver et al. (2019)	
	Poor timing (e.g., not frequent enough, or only at very end of process)	On NECPs: Didi et al, (2023); CAN Europe (2023), EEB (2023), Faber et al., (2023) On LTSs: Velten et al. (2022)	
	Lack of participatory processes embedded in legal framework	Ecologic Institute (2023); Evans and Duwe (2021)	
Participation	Use of dedicated stakeholder engagement platforms could be expanded	Ecologic Institute (2023); Evans and Duwe (2021)	
	EU obligations are too vague - lack of guidance, e.g., on multi-level climate and energy dialogues	Duwe (2022); LIFE PlanUp, (2021a); Didi et al., (2023)	
	Lack of information on effectiveness of existing par- ticipatory processes	ECNO (2023)	
Political sup-	Political will, polarising discourse on climate policy	Duwe and Evans (2020)	
port	Lack of clear role for Parliament	Evans and Duwe (2021)	
Frameworks	Not all countries have legally binding frameworks; some frameworks are relatively weak, containing ei- ther no targets or substantive means of target achievement	Averchenkova et al. (2020); Averchenkova and Chan (2023); Averchenkova and Lázaro- Touza (2020); CAN Europe (2023); Duwe and Evans (2020); Ecologic Institute (2023); Evans et al. (2023); McIlhennon and Brennan (2023); Rüdinger et al. (2018)	

Table A3: List of 'known deficits' in national climate governance systems

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