



SCIENCE
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SILENCE

CLIMATE LAWS IN EUROPE

GOOD PRACTICES IN
NET-ZERO MANAGEMENT

FEBRUARY 2020



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This report presents the designs of the national climate laws in the United Kingdom and eight EU Member States: Denmark, Finland, France, Germany, Ireland, the Netherlands, Spain and Sweden.¹ Its findings are intended for policy-makers and interested stakeholders in the EU and beyond who are considering the implications of a net-zero economy and seek to understand and prepare themselves for the mammoth task of rewiring economic structures to become climate neutral. The insights can also inform the debate on the EU climate law, highlighting gaps in the existing European legislation that could be filled.



DISCLAIMER

This report has been commissioned by the European Climate Foundation (ECF). It is part of the Net-Zero 2050 series, an initiative of the ECF with contributions from a consortium of experts and organisations.

The Net Zero 2050 series of reports aims to start building a vision and evidence base for the transition to net zero emissions societies in Europe and beyond, by mid-century at the latest. The Paris Agreement commits us to making this transition, and long-term strategic planning shows that many of the decisions and actions needed to get us on track must be taken imminently. While most of the reports look in detail at the actions and transformations needed in different sectors, the overarching governance framework is also key to making sure that these steps are identified and taken.

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CONTENTS

EXECUTIVE SUMMARY	4
1 INTRODUCTION: TOOLS TO MANAGE THE TRANSFORMATION	6
2 CONTEXT: THE PARIS AGREEMENT AS AN IMPULSE FOR NATIONAL CLIMATE LAWS IN EUROPE	8
2.1 INTERNATIONAL CONTEXT	8
2.2 FRAMEWORK LAWS ARE BECOMING THE DEFAULT CHOICE	8
2.3 EUROPEAN COUNTRIES WITH FRAMEWORK CLIMATE LAWS	9
3 THE ADDED VALUE OF CHOOSING A LEGAL FORM	12
4 THE TOOLBOX: CORE ELEMENTS OF CLIMATE LAWS	14
5 DESIGN CHOICES: HOW EXISTING CLIMATE LAWS APPLY THE TOOLS	17
5.1 WHAT? TARGETS	18
5.2 HOW? PLANNING	22
5.3 HOW? MEASURES	24
5.4 HOW WELL? PROGRESS MONITORING	27
5.5 WHO DOES WHAT? INSTITUTIONAL ARRANGEMENTS	29
5.6 WHO TO INVOLVE? SCIENTIFIC ADVICE	32
5.7 WHO TO INVOLVE? PUBLIC PARTICIPATION	35
5.8 FUTURE VISION? LONG-TERM GUIDANCE FOR NET-ZERO	39
5.9 HIGHLIGHTS: GOOD PRACTICE EXAMPLES	42
6 A CLIMATE LAW FOR THE EU: GAPS AND OPPORTUNITIES	44
7 ANNEX	48
7.1 ANNEX I: LIST OF CLIMATE LAWS WITH ONLINE REFERENCES AND FULL NAMES	49
7.2 ANNEX II: COMPARATIVE OVERVIEW PER DESIGN ELEMENT	50

EXECUTIVE SUMMARY

National climate laws are emerging as key governance tools to help manage the low-carbon transformation of our societies towards net-zero emissions. Overarching framework laws help governments organise their own actions, while sending a clear signal to all sectors of the economy: *we are serious about our long-term climate goals*. Nearly half of all EU Member States have already adopted such laws – with cross-party support – or are preparing one, while more are considering doing so. In addition, an EU climate law is currently under debate. While no two climate laws are the same, the frameworks tend to draw on a set of common elements, such as targets, planning, measures, monitoring, public participation and scientific advisory bodies. There are many examples of good practices to inform national climate laws and the debate on an EU climate law.

A LAW SPEAKS LOUDER THAN A THOUSAND PROMISES

The pace and the scope of the transition needed to get to net-zero emissions present a formidable challenge for governments: how can countries manage to trigger the required changes? In short, governments need an overarching framework that aligns governmental structures and actions with long-term goals and facilitates the involvement of a wide range of actors. Enshrining such a framework in a dedicated law not only reflects a government's resolve to achieve its climate objectives but can also facilitate planning, improve investment security, increase buy-in and heighten transparency.

PARIS MOMENTUM: CLIMATE LAWS THE DEFAULT CHOICE FOR GOVERNANCE FRAMEWORKS IN EUROPE

The adoption of the Paris Agreement refocused attention on the need for long-term structural change, prompting a growing number of EU Member States to establish governance frameworks with

a long-term outlook. The design of the national climate laws in the United Kingdom (UK) and eight EU Member States—Denmark, Finland, France, Germany, Ireland, the Netherlands, Spain and Sweden—has been analysed in this report. They draw on a common toolbox but show differences in how they apply the different instruments.

- **Targets:** The vast majority enshrine a clear quantitative long-term target in the law. Most countries aim for net-zero emissions in some form and implement interim targets or even set successive carbon budgets to steer a clear path towards the long-term goal.
- **Planning and measures:** While all laws stipulate planning for climate action at regular intervals—many with a view towards the long-term—alignment between long-term planning and near-term policies can be improved through mainstreaming requirements into other policy areas.
- **Progress monitoring:** All laws include regular annual reporting and progress checks, most with triggers for additional action if gaps are identified, thereby closing the policy learning cycle.
- **Institutional arrangements:** Most laws assign responsibilities but few spell out a dedicated mechanism to delegate among sectoral ministries, or to create a mechanism for intra-governmental coordination. This creates clear risks for target achievement overall, and is likely to neglect approaches which require a coordination between sectors. Parliament is involved explicitly in most cases, creating opportunities for debate and enhancing transparency.
- **Scientific advice:** Nearly all laws feature an independent scientific advisory body set up for the express purpose of advising on policy and/or progress monitoring. These bodies need dedicated resources to function effectively; this is not always guaranteed.



- **Public participation:** Most laws refer to public consultation, but with varying degrees of specificity and concreteness. Dedicated stakeholder mechanisms exist in several countries, but are hardly referenced in the climate laws. Some countries invest in new ways to engage citizens directly, outside of the framework laws.
- **Future vision:** Several laws prioritise long-term structural change explicitly through their title, individual policies or alignment between short- and long-term action. Still, relative to a handful of good practice examples, this dimension needs strengthening in many laws.

Most climate laws have had a cross-party element built into the political development process, or have arrived at a consensus across most of the political spectrum over time. This is essential to creating a lasting foundation for future climate policy – one which won't change with electoral cycles.

FILLING GAPS IN EU GOVERNANCE THROUGH AN EU CLIMATE LAW

Existing EU legislation provides some support for Member States through minimum common standards, for example for planning and monitoring. There are however several gaps in overall EU climate governance which reduce the ability of the EU itself to manage achievement of its targets effectively. An analysis of the existing legislation identifies several improvements to EU climate governance that could be made via the EU climate law promised by European Commission President Ursula von der Leyen, based largely on the examples in Member States.² These include:

- Enshrining in legislation the **long-term target** of climate neutrality by 2050 adopted by the European Council in December 2019.
- A dedicated mechanism for **reviewing and setting future interim targets**, in line with the Paris Agreement cycle for nationally determined contributions.
- A comprehensive **carbon budget approach** that provides transparency over the EU's remaining share of the global budget for staying below a warming of 1.5 degrees.
- **Regular updates to the EU long-term strategy**, currently mandatory only for Member States.
- **Regular updates on policy development**, an equivalent overview to the National Energy and Climate Plans that all Member States have to produce.
- Provisions for **mainstreaming climate policy** goals as benchmarks for other policy areas as well as the EU budget and related expenditure.
- **Enhanced institutional arrangements** at EU level to ensure that implementation of the strategy towards climate neutrality is happening in a coordinated and transparent manner.
- Creation of an **independent advisory body** to support all EU institutions, including the European Commission (which often plays that role), in providing relevant analysis and issuing recommendations.
- A **dedicated stakeholder forum** on climate policy to create ongoing opportunity for inputs, and a role for the European Parliament in the processes governing monitoring of progress.



INTRODUCTION:

TOOLS TO MANAGE THE TRANSFORMATION

Change is inevitable. Greenhouse gas (GHG) emissions caused by human activities have already raised global temperatures by 1.0 degrees Celsius, and projections show that we are on track to reach 1.5 degrees between 2030 and 2052.³ Our changing climate will expose countless communities and ecosystems to compounding risks, as the sea level rises, droughts and extreme weather events become more frequent and intensify and animals and people are forced to migrate.⁴ Maintaining the status quo is not an option: the climate crisis is real and the impacts are being felt faster than anticipated.

Avoiding the potentially catastrophic effects of a warming planet requires steep reductions in global emissions. To have a chance of staying below an increase of 1.5°C in global temperature over pre-industrial levels, global carbon dioxide emissions must reach zero by 2050.⁵ This implies transformations in how we power our societies, what we consume and how it is produced as well as how we move about (including how far and how often).

The pace and the scope of the change needed present a formidable challenge to governments around the world. How can countries manage the achievement of an objective of such proportion—one that extends well beyond normal electoral cycles but requires bold action now to get on the right path? How do elected officials get corporations and citizens to realise the importance of helping achieve the objective by changing their business models and behaviour, and becoming invested (literally and figuratively) in a new, climate-friendly economy and society? And how do scientists and well-intentioned bureaucrats guarantee that society is involved and takes part in the decisions that will substantially influence their livelihoods (positively if action is taken and dramatically if inaction is allowed)?

There is no blueprint for this transformation. Therefore any determined approach needs to be both proactive, with concrete actions taken now, and exploratory, continuously reviewing what has been done, considering new information and adjusting the plans going forward. What is required is a legal framework for organising this process. An overarching framework not only aligns governmental structures and actions with long-term goals and keeps track of progress, but also facilitates the involvement of a range of other actors, while creating the right procedures and incentives for them to act in line with the end goal.

National framework climate laws can establish such a framework and provide the management tools for the transformation. An increasing number of countries around the world are establishing such laws to equip themselves for the task ahead.



KEY INSIGHTS

- **Change: managed or catastrophic?** Averting the climate crisis demands drastic emission reductions, which requires structural change to our economies.
- **Policy innovation:** Governments need new tools to manage the low-carbon transformation, not only to organise their own actions, but also to engage stakeholders, leverage private capacities and send a clear signal to all sectors of the economy on the direction and resolve of their climate policy objectives.
- **A solid structure:** Framework climate protection laws can provide the overarching rules and procedures needed.

This report is intended for policymakers and interested stakeholders in the EU and beyond who are contemplating the implications of a net-zero economy. By reviewing and drawing insights on the governance innovations that many countries are now deploying, it aims to serve as a useful resource for those who seek to understand and prepare themselves for the mammoth task of rewiring economic structures to become climate neutral.

To this end, the report:

- Provides context on the international level deriving from the Paris Agreement;
- Explains which countries in Europe have already adopted national climate laws;
- Identifies common elements found in most laws – the “transformation management toolbox;”
- Describes how existing climate laws in Europe have implemented the different elements; and
- Connects these insights with existing EU legislation and the prospects of an EU climate law.

This study draws on previous analysis done by Ecologic Institute. One of them is a 2019 report commissioned by WWF Deutschland, which highlighted lessons from the experience of other country’s climate laws for Germany in the lead-up to the adoption of its draft climate law.⁶ The information and findings contained in that report had been informed by an analysis of case studies commissioned by the European Climate Foundation in 2017, which covered several levels (national, regional, local) and continents.⁷ This foundation was enriched with the results of further analyses at the European⁸ and sub-national level⁹ and through targeted research (in particular on Denmark and Finland). Additional research was conducted for the current study to allow for the inclusion of Germany’s new law and the recent law adopted in the Netherlands, as well as the latest available draft law in Spain and the draft new Danish law, which will replace the one from 2014. The authors thank the experts and colleagues who have contributed additional information and are especially grateful to the funders of the existing work, specifically WWF and the European Climate Foundation.





CONTEXT:

THE PARIS AGREEMENT AS AN IMPULSE FOR NATIONAL CLIMATE LAWS IN EUROPE

2.1 INTERNATIONAL CONTEXT

The Paris Agreement has given a strong boost to the rationale for adopting long-term climate policy frameworks. On the one hand, the 2015 agreement establishes a clear global long-term (temperature) goal and indicates the emissions trajectory that such a goal implies. On the other hand, it defines a procedure for pledging action in the short to medium-term (mandatory for all parties to the treaty) and combines this with a process for monitoring progress and reviewing whether the actions are sufficient to reach the long-term goal. However, it neither enforces implementation of those pledged contributions (the so-called “nationally determined contributions” or NDCs); nor does it provide governments with a means of measuring whether their actions are indeed on track to achieving the long-term global goal.

In this way, while the Paris Agreement itself does not prescribe the adoption of framework laws, it does lay out numerous mandatory elements. Governments would be well-advised to seek out the right tools to manage their obligations under the international agreement. Framework climate laws can serve as a bridge between shorter term actions pledged and the long-term objective which all parties to the Paris Agreement are committed to delivering.¹⁰

2.2 FRAMEWORK LAWS ARE BECOMING THE DEFAULT CHOICE

In recent years there has been growing attention towards questions of climate governance in both academic research and public discourse, and the number of national climate laws has been steadily rising. Most of these were adopted immediately before the adoption of the Paris Agreement or have been developed since (see specifics for Europe below), indicating that governments around the world are attempting to implement the Paris Agreement and prepare for deep emission reductions. The concept of deploying a legal framework to manage the multi-decade decarbonisation challenge is, however, not new. It was tried and tested before the adoption of the Paris Agreement, which has surely helped pave the way for the current success of the concept.¹¹



KEY INSIGHTS

- **Paris momentum:** The adoption of the Paris Agreement has accelerated the establishment of national climate protection laws worldwide. The clear, long-term objectives and global participation have prompted many governments to adopt dedicated governance frameworks.
- **Connecting the now with the future:** National climate laws can bridge the governance gap between the requirements of the Paris Agreement for near-term action and its long-term goal, and facilitate alignment between the two. #ParisCompatibility
- **A majority in the EU:** More than half of all EU Member States have adopted an overarching climate protection law, are currently developing their law or are considering one. An EU climate law is also under discussion.

UK Climate Act: The first law with a clear long-term perspective

The Climate Change Act in the United Kingdom, adopted in 2008, is the predecessor of all climate laws with a clear long-term direction—these being the focus of this report.¹² Previous framework laws had been geared mainly towards target achievement over shorter time-frames (e.g., New Zealand (2002), Switzerland (2000)) and therefore looked at incremental change. The UK Climate Change Act set out from the start to pinpoint a specific long-term objective and design procedures for directing government action towards it. The UK act, as the first of its kind at the time, includes several relevant elements that have since been copied in other laws, such as the notion of successive carbon budget periods, and a strong independent monitoring and advisory institution (see following chapters for detail). A number of governments have followed suit, a notable example being Mexico in the wake of increased attention to climate policy around the Mexican UNFCCC COP Presidency in 2010.¹³ The Mexican law also established an overarching emissions reduction objective for 2050 as the guiding principle for all further actions.¹⁴

Around the world, many countries have taken to adopting climate laws or are considering introducing them in the near future. According to the climate law database operated by the LSE Grantham Research Institute on Climate Change and the Environment¹⁵, a number of countries outside Europe have passed general framework climate legislation since 2015 (the year of the Paris Agreement): Benin, Kenya, Pakistan, Papua New Guinea, Paraguay and Peru. Several other countries are known to be actively considering a law, or at least have made public statements to that effect, notably Chile and the United Arab Emirates. Naturally, these laws differ significantly in scope and nature (given different legal traditions) and may not all set national objectives for a time horizon of 2050. Nonetheless, they suggest a clear “Paris momentum” for framework or overarching national climate laws — as distinct from individual instruments with a sectoral focus.

As a prime example of a post-Paris climate law is New Zealand’s Climate Change Response (Zero Carbon) Amendment Act adopted on 13 November 2019. It specifically references the Paris Agreement’s global long-term temperature target of staying below 1.5 degrees and establishes processes and institutions for reaching a target of net-zero emissions by 2050.¹⁶ The legislation provides a clear framework for organising national action in the near-term in the direction of a specific long-term goal that is in line with the global objective. That is the core function that framework climate laws should ideally serve.

2.3 EUROPEAN COUNTRIES WITH FRAMEWORK CLIMATE LAWS

The UK’s pioneering climate act may have inspired a range of related national framework laws following its adoption in 2008, but it was only around the negotiations towards the Paris Agreement that the numbers grew more substantially and took on a dedicated long-term focus.

Non-EU European countries, Iceland, Liechtenstein and Switzerland, all adopted or revised national climate laws in the years 2011-2013 (pre-Paris), but none of these included a long-term focus and rather aimed at ensuring target fulfilment for a 2020 or 2030 time horizon.¹⁷ However, when Norway established its “Lov om klimamål” in June 2017 (after Paris), it included a clear 2050 objective. Switzerland is now considering an update to include 2050.

In the EU, Austria established its law in November 2011 and Bulgaria in March 2014—but both did so only with a view to meeting short-term targets. Denmark followed suit in June 2014, but left the target-setting to a process outside of the law, and the government established a national 2050 objective on its own. This pre-Paris Danish law is already being replaced by a more ambitious one: on 6 December 2019, a broad political majority adopted a political agreement on a new law, which now commits Denmark to the global goal of staying below 1.5°C and net-zero emissions by 2050.¹⁸ The need to think long-term amidst immediate action that is expressed in the Paris Agreement is evident here.

A handful of other EU Member States had also already passed laws with a long-term focus in 2015 (e.g., Finland, France, Ireland). These were joined by Sweden in early 2017 and by the Netherlands and Germany in 2019. At the time of writing, Croatia, Luxembourg, Slovenia and Spain have draft laws ready. All told, the majority of EU Member States have adopted national climate laws or are preparing or considering their adoption. All of the laws passed since the Paris Agreement prominently include the long-term perspective. Figure 1 shows the state of play of climate laws in Europe at the time of publication.¹⁹

Denmark is not the only country to have already improved upon its original climate law. The UK and France also both revised existing legislation to strengthen the long-term target (i.e., to net-zero emissions in 2050) in 2019 and others are considering updates (e.g., Austria, Finland and Ireland²⁰).

CLIMATE LAW STATUS QUO

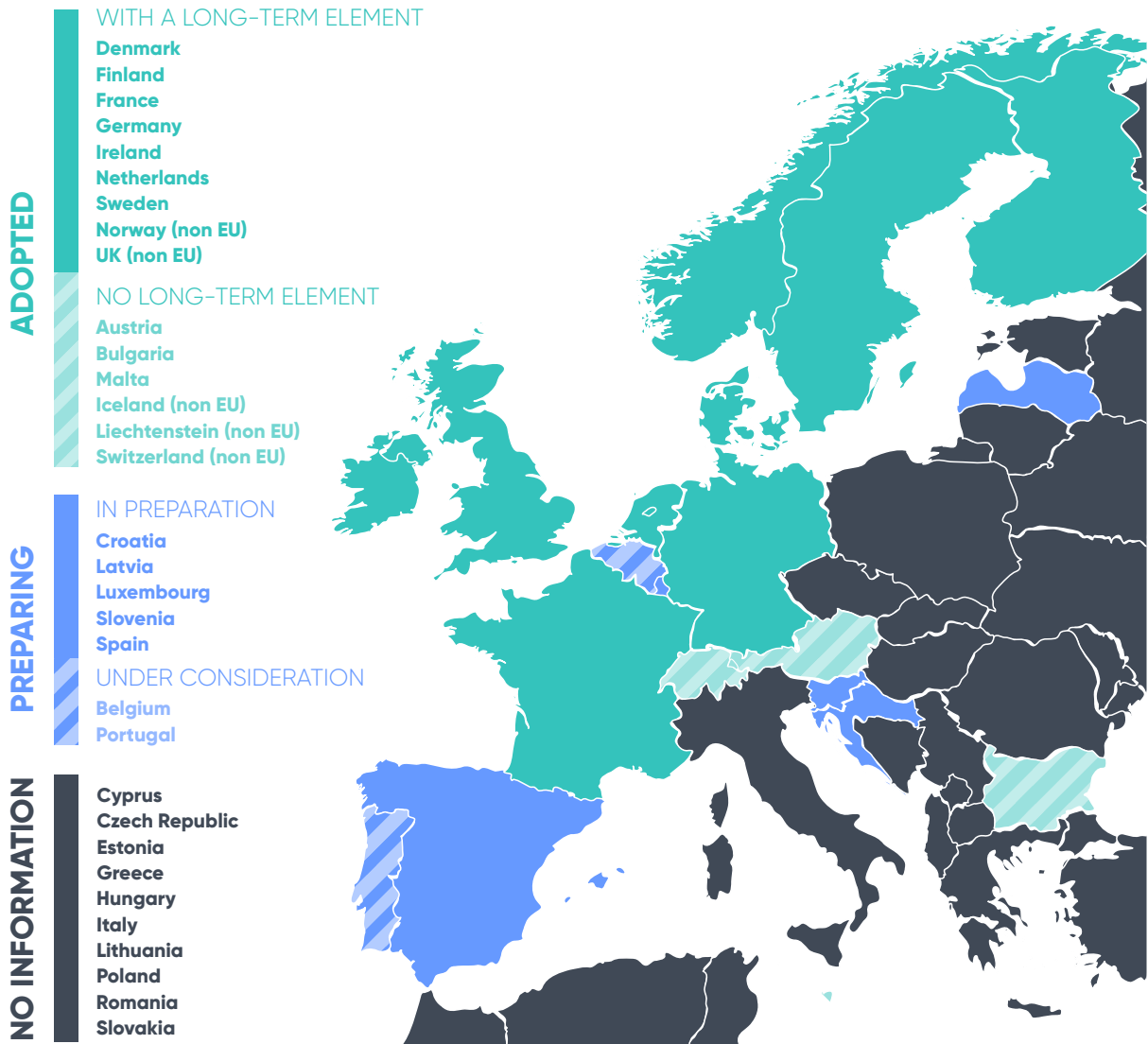


FIGURE 1: Geographic overview of the state of national framework climate laws in the EU

Source: Ecologic Institute research based on a range of sources (including legislative databases, direct legal texts, news reports and personal contacts)

A climate law for the EU

The EU as a whole has now also adopted a new target of climate neutrality²¹ by 2050,²² which European Commission President von der Leyen has promised to enshrine as a guiding principle for future EU policy. Right before her election in July 2019, President von der Leyen committed to putting forward a proposal for an EU climate law including this goal within her first 100 days in office.²³ This proposal is officially scheduled for publication in March 2020.²⁴ It is further evidence of the proliferation of the concept of establishing long-term targets and related processes in framework laws.

The new EU climate law will be able to build on a host of existing instruments (see dedicated chapter at the end of this report). EU legislation already commits EU Member States to obligations beyond the direct requirements contained in the Paris Agreement. For example, the Regulation for the Governance of the Energy Union and Climate Action, or Governance Regulation (GR), requires Member States to produce long-term climate strategies that chart a course towards decarbonisation, as well as integrated National Energy and Climate Plans (NECPs), which are effectively packages of climate policies and measures for the near-term. These two obligations must be aligned with one another: in short, Member States should strive to meet their 2030 targets always with a clear eye on 2050.²⁵ However, there is so far no substantial guidance as to what that obligatory coherence means, or how it could be verified. Ensuring that this connection between long- and short-term is made strongly is a key role for effective governance frameworks.

The GR and related legislation do put down additional markers (e.g. binding national GHG targets for emissions from buildings, transport and agriculture) and leave EU Member States less flexibility than the Paris Agreement itself. However, EU rules do not establish all the tools that governments need at the national level to ensure target achievement. Arguably, the additional level of legal obligation that EU Member States are subject to necessitates the adoption of national framework laws even more strongly.²⁶





3 THE ADDED VALUE OF CHOOSING A LEGAL FORM

In theory, a number of the functions provided by a climate governance framework could be provided by a system that is not established in dedicated legal form. Why have governments decided to opt for the adoption of climate laws? What is their added value? The answers are manifold:

- Establishing the system (including targets and means of achieving them) in legal form makes it harder to go back on promises made. Laws can of course be changed, but legislation acts as a significant hurdle for policy roll-backs.
- A law is also a clear statement of sincerity. This sign of commitment (“we mean business on climate action”) is also heard by external actors. Combined with a concrete long-term time horizon, this enhances certainty for all involved in the implementation.
- Enshrining a long-term climate target in law can facilitate a kind of “climate mainstreaming”. Governments naturally pursue multiple priorities across many sectors of the economy, so it is no wonder that their respective policies are occasionally at odds with one another. Mainstreaming enhances coherence across policy areas by establishing the climate as an overarching priority. A framework law can emphasise a specific goal—i.e., net-zero emissions—as a form of litmus test for the climate-friendliness of all subsequent policy-making. A mere political declaration would not have this effect.
- Adopting an overarching climate protection law can result in a professionalisation of political structures (depending on the elements included). As these laws primarily address actions by governments themselves, they help to establish responsibilities for governmental institutions that may otherwise not contribute. Like mainstreaming, this increases participation across policy areas (by different ministries, for example) making target achievement more likely.

The chance of a court case being filed against the government on climate policy reasons could be increased in some countries with the adoption of a climate law. This may be seen by some as another argument in favour of establishing such laws, while others may judge this to be an argument against it. However, such cases have been brought forward in several EU Member States even before such laws were in place, for example in the Netherlands and in Germany. In Europe, only one case exists at the time of writing in which a legal challenge has been brought on the basis of a national climate law. In Ireland, a civil society organisation called “Friends of the Irish Environment” tried to take the government to court over failing to implement its own law properly, arguing that the national mitigation plan that was not delivering emissions reductions deep and fast enough. However, the court ruled in favour of the government. Friends of the Irish Environment have appealed the ruling and seek to be heard directly by the Supreme Court.²⁷ In the mean-time, a strengthening in national climate policy has been agreed and an amendment to the Irish law is under preparation. One may argue, that the legal challenge created public attention to shortcomings in national climate policy, even if the court dismissed the claim. However, such attention through litigation may be possible in many countries without the basis of a national climate law.

KEY INSIGHTS

- **A law speaks louder than a thousand promises:** A dedicated law signals commitment towards a specific political direction and can enhance reliability, thereby also facilitating planning and improving investment security.

Political buy-in as a solid foundation for long-term laws

Of course, delivering emission reductions requires effective sectoral measures. Political will is needed to adopt and maintain such policies – regardless of whether a framework climate law is in place – and there have been cases where a change in government led to a significant roll-back of progressive policies.²⁸ A climate law cannot by itself replace the political will that needs to exist; it only supports the process of climate policy-making with structure and direction. However, if the processes established by a climate law have built-in opportunities for public and stakeholder involvement, the law can help to generate buy-in and create ownership of the direction, structure and actions it lays forth. There is also growing anecdotal evidence that the very existence of such laws can help to build and maintain political will for the transition, supporting an ongoing national discussion on climate action and keeping it on the political agenda.

At the same time, climate laws themselves will be much more resilient and credible if they have broad support across multiple political parties in the respective political spectrum. Interestingly, this seems to be the case with most, if not all of the laws analysed for this report. In most cases, the development process leading up to their adoption was either designed to create political buy-in, or facilitated support over time (see box below for more information). One can speculate that the growing awareness in society of the climate crisis, and the demands of protesters for governments to listen to scientists, may enhance the prospects of broad political buy-in around future climate laws or revisions thereof.

BROAD POLITICAL SUPPORT FOR EXISTING CLIMATE LAWS

Background on political support for individual climate laws (in chronological order)

UK: Adoption of the law in 2008 took place with “overwhelming political support from all major political parties”²⁹ which has facilitated implementation across electoral cycles, including political shocks such as the Brexit referendum.³⁰ It had been preceded by a public campaign called “the big ask” which demanded the introduction of a new climate change law. Nearly 200,000 citizens wrote to their Members of Parliament.³¹

France: Adoption of the 2015 law was the result of processes involving a broad range of stakeholders that was building on several (often controversial) national debates. Parliament was strongly involved in shaping the final bill, which was also debated with stakeholders several times during the process.³² The Macron government elected in 2017 took the law even further, strengthening the GHG target and improving the independent expert council’s role in a 2019 amendment.

Ireland: Several years of debate with a range of draft laws preceded the adoption of the Climate Act in 2015.³³ Since then a Citizens’ Assembly was established (see chapter on public participation) which debated climate policy. A Joint Parliamentary committee considered its recommendations and adopted a common political platform for future

climate policy in Ireland with cross-party support,³⁴ which has provided the basis for amendments to the law which strengthen key procedures.³⁵

Sweden: A pro-environment minority government elected in 2014 tasked a Committee composed of members from many different political parties and expert stakeholders to explore the option of a framework climate law. The government based its draft law on the recommendations of the Committee, and the cross-party support established in that group was extended into both the debate and the vote on the law.³⁶

Germany: Adoption of a national climate law had long been demanded by the Greens and Social Democrats, but resisted by the Conservative party of Chancellor Merkel. Ongoing lack of progress on 2020 climate targets demonstrated the necessity for a framework with more continuous political action and steering. The party changed course and adopted the law in 2019, jointly with the Social Democrats.

Denmark: After the 2019 election the new (minority) government established more ambitious national targets and the need to revise the existing climate law established under Conservative Party rule. The government parties brokered a political agreement covering a broad political spectrum, including some conservative opposition parties. The Danish Minister in charge of the file said after the agreement: “It has been crucial for the government that the climate law cannot just be annulled by a less ambitious government in the future.”³⁷



THE TOOLBOX:

CORE ELEMENTS OF CLIMATE LAWS

Overarching climate laws can provide a framework for streamlining national climate policy-making. Despite numerous and at times large differences, all existing laws tend to incorporate a similar set of core elements intended to help achieve this. These ensure that the central questions of any robust climate policy are answered: What do we want to achieve? How do we get there? Who is doing what? How well are we doing? And: Who to involve?



WHAT do we want to achieve?

The first question that arises is what the climate policy is intended to achieve. Therefore, most climate framework laws specify (short- and/or long-term) qualitative or quantitative climate protection targets, which national policies and measures must aim to meet. These targets provide a concrete direction and also act as benchmarks for success.



HOW do we get there?

The next question pertains to how the climate targets will be achieved. Generally, climate laws do not prescribe specific policy instruments and instead demand that governments develop a) long-term strategies (e.g. until 2050) for the country and/or for individual policy areas as well as b) short- and medium-term plans with specific policies and measures (e.g. until 2030). This distinction mirrors provisions in the Paris Agreement (i.e. NDCs and long-term low GHG development strategies) and is also found explicitly in EU legislation, as described above (i.e., NECPs and long-term strategies).



WHO does what?

Closely connected to strategic planning is the question of who is responsible for meeting the climate targets set forth by the law. Climate framework laws as a general rule do not require anything of citizens and firms and instead target the government itself: as such, these laws can be considered legal demands on the executive branch by legislature. In reality the question is therefore about which government institutions are involved (and in which form), and whether they are given a leadership role or are required to perform specific tasks as part of a coordinated system.



KEY INSIGHTS

- A common toolbox: A set of core design elements are found in most of the existing climate laws in Europe. For some there is a remarkable degree of similarity in certain elements, such as the use of scientific advisory bodies or progress monitoring systems, suggesting a high degree of a common understanding on essential features.
- Progressive iteration or a policy cycle: an essential feature of an effective governance system is the explicit creation of a policy learning cycle, which in this case consists of target-setting, strategic planning towards these targets, policies identified for implementation and then progress monitoring, which can in turn inform a review of targets, plans and policies.



HOW WELL are we doing?

In order to ensure that the climate targets are met with the policies and measures that are meant to deliver them, the government must regularly assess how well implementation is working, and whether there is a need for increased action. To this end, climate laws often stipulate a process for reporting data and evaluating it, as well as a procedure for progress review. In most cases, these reports are delivered regularly—usually to parliament—and made publicly available. They show, among other things, the emissions development for the reporting period, compare this with the foreseen target trajectory and evaluate whether the impact of existing measures is sufficient.



WHO to involve?

Climate protection is a cross-cutting issue that involves all economic sectors. Because of this, climate protection laws often stipulate whom governments should consult and engage in the creation and evaluation of climate policy. In the existing laws, the most common approach is to use scientific advisory bodies, which are often established by the laws themselves for the express purpose of providing external expert guidance and policy evaluation. Additionally, climate protection laws can also establish dedicated avenues for public participation and stakeholder engagement.

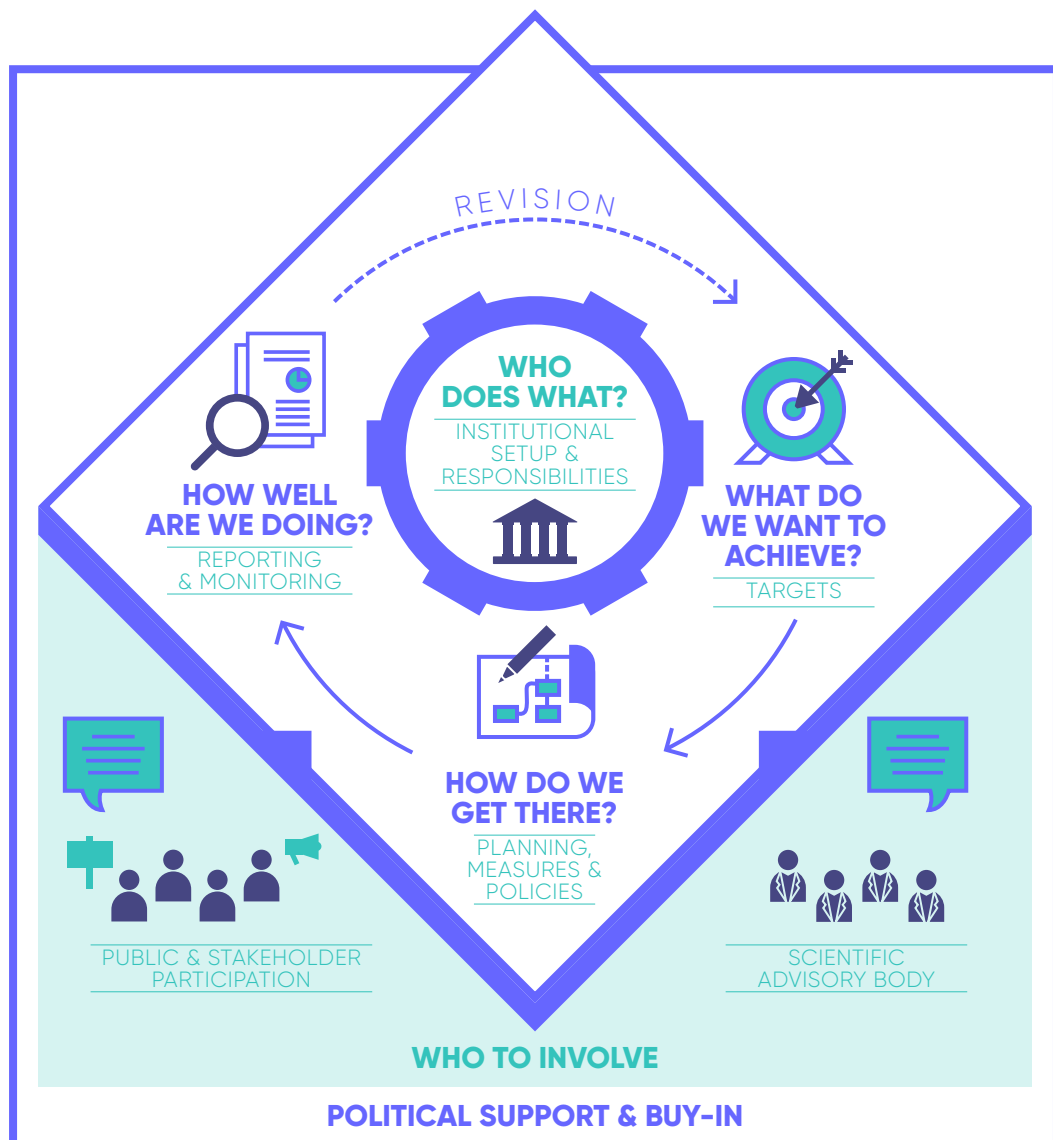


FIGURE 2: Core elements of framework climate laws and their main interactions

Source: visualisation by Ecologic Institute

Figure 2 presents the main design elements of climate framework laws and their principal relationships. It depicts the policy learning cycle that is established in many laws through a feedback loop, in particular, between progress monitoring and policy creation. Information gleaned from the monitoring reports can result in lessons learned—about which policies work or the need to take additional actions based on new scientific data—and inform the revision of targets, plans or measures. The policy learning cycle is enhanced by potential input from the public or an independent advisory body (in many cases a committee of scientific experts) and includes specifics on institutional responsibilities for each step.

The added value of having an overarching structure with these tools to support the organisation of climate action policy is clear: this system assigns responsibilities, creates broad engagement, and provides information—and therefore transparency—on planned actions and progress in a structured process. Crucially, in combination these tools give governments increased ability to steer change towards short- and long-term targets, improving the overall performance of their policy mix.

A future vision?

For the purposes of this report, which looks specifically at those climate laws that include a long-term dimension, we add the issue of transformational strength. This relates to the extent a governance system integrates the long-term (e.g., 2050) dimension and uses this to ensure that all actions taken under the law contribute to realising its achievement.

The resulting set of core design elements is detailed in Table 1 below. The following sections of this report will focus on these elements in more detail and describe how they are incorporated (or not) in each of the existing EU climate laws.

Table 1: Core design elements found in most framework climate laws

GOVERNANCE QUESTION	ELEMENT IN CLIMATE LAWS – ANALYSED IN THIS REPORT
What?	Targets
How?	Planning
	Measures
How well?	Progress monitoring
Who does what?	Institutional arrangements
Who to involve?	Scientific advice
	Public participation
Future Vision?	Long-term guidance towards net-zero



DESIGN CHOICES:

HOW EXISTING CLIMATE LAWS APPLY THE TOOLS

Having established the key design elements, the following sections analyse the eight national laws with a dedicated long-term perspective to see how they apply these tools. Spain is due to adopt a long-term law in 2020 so we also look at its draft, taking the assessment to a total of nine laws, as detailed in Table 2 below (see full list of laws with original titles and links in Annex X).³⁸ In Denmark, a broad cross-party political agreement on the essential elements of a new climate law was brokered in early December 2019 and in the second week of 2020 a draft law was published for consultation. Unless a direct reference to the previous political agreement is made, this report treats that draft law as representing the features of the future law for the purposes of comparing Denmark to other countries.³⁹

Table 2: List of national climate laws (and draft laws) analysed in this report

COUNTRY	TITLE (IN ENGLISH)	ORIGINAL DATE OF ADOPTION	NOTES/MAJOR REVISIONS
UK	Climate Change Act	November 2008	Change to the 2050 target (July 2019)
Denmark	Act on the Climate Council, climate policy statement and setting national climate objectives	June 2014	Agreement on a new law to replace the original one (December 2019) Proposed draft law (January 2020)
Finland	National Climate Law	June 2015	Revision being considered to account for stronger target, adopted in 2019
France	Energy Transition Green Growth Act	August 2015	Changes to target and institutional set-up (September 2019)
Ireland	Climate Action and Low Carbon Development Act	December 2015	Major revision planned: Climate Action (Amendment) Bill (not included)
Sweden	Climate Law	June 2017	
Netherlands	Climate Act	July 2019	
Germany	Federal Climate Protection Law	December 2019	
Spain	Climate Change and Energy Transition Law (public draft)	February 2019	Available in draft form, adoption expected in 2020. Updated draft circulated to stakeholders in June 2019.

Despite all serving the same purpose, the climate framework laws examined in this report come in all shapes and sizes. Some laws are lengthy, expansive and complex texts—as in the case with France (30 pages with numerous in-text references to other statutes) or the UK (100 pages of dense legal language), while others are significantly less complicated and amount to fewer than five pages (e.g., Netherlands and Sweden). The difference in format likely reflects both diverse governing cultures as well as the evolving understanding of the role and function of climate laws.



5.1 WHAT? TARGETS

Targets come in different formats

Specific GHG emission reduction objectives are essential for targeted climate policy. In the context of climate governance, they express the objective that policy needs to work towards and will be measured against. Targets have been incorporated in the national laws analysed in various forms and ways. In this section we look at the following characteristics:

- Nature of the target (quantitative/qualitative)
- Timing (short/long-term)
- Form (single year/budget)
- Adjustment mechanisms
- Additional targets (non-GHG reduction)

Nature and timing of the targets

Quantitative targets directly enshrined in the legal text are the default choice among the laws analysed. Almost all of the laws (7 out of 9) include a quantitative long-term target (most of them the equivalent of “net-zero” GHG emissions), and a majority (5 out of 9) also have quantitative interim milestones.⁴⁰

The two exceptions (Sweden and Ireland) on the long-term target have quite different alternative set-ups: **Sweden**, which has some of the most ambitious national targets in Europe, includes a process for having parliament decide the targets, but does not list them in the law. In fact, the climate law itself was adopted alongside a target of achieving climate neutrality by 2045 already (and would thereafter achieve net negative emissions) as part of a new Swedish Climate Policy Framework. It has further specified that it expects the “remaining emissions...[will] be at least 85 per cent lower than in 1990”.⁴¹ The (likely soon-to-be-amended) law in **Ireland** only includes a qualitative target description for 2050 (the “national transition objective”), and no quantification is provided.⁴²

KEY INSIGHTS

- **Quantitative targets rule!** Almost all laws build on quantitative emission reduction targets enshrined directly in the legal text as overarching objectives, and the vast majority do so for both the long-term (e.g., 2050) and interim milestones (e.g. 2030).
- **Security and transparency through budgets:** In order to concretise the emission reduction path for 2050 and to create planning security, long-term climate protection targets can be broken down into emission budgets periods (France and UK). Germany has used a sectoral variant of this concept to increase collaboration by all ministries and enhance overall target achievement.
- **Expanding and reviewing targets:** A number of laws include provisions for the establishment of future targets (Denmark, Germany and Sweden) and several also specify review mechanisms. Both the UK and Spain include a process for revising targets based on new information (e.g., scientific or technological advances). Others (Finland, Germany) anticipate the possibility of stricter European and international reduction targets.

Table 3: Interim and long-term targets found in (and outside) the laws

COUNTRY	INTERIM TARGET(S)	LONG-TERM TARGET(S)
UK		-100% by 2050
Denmark	-70% by 2030	climate neutrality by 2050
Finland	(carbon neutrality by 2035)	-80% by 2050
France	-40% by 2030	carbon neutrality and at least -83.3% (“a factor of six” reduction) by 2050
Ireland		“low carbon, climate resilient and environmentally sustainable economy” (qualitative) by 2050
Sweden	(-63% by 2030 or -55% without offsetting) (-75% by 2040 or -73% without offsetting)	(climate neutrality by 2045)
Netherlands	-49% by 2030	-95% by 2050
Germany	-55% by 2030	GHG neutrality by 2050
Spain	at least -20% by 2030	at least -90% by 2050 (climate neutrality by 2050)

Note: (1) Italics () indicates that the target is not mentioned in the law. (2) Unless otherwise stated all reduction targets have a 1990 baseline.

With regard to the interim targets, all EU Member States already have binding national reduction targets for 2030 coming from EU legislation, for emissions from sectors not covered by the EU Emissions Trading System (EU ETS).⁴³ **Sweden** does not list any interim targets in the law but has also decided on a national 2030 target outside of the law (more ambitious than what it is required to do under EU legislation). **Finland** refers to EU legislation, but does not include a dedicated 2030 target in the law itself. However, as the Finnish government announced a significantly more stringent national climate target of climate neutrality by 2035 in the summer of 2019, it will need to update its legislation accordingly in the near future. This has already happened in **Denmark**, which included a new 70% reduction by 2030 in an agreement on a new climate law, as well as integrating a process of continuously setting interim targets beyond 2030 over time. The 2030 target will be measured as an average of the emissions 2029-2031.

The UK and France both use a budget approach to emission reduction (see more below). Their laws establish a system through which successive target periods are defined, with quantitative limits on emissions. While **France** also includes interim national targets in the law, the **UK** has the budget process only. **Spain** specifies a 2030 reduction target and makes passing reference to the possibility of defining five-year carbon budgets for indicative purposes only in the context of its NECP. The June 2019 draft further specifies that the long-term strategy towards 2050 will also “at least” include an interim target for GHG emissions in 2040.

Budget approach for emission reduction

The pioneer **UK** climate act formulates its quantitative emissions target as a 100% reduction (updated in 2019 from previously 80%) by the year 2050 compared to a base year of 1990. As a means of working towards that reduction it includes a requirement for the government to implement five-year emission budgets or “carbon budgets” (even though they cover all six main greenhouse gases). The emission budget determines how many tonnes of GHG emissions are allowed within each five-year period. The budget levels are determined 12 years before the beginning of each period; these are drawn up by the government and then submitted to parliament for decision. The UK Climate Change Committee has an advisory role in determining emission budgets. If the government deviates from the committee’s recommendations it must justify the decision thoroughly. Concrete measures to reduce emissions must then be planned and implemented to stay within the budget.

Inspired by the UK regulation, **France** has also enshrined a budget approach in its climate law. In addition to the quantitative reduction targets for 2050 and 2030, the French “Energy Transition Act” of 2015 and its subsequent amendment and expansion “Energy and Climate Bill” of 2019 provide for five-year emission budgets to be set up to 10-15 years in advance. The French system has changed with the 2019 revisions: emission budgets are no longer set by government decree as part of its long-term low-carbon strategy, but through a separate law that is more closely connected to the medium-term energy planning process.

The emission budget approach operationalises the long-term objective with further signposts, in a transparent process. The approach brings additional flexibility compared to target values measured only in a given year, while at the same time creating greater visibility of progress (or lack thereof) and assurance over target achievement, through an additional level of quantification. This approach also allows greater control over the emissions created over time. It could also allow for the measurement of cumulative emissions, which determine the overall impact on the atmospheric concentration of greenhouse gases. This in turn determines the degree of radiative forcing or heat retained in the atmosphere, i.e., the greenhouse effect.

The UK approach has also turned out to create a certain resistance to political shocks and government changes. A mere month after the Brexit referendum in 2016, the British Parliament adopted its fifth emissions budget for the period 2028 to 2032. Setting emission budgets 12 years in advance guarantees that the reduction objectives are geared towards the long-term climate protection target and not towards

current political debates. This enables an objective discussion based on climate policy needs. At the same time, it gives companies the investment and planning security they need.

Using emission budgets as a compliance measurement mechanism for specific periods is an approach that already existed in the Kyoto Protocol (five-year budget 2008-2012) and is also applied in the EU Effort Sharing Decision⁴⁴ (covering 2013-2020) and the follow-up EU Climate Action Regulation⁴⁵ (covering 2021-2030). The approach simultaneously provides certainty, with a quantitative upper limit for a clearly defined period, and flexibility from year to year (which is clearly limited in EU legislation) to compensate for slight deviations.⁴⁶

Germany has taken inspiration from this use of the budget approach, and employed a variant of the concept, mainly to enhance compliance and enforce greater collaboration by all relevant ministries.⁴⁷ In an annex to the law, it has broken down the national emissions pathway towards 2030 into dedicated annual values for each main economic sector. The law assigns responsibility for achieving these annual emission budgets to the respective ministries, with some limited flexibility allowed towards meeting them. Progress is reported per sector, and gaps can trigger short-term action plans for additional reductions. The French Low-Carbon Strategy also breaks down the five-year budget periods down by sector, but for indicative purposes only.

Target review mechanisms

A number of climate laws foresee the possibility that the targets in the law may need to be changed. The **UK** law specifically establishes a mechanism for target correction if this seems justified, based on scientific information or EU or international policy developments. This procedure was used in 2019 to adjust the 2050 target level from 80% to 100%, in a targeted amendment to the law which adjusted only this one number, based on input from the Committee on Climate Change (UKCCC). Essentially the same process had also been used to increase the Scottish climate target (Scotland has its own law and uses the UKCCC for scientific guidance).⁴⁸

France has a very general review clause on the long-term targets in the law (linked to progress reports at the end of every five year policy programming period), and has in fact also amended its legislation to account for the decision to increase the target to climate neutrality by 2050 (from a 75% reduction previously). **Spain** allows for the revision of the 2030 and 2050 targets for specific reasons (Article 3.3. draft law), such as compliance with the Paris Agreement or EU regulation, as well as on the basis of new information, such as technological advances. The Spanish draft law also lists “no regression” as a guiding principle in Article 2, underlining that

any review cannot reverse the process of moving towards ever lower emissions (no backsliding). The **Finnish** climate law specifies that stronger European or international targets would supersede the ones in the law, meaning that no changes to the Finnish law are required in order to take such developments into account. However, it also includes a provision under monitoring to check if the emission reductions are “sufficient” based on the latest climate science and the country’s international obligations.

Denmark has no specific clause on target revision in the proposed draft climate law and instead includes a process for setting future interim targets. The **German** law also includes a process for setting specific targets beyond 2030 in the context of its sector-specific annual budget approach by government decree. The law also allows changes to existing annual budget allocations, in the same form, without specifying limitations other than the need for parliament to approve the changes. In addition, the door to higher targets due to European or international commitments is left open— specifying, however, that no such target adjustments could lead to a lowering of the targets (again, no backsliding).

Non-GHG targets

All EU Member States also have national objectives derived from EU, and in some cases, national law that are relevant to climate policy but are not expressed in reductions of GHGs, notably for renewable energy and energy efficiency. Some laws include such dedicated objectives for other policy areas and sectors. The laws in **France** set a range of targets for the energy sector, such as increasing the share of renewable energies and reducing the share of nuclear energy in the energy mix, but also for a reduction in the share of fossil fuel energy use, for renovation in the buildings sector and for future deployment or renewable hydrogen. The **Spanish** draft law also sets targets for renewable energy. The law in the **Netherlands** specifies that by 2050 all electricity production should be climate neutral. The **German** climate law commits its governmental administration to become climate neutral by 2030.



5.2 HOW? PLANNING

Planning foreseen under EU legislation and Paris

In climate protection planning, a distinction can be made between long-term strategic planning, and policies and measures for implementation in the short to medium term (see following section). The Paris Agreement includes the request for Parties to prepare and submit long-term “low greenhouse gas emission development strategies” (Article 4.19), which has prompted greater attention to be given to the related planning processes. The development of such long-term strategies can act as fact-finding missions that create awareness of options for realising the long-term transition and its implications, and ideally inform near-term policy-making.

Since the end of 2018, all EU member states are subject to the provisions of the EU Governance Regulation. This requires the submission of two different types of planning documents aimed at these two time horizons: NECPs with a focus on 2030, and long-term strategies until 2050.⁴⁹ The first versions of each were due by the end of 2019.⁵⁰ The Governance Regulation explicitly requires that these two documents must be mutually coherent.

The EU’s Governance Regulation also described a process for producing EU long-term strategy. The subsequent analysis and proposal by the European Commission published in November 2018 created a debate that has led to the adoption of climate neutrality as a new EU goal for 2050.⁵¹ The “European Green Deal” proposed by the European Commission in December 2019 can be argued to represent a political framework to start an implementation process for this 2050 strategy.⁵²

Long-term planning not always a central feature

While all nine climate laws mention a long-term (most often specified as 2050) dimension in some form, only some detail a strategic planning process that places a clear separate emphasis on the long-term dimension: the Finnish Climate Protection Act, the French Energy Transition Act and the Spanish draft Climate Change and Energy Transition Law. The long-term strategy is also referenced in the German Climate Protection Law, but its development process is not specified. Reasons for this could include that several of the climate framework laws examined in this study were enacted before the EU Governance Regulation was finalised. Strategic long-term planning and the identification of policies and measures in short-to medium term action plans can sometimes also take place as part of the same exercise—which also supports integration of the two—and even be communicated in the same governmental document. In the Irish climate law, there is indeed only one central plan, which should spell out how the long-term target is reached and through which policies, while then identifying concrete measures to be implemented. Arguably, the UK’s policy action plans, which are called strategies, could also fall into this category, as they focus on medium-term policies but have to do so in the context of the 2050 target. The same is true for the Dutch climate plan. However, for the purposes of distinguishing between the design elements, the latter two have been marked as policy plans and are discussed in more detail in the next chapter, since their main focus is clearly on the next 10-15 years.

KEY INSIGHTS

- **Long-term planning is missing from most framework laws:** Only a handful of the climate laws establish a concrete national system for strategic long-term planning on climate, and make the long-term strategy a central document to guide future policy-making and inform action plans (Finland, France and Spain and to some extent Ireland).
- **EU requirements to fill the planning gap:** Strategic long-term climate planning is a mandatory element of national climate policy under the EU Governance Regulation and also asked of all parties to the Paris Agreement. Under EU law the long-term strategies have to be closely connected to the definition of specific policies and measures.

The law in **Finland** establishes an explicit “climate planning system”, which integrates a long-term plan with central policy measures for both the emissions trading sector and the sectors not affected by emissions trading, examined in the next section. The plan also describes emissions scenarios and options for achieving the 2050 targets in the various sectors. Before being adopted by the government every 10 years, the long-term plan is developed by the Ministry of Employment and the Economy. The Ministry of the Environment, meanwhile, is responsible for the medium-term climate plan (see next chapter), which spells out more specific individual policies.

In **France**, the national low-carbon strategy is also a central document and adopted by government decree. It contains among other items the emission budgets for upcoming periods (see above). However, the 2019 revision also places the budgets inside a separate law, which is more closely connected to medium-term energy planning. It includes scenarios for future development towards 2050 and should spell out both medium- and long-term reduction policies. It also allocates the national emission budget to different sectors (indicatively) and describes the sectoral and overarching guidelines for meeting their allocations. The strategy needs to be reviewed and extended every five years. The **Spanish** draft law demands the creation of a Low Emissions Strategy for 2050, to be reviewed every five years and to include an intermediate objective for 2040. It is also meant to include specific measures on zero emission vehicles for 2040 (essentially a ban on combustion engine sales for private cars and light duty vehicles).

In **Germany**, a specific article spelling out a process for the 2050 climate action plan was contained in a draft for the national law but removed from the adopted version. However, it is still referenced, in that every update to the action plan should trigger the adoption of a new package of measures (a “climate protection programme”) to be adopted. The expert council established by the law will also be asked to issue an opinion on the assumptions underlying expected emissions reductions before any future iteration of the plan will be adopted. The original 2050 plan, adopted by the government in late 2016, includes governance elements that are now part of the system established under the framework law, including the sector-specific targets for 2030 and the regular adoption of climate policy programmes. The 2050 plan itself is meant to be “reviewed and updated in accordance with the five-year reviewing cycle...under the Paris Agreement”.⁵³

Several laws include other types of strategies; in fact, the **French** legislation includes a whole range of them on clean mobility, hydrogen, biomass, and so on. The **Spanish** draft law establishes an obligation on the government to formulate and update a Just Transition Strategy every five years, in order to maximise economic opportunities from the energy transition and proactively address the socioeconomic impacts of structural change.⁵⁴

As mentioned above, the absence of a clear long-term strategic element in some climate laws may be partially explained by the fact that these laws precede the Paris Agreement (e.g. the UK) and its heightened emphasis on a 2050 time horizon. Nevertheless, the way in which explicit long-term climate planning is carried out—and linked to decisions on short- and medium- term action (see next section)—is a key area for possible improvement of existing climate laws in the EU.



5.3 HOW? MEASURES

Regular policy programming processes

Climate framework laws are principally just that—a framework—but all the laws examined in this report do include, as a core feature, a procedure for more detailed climate policy development in some form (this is less pronounced in France). As described in the section on strategic planning, policy identification is distinguished by the focus on a medium-term time horizon, usually 10-15 years into the future. These exercises are scheduled to take place on a regular cycle of every 4-5 years, and their outputs are variously called strategies, plans (most common) and programmes—demonstrating diversity in both the scope and form of the documents, but also a lack of standardised definitions.

National policy formulation processes have now essentially been made an obligation for all EU Member States through the integrated **NECPs** established by the Governance Regulation. NECPs need to contain specific targets, policies and projections on future developments, and must be updated on a five-year basis (with drafts after four years). The same frequency is mandatory under the Paris Agreement’s review cycle for national climate action pledges (NDCs), showing the link between regular target setting and updates to policies for reaching them.

In the UK and France, which both employ a carbon budget approach, the frequency of the development of implementing plans is closely linked to specific budget periods, which are also on a five-year schedule. Each relevant **UK** ministry draws up sector-specific proposals and policies for compliance with emission budgets and submits these to parliament. Most recently, the government completed this process in 2017 as part of its “Clean Growth Strategy”, which identifies measures for industry, buildings and transport, among others, until 2032 (the end of the fifth carbon budget), although these are framed in the context of the 2050 objective.⁵⁵ In **France**, policy formulation is to some extent included in the national long-term low-carbon strategy but is further specified through a multiannual programme for the energy sector. This identifies core objectives and policies for upcoming five year periods for all of the related climate and energy objectives of which there are several in the French legislation. The energy programme does not fully compare with climate policy plans in other laws, as it does not have a specific mandate to spell out a set of policies. However, the French climate laws themselves include a series of specific measures (see more below).

In **Finland**, the Ministry of the Environment draws up a medium-term climate plan once per legislative period—i.e., every four years—which includes an action plan with measures for sectors beyond emissions trading, and is adopted by the government. **Sweden** also uses a four-year frequency, Ireland, Denmark and the Netherlands “at least” every five years and Germany has an implicit five-year routine (via updates to the long-term strategy in line with the Paris Agreement cycle). Not all of them are explicit about the respective calendar years or times in the year when the programmes should be ready (as is the case for EU obligations, for example). Overall, the systems for identifying measures are rather similar.

KEY INSIGHTS

- **Policy action in regular intervals:** Almost all climate protection laws include some form of short-to medium-term action planning for climate measures. They establish a framework and timeline for how mitigation measures are proposed, who proposes them and with what frequency.
- **Signalling structural change:** A few Member States also establish individual measures in the law itself (e.g., carbon tax and CO₂ performance standards in France,) or list specific measures to be adopted (e.g., 2040 ban for certain combustion engine vehicles and e-mobility infrastructure obligations for fuel suppliers in Spain).
- **Financial mainstreaming:** Several laws connect the climate policy cycle with their country’s annual budget process in some form (Sweden, France, Germany). Sweden explicitly states that climate and budgetary policies should be aligned, whereas Spain allocates a share of the annual budget to climate action-related purposes. France and Spain both include dedicated provisions for financial institutions to consider climate risks.

In **Denmark** and the **Netherlands**, these Climate Action Plans are meant to cover a ten-year perspective. In Denmark, these plans are also operationalised as annual Climate Programmes, which are essentially ongoing updates on policy packages towards achieving the goals of the law. The **Spanish** draft law is unusual in placing a strong and explicit focus on the NECP, thereby linking directly to the EU process and its timing (implying a five-year cycle) and scope (2021-2030). This reflects the fact that the draft was prepared after the GR was in place.

Individual features

Responsiveness or additional action: The majority of laws provide for the possible development of additional, stronger measures if progress monitoring shows that these are needed. The **German** climate law mentions that the identification of a target being missed requires the development of an ad hoc policy programme by the respective ministry whose sector is found to be responsible. The **Finnish** law obliges the government to continuously monitor the sufficiency of its policies and to decide on additional measures as required. In **France**, the government needs to respond within six months to the annual report by the scientific advisory body High Council, and to indicate how any gaps would be closed with additional actions. In the Netherlands, the biannual progress report on the climate plan may trigger additional policy actions, if this turns out to be necessary. In **Denmark**, the government needs to consider the need for additional action as part of its annual climate programme.

Adaptation and more: The **Finnish** law demands the elaboration of a National Adaptation Plan for climate change every 10 years, with a risk assessment and specific measures. **Spain** also requires a National Adaptation Plan and a specific strategy for the conservation and restoration of ecosystems and species. In **Ireland** adaptation plans also feature prominently, with a national strategy including adaptation measures and sectoral adaptation plans. The **French** legislation demands the production of a series of sector-specific strategies, on issues such as clean mobility and hydrogen.

Responsibilities: The laws vary in the level of detail they include about who is involved in the preparation of the policy programmes; this point is elaborated on in the section “Who Does What”. Some laws simply mention “the government”; others name an individual ministry or minister, while others describe a process or mechanism through which different ministries are involved in providing input on their policy areas to the programme as a whole (e.g., Finland, Germany). Input from the respective scientific advisory councils (see also separate chapter) is usually sought in policy development.

Despite the clear similarities between national policy planning processes and the requirements of the EU Governance Regulation, it is clear that there is scope for greater alignment between them in order to avoid duplication and to ensure maximum efficiency. **Spain**, which is drafting its law with the GR in place, is taking care to do this. However, differences in national electoral and policy cycle schedules may need to be considered, and may stand in the way of delivering perfect alignment with the formal process.⁵⁶

Specific policies, finance and mainstreaming

Some of the analysed laws contain specific instruments beyond the policy planning processes described above, some of which are noteworthy in the context of other countries considering the experience for their own potential climate legislation.

The **French** legislation (2015 Energy Transition Law and 2019 Energy and Climate Bill) is by far the most detailed in terms of specific policies. These mostly take the form of amendments to existing legal codes, with few provisions that stand on their own—which is in stark contrast to all of the other laws surveyed. Several important instruments are introduced (or updated) through these laws, including a progressively increasing carbon tax (2015 law), and a CO₂ performance standard for thermal power plants that effectively eliminates coal firing as of 2022 (2019 law). There are also renovation obligations and a Fund for Building Renovation (2015 law) as well as an obligation to install PV on new supermarkets and warehouses and on top of parking shades (2019 law). There are also substantial sections of the law devoted to circular economy and changes to renewable energy support. According to an analysis of the origins of the Energy Transition Law, the high level of detail on individual policies (especially in the energy sector) was not originally intended to be part of the law, but were introduced as part of the political negotiation process.⁵⁷ The **Spanish** draft law also lists suggested, specific measures, for example for energy efficiency and mobility in large municipalities. Notably, the draft law includes the intention to ban the sale of combustion engine vehicles by 2040.⁵⁸

Both Spain and France seek to address the consequences of economic change due to the energy transition in their law. **France** foresees support to workers affected by the closure of coal plants, and **Spain** has already drafted a first Just Transition Strategy which the draft law states should be updated every five years and which should be implemented by concluding Just Transition Agreements with vulnerable regions.

Climate mainstreaming and finance

Another key innovation of the **French** law is the introduction of a way to start mainstreaming climate action into all government action, especially its spending. Implementation of the carbon tax happens through specification in the annual budget bill, for example. Its annual report on the climate law (see later section on monitoring) must also be communicated in connection with the budget bill. In this report the government must provide information on the financing of the energy transition, quantifying and analysing the public funds dedicated to it and evaluating private investments and comparing these to the volumes necessary. This information has been gathered in the form of national “climate finance landscapes” by French climate think tank I4CE for the official reports, and their model and methodologies have now been applied to distilling and presenting similar information for other countries.⁵⁹

The **Swedish** climate law likewise contains a specific obligation stating that the climate policy and budget policy goals should be aligned, and requires that investment-related impacts be explicitly taken account of in the four-year climate plan. Like France, Sweden also requires the annual government report to be connected to the budget bill, which strengthens the link between the budget and climate action. **Germany** connects to the annual budget process through an attached overview on progress (with data per sector) that also needs to include information on the cost of having to purchase external credits to meet EU climate target obligations, should that become necessary.

The **German** law also includes the obligation to check the impact of federal investments and state procurement on the climate targets—and, as mentioned above, it includes the specific objective to make the federal administration climate neutral by 2030 (§15). The Spanish draft law also includes specific provisions on climate-friendly procurement.

Another special feature in the **French** law is again linked to climate finance. It introduces reporting obligations for financial institutions to integrate the assessment of climate-related risks and the evaluation of the carbon footprint of their assets. The provisions in the respective Article 173 of the Energy Transition Law of 2015 have been called “ground breaking” and hailed as the first of their kind.⁶⁰ This inspired the authors of the draft law in **Spain**, which contains several specific provisions designed to make financial institutions more sustainable and attentive to climate risks, including a biannual report by the Bank of Spain and related institutions on the subject.

Going even further, the **Spanish** draft law also states the intention to spend a certain percentage of its state budget on climate action (again linked to related reporting in the annual budget bill).⁶¹ This is proposed to be equivalent to the share dedicated to climate in the EU budget (which is presently at 20% and is proposed to be increased to at least 25%).

The Spanish draft law also includes the intention to adopt an International Finance Strategy, to cover both the country’s own climate finance commitments, but also how to mainstream climate considerations into international financing instruments. The **Danish** draft climate law includes the obligation of the government to produce a “global strategy” every year (as part of its Climate Programme), meaning a document that accounts for Denmark’s international climate responsibility (through imported goods) and also its action (e.g., climate finance and other bilateral cooperation). The French law introduces the concept of the country’s overall carbon footprint, accounting for emissions created by imports—although without this being made part of the emission reduction targets.

Offsets

Some laws speak to the potential use of traded emission reduction units of different forms as part of their policy portfolio. In **France**, the use of such offsets (international or EU) is explicitly excluded—reductions are to take place inside national territory. While ensuring “real domestic reductions” is a guiding principle in the **Danish** draft law, a back door is left open in the consultation comments: if in 2030, it turns out that the 70% reduction cannot be met, purchasing offsets may be considered. The **German** law explicitly leaves open the use of intra-EU trading of annual emission allocations to meet EU obligations, should this be necessary. Most laws stay silent on this issue.

Pros and cons of going beyond frameworks and procedures

While most climate laws remain in the domain of setting a framework, and simply set out processes for a more detailed elaboration of sectoral policy details elsewhere, some do include some specific sectoral measures—notably France and Spain. Including these policy details increases the importance of the law for affected stakeholders and can send a clear signal about the government’s commitment and the need for structural change. However, their inclusion can also create additional political conflict, which may affect the overall political and public support for the climate laws. In Germany, for example, the framework law was receiving little attention due to a focus on a range of other specific climate policy measures (including a domestic carbon price system), which were being debated at the same time, but in different legal instruments. At this point in time, no conclusive answer can be provided, other than the insight that national contexts determine the respective choice. Future research may yield insights on the matter, as more experience is gained in other countries. Ultimately, political support for the adoption of specific policies is a precondition, regardless of the form in which they are adopted.



5.4 HOW WELL? PROGRESS MONITORING

Annual reporting is standard

Progress monitoring is an essential element in the policy cycle. Existing UN and EU obligations have established a detailed system for gathering data, calculating emissions inventories and reporting to the respective international bodies. These processes have already been in operation in all EU Member States for more than 10 years (with minor modifications along the way). The EU's monitoring system also demands forward-looking projections every two years, and the EU (organised via the European Environment Agency) has a network of technical experts across the EU who work to constantly improve the methodology. In addition, Member States need to include projections for the impact of policies in their NECPs.

Progress monitoring is therefore already built into Member State obligations from the international and EU levels. For national climate laws, the key question in this context is how the gathered information is used: who communicates it, to whom and how often (is there transparency and independent evaluation) and to what extent is an assessment of progress used to inform future policy-making? All nine climate framework laws examined in this report describe monitoring and reporting obligations for the purpose of reviewing target progress as well as the effectiveness of policies and measures, albeit with varying degrees of detail.

Timeline for reporting

All countries surveyed require annual progress reports. In the vast majority, these are submitted to parliament, which means they are accessible to the public and have a built-in opportunity for the public, stakeholders and political actors to engage with the information they contain. This is true for Finland, France, Germany, Ireland, Spain, Sweden and the UK, but the contents and responsibilities differ between the countries. In Sweden, Germany, Denmark and Ireland, for example, the reporting obligation is first and foremost on the government, while in France, the Netherlands and Spain this falls to the respective scientific advisory body. The process can take different forms: in the **Netherlands**, it is the scientific support body PBL that issues an annual report, while the government does so every two years (in line with EU requirements). In the **UK**, the CCC issues a report to which the government is then forced to respond—but the government also provides its own annual report. A response is also mandatory in **France**, where the government is required to provide an explanation of any gaps and provide information on future actions. The draft **Spanish** law also obliges the government to participate in a debate on the report by the advisory body. In **Denmark**, the government must respond every year to recommendations of the Climate Council in its own reporting. In **Germany**, the expert council only verifies the accuracy of the data used for reporting and does not deliver its own assessment.

Notably, the annual reporting requirement in **France** and **Sweden** is linked to the presentation of the annual draft budget bill, and some progress data is also included in the **German** budget proposal. In **Denmark**, a link between climate progress reporting and the annual budget process is made in the comments attached to the draft law (referring to the timing of the reporting in the annual cycle) but this is not explicitly mentioned in the legal text. The connection to a prominent annual process such as the budget signals the importance of the progress reporting and also creates a clear connection between government spending and climate policy (see under “Measures” above).

KEY INSIGHTS

- **Keeping track in public:** Annual reports covering the evolution of GHG emissions must be submitted in all Member States and the UK—mainly sent to parliament. In most cases these are from governments, but some countries have assessments from independent advisory bodies (France, the Netherlands and the UK). In the UK and France, the government is obliged to respond and submit explanations.
- **Prominent position:** In order to emphasise the importance of climate policy and to take account of the link between climate policy and budget policy, the implementation report in France and Sweden is submitted to parliament together with the draft budget. In Germany, sectoral progress data is also included in the budget proposal.
- **Mind the gap!** Most laws explicitly link progress monitoring to additional measures, if it becomes clear that reductions being made are not in line with the targets—for example in Denmark, Finland, France, the Netherlands and Sweden.

Some laws stipulate additional reporting requirements with different frequencies and purposes. For example, in **Finland**, while the annual report focuses on a review of overall progress, a second biennial reporting mechanism serves as an evaluation of specific policies and measures. In **Germany**, the government is also required to submit a report on emissions projections every two years, which corresponds to an EU obligation under the Governance Regulation, and submits this also to parliament. In this way, EU and national reporting processes are used in a synergistic fashion.

Contents of reporting

As a rule, the obligations require reporting on the evolution of national GHG emissions and frequently also on trends or forecasts for the future (projections). In addition, most of the laws also require some form of progress monitoring, i.e., an assessment of whether the national climate targets have been or will be achieved—and/or the state of policy implementation and effectiveness. The **Irish** climate protection law requires the respective ministries to produce separate national and sectoral “mitigation transition statements,” which evaluate specific instruments and measures taken by sector and present these to parliament (the only case in which such a detailed sectoral assessment is specified). The **Finnish** law requires a more detailed report every two years, including information on the implementation of the policy measures in the medium-term climate plan. France, Germany, the Netherlands, Sweden and the UK also include reporting requirements on the degree of policy implementation and/or progress towards the targets. In most countries, if progress monitoring identifies gaps in target achievement, this can trigger additional action (see section on “Measures” above). In **Denmark**, for instance, an assessment of the previous year’s climate action is required in each iterative annual program, which serves as an impulse for the adoption of additional actions if current measures are found to be insufficient. This annual review mechanism is referred to by the Danish Ministry for Climate, Energy and Utilities as the “Climate Cycle” (Klimalovens årshjul).⁶²

The **French** reporting obligation goes beyond the other reporting obligations insofar as the progress reports must also contain information regarding the availability of public and private climate finance (see under “Measures” above), as well as information on a whole variety of sectoral strategies and objectives. These are reported together with progress related to the five-year carbon budgets and energy target periods—both separate from each other but with potential duplications. In the **UK**, the CCC also needs to specifically add an assessment at the end of a budget period. Progress monitoring results are also often included as information in the formulation of or updates to strategic plans and policy programmes.

Engaging with other agencies and external scientific advice

Besides the instances in which the main annual report stems from a scientific support body (see above for France, the Netherlands and the UK), additional actors are involved in several of the other countries. The laws in Finland and Germany and the draft law in Denmark call upon additional government agencies to engage in reporting or provide scientific guidance. The German Federal Environmental Agency prepares an annual report on emissions trajectories, which is then assessed by the Expert Council. Statistics Finland is in charge of Finland’s GHG inventory. The Danish Meteorological Institute is named specifically as the government’s advisor in relation to climate science developments.

The **Finnish** law establishes that the government should monitor how well projected policy impacts turn out to be in reality—effectively an ex post quality check on impact assessments, to ensure future estimates are improved. There is no timing or frequency attached to this task however. The **German** law gives its Expert Council the job of verifying the assumptions underlying expected emission reduction effects of measures proposed by ministries, before these are adopted—essentially an independent ex ante quality check to ward off inflated impact claims. This may have been informed by a series of significant diversions between projected emissions developments and actual emissions in Germany.⁶³



5.5 WHO DOES WHAT? INSTITUTIONAL ARRANGEMENTS

Organising internal cooperation

Each law describes a framework for governmental organisation, but there is considerable variation in the procedure and competencies pertaining to climate policy. Some laws designate a single governmental authority as more or less solely responsible for the formulation of climate action, whereas others delegate roles among multiple agencies and ministries. A handful of best practice examples establish more pointed guidance and coordination between various sectoral competencies. In addition, the legislative body (e.g. parliament) in each country assumes a variety of roles in climate policy-making. EU legislation does not really address how governments assign responsibility for delivery on EU targets and leaves this for every country to determine for itself.

Assigning responsibility

The climate framework laws in France and Sweden provide only a vague indication of who is responsible for the design and implementation of climate policy. In **Sweden**, the “government” is charged with drawing up and implementing climate action plans, submitting these to the Parliament (Riksdag) for approval. The **French** law also charges the government (i.e., much of the legal language centres on “the government will...”) with lead climate policy-making competencies, but any further breakdown of responsibility is unclear. The French law does make mention of numerous peripheral ministries and agencies, in some cases assigning specific obligations, but there is no clear coordination mechanism built into the law regarding the organisational setup. The Dutch and British laws are more precise on institutional arrangement; each identifies a specific governmental body. In the **UK**, the Department for Business, Energy and Industrial Strategy (BEIS) and its Secretary of State (or leading minister) are chiefly responsible for compliance with the Climate Change Act, and in this capacity are tasked with drawing up the policies to meet the targets in each budget period as well as the headline 2050 target. In the **Netherlands**, the Ministry of Economic Affairs and Climate is responsible for proposing and implementing the ten-year climate plans, but the law does not go into further detail.⁶⁴ The **Spanish** draft law is similar; it envisions the Ministry for Ecological Transition as primarily responsible for climate action planning. Similar to the French law, the Spanish draft law outlines roles for additional ministries and agencies, but these are not integrated in any way into a coordinated governance framework. In fact, many of the framework climate laws assign specific peripheral roles to additional relevant governmental agencies. For instance, the **German** Environmental Agency is charged in their respective laws with a technical advisory role regarding emission projections and data collection. Similarly, in **Finland**, Statistics Finland is deemed responsible for the national inventory system for GHG emissions. Similar arrangements will be in place in other countries (in Denmark, the explanatory comments mention this explicitly), as these are needed to comply with existing EU obligations, but they are not repeated in the framework laws.

KEY INSIGHTS

- **Who does what?** Some framework laws seem to delegate the overarching task of developing climate plans to a single ministry (Netherlands, Spain and the UK)—or at least the ministry is named as having overall responsibility. Other countries mention specifically how various ministries and agencies will be involved in the policy-proposal and policy-making process (Denmark, Finland, Germany, Ireland and France to a lesser extent).
- **Division of responsibility is key:** In order to engage all relevant government bodies in climate protection planning, ministries covering relevant sectors of the economy can be obliged to prepare those parts of a strategy or plan that relate to their sector (Finland, Germany and Ireland). In addition, reduction targets can be broken down into sectors within the framework of planning (France). The laws in other Member States may need to strengthen the means by which they oversee sectoral progress in the non-ETS sectors. All laws could improve coordination and how cross-sector issues are dealt with.
- **Involvement of parliament:** Several laws give the country’s legislative body the role of approving plans submitted by either the government or the responsible ministry (Germany, the Netherlands and the UK). Most countries explicitly involve the parliament in discussing progress via reports submitted to it.

The role of parliament

The legislative branch of government is given a different role in each climate protection law—in some cases taking on a more active role than in others. In the Finnish and French laws as well as the Spanish draft law, parliament is tasked primarily with receiving climate reports, although a stated purpose of the **Finnish** law is “to strengthen the opportunities of Parliament [...] to participate in and affect the planning of climate change policy.” In **France**, the parliament can also request analyses or assessments from by the High Council for Climate. In Ireland and the Netherlands, both the annual reports and the climate plans are submitted to the respective legislative chambers. Both Chambers of the **Dutch** States General must be heard regarding changes to climate planning.

In the four remaining climate framework laws, the legislative branch is given a more central and active role. The **UK**'s carbon budget system, established via the primary legislation of the 2008 law, is implemented in five-year budgetary periods as secondary legislation. As such it must be approved by a simple majority in both Houses of the British Parliament based on the recommendation of the Climate Change Committee (see section below on Scientific Advisory Body). The Parliament also holds the Secretary of State responsible for delivering policies and measures to meet each carbon budget. The **Swedish** law gives the Riksdag the task of setting the country's overall long-term climate goal and receives annual climate reports along with the proposed budget.

In **Germany**, the Bundestag also plays a relatively active role in national climate policy formulation. First, it is called on to approve future emission budgets, and receives climate reporting from numerous sources including the government and Council of Experts. It also has the ability to request special reports or opinions directly from the German advisory council, and must sign off on proposed changes to existing emissions budgets.

Differentiating sectoral responsibilities

Historically, climate action in the EU has focused on the energy sector, with ministries covering energy and the economy taking on most of the implementation and policy-creation responsibilities. As a result, the emission reductions achieved to date have been primarily in the energy sector, with much less attention and therefore progress in transport, buildings and agriculture. Moving forward, all sectors must be integrated into the climate action planning in all countries. This can be achieved either by widening the competencies for climate policy making to include all relevant ministries, or by designing coordination mechanisms which make ministries beholden to the overarching climate goals. This is

a central management challenge for governments, which can be addressed in framework laws.

Whether and to what extent specific economic sectors are deemed responsible for emission cuts varies by Member State. The climate framework laws of countries—Finland, Germany and Ireland—have provisions differentiating responsibilities by sector. In **Finland**, for example, coordination in governing the climate is stated as a purpose of the law. Article 15 of the law describes an organised framework in which responsibility is spread relatively evenly across multiple ministries; each ministry is required to prepare its sectoral input for each long-term and medium-term climate plan and provide the necessary information for their sector for annual reporting in the medium term. Interestingly, the Ministry of the Environment has overall responsible for the medium-term policy planning, while the Ministry of Employment and the Economy is responsible for the long-term strategy.

Similarly, in **Germany**, ministries must propose measures to be included in policy programmes for their respective sector, then adopt and implement them. The expected effect of these policies on emissions must be in line with the annual budgets set for each sector, and the Expert Council is tasked to check the validity of the assumptions that inform the respective impact assessments. Progress is monitored for each sector, with any gaps being made public annually, and individual ministries held responsible for deviations—meaning that in such instances they have to propose an ad hoc programme with additional measures. In this way the internal budget division approach is explicitly designed to facilitate adequate contributions by all ministries. This is the most elaborate mechanism for ministerial collaboration among the laws surveyed.

However, the law does not install an internal coordination mechanism with a central actor. In the run-up to the political agreement reached in September 2019 on the climate law and the climate policy package, Germany held meetings of a “climate cabinet”, which brought together all relevant ministries (chaired by the Chancellor as head of government). Despite its good practice nature, this coordination mechanism has not been enshrined in the law as a regular forum for inter-ministerial collaboration.

The **Irish** climate law provides detailed guidance, whereby each relevant ministry submits a sectoral mitigation plan after consulting with the expert advisory body. These plans are then collected and combined by the Ministry for the Environment, Community and Local Government,⁶⁵ which is generally responsible for climate policy-making, into a single climate action plan to be approved by the government. A similar division of labour is applied to annual reporting, for which again every ministry needs to prepare its own sectoral input.

Other countries' laws provide for some level of sectoral differentiation, albeit to a lesser degree. While the **UK** law requires emission budgets that are calculated considering the potential of the sectors concerned, it does not demand a sectoral breakdown for these emission budgets. Nor does it do so for the proposals and policies, but a differentiation then takes place in practice via the policy plans. The **French** energy transition law stipulates that the emission budgets be distributed among the sectors via the national decarbonisation strategy, but this distribution is only indicative and does not carry formal responsibility allocation. Nevertheless, this system makes it possible to allocate shortcomings to individual sectors, even if these failures in the law's current form result in no consequences.

Risk through lack of coordination?

Establishing sector responsibilities in a framework climate law may lead to increased buy-in and synergies between governmental bodies and can highlight those parts of the economy which are falling behind in emission reductions. Under EU law the sectors not covered by the EU ETS, such as transport, agriculture and buildings are assigned a joint national (non-ETS) GHG target. There is therefore a clear legal obligation for reductions in these sectors and a risk of additional costs if emissions in these sectors cannot be reduced adequately, resulting in the country having to purchase certificates from the scheme. Climate framework laws which do not specify a sector-based approach, with a clear division of responsibility, run this risk.

Besides individual sectoral responsibilities, climate governance also needs to establish mechanisms to ensure that all government departments and ministers are aware of implications of the economy-wide planning process and that cross-sectoral approaches are being considered adequately. There are many relevant issues which cut across sectors, for example the choice of any one sector to use biomass, and the implications of growing crops for non-food purposes (e.g. as building material, industrial feedstock or energy source) for the amount of land available to be used as a sink towards climate neutrality. So far none of the analysed climate laws seem to include dedicated coordination mechanisms to ensure sectors are coupled efficiently and potential conflicts are avoided.

In some cases, the absence of these coordination mechanisms in climate laws may be due to the fact that there are other internal arrangements (established through law or internal practice) that facilitate internal collaboration outside of the climate law. It is also evident from the names of several of the lead ministries, that they may already bring together a number of relevant dossiers. Some even are now explicitly dedicated to the task of leading the change towards a climate-friendly future, such

as the Spanish Ministry for Ecological Transition and the French Ministry for the Ecological and Inclusive Transition (both formerly the Ministry of Environment). Also, the Danish Ministry for Climate, Energy and Utilities shows in its name that climate policy is given a high profile. These ministries may have been given political power that means they are simply not as reliant on others – which could reduce the importance for a dedicated coordination mechanism.

Being specific about “who does what?”, rather than assigning a job to “the government” as a whole in a national framework law, is clearly making use of a dedicated opportunity to reduce risk and potential friction on getting all governmental actors to pursue the same goal and structure. It also increases the chances of ensuring a sophisticated reflection of the near-term implication of long-term planning in all sectors across the economy. Most of the national climate laws have room for improvement in this regard.





5.6 WHO TO INVOLVE? SCIENTIFIC ADVICE

Governments seek independent advice

Almost all climate protection laws establish or include mention of an independent expert advisory body on climate policy matters.⁶⁶ The one exception is Sweden, whose Swedish Climate Policy Council was created by a governmental remit in parallel and is not mentioned in the act itself. At present, EU legislation does not contain any obligation for the establishment or use of such an institution that may have triggered this development; the fact that so many countries have opted for this approach may be more directly connected to the nature of the problem at hand (climate change as an evolving scientific issue), or the fact that climate framework laws tend to be laws directed at governments themselves, which may necessitate a third party assessment of progress. The example set by the UK climate act and its Committee on Climate Change may also have played a supportive role – it is regularly cited as a source of inspiration in supporting literature.⁶⁷

Three roles: watchdog, science advisor, convenor

Expert committees as a rule serve both a monitoring and an advisory function—and in some countries also facilitate stakeholder dialogue and public engagement with the policy-making process. However, they vary in mandate (scope of their work and role in the process), composition and access to resources—and the detail in which their roles are described. The **Irish** law, for instance, specifically obliges the Climate Change Advisory Council to conduct an annual review in addition to periodic reviews at the discretion of the ministry, as well as to provide recommendations for the government's key climate policy plans and frameworks. The **Finnish** climate law foresees the establishment of an expert body but stipulates its competencies and composition in vague terms and does not lay forth concrete tasks, other than to collect and itemise research data on the mitigation of climate change for monitoring and reporting purposes. In **France**, the committee of experts that was established through the 2015 Energy Transition Law was replaced already in November 2018 by a new High Council for Climate Policy.⁶⁸ The expert committee had not been given dedicated resources in the existing law and so had been unable to carry out meaningful work. As in many other countries (most notably Sweden, as mentioned in the introduction), specific provisions on rules governing the council have been adopted by separate government decree.

Monitoring function

A core function for the advisory bodies is to contribute to the progress monitoring of the country's climate policy. In seven of the cases (Denmark, France, Ireland, the Netherlands, Spain, Sweden, UK) this takes the form of an obligation on the respective body to present a report (annual or periodic) on the state of the country's climate action in relation to target achievement. This report is then sent to the government or the responsible minister, sometimes also to parliament. However, the inputs by the councils differ in scope and importance in the process.

KEY INSIGHTS

- **Advising, monitoring and dialogue:** As stipulated in the climate laws, scientific expert councils may serve three basic functions. In an advisory role, the expert body evaluates and directs policy-makers in their climate policy decisions. In a monitoring role, the external body reviews emissions data, pathways and the effectiveness of policies and has reporting obligations. In some cases (Denmark, Sweden and the UK) the expert council is also charged with conducting and encouraging a public debate surrounding domestic climate policy.
- **Focus on scientific expertise:** The independent bodies in the UK and all the Member States surveyed are not composed of stakeholders, but of experts selected on the basis of qualifications, expertise and experience or appointed through their position in public office (Ireland).
- **Show me the money:** In order to make the expert council functional, it may be given access to a secretariat (e.g. Denmark, Germany, Ireland, Sweden and the UK), have its own budget (UK) or involve external expertise through ad hoc committees (Denmark).
- **With great power comes great responsibility:** The advisory bodies have different mandates, but three cases stand out due to their strong position in the process. In the UK and France, the advisory bodies are charged with producing independent annual reports which the government is then obliged to respond to. In Denmark, the government must also specifically take a position on recommendations by the Climate Council in every annual report it presents.

For example, the annual report of the **Irish** Climate Change Advisory Council is sent to the Minister of the Environment and is also published and made publicly accessible. The convenor, Climate Change Committee, meanwhile, submits an annual progress report to Parliament, on which the Environment Minister has to give their opinion in Parliament. The report must include information on the progress made in reducing emissions and an assessment of whether the country is on track to meeting its emission targets. Specific climate policies and measures are also evaluated every two years. The **French** High Council does this every year, and the government must respond to its input within six months. In the draft Spanish law, the government must at least engage in debate on the annual report issued by its national committee. In the **Netherlands**, the only country that uses an existing and established (independent) scientific body, the role is limited to a vaguely defined annual report that includes (at least) an update on data and relevant policies. In **Germany**, there is no reporting role as such for its Expert Council, but it does need to provide a quality check on the annual emissions data. As stated above, the **Swedish** Climate Act does not mention the country's advisory body, but its council's separate (legally established) mandate does detail monitoring obligations, including an annual climate progress report and a review of the four-year climate action plans.

Scientific and expert advisory body function

The advisory function involves consultation in the formulation of climate policy itself. This can take the form of exploratory analyses on specific sectoral mitigation options or types of technologies (e.g. biomass potential), for example, or in some cases it may be concrete policy recommendations on the country's future policy programmes. In practice, an expert advisory council is only as relevant as the degree to which its recommendations and concerns are actively considered by the government or governmental ministry it serves, as well as the strength and independence of its mandate. These vary significantly by EU Member State. Under some framework laws governments are required to engage with the advisory body by issuing a formal response to the council's recommendations; other laws require governments to consult directly with the advisory body during specific phases of climate policy-making, while some do not specify such interactions (e.g. in the Netherlands). Some advisory bodies enjoy a more flexible mandate and are encouraged to set their own priorities through ad hoc exploratory analyses on matters of perceived importance – others may only engage in such work upon request (e.g. Germany).

For instance, recommendations by the **UK** CCC on emission budgets must be considered by the ministry before the proposed carbon budget or any amendments are put before Parliament. In fact, the government must issue a public statement if it deviates from the Committee's recommendations. Likewise, the **Danish** Minister for Climate, Energy and Utilities must comment, outline and decide explicitly on recommendations arising from the Climate Council in drawing up the country's climate programme. In **France**, the government must also respond to the recommendations of the High Council. Meanwhile, the Irish law stipulates that while the government “may” consult with the Advisory Council, the ministry responsible for drawing up the national transition plan “shall” consult with the council.

The **Finnish** Climate Panel, which does not have much secretariat capacity,⁶⁹ can also carry out other tasks linked to the procurement of climate-related information, and as such has a more open-ended—but also less specific—mandate. The British, Danish and French advisory councils are also encouraged to engage in exploratory analyses in some form, over and above their specified reporting and monitoring obligations. The **German** Expert Council can only do so upon request by either the Parliament or the government. In a more fact-checking role, the German Expert Council is asked to verify the assumptions underlying the projected impact of measures proposed by sectoral ministries before climate policy programmes or a new 2050 plan are adopted, which could provide an important check against overstated emission reductions potentials and thereby enhance certainty of target achievement.

The attention given to the advisory bodies' input is key to their ability to create an impact on national climate policy. As such, the arrangements in Denmark, France and the UK stand out. In all three cases, the government is obliged to respond in a public form. In the **UK**, in particular, the Secretary of State must not only respond but also substantiate its decisions whenever these deviate from the Committee's recommendations. Anecdotal evidence from the **German** experience with a similar independent body, the Energy Transition Monitoring Commission, shows that mandatory government responses can end up being a formality without consequences—unless there is indeed a clear sequence of recommendations and response—and a dedicated public opportunity for debate on progress.⁷⁰

Advisory body composition

The composition and designation of the panel of experts varies from one Member State to another. The number of members varies from five in Germany, to six members and two chair people in Sweden, to 12 members in the High Council on Climate Change in France, and 15 in the Finnish climate panel (including the chairperson).⁷¹ As a general rule, all advisory councils are made up of external experts who do not represent different interest groups. In fact, the **Irish** law includes a clause that requires Advisory Council members to disclose and excuse themselves from any conflicts of interest. Finland, Denmark and Germany emphasize the importance of diversity in academic and research background; and in the case of **Denmark**, the scope of expertise has been actively expanded over the old law to include members with a background in behavioural science.

Members are nominated by the executive branch of government in most countries studied—either by the government (i.e., Finland, Germany, Ireland and Sweden) or by different national authorities (i.e., UK). The **UK** climate law, in particular, names experience and expertise as the two main criteria for council member selection. It is worth noting that the **Irish** Climate Change Act stipulates that four council members should be public officials automatically appointed as per their office.⁷² Since the 2019 revision of its national climate law, the **Danish** expert council (established originally through the 2014 law) is unique for selecting its own members (which are then appointed by the Ministry).

In addition, the Irish and UK laws also state reasons for dismissing members. As a rule, members are appointed for four or five years, and can be reappointed for one additional term. In Sweden the term of office is in principle limited to three years (with a two-year extension option) and six years for the presidency.

Funding and resources

The financial and human resources available to each advisory council also differ from one country to the next. The **UK** Committee on Climate Change, for example, is a public institution with its own budget and a secretariat with approximately 30 staff members. In Denmark and Sweden, the respective expert committees are also supported by a secretariat created expressly for the advisory body, while in Ireland the Environmental Protection Agency (EPA) performs the tasks of a secretariat. In **France**, the members of the previous Expert Committee on Energy Transition performed their duties free of charge and did not have access to a secretariat. This has changed with the establishment of the High Council for Climate Change, which not only has its own secretariat, but also its own budget, for example for commissioning external studies. The staff size of the secretariats in Finland and Sweden is smaller, which suggests fewer resources compared to the UK, for instance.⁷³

Facilitating public dialogue

In some countries—most prominently in Denmark and to a lesser extent in Ireland, UK and Sweden—the independent panel of experts is also encouraged to contribute to the public debate or serve as a platform for facilitated discussion. For example, the **Danish** draft climate law calls for the creation of a “Climate Dialogue Forum” for outreach and debate in connection with the national Climate Council’s tasks. Even when public engagement is not mandated or even implied by the framework law, it is likely that advisory bodies, by the nature of their work, help to catalyse public debate. Indeed, an external evaluation carried out on the work of the **Finnish** Climate Panel’s first three years of operation found that its activities (despite being low on own resources) had a significant impact on public and political debate through the Panel’s presence and scientific publications.⁷⁴ In this way advisory bodies can provide scientific and independent oversight as well as a bridge between policy makers and civil society, acting as a linchpin and centre of gravity for awareness-raising and enhancing public debate.



5.7 WHO TO INVOLVE? PUBLIC PARTICIPATION

Existing legislation establishes standards

The magnitude of change required in working towards net-zero emissions economies affects all parts of society, and the transformation will only be achievable with support from citizens. It is therefore of essential importance to involve them in the transition process, through organised stakeholder groups as well as through public outreach and consultation.

A range of existing legal provisions govern public participation in the EU. All EU Member States and the EU itself are Parties to the “Aarhus Convention.”⁷⁵ This international treaty needs to be implemented at both EU and national level; and accordingly, there is corresponding EU legislation.⁷⁶ Member States also have their own respective laws and practices. Specifically on climate policies and related instruments, the EU Governance Regulation includes provisions on public consultation (Article 10) concerning long-term strategies and NECPs.⁷⁷ However, experience from the implementation of the Regulation thus far, for example the process of drafting NECPs, has shown that in practice public participation is handled quite differently between countries and is not guaranteed.⁷⁸ The Governance Regulation requires that all Member States establish so-called “multi-level climate and energy dialogues” (Article 11) to discuss NECPs and long-term strategies—but there are no further specifics to define these. There is therefore arguably space for implementation at national level that needs to be filled.

Public participation options left vague

This overall situation is reflected in the ways the climate laws treat public participation and general stakeholder engagement, which shows a great diversity. While most laws mention public participation in some form, some do so only in vague terms or imply it as a guiding principle for climate policy making more generally, failing to include details on frequency or when participation will occur in the policy process. Others emphasise the role of the independent advisory board as a forum for enabling public comment and dialogue or discussion of the issue more broadly. A minority of climate protection laws require public engagement as an element of the policy-making process itself or set up dedicated mechanisms. However, several EU Member States have separately established stakeholder engagement bodies in operation for several years already. These are not always referenced in the framework laws. Some governments are also trying out new ways to engage a broader public. To complement the picture that emerges from the treatment of public participation in the laws, this chapter adds further information on some of those bodies and initiatives.

KEY INSIGHTS

- **Three degrees of public participation:** The climate laws discussed in this report fall into three groups regarding citizen engagement: (1) no or only vague mention of public participation (Netherlands, Sweden), (2) public participation relegated as a task for the external expert council (Denmark and UK), (3) avenues for public participation built into climate policy making and thereby required of the responsible governmental agency or body (Finland, France, Germany, Ireland, Spain).
- **Missing details:** Even for those laws which do require public consultation, there is little to no information on the scope and timing for these processes written into the laws themselves. Those countries that do not mention it may rely on existing laws that regulate such matters.
- **Dedicated mechanism:** Several countries have established dedicated bodies or platforms to further institutionalise stakeholder engagement (Denmark, France, Germany, Netherlands, Spain) although not all laws mention them explicitly.

The climate law in the **Netherlands** has an entire section dedicated to “participation” but does not specify relevant parties or mention the general public, and as such should be understood as a guiding principle. Despite this, there is a strong tradition of stakeholder participation in policy-making, particularly climate adaptation, in the Netherlands (see below). There is no mention of public participation in the Swedish climate law; indeed, citizen and stakeholder engagement seem to be relegated entirely to the external advisory body. The **Swedish** Climate Council is obliged to contribute to a social discussion on climate policy, albeit should refrain from clear specifications about the way in which climate policies and measures should be enacted. The **UK** Climate Act is similar—there is no substantial mention of public engagement, but the Climate Change Committee is required to publish its recommendations and Article 39.4 obliges the Committee to see public participation as integral to its mandate. It is evident that the Committee views outreach as one of its key priorities.⁷⁹

Four laws—those in Finland, France, Germany and Ireland—integrate citizen and stakeholder engagement in a more concrete manner in the law. All four framework laws stipulate some form of direct public comment and consultation in connection with climate policy-making. In **Finland**, all medium- and long-term draft plans must be made available to the public for comment prior to their adoption; statements must be received from key stakeholders on the draft versions, and the law also requires that the public be informed on the outcome of monitoring and reporting. **Germany** takes a similar approach, building in time for public consultation for each climate program. In **Ireland**, public consultation is sought before each submission of the national mitigation plan, national adaptation framework and sectoral adaptation plan. The **French** legislation also mandates consultation before the main strategic and policy plans are submitted to Parliament.

Arguably the most advanced in terms of public engagement, the **Spanish** draft law dedicates an article to public participation in climate policy. While it does not yet provide details about the consultation process, it does contain a particularly comprehensive list of instances in which public consultation should take place, including for “plans, programmes, strategies, instruments and provisions of a general nature” (Article 32.1). Still, it remains to be seen to what extent this encompassing system for public engagement will be formalised in the final version of the law.

Despite differences in the role of direct public participation, all laws implicitly require the publication of climate reporting either because it is submitted to Parliament, or falls, at least partially, under the mandate of the advisory body. Ireland, in particular, stipulates that reports must be published within 30 days of being submitted to the Ministry.

Dedicated mechanisms for stakeholder engagement

Many countries have established dedicated fora for stakeholder engagement, which may or may not be directly referenced in their respective climate laws. While not an exhaustive list by any means, the examples below represent efforts on the part of governments to institutionalise stakeholder engagement within the climate planning or policy process through regular dialogue fora, a formal mandate or role as well as well-established linkages to governmental bodies. In two cases—Denmark and France—these are actually mentioned by name in the text of the climate law (or the agreed proposal in the former case).

The task description for the **Danish** Climate Council explicitly contains provisions for a contribution to the public debate, including the creation of a “Climate Dialogue Forum,” which convenes around the publication of key assessment reports by the Council and establishes a process for the submission of written comments. This independent body, composed of stakeholders from inter alia industry associations, companies, non-governmental organisations, municipalities and regions, enables the positions of the stakeholders to be included in the work of the Council.

Participatory processes for climate action in **France** are marked by a complicated structure of overlapping institutions that operate outside its national framework law.⁸⁰ Following a long history of national debate and experience with successful public engagement with climate policy-making, France's National Council for Ecological Transition (NCET) was established in 2012 to further institutionalize stakeholder participation in the policy-making process. Comprised of 50 members representing six stakeholder groups, the NCET is tasked with reviewing all French policy related to sustainability and is referenced in the legislation on several occasions. While there is little mention of public engagement in the law itself, it does stipulate that consultation must occur before the plan is submitted to parliament. France is also trying out other ways of engaging the public (see below) which are not referenced in the law itself.

Existing stakeholder fora outside of the laws

In several other countries, permanent stakeholder dialogue platforms dedicated to climate policy exist, but have not been referenced in the respective framework laws (e.g. the Spanish National Council on Climate Change (created 1998)⁸¹ or the German Climate Protection Action Alliance (created 2015)⁸²). Further research is required to evaluate why this is the case. Two distinct examples of successful stakeholder dialogues for climate policy are described in the box below, as showcases for potential application in other circumstances.

Another dedicated temporary forum of significant success was created in **Germany**, where a stakeholder commission was used to broker agreement on a potential plan for phasing out the country's remaining coal power and mining in a socially and therefore politically acceptable way. While deliberations took longer than initially foreseen, the grouping was able to reach a compromise, which received significant public attention.⁸³ The "coal commission" agreement provided the basis for a subsequent process of the government implementing the main elements in legal form.⁸⁴

The so-called "polder model" in the **Netherlands** which dates back to the 1950s, organises structured dialogues (also called "polders") on a large array of policy issues. Any given polder is comprised principally of stakeholder groups but draws its members broadly from Dutch society, and, despite retaining no legal authority, historical precedent provides the deliberative model with a high level of legitimacy.⁸⁵ For example, in the drafting of the Dutch National Climate Agreement, a Climate Council was convened with the objective of delivering carbon dioxide emission reductions of 49 percent by 2030 (using a 1990 baseline).⁸⁶ The Climate Council consisted of representatives from the Dutch Ministry of Economic Affairs and Climate, civil society organisations, business and local authorities and was organised around five sectoral roundtables (electricity, mobility, industry, built environment and agriculture and land use), each chaired by a different member of the council.⁸⁷ In the end, the final legislation did vary somewhat from the Council's recommendations; the government opted to impose a carbon tax on industry after it was determined that the industry stakeholders' proposal lacked teeth. Nevertheless, after delivering its report to parliament in December 2018, many of the Climate Council's recommendations made it into the final legislation.⁸⁸ Given the importance and tradition of such deliberative processes in Dutch society, it is likely that these institutions will be drawn upon again even if they are not mentioned directly in the Dutch climate law.

The success of the Dutch "polder model" in climate action demonstrates the importance of proactive stakeholder engagement from the start. Policies and policy goals that have pre-negotiated support from stakeholders are more likely to hold up and survive political shocks compared to those prescribed without transparency from governments. Indeed, when it comes to effective and ambitious climate policy, the importance of political buy-in from a wide cross section of society, including the general public, cannot be overstated.⁸⁹ And, as the recent convening of citizen engagement assemblies across Europe (e.g. in Ireland, France, and the UK—see separate box) suggests, governments have taken notice.⁹⁰

POWER TO THE PEOPLE: INNOVATIVE APPROACHES FOR CITIZEN ENGAGEMENT



CASE STUDY IRELAND: The Irish Citizens' Assembly was a dialogue and forum established in 2016 to consider a number of pressing political issues, one of these being climate change. Composed of one chairperson and 99 citizens selected randomly to ensure broad representation of Irish society, the assembly met over a series of weekends for expert presentations and facilitated discussion, after which they voted on proposed recommendations. Broad public consultation was conducted in parallel, and parts of the Assembly's deliberations could be attended by members of the general public. The Irish government was required to submit a response to the resulting resolutions through parliament, and in some cases has led to significant change, including on climate policy. Most notably, Ireland's complete reversal of its ban on abortion can be traced back to the work of the assembly.⁹¹

On climate change, the Citizens' Assembly drew up a list of 13 key proposals on climate policy synthesised in its third report.⁹² These included ensuring that climate action be at the centre of Irish policy-making through a new governmental architecture and increasing Ireland's carbon tax. A special parliamentary committee was established to consider the Assembly's resolution, which is seen to have paved the way for Ireland's "landmark" climate action plan and net-zero target announced in summer 2019.⁹³

CASE STUDY FRANCE: The French Citizens' Convention for Ecological Transition was established by President Macron by decree in April 2019. The first of its kind in the French political system, it was established partly in response to the "yellow vest" protests and outrage over the recent hike in fuel taxes (which was eventually rolled back), its organisation is inspired by the Citizens' Assembly in Ireland.⁹⁴ Comprised of 150 randomly chosen citizens as well as an expert group made up of climate and policy experts and public officials, the Convention has the unprecedented charge of making concrete legislative proposals towards "reducing greenhouse gas emissions by at least 40% by 2030, in a spirit of social justice".⁹⁵

The Convention's work is organised around several meetings (originally six) scheduled between October 2019 and April 2020 and is (at the time of writing this report) in the process of drafting policy proposals, which will then be submitted to the French parliament. While the first two meetings showed signs of positive progress, there was an immediate concern that the 18 days allotted for the work of the Convention would not be enough to provide substantive proposals.⁹⁶ Deemed a "democratic experiment," the success of the Convention in engendering true policy change and increasing public buy-in for President Macron's climate agenda remains to be seen.⁹⁷

This trend of the use of direct or participatory democracy in climate policy among European countries seems to be accelerating. In late 2019, drawing from both the French and Irish examples, the UK started to organise its own Citizens' Assembly on the matter of climate change at the behest of six parliamentary committees⁹⁸ and Spain made a corresponding announcement in January 2020.⁹⁹

5.8 FUTURE VISION? LONG-TERM GUIDANCE FOR NET-ZERO

A framework to achieve climate neutrality

In the context of this analysis, a central overarching purpose of national framework laws is to help steer governmental action (and through it that of many stakeholders) towards net-zero emissions. This is not a separate feature but a function of a combination of design elements. As stated in the introduction, this is a long-term task, one which needs to be started now in order to be completed in time. Currently, there are competing political definitions in the EU as to when this goal should be achieved. In December 2019 political agreement was reached on the goal of climate neutrality for the EU as a whole by 2050, but individual countries like Sweden and Finland aim for 2045 and 2035, respectively. Science also shows that the transformation does not end with neutrality, but must continue towards achieving net negative emissions thereafter. While this process will clearly span multiple electoral cycles and at least one human generation, it must be achieved in less than the life-span of most industrial installations or infrastructure—both of which are crucial for determining our emission profiles.

How do climate laws integrate the long-term dimension effectively?

Which features of a climate governance framework have the most impact on embedding long-term direction into the system? In this section, we use the following criteria to gauge the 2050 or long-term readiness of each climate law:

1. Is there a clear future objective to chart a course towards, i.e., a long-term target?
2. Does the law include iterative strategic planning? Since we do not yet precisely know what that future will look like, such iterations are needed to update assumptions regarding the overall path towards the goal as well as what needs to be achieved, by when, along the way.
3. Does information on pathways towards net-zero inform near- to mid-term policy-making: in other words, does the climate law explicitly require consideration of the long-term objective when it comes to deciding action now? Failure to make this connection will make future course corrections harder and costlier.
4. Are there effective mainstreaming provisions to require the integration of climate policy considerations into other policy areas and investment decisions? Existing policies and practices across all dimensions of government need to be coherent with the long-term climate policy direction.
5. Is the need for structural change and the government's intention to implement it signalled through specific sub-goals or individual policies directly included in the framework?

On each of these points, EU legislation has some bearing on how they manifest at the national level. Please see the next chapter for an overview of the relevant EU legislation.



KEY INSIGHTS

- **Pointing towards net-zero:** long term targets feature prominently in all laws, and some countries bolster this with interim targets and long-term strategies as central documents defining future actions.
- **2050 is being determined today:** most countries create at least an implicit connection to ensure that near-term policies are informed by the long-term objective. This can be significantly strengthened by explicit requirements and processes to ensure climate mainstreaming for governmental policy or financing (e.g. Finland, Sweden, France) and risk consideration for financial institutions (e.g. France, Spain).
- **Signalling structural change:** Some laws signal structural change in their name (France, Ireland, Spain) and some even include transformational policies directly in the legislation itself: Spain seeks to phase out most combustion engine sales by 2040 and wants to implement a Just Transition Strategy. France is phasing out coal by 2022 and offers proactive support for the affected workforce.

Targets for direction

As detailed in the respective section above, all of the laws analysed are oriented towards a long-term objective, even if it is set in a separate process (Sweden), or not provided in a quantitative manner (Ireland, prior to ongoing revision). Several laws make the long-term objective a clear guiding principle for the governance system as a whole, by giving it a prominent place in the law. This is very pronounced in **Sweden**, which introduces core principles in line with long-term climate protection and subjects all climate policy work by the government to them. This can also be argued to be the case in **Germany**, where the long-term dimension is most explicit in the opening Article on the purpose of the law, which should be interpreted to apply to all actions taken in its implementation.

Use of the long-term target to guide interim milestones is another way in which some laws seek to ensure that the future dimension is properly integrated, such as in the carbon budget approaches used in the **UK** and **France**, as well as for the **Danish** interim targets (which already have 70% in 2030 as a strong pointer for direction in the next 10 years). The same principle applies in **Sweden**, where interim targets need to serve the long-term objective. Any future update to the **Finnish** law that incorporates the new overall target of climate neutrality by 2035 will certainly by definition have a more transformational character.

Long-term strategy to plot a path

Several of the laws analysed have a dedicated long-term strategic planning component (**France, Spain, Finland, Ireland**), but others include only a passing reference (**Germany**) or equate their medium-term policy plans to the long term by ensuring that they make reference to the goal (**UK, Netherlands**). In **France** this long-term strategy is the central planning document, which makes a connection to the interim budgets and also analyses sector-specific contributions. The **Finnish** planning system also gives clear dominance to the long-term strategy, signalling its importance for deciding future policies. The **Spanish** draft law promises a 2040 interim target to be included in the National Decarbonisation Strategy, which would specify the path towards the long-term objective.

Integrating the long term into today's policies

The laws that include a long-term strategy, in particular, make the connection between planning and policies quite explicit (as described above). In the **Irish** case, in which strategic long-term planning and policy identification are contained in one document, the integration of the two dimensions is, in principle, ensured—or at least facilitated, with potential incoherence easier to identify.

For other laws, the long-term compatibility of the policies is only inscribed in an implicit fashion. The laws in the **Netherlands** and the **UK** specify that policy plans should be made with a view to meeting each country's respective 2050 target. The **Swedish** law follows the same intention for its policy action plans, albeit with rather general language. In **Germany**, each time the 2050 climate protection plan is updated, so are the related policy packages. This approach was not fully incorporated in the law, but can be counted as part of the governance system. The inclusion of interim targets (**Denmark, Spain, Sweden**) or rolling budgets (**France, UK**) helps to make alignment between the short- and long-term more explicit.

Mainstreaming

Another way of creating more climate policy impact are means of mainstreaming climate considerations into other policy areas, for which some laws have explicit provisions. The **Finnish** law states that climate plans “are to be taken into account” in relevant decisions and legislation in other policy fields. The **Swedish** law stipulates an alignment of climate policy and government budgets, while other laws actively link the governance processes to the annual budget (**France, Germany**). **Spain** sets aside a dedicated share of its budget for climate purposes in its draft law. France and Spain also oblige financial institutions to undertake climate risk assessments. The Spanish draft law also includes a dedicated article on education, which can be seen as another means of spreading awareness and building broader understanding and support for climate action.

Structural change

A small but not unimportant signal for change can be found in the names of some of the laws, such as the French Energy Transition Law (of 2015), the Irish Climate Action and Low Carbon Development Act and the Spanish draft for a Climate Action and Energy Transition Law. In a more substantial fashion, a small number of laws include specific policies that represent examples of structural change which needs to occur. In the **French** legislation, the CO₂ standards for thermal power plants effectively phase out coal-based electricity by 2022. The law also recognises that this will put people out of work and offers support for them. The **Spanish** draft law declares the intention to phase out the sale of new combustion engine cars, moving to zero-emission vehicles by 2040—again a specific shift to implement the net-zero economy. The question of whether it is, on balance, preferable to include such important—but potentially divisive—provisions in a framework law depends strongly on the respective national context.

The Spanish draft law is also the only one that establishes a dedicated mechanism for dealing with the social effects of the economic change overall. Spain wants to implement a Just Transition Strategy that explores how to make use of the opportunities provided by the innovation in the economy, while also proactively addressing those affected by change—including through concluding specific Just Transition Agreements with vulnerable regions. Such a forward-looking and socially inclusive approach has the potential to improve public acceptability and political feasibility of the transition, facilitating its realisation.

Sufficient transformative strength?

All laws analysed contain at least one or two elements that point towards the long-term transformation of society and economy (though note that the long-term focus was also a criterion for their selection for this report). As noted earlier, this is clearly more trackable in those countries that include interim targets or a process for setting them, such as the continuous evolving carbon budgets which make the path towards 2050 targets very explicit. The UK example, which has been in operation for over 10 years now, also shows that such a mechanism, implemented over time, can create broad acceptance of the concept of ever-lowering emissions.

The lack of dedicated long-term strategic planning as an integral part of the governance system (despite the fact that these do exist now in all EU Member States) is a concern for how strongly the path towards it guides policy-making now, which is crucial. Even where medium-term policy plans are meant to be geared towards the long-term goals, there is no immediate test for actual compatibility built in: the strength of the respective provisions will only show in their application. The way in which the implementation of EU legislation (which demands the coherence between 2030 policies in the NECPs and long-term strategies) will evolve will also be important in this context.

One important way in which transformational effect can be generated and sustained is through mainstreaming climate goal considerations into other policy areas, which is present in some laws but could be more pronounced and explicit. Especially the Spanish law contains innovative features in this regard, as do the French and Swedish legislation to some extent.



5.9 HIGHLIGHTS: GOOD PRACTICE EXAMPLES

The following table summarises insights from the previous sections and highlights good practice.

DESIGN ELEMENT	STATUS QUO AND GOOD PRACTICE EXAMPLES
WHAT? TARGETS	Long-term target Almost all laws build on quantitative targets and enshrine these in the laws (except Sweden, Ireland). The majority of the laws set net-zero emission targets in various forms.
	Interim targets The vast majority include interim targets, or a process for setting these. Innovative approach in the UK & France : rolling five-year carbon budgets, set 10-12 years in advance, with a view to 2050. Germany uses annual budgets for sectors up to 2030.
	Review mechanism Several countries include the option to review targets on the basis of better information (Spain, UK) and/or stricter EU or UN targets (Finland, Germany). Germany and Spain include an explicit “no backsliding” clause.
HOW? PLANNING	Long-term strategies Dedicated long-term strategy only fully included in half the laws (Finland, France, Ireland, Spain and referenced in Germany), reviewed every 5 years (10 in Finland). Ireland integrates long-term planning with policy identification in one document. Finland makes it the central document in its overall climate planning system, and lays out a clear overall structure. <i>LTS development an EU obligation: all laws should reference this and update regularly.</i>
	Regular process All laws include some form of regular policy development process, updated every 4-5 years, for a time horizon of the next 10-15 years—similar to the EU -based NECPs (which Spain wants to use explicitly for this purpose).
HOW? MEASURES	Specific policies Some countries include very specific instruments directly in the law – most prominently France’s carbon tax – or the more recent CO2 standard for thermal power plants, which implies a coal phase-out by 2022 (with support offered to affected workers). Spain aims to only allow new vehicles with zero emissions as of 2040.
	Main-streaming The Swedish climate act demands the alignment of climate policy and budgetary policy goals. The French and the draft Spanish law include reporting obligations for financial institutions on climate risk.
HOW WELL? PROGRESS MONITORING	Climate finance The French government is required to present an annual overview of available public and private climate finance alongside its draft budget proposal. Sweden and Germany also connect annual reporting to the draft budget. The draft Spanish law sets aside a dedicated share of its annual budget for climate purposes. Denmark and Spain are the only ones to also explicitly address the international climate policy dimension, including finance.
	Steady annual reports All countries establish annual reporting on progress, delivered in some cases by advisory bodies. These reports are made public in some form, most often via submission to parliament, which also creates an opportunity for public debate. In Denmark, France, Spain and the UK , the government is obliged to respond to these in public (via parliament). Finland includes several general monitoring provisions, including a check on how accurate the predictions on emission reduction effects of individual policies have turned out to be in reality.
	Action trigger Most laws foresee additional policy action in case of progress gaps (Denmark, Finland, Germany, the Netherlands and to some extent France), but others do not mention this specifically as mechanism. This is the essential step that concludes the policy learning cycle. In Denmark , the annual routine is particularly comprehensive, including historical data, forward projection and if need be additional policies, based also on independent advice.

WHO DOES WHAT?
INSTITUTIONAL ARRANGEMENTS

Specifying actors	Surprisingly, few laws include a clear internal coordination. Only a small group mention specifically how various ministries and agencies will be involved in the policy-proposal and policy-making process (Finland, Germany, Ireland —and France to a lesser extent). Some laws name single ministries as having overall responsibility for specific tasks, for example the preparation of policy plans (Netherlands, Spain and the UK). In the others, it is almost exclusively “the government” that is mentioned as the main actor.
Clear sectoral responsibility	Finland stands out as good practice example, with a dedicated article on internal organisation, specifying inputs from different ministries. Germany has the most elaborate mechanism for assigning responsibility to individual ministries, employing annual emission budgets for sectors. The laws in other Member States may need to be revised to ensure sectoral progress in the non-ETS sectors.
Involvement of Parliament	Some laws give the country’s legislative body the role of approving plans submitted by either the government or responsible ministry (Germany, the Netherlands and the UK). Most countries explicitly involve the parliament in discussing progress via reports submitted to it.

WHO TO INVOLVE? SCIENCE

Independent input	Essentially all climate governance systems use an independent scientific advisory body in some form (deviations: Netherlands uses an existing one, Sweden established its Council outside of the main law). They differ in many important ways, such as mandate and capacity. The UK’s Committee on Climate Change stands out in terms of overall size, but also reputation and general importance in the overall system. These independent bodies fulfil three main functions: monitoring and/or an advisory function and public engagement.
Capacity	In order to make the expert council functional, it is given access to a secretariat (Denmark, Germany, Ireland, Sweden and the UK), has its own budget (UK) or involves external expertise through stakeholder bodies (e.g. Denmark).
Effective role	The advisory bodies have different mandates, but three cases stand out due to their strong position in the process. In the UK and France , the advisory bodies are charged with producing independent annual reports that the government is then obliged to respond to. In Denmark , the government must also specifically take a position on recommendations by the Climate Council in each annual report it presents. A notable innovation in Germany is the expert council’s job to verify the underlying assumptions for policy impacts provided by sectoral ministries.

WHO TO INVOLVE? PUBLIC PARTICIPATION

Little detail	Finland, France, Germany, Ireland, and Spain mention explicit obligations and opportunities for public participation, Denmark and the UK make public engagement a task for their respective expert body, and several other laws do not mention public or stakeholder involvement explicitly (e.g. the Netherlands, Sweden), but these are part of their political culture nonetheless.
Specific platforms	Several countries have established dedicated bodies or platforms to further institutionalise stakeholder engagement (e.g. Denmark, France, Germany, the Netherlands, Spain) although most of these laws do not mention them explicitly.
Innovations	Several countries have tried to engage citizens in new ways, and outside of the mechanisms of the framework laws: Germany with the 2050 Climate Action Plan in 2015, Ireland through a Citizen Assembly in 2018 (which covered a range of topics, including climate) and France with its Citizens’ Convention for Ecological Transition, started in 2019.

TRANSFORMATION? LONG-TERM GUIDANCE

Targets and strategies	Long-term targets with deep emissions reductions feature prominently in all laws, and some countries bolster this with interim targets (or a dedicated process for continuously setting future ones (UK and France (using carbon budgets) and Denmark). Too few countries (Finland, France, Ireland, and to a lesser extent Germany), employ long-term strategies as central documents defining future actions, although these are mandated by EU law.
Policies for net-zero	Most countries create at least an implicit connection to ensure that policies are informed by the long-term objective. This can be significantly strengthened by climate mainstreaming for governmental policy or financing (e.g. Finland, Sweden, France) and risk consideration for financial institutions (e.g. France, Spain).
Structural change	Some laws signal structural change in their name (France, Ireland, Spain) and some even include transformational policies directly in the legislation itself: Spain seeks to phase out most combustion engine sales by 2040 and wants to implement a Just Transition Strategy. France is phasing out coal by 2022 and offers proactive support for the affected workforce.



A CLIMATE LAW FOR THE EU:

GAPS AND OPPORTUNITIES

Existing EU climate governance

Throughout the chapters on individual design elements, this report has spelled out the ways in which existing EU legislation influences what Member States can and must do with regard to national climate governance. The Governance Regulation establishes binding processes for developing NECPs and long-term strategies and extends regular reporting duties. The Climate Action Regulation (CAR) sets binding national emission reduction targets for non-ETS sectors for each Member State, and spells out the process for taking corrective action if national emissions are not on track. However, the EU acquis does not yet provide sufficient guidance to render national climate laws obsolete.

Moreover, there are gaps in the climate governance for the EU as a whole: a key reason why a proposal for an EU climate law is expected for March 2020 at the time of writing.¹⁰⁰

The following table provides a summary overview of the extent to which EU legislation covers the governance elements analysed in this report. It distinguishes between the obligations for Member States—and, in the right-hand column, what the legislation says about those same design elements at the EU level.

KEY INSIGHTS

- **Minimum standards across the EU:** EU legislation already contains a range of provisions that make key governance elements mandatory for all Member States (on strategic planning, policy development and monitoring), but these do not fulfil all functions a national system needs.
- **2030 compliance pressure:** EU legislation contains binding GHG targets for all Member States. Not meeting these through domestic action can become costly, as extra permits by other countries may have to be bought. This makes it even more important for governments to have an adequate governance system to ensure target achievement.
- **An EU climate law can take EU governance to the next level:** An EU climate law can fix key gaps in the current acquis, such as enshrining the long-term target, a mechanism for review and interim targets, a comprehensive carbon budget, regular updates on policy development and provisions for mainstreaming and public participation—as well as an independent advisory body.

Table 4: Governance elements covered by EU legislation for Member States and the EU

	MEMBER STATE LEVEL	EU LEVEL
Targets: long-term	Only implicit guidance: 2050 target is not differentiated by Member State and not legally binding.	European Council agreed on new target of climate neutrality by 2050 (December 2019) - but it is not enshrined in law yet.
Targets: interim	CAR sets binding non-ETS targets for 2030, but Member States are free to go beyond those. Non-GHG targets decided and communicated via NECPs.	2030 -40% target: increase under debate. No 2040 figure (but sectoral legislation (EU ETS) points beyond 2030).
Targets: review mechanism	Binding Member State specific targets are dependent on overall EU targets, see right-hand column => Member States have the option to set more ambitious national targets by themselves.	Reviews are specific to individual instruments (timing references Paris Agreements) but no formal process for how to set targets or review them. Existing practice on target setting gives a strong role to the European Council (unanimity).
Target: use of emission budgets	National budgets are defined up to 2021-2030 for non-ETS. Budget for the EU ETS as a whole, but not country-specific.	“Bottom-up” ten-year budget to 2030 (EU ETS + Non-ETS). No science-devised 2050 budget, no process of regularly setting interim budgets as in the UK, France.
Strategic planning	Every Member State obliged to submit a national long-term strategy by 1.1.2020—and then every 10 years thereafter.	European Commission had to develop a proposal before April 2019 (which it did): no review or update foreseen.
Implementing measures	Mandatory to produce detailed mid-term (2030) NECPs with policies, possible update after 5 years. Corrective action plans must be drawn up if a gap materialises on non-ETS targets.	No regular, standardised process for the development of specific EU level policies (no EU NECP equivalent). However, main climate instruments have individual review clauses (linked to Paris cycle).
Institutional arrangements or sectoral responsibility	Very few specifications from EU level (other than ETS/Non-ETS differentiation and some specific interactions between Member States and the European Commission). No explicit requirements for cross-department coordination.	Few climate specific arrangements fixed: individual duties on the European Commission as a whole for the EU (e.g. EU level progress reports) and there is the Climate and Energy Committee (for Member States). Commission and Parliament can decide their own internal set-ups and dossier assignments. No explicit requirements for cross-department coordination.
Reporting	Clear mandatory procedures for annual GHG data, biannual reporting on policies and measures, projected impacts, NECP progress.	Annual collective GHG data sent to UNFCCC. Annual State of the Energy Union report. Several regular progress reports.
External expert institution	No specifications (other than the EEA doing quality assurance and control on reporting)	No independent advisory body specific to climate at EU level. EEA provides expert inputs. European Commission produces most analysis itself - with contracted inputs from external research organisations.
Public participation	Mandatory national multi-level stakeholder dialogues required by Governance Regulation + Aarhus Convention provisions. But practice shows shortcomings. ¹⁰¹	Aarhus and related EU legislation on transparency and public participation provide minimum standards—but there is no stakeholder forum specific to climate.

Source: Ecologic Institute overview (prepared for Climate Recon 2050 workshop in October 2019)

Gaps in the existing EU legislations

The analysis of the *acquis* for each design element shows the following gaps for the two levels:

WHAT? Targets: The long-term target for the EU is currently not included in EU law — a gap that the upcoming proposal for an EU climate law is meant to address. Interim targets beyond 2030 are also not included for the EU, and there is no explicit process inscribed in law for regular target setting or review (although this is a key procedural feature of the Paris Agreement). There is no UK style budget approach in place for interim targets—but also no overall carbon budget defined towards 2050—an issue that the European Parliament had sought to see addressed in the Governance Regulation.¹⁰² The budget that is indirectly created for the target measurement periods (2013-2020 or 2021-2030) is the result of a complex combination of the EU ETS emissions cap and the sum of all Member State non-ETS allocations—and a number that is given no attention as such. Meanwhile no single EU legislation covers the setting, progress measurement and achievement of either the EU's, or Member States' overall greenhouse gas targets, not least because the target is split between ETS and non-ETS emissions. The respective laws each have their own review processes, although they are closely aligned. An EU climate law should fill this gap in the governance system.¹⁰³

HOW? Strategic planning: The Governance Regulation makes long-term strategies mandatory for all countries, and mentions updates. However for the EU level, there is no updating or review process envisioned at all, to follow up on the exercise carried out in 2018. This is a shortcoming that the EU climate law must address. Planning towards net-zero is not a one-off exercise but must be continuous.

HOW? Measures: The NECPs are the vehicle that all Member States could use as a process for national policy development rather than having their own separate processes, as is being done in the Spanish draft law. Not aligning national policy development with the NECP will certainly create at least inefficiencies through duplication, but could also produce inconsistencies. The EU level has no equivalent planning process with regular updates on policy development that is linked to progress monitoring. The EU climate law could establish a regular cycle for a review of key common and coordinated EU policies relevant to the climate targets and their adequacy, potentially informed by the assessment of an independent advisory committee (see below). The EU climate law could also use the example of some of the national laws and integrate climate policy with economic policy and related processes (e.g. integrate climate explicitly in the European Semester). The new law could also establish the climate target's overarching objectives that all policy must be aligned with, including the EU budget (mainstreaming).¹⁰⁴

HOW WELL? Monitoring: The EU provisions are strong in terms of providing quantitative transparency over national progress towards non-ETS targets—and for the EU emissions as a whole. However, this does not obviate the need for attention to progress monitoring at the national level, where policy-makers and stakeholders need regular updates and opportunities for a more granular national progress check to determine whether additional action is needed. Where provision for these checks are absent, EU legislation can step in, such as through the Corrective Action Plans.

WHO DOES WHAT? Institutional set-up: The EU *acquis* provides few specifics and EU rules are arguably not well-suited to efficiently providing guidance for national governments, who have their own distinct existing rules and institutions. However, an EU climate law could provide improvements for the EU level, for example by strengthening the involvement of the European Parliament in overseeing progress, by establishing a clear process for future target-setting, and by providing for the involvement of sectoral Directorate-Generals (DGs) and stakeholders. Establishing responsibility for the European Green Deal (as the overarching implementation plan for climate neutrality) at the level of a Commission Vice-President, as set out through the Mission Letter for Commissioner Timmermans in 2019, gives the issue prominence in the Commission's set-up and should ensure a good degree of follow-through by other DGs. A dedicated and more permanent institutional arrangement (beyond the current Commission) specifically for the achievement of the climate neutrality objective as an overarching principle and goal could make EU policy-making more effective in achieving progress.

WHO TO INVOLVE? Independent advice: EU law does not prescribe the setting up of independent advisory bodies at national level, but almost all laws analysed in this report have chosen to use one. This shows that many Member States see a strong added value in having an independent assessment, one that the EU could copy to provide greater transparency and an enhanced ability to steer policies onto the right course. Such a body does not need to replace the role of the European Commission: its mandate can be to analyse, assess and advise in an independent and complementary manner as part of a new EU climate governance system for climate neutrality.

WHO TO INVOLVE? Public participation: In principle, EU legislation has covered public participation needs, but reports from national case studies, e.g. from the NECP process, show clear shortcomings and potential deviation from Aarhus Convention obligations. Stakeholder involvement mechanisms could be strengthened at the national level, and a dedicated, more permanent set-up for climate policy deployed at EU level.¹⁰⁵

Steering EU policy towards climate neutrality

So how do these gaps affect the strength of the long-term signal towards net-zero in EU climate governance? As described in the previous chapter, the strength is determined, inter alia, by several features, including the ways in which targets and strategic planning influence medium-term measures, the degree of mainstreaming and signals for structural change. For all of these, the survey of the existing national climate laws has already provided good practice examples, which could serve to inform the design of an EU climate law.

In this context, the new long-term objective of climate neutrality by 2050 is in line with the majority of Member States analysed in this report who are setting similar targets, signalling a clear direction of travel towards net-zero emissions, which should now be enshrined in law. A specific interim target beyond 2030 or a clear process for setting such a target should also be included. A continuous carbon budget approach such as used in the UK could serve this purpose, and an ex ante decision on a remaining carbon budget for the EU would be an even stronger indicator for change (also as a complement, not substitute, for specific interim targets).

As with national climate laws, the primary objective of this new EU law must be to ensure the consistency of all European policies with the long-term climate neutrality objective, based on a sophisticated understanding of the structural pathways towards net-zero—and eventually net negative—emissions. The lack of periodic updating for the EU long-term strategy is clearly a noticeable gap in this context, to be remedied in the future framework. Interim targets and repeated future planning would also strengthen the 2050 dimension in updates to NECPs (making national policies more long-term focused). It would also inform appropriate amendments to the main EU instruments, making concrete EU measures more compatible with net-zero. Institutional arrangements to facilitate this would also help, including cross-sectoral fora and an independent body to audit or review relevant instruments.

Explicit and systematic mainstreaming of climate considerations into other policy areas—as is proposed, for example, in the concept of the European Green Deal—is another, complementary and powerful way to rewire EU policy towards net-zero emissions. An EU climate law could also establish overarching guidance regarding future policy-making processes, including net-zero compatibility as a criterion in impact assessments, or establishing stronger rules for the climate impacts of EU spending.

Furthermore, additional signals for structural change could be established at EU level that would have an impact, and perhaps provide inspiration for Member States. Arguably, some of these already exist, for example through initiatives such as the Coal Transitions Regions Platform on the one hand or the European Battery Alliance on the other. The development of further dedicated sectoral initiatives could be a requirement that is included in a European Climate Law. Finally, this set of signals for structural change could be complemented with a show of commitment from the European institutions, akin to the obligation for a climate neutral administration in the German climate law: showing that “Brussels” too is going climate neutral in its activities.

By taking a cue from the existing good practice in Member States, the EU climate law could provide a robust framework for moving towards climate neutrality.



ANNEX



ANNEX I: LIST OF CLIMATE LAWS WITH ONLINE REFERENCES AND FULL NAMES

COUNTRY	TITLE	ORIGINAL DATE OF ADOPTION	MAJOR REVISIONS	DATE OF REVISIONS	CITATION AND LINK (ACCESSED 22 JANUARY 2020)
UK	Climate Change Act 2008 (c 27)	November 2008	The Climate Change Act 2008 (2050 Target Amendment) Order 2019 No. 1056	July 2019	http://www.legislation.gov.uk/ukpga/2008/27/contents/enacted Revision: http://www.legislation.gov.uk/ukpga/2008/27/contents
Denmark	Act on the Climate Council, climate policy statement and setting national climate objectives (Lov om Klimarådet, klimapolitisk redegørelse og fastsættelse af nationale klimamålsætninger)	June 2014	Political agreement on a new climate law (Aftale om klimalov) Proposed climate law (consultation draft) (Forslag til Lov om klima)	December 2019 January 2020	https://www.ft.dk/ripdf/samling/20131/lovforslag/l161/20131_l161_som_vedtaget.pdf 2019 Political agreement on a new climate law: https://kefm.dk/media/12965/af-tale-om-klimalov-af-6-december-2019.pdf 2020 Proposed climate law: https://hoeringsportalen.dk/Hearing/Details/63634
Finland	National Climate Law (Kansallinen ilmastolaki)	June 2015			https://www.finlex.fi/fi/laki/alkup/2015/20150609
France	Energy Transition Green Growth Act (Loi de transition énergétique pour la croissance verte)	August 2015	LAW n° 2019-1147 of 8 November 2019 relating to energy and climate (LOI n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte)	September 2019	https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000031044385&categorieLien=id Revision: https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000031044385
Ireland	Climate Action and Low Carbon Development Act	December 2015	DRAFT Climate Action (Amendment) Bill 2019 (not considered in this report)	January 2020	http://www.irishstatutebook.ie/eli/2015/act/46/enacted/en/pdf Amendment Bill: https://dcae.gov.ie/en-ie/news-and-media/press-releases/Documents/1020/Heads%20of%20Climate%20Amendment%20Bill.pdf
Sweden	Climate Law (Klimat Lag)	June 2017			https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattnings-samling/klimatlag-2017720_sfs-2017-720
Netherlands	Climate Act (Klimaatwet)	July 2019			https://wetten.overheid.nl/BWBR0042394/2020-01-01#other-sites
Germany	Climate Protection Law (Klimaschutzgesetz)	December 2019			http://www.bgbl.de/xaver/bgbl/start.xav?startbk=Bundesanzeiger_BGBL&jumpTo=bgbl119s2513.pdf
Spain	Climate Change and Energy Transition Law (Ley de Cambio Climático y Transición Energética)	Drafts: February 2019 & June 2019			Draft for public consultation (February 2019): https://www.miteco.gob.es/es/cambio-climatico/participacion-publica/1an-teproyectoleyccyte_tcm30-487336.pdf

ANNEX II: COMPARATIVE OVERVIEW PER DESIGN ELEMENT

Note: Unless otherwise stated all quantitative targets have a 1990 baseline.

COUNTRY	UNITED KINGDOM	FINLAND	FRANCE	IRELAND
TITLE	Climate Change Act	Kansallinen ilmastolaki	Loi de transition énergétique pour la croissance verte	Climate Action and Low Carbon Development Act
YEAR	2008	2015	2015	2015
STATUS	revised in 2019	target updated (needs revision)	revised in 2019	significant amendment expected 2020
Long-term	-100% by 2050	-80% by 2050	Carbon neutral by 2050	Qualitative target for 2050
			"factor of six reduction" by 2050 (>-83.3%)	
Interim		Not mentioned in law (new): Carbon neutral by 2035	-40% by 2030	
TARGETS	Process for target setting/revision	Via rolling emission budgets - every five years Process for long-term target revision	Mandatory EU targets take precedence Target to be reviewed (no specific timing)	Via rolling emission budgets - every five years
	Budget approach	Five-year emissions budgets, defined 12 years in advance		Five-year emissions budgets, defined 15 years in advance
	Sectoral/additional targets			Energy: RES, EE, fossil fuel, nuclear share, hydrogen, etc.
PLANNING	No separate long-term strategic planning level included in law, but integrated with policy plan which should reflect long-term target Not mentioned in law: In practice, the 2018 measures plan "Strategy for Clean Growth" including paths up to 2050	National climate "planning system" requires creation of long-term climate plan at least every 10 years Developed by the Ministry of Employment and the Economy; adopted by government To include key policy measures	National low carbon strategy Connection with budget periods, updates every five years Adopted per decree Involvement of the High Council Connected to multi-annual planning in energy sector	Long-term planning and medium-term measures integrated - but long-term target unspecific (unclear pathway) Not mentioned in law: New act to include LTS with five-year updates
	Medum and short-term action planning	Sector-specific "proposals and policies" designed for each successive emission budget - and towards 2050 Every five years for budget period in 10 years Developed by Secretary of State Submitted to Parliament for approval	Medium-term plan for climate policy Every four years or once per election cycle Developed by the Ministry of Environment; approved by government Includes action plan with measures for non-ETS sectors	Multiannual Energy Policy Programme looks 10-15 years ahead Every five years Low on policy detail Several specific measures in the laws themselves
MEASURES			Risk reporting obligation for financial sector Dedicated report on climate finance availability and needs attached to budget draft every year	National mitigation plan At least every five years Developed by Minister Approved by government Publication of draft for comment
Main-streaming, finance & flexibilities				

SWEDEN	NETHERLANDS	GERMANY	DENMARK	SPAIN
Klimat Lag	Klimaatwet	Klimaschutzgesetz	Forslag til Lov om klima	Ley de Cambio Climático y Transición Energética
2017	2019	2019	2020	2020 (expected)
no foreseeable changes	adopted in July 2019	entry into force in December 2019	proposed new law January 2020 - previous law 2014	unreleased draft from June 2019.
Not mentioned in law: Climate neutral by 2045	-95% by 2050	GHG neutral by 2050	Climate neutral by 2050	at least -90% by 2050 Not mentioned in draft (new target): Climate neutral by 2050
Not mentioned in law: -63% by 2030 -75% by 2040	-49% by 2030	-55% by 2030	-70% by 2030	at least -20% by 2030
		Process for target revision - linked to EU or UN obligations No backsliding	Interim targets with 10-year perspective set every five years Process for interim target revision	Process for target revision, with specific criteria No backsliding
		Sector-specific annual budgets to 2030 - option to extend this approach		NECPs “may” use five-year carbon budgets in addition to national targets
	Energy: carbon-neutral electricity production by 2050	Climate-neutral government activity by 2030		Energy: RES, EE Qualitative targets for transport and buildings
No separate strategic planning level included in law Law stipulates short-term planning should reflect long-term target	No separate strategic planning level included in law	Law references Germany's 2050 plan and updates to it but does not specify details or timing Expert council provides opinion on underlying assumptions for 2050 plan update Not mentioned in law: 2050 plan to be updated every five years, in line with Paris cycle	No separate strategic planning level included in law	Decarbonisation Strategy for 2050 Reviewed every five years Includes intermediate objective for 2040 Established by decree, proposal from the Ministry for the Ecological Transition, after consultation with the National Climate Council
Climate policy action plan Every four years Developed by the government, submitted to Parliament (Riksdag) New policies can also be in annual climate programmes	National climate plan Every five years with ten-year perspective Developed by Ministry of Economic Affairs and Climate	Climate action programmes After every update of the 2050 climate plan (should be every five years) Additional ad hoc packages for sectors if a gap is identified	Climate action plans Every five years (ten-year perspective) Annual climate program includes policies and measures if deemed necessary	Strong focus on NECP process - law lays out what should be in each integrated plan Specific measures for energy efficiency, transportation in large municipalities and zero emission vehicles by 2040
Requires alignment of climate and budgetary policy Annual progress monitoring and reporting submitted with budget		Some data reporting linked to draft budget Green procurement obligation on government	Global strategy to consider also finance Avoid use of offsets as a guiding principle - measures must lead to “real domestic reductions”	Risk reporting obligation for financial sector Provisions for climate-friendly procurement Share of national budget set aside for climate International Climate Finance Strategy

COUNTRY	UNITED KINGDOM	FINLAND	FRANCE	IRELAND
Organisational setup	<p>Secretary of State responsible for government departments</p> <p>Department for Business, Energy and Industrial Strategy (BEIS) responsible for 2050 targets and Minister is responsible overall for carbon budgets, consult with CCC</p> <p>Parliament votes on budget proposals</p> <p>No mention of sectoral division of responsibility</p>	<p>Long-term plan developed by the Ministry of Employment and the Economy; adopted by government</p> <p>Medium-term plan developed by the Ministry of Environment; adopted by government</p> <p>Government submits medium- and long-term strategies to parliament</p> <p>Government amends plans</p>	<p>Mentions the government as responsible for most climate governance tasks, without further breakdown</p> <p>Mentions variety of ministries and governmental agencies responsible for tasks in implementing individual policy elements</p>	<p>Ministry for the Environment, Community and Local Government overall responsible for climate plan submits to government for approval</p> <p>Government “may” consult Advisory Council</p> <p>Ministry “shall” consult Advisory Council</p> <p>All ministries submit to Government</p> <p>Government approves changes</p>
Role of parliament	Active role – receives plans and/or reports, adopts budget proposals	Passive role – receives plans and/or reports	Active role – receives plans and/or reports, engages in law adoption (energy planning, budgets)	Passive role – receives plans and/or reports
Sectoral division of responsibilities	No governmental coordination mechanism or sectoral responsibility mentioned	Ministries responsible for sub-sections of climate change policy plans (and implementation), provide progress reporting for their respective administrative branches for the annual report	No governmental coordination mechanism or sectoral responsibility mentioned Low carbon strategy breaks budgets down into indicative sector shares	Respective ministries provide sectoral mitigation measures to Ministry No central coordination mechanism mentioned
PROGRESS MONITORING	<p>Annual progress monitoring report by scientific advisory group (Climate Change Committee, CCC)</p> <p>CCC report submitted to Parliament; Secretary of State must submit response and own report to Parliament</p> <p>Law outlines required contents of CCC report</p>	<p>Law stipulates generally that the government shall monitor implementation and sufficiency of climate policy plans</p> <p>Annual progress monitoring report by the government submitted to parliament</p> <p>Biennial implementation report including evaluation of policies and measures submitted to parliament</p>	<p>Annual report by government in connection with draft budget</p> <p>Annual report by the High Council for Climate to which government must respond</p> <p>Commentary every five years by High Council for Climate</p>	<p>Annual report “transition statement” by the government, including sectoral breakout</p> <p>Annual report by Advisory Council</p> <p>Advisory Council may at every time it finds appropriate or necessary conduct a “periodic review”</p> <p>Law outlines required contents of Advisory Council report and government “transition statement”</p>
SCIENTIFIC ADVICE	<p>Climate Change Committee (CCC)</p> <p>Eight members</p> <p>Appointed by national authorities</p> <p>Secretariat</p> <p>Own Budget</p> <p>Monitoring and advisory roles</p> <p>Committee is encouraged to involve public</p> <p>Secretary of State must respond to CCC (and submit this to Parliament)</p> <p>Secretary of State must consult CCC before changing 2050 target</p>	<p>Climate Panel</p> <p>14 members and chair</p> <p>Secretariat of two</p> <p>Information procurement</p> <p>Monitoring and advisory roles</p> <p>Provides statement on draft plans</p> <p>Tasks and composition by government decree</p>	<p>High Council for Climate Change</p> <p>Chair plus twelve members</p> <p>Secretariat</p> <p>Monitoring and advisory roles</p> <p>Involvement of other bodies, such as the National Council for Ecological Transition</p>	<p>Climate Change Advisory Council</p> <p>Chair plus 8-10 members</p> <p>Four members are public officials</p> <p>Appointed by government on nomination by Minister</p> <p>Discharge possible</p> <p>EPA as secretariat</p> <p>Monitoring and advisory roles</p> <p>Government and Ministry must take into account Advisory Council recommendations</p>
PUBLIC PARTICIPATION	<p>No specific mention of public participation in law</p> <p>Climate Change Committee is encouraged to consult the public and is required to have diverse membership</p>	<p>Enhancing public engagement is a guiding principle of the law</p> <p>All medium- and long-term plans must be made available to the public for comment</p> <p>Public is also informed regarding monitoring</p>	<p>Public consultation on draft strategies and laws</p> <p>Stakeholder body in place, referenced in the law</p>	<p>Public consultation sought before submission of the national mitigation plan, national adaptation framework and sectoral adaptation plan</p>
TRANSFORMATIONAL STRENGTH	<p>2050 target is what guides setting of interim budgets, which informs policies</p> <p>2050 target increased to -100%</p> <p>Budget approach: continuous interim targets</p> <p>No separate 2050 strategy - integrated into policy plans</p>	<p>Clear hierarchy for long-term as guiding element</p> <p>2050 mentioned as goal of the planning system, which is core of the law</p> <p>Long-term plan is first in the order/hierarchy of the three types of plans</p> <p>Hierarchy visible also in that medium-term plan is to present (non-ETS) policies needed in line with 2050 plan</p>	<p>2050 target should guides setting of interim budgets - not as clear as in the UK</p> <p>2050 target increased</p> <p>Budget approach: continuous interim targets</p> <p>Dedicated 2050 strategy - link to policy vague</p> <p>Some mainstreaming</p> <p>Several structural change policies included (coal phase-out)</p>	<p>Only a qualitative 2050 objective, no specification</p> <p>Long-term planning fully integrated with policy plan</p>

SWEDEN	NETHERLANDS	GERMANY	DENMARK	SPAIN
<p>Government responsible for developing and implementing climate action plan that it submits to Parliament (Riksdag) for approval</p> <p>Not mentioned in law: Swedish EPA supports development of four-year climate action plans</p>	<p>Minister of Economic Affairs and Climate has overarching responsibility</p> <p>Determines the climate plan with the opinion of the Council of Ministers once it has been submitted to Chambers of the States General</p> <p>Can amend plan in accordance with the Council of Ministers and both Chambers of the States General</p>	<p>Relevant ministries all contribute sector-specific policies, responsible for emissions</p> <p>Submits annual emissions report to Parliament</p> <p>Federal Environmental Agency tracks and submits emissions data</p> <p>Not mentioned in law: "climate cabinet" in place in 2019</p>	<p>Minister for Climate, Energy and Utilities mentioned as single responsible ministry: sets interim targets, establishes climate action plan, prepares annual climate programme</p> <p>Annual climate program submitted to parliament (Folketing)</p> <p>Danish Meteorological Institute provides climate science support to Minister</p>	<p>Government approves strategies and plans at the proposal of the Ministry, after consultation with the National Climate Council</p> <p>Government reviews target percentages by 2025, after consultation with the National Climate Council</p> <p>National climate council consults on all matters and designates members of Climate Change and Energy Transition Committee</p> <p>Parliament receives reports</p>
<p>Active role: Parliament establishes reduction targets and approves climate plans</p>	<p>Passive role – receives plans and/or reports</p>	<p>Active role: has a say on changing targets and policy plans, may ask opinion of expert council</p>	<p>Passive role – receives plans and/or reports</p>	<p>Passive role – receives plans and/or reports</p>
<p>No governmental coordination mechanism or sectoral responsibility mentioned in the law</p>	<p>Not mentioned in law: Separate sector-specific implementing committees for implementation of the National Climate Agreement will be set up under the supervision of the relevant Ministers</p>	<p>Dedicated mechanism to assign sectoral emission responsibility to respective ministry</p> <p>No central coordination mechanism mentioned</p>	<p>No governmental coordination mechanism or sectoral responsibility mentioned</p>	<p>Mentions other ministries but no clear sector specific obligations established</p> <p>No central coordination mechanism mentioned</p>
<p>Annual report by the government</p> <p>Submission with draft budget</p> <p>Climate action plan every four years also includes progress monitoring of measures taken and projected impact of future measures</p> <p>Not mentioned in law (separate decree): Climate Policy Council submits annual progress monitoring report and assessment of each climate action plan to government</p>	<p>Annual "exploratory report" by scientific advisory body (Netherlands Environmental Assessment Agency) submitted to Ministry</p> <p>Biennial progress monitoring report by Ministry (implied) - may or may not trigger a review</p>	<p>Annual progress monitoring report by government + report on data re progress alongside budget</p> <p>Biennial report on emissions projections by government submitted to parliament</p> <p>Federal Environmental Agency prepares annual report on emissions, data is assessed by advisory body (expert council)</p>	<p>Annual climate program includes performance assessment and emissions inventory</p> <p>Climate policy progress evaluated by Climate Council with its annual recommendations</p> <p>Not mentioned in law (in explanatory comments): Annual climate status and projections by Danish Energy Agency</p>	<p>Progress monitoring reports on NECP prepared and submitted "periodically" by Ministry</p> <p>Annual progress monitoring report by Committee sent to government and congress</p>
<p>Not mentioned in law (separate decree): Climate Policy Council</p> <p>Chair, vice chair plus max six members</p> <p>Appointed by government on proposal of the Climate Council</p> <p>Secretariat</p> <p>Monitoring and evaluation of climate action plan every four years</p>	<p>Uses existing body: Netherlands Environmental Assessment Agency (PBL)</p> <p>Mainly monitoring role</p> <p>Annual report on emissions and policy impact</p>	<p>Expert council</p> <p>Five members Secretariat</p> <p>Members appointed by Federal Government</p> <p>Monitoring and advisory roles; issues opinions on validity of assumptions regarding expected reductions (for strategy & policy programmes (regular + ad hoc)</p> <p>Additional analysis upon request by Parliament or government</p> <p>Review of annual emissions data</p>	<p>Climate Council</p> <p>One chair-person plus eight members</p> <p>Selects its own members; appointed by Minister</p> <p>Secretariat</p> <p>Monitoring and advisory roles; submits progress report and recommendations</p> <p>Consultation and establishment of body of stakeholders (Climate Dialogue Forum)</p> <p>Ministry must respond to recommendations annually</p>	<p>Committee of Climate Change and Energy Transition</p> <p>Monitoring and evaluation of climate policies</p> <p>Tasks and composition in separate regulation</p>
<p>No specific mention of public participation in law</p>	<p>Vague mention of participation in law but no process detailed</p> <p>Not mentioned in law: existing stakeholder consultation forum on climate</p>	<p>Public consultation procedure included for climate protection programmes</p> <p>Not mentioned in law: existing stakeholder consultation forum on climate</p>	<p>No specific mention of public engagement in law</p> <p>Dedicated climate dialogue forum for stakeholder engagement connected to the Climate Council</p> <p>Annual reports must be made public</p>	<p>Public participation must be a part of all climate "plans, programs, strategies, instruments and provisions" but no process is detailed</p> <p>Ministry reports must be made public</p> <p>Not mentioned in law: existing stakeholder consultation forum on climate</p>
<p>2050 goal is the determining factor for the government's climate policy work</p> <p>Other targets to be set to meet the long-term target</p> <p>Policy plan needs to say how it will achieve the targets</p>	<p>Specific 2050 emissions target; 2050 energy sector-specific goal, carbon-neutral electricity</p> <p>Climate plan stipulated in law is for the next 10 years (in ten-year periods) - no planning for 2050</p> <p>Direct reference to Paris Agreement</p>	<p>2050 targets mentioned only under "purpose"</p> <p>Long-term strategy exists, mentioned but not detailed in the law</p> <p>Climate-neutral administration commitment</p>	<p>Mandatory agreement, including long-term goal of climate neutrality by 2050</p> <p>Mentions long-term objectives several times and aligns sub-targets and other planning and evaluation mechanisms to the long-term (2030 and 2050)</p>	<p>Quantitative whole-economy 2050 target</p> <p>Long-term strategy produced every five years</p> <p>Strong focus on NECP process (law centres on it), which itself is attached to the LTS requirement</p>

ENDNOTES

- 1 For Denmark and Spain, the report draws on the drafts available at the time of writing, whereas for Ireland the existing law (adopted in 2015) is being analysed (a draft amendment was published in January 2020).
- 2 For an in-depth look at the existing legislation and its gaps and key elements for an EU climate law, see Meyer-Ohlendorf, N. (2019): "A European Climate Law – What Should It Look Like?" Berlin: Ecologic Institute.
- 3 IPCC (2018): "Summary for Policymakers," In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)], p. 4.
- 4 IPCC (2018): pp. 9-11.
- 5 IPCC (2018): pp. 12-13.
- 6 Duwe, M., & Stockhaus, H. (2019): "Klimaschutzgesetze in Europa: Überblick und Bedeutung für ein deutsches Klimaschutzgesetz," Berlin: Ecologic Institute on behalf of WWF Germany.
- 7 Duwe, M., Freund, M., Iwaszuk, E., Knoblauch, D., Maxter, M., Mederake, L., et al. (2017): "'Paris compatible' governance: Long-term policy frameworks to drive transformational change," Berlin: Ecologic Institute.
- 8 Duwe, M., & Iwaszuk, E. (2019): "LTS in Europe: Experience from National and EU-Wide 2050 Climate Planning," 2050 Pathways Platform, NDC Partnership, Berlin: Ecologic Institute.
- 9 Sina, S. & Stockhaus H. (2019): "Landesklimaschutzgesetze in Deutschland: Überblick und Bedeutung für ein Klimaschutzgesetz des Bundes," Berlin: Ecologic Institute on behalf of WWF Germany.
- 10 Duwe, M. & Bodle, R. (forthcoming): "'Paris Compatible' Climate Change Acts? National Framework Legislation in an International World," In: Major National Climate Change Acts: Their Emergence, Form and Nature.
- 11 In this document we use the terms "climate protection laws," "climate framework law" or "climate laws" interchangeably.
- 12 The adoption therefore took place in a previous "high attention period" for climate action, following the IPCC's Fourth Assessment Report in 2007 and in anticipation of the 2009 Copenhagen climate summit. On the history of the UK climate act, see Fankhauser, S., Averchenkova, A. & Finnegan, J., 2018: "10 years of the UK Climate Change Act," London: Grantham Research Institute on Climate Change and the Environment.
- 13 Duwe et al. (2017)
- 14 Other framework laws had been passed in the developing world already by then, such as in the Philippines in 2009. Their climate act also established institutions and procedures, but did not include quantitative long-term goals.
- 15 The database is available online at <https://climate-laws.org/>
- 16 Climate Change Response (Zero Carbon) Amendment Act 2019, accessed on 17 December 2019: <http://www.legislation.govt.nz/act/public/2019/0061/latest/LMS183736.html>.
- 17 The following are the names of the laws in their national language - details on each in English are available via the "Climate Change Laws of the world" database mentioned above: Bundesgesetz vom 23. Dezember 2011 über die Reduktion der CO₂-Emissionen (CO₂-Gesetz) 641.71 (Switzerland); Lög um loftslagsmál (2012 nr. 70 29. júní) (Iceland); Gesetz vom 6. September 2013 über die Reduktion der CO₂-Emissionen (CO₂-Gesetz) (Liechtenstein).
- 18 Danish Ministry of Climate, Energy and Utilities (2019): "During the COP, Denmark passes Climate Act with a 70 percent reduction target," Press Release, accessed 12 January 2020 at <https://en.kefm.dk/news/news-archive/2019/dec/during-the-cop-denmark-passes-climate-act-with-a-70-percent-reduction-target-70-page-eng/>. Text of the political agreement accessed 12 January 2020: <https://kefm.dk/media/12965/aftale-om-klimalov-af-6-december-2019.pdf>
- 19 Disclaimer: the state of national climate laws in both the EU and globally is always changing, with new laws and/or amendments to existing laws passed regularly (indeed the Danish draft law was included late in the present analysis). To the best of our knowledge this report covers all fully realised EU climate framework laws at the time of writing; however, there is a chance that pending or planned legislation may have been missed by the authors. For instance, the outline of an amendment to the 2015 Irish climate law, published in January 2020, could not be taken onboard anymore.
- 20 For an assessment of the ways in which the Irish climate law has been strengthened, see Torney, D. (2020) Proposed climate law is a big step forward, but questions remain, Raidió Teilifís Éireann, accessed 22 January 2020 at <https://www.rte.ie/brainstorm/2020/0107/1104829-proposed-climate-law-is-a-big-step-forward-but-questions-remain/>
- 21 Generally, "climate neutrality" is understood to refer to all greenhouse gases, whereas "carbon neutrality" focuses on carbon dioxide only.
- 22 European Council (2019): Council conclusions of 12 December 2019, EUCO 29/19, Brussels.
- 23 von der Leyen, U. (2019): "A Union that strives for more: My agenda for Europe. Political Guidelines for the next European Commission 2019-2024."
- 24 European Commission (2019): "The European Green Deal: Communication from the Commission to the European Parliament, the European Council, the Council, The European Economic and Social Committee and the Committee of the Regions," COM(2019) 640 final, Brussels.
- 25 European Parliament and Council (2018a): "Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, Amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and Repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council." Text with EEA relevance. PE/55/2018/REV/1, Brussels, article 14-3.
- 26 See also Duwe, M. & Bodle, R. (forthcoming)
- 27 The court decided that the plan was in line with the law, and as such any lack of ambition was a result of the goals stated in the law or government policy on climate change. For updates to the case and the ruling, see <http://climatecasechart.com/non-us-case/friends-of-the-irish-environment-v-ireland/>
- 28 This has been observed with Australia's emissions trading system and also Spain's renewable energy support system, for example.
- 29 Hölischer, L., Dinges, K. (2018) The Climate Change Act in the United Kingdom. BEACON project. https://www.euki.de/wp-content/uploads/2019/09/20181205_UK_Climate-Change-Act_Study.pdf, p. 10
- 30 For a comprehensive analysis of the act's origin, see Fankhauser, S., Averchenkova, A., Finnegan, J. (2018)
- 31 Friends of the Earth (2017) The Big Ask: How you helped make climate change history. Accessed 23 January 2020 at <https://friendsoftheearth.uk/climate-change/big-ask-how-you-helped-make-climate-change-history>
- 32 Rüdinger A. (2018): "Best practices and challenges for effective climate governance frameworks: A case study on the French experience," Studies N°02/18, Paris: IDDRI. And Hölischer, L., Jensterle, M., Dinges, K. (2018) The Energy Transition for Green Growth Act in France. BEACON project. [athttps://www.euki.de/wp-content/uploads/2019/09/20181205_French_LTECV_Study.pdf](https://www.euki.de/wp-content/uploads/2019/09/20181205_French_LTECV_Study.pdf)
- 33 Torney, D. (2017) If at first you don't succeed: the development of climate change legislation in Ireland, Irish Political Studies, 32:2, 247-267
- 34 Torney, D. (2019) What's in Ireland's landmark climate change report? Accessed 23 January 2020 at <https://www.rte.ie/brainstorm/2019/0329/1039327-whats-in-irelands-landmark-climate-change-report/>
- 35 Torney, D. (2020)
- 36 Bruhin, A., Dinges, K., Ackva, J. (2018) The Swedish Climate Act https://www.euki.de/wp-content/uploads/2019/09/20181205_SE_Swedish-Climate-Act_Study.pdf
- 37 <https://www.climatechangenews.com/2019/12/06/denmark-adopts-climate-law-cut-emissions-70-2030/>
- 38 For the purposes of the following sections, we will treat the Spanish draft law of 6 June 2019 (as distributed to members of the National Council on Climate Change, a stakeholder platform) as if the text were adopted, and refer to any instance of in the same way as the other laws that have already entered into force.
- 39 A similar process is underway in Ireland, which published the "outline" of an amendment to the existing law in early January 2020. For Ireland, however, this report uses the existing law from 2015 as the basis for comparing it with other countries. See Ministry Press Release (accessed 22 January 2020) at <https://dcaae.gov.ie/en-ie/news-and-media/press-releases/Pages/Minister-Bruton-Publishes-Draft-Scheme-of-New-Climate-Law.aspx>
- 40 The majority of the long-term targets are formulated as "climate, "carbon" or "GHG" neutrality. While these formulations leave open the ratio of remaining emissions and sinks to create "net-zero" emissions in balance, we take this to imply a level of specificity that is significantly greater than a qualitative formulation such as "achieving a low-carbon economy" and thus count them as quantitative.
- 41 Governmental Offices of Sweden (2017): "The climate policy framework", published 15 June 2017 by the Ministry of the Environment, accessed 12 January 2020: <https://www.government.se/articles/2017/06/the-climate-policy-framework/>
- 42 The specific formulation is "transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050"
- 43 European Parliament and Council (2009a): Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community (Text with EEA relevance).
- 44 European Parliament and Council (2009b): Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.
- 45 European Parliament and Council (2018b): Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (Text with EEA relevance), PE/3/2018/REV/2.
- 46 Fankhauser et al. (2018), p. 9.
- 47 For details on this mechanism and other features of the German climate law, see Scharlau, J., von Swieykowski-Trzaska, L., Keimeyer, F., Klinski, S., Sina, S. (2020) Das Bundes-Klimaschutzgesetz, Neue Zeitschrift für Verwaltungsrecht (NVwZ) 2020, 1 pp 1-8.
- 48 Climate Change (Scotland) Act 2009, s 5(7).
- 49 European Parliament and Council (2018a)
- 50 Final NECPs were due on 31 December 2019, and national 2050 strategies by 1 January 2020. A previous publication in the Net-zero 2050 series, "Planning for Net-zero" (2019) assessed the draft NECPs put forward by Member States.
- 51 European Commission (2018): "A Clean Planet for all A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy," COM/2018/773 final, Brussels.
- 52 European Commission (2019)
- 53 German Ministry for the Environment (2016): "Climate Action Plan 2050.

- Principles and foals of the German government's climate policy," p. 78, accessed 12 January 2020: <https://www.bmu.de/en/topics/climate-energy/climate/national-climate-policy/greenhouse-gas-neutral-germany-2050/>
- 54 The first of these strategies has already been drafted, independently from the adoption process for the law - accessed 22 January 2020 at https://www.miteco.gob.es/es/cambio-climatico/participacion-publica/5borradoresstrategia-atransionjusta_tcm30-487304.pdf
 - 55 Despite the focus on 2032, the UK positions its "Clean Growth Strategy", as its "long-term strategy" within the framework of the Paris Agreement. However, given its clear focus on a 2032 time horizon we choose to define this document as the UK's climate action plan or package of medium-term policies and measures. See UK Department for Business, Energy and Industrial Strategy (2017): "Clean growth strategy: An ambitious blueprint for Britain's low carbon future," accessed 20 January 2020: <https://www.gov.uk/government/publications/clean-growth-strategy>
 - 56 In the first iteration of the new system being implemented (draft NECPs due on 31 December 2018) some countries were not able to provide specifics on policies, because their national policy identification processes had not been completed yet (e.g. in Germany). See Duwe, M., Velten, E. K., Evans, N., Freund, M., Pestiaux, J., Martin, B., & Vermeulen, P. (2019): "Planning for Net-zero: Assessing the Draft National Energy and Climate Plans." Brussels: European Climate Foundation (ECF).
 - 57 Rüdinger A. (2018)
 - 58 Other countries in Europe have announced similar bans and for earlier time-frames, but they do not include this in the law.
 - 59 Hainaut, H., Ledez, M., & Cochran, I. (2019): Landscape of Climate Finance in France, Paris: Institute for Climate Economics (I4CE); I4CE (2019): International support for Landscapes of domestic climate finance, accessed 12 January 2020: https://www.i4ce.org/go_project/landscape-of-domestic-climate-finance/international-support-for-landscapes-of-domestic-climate-finance/
 - 60 Delérable, C., Gazzo, A., Perez, J., Luu, E., Lowe, F. & Dunikowski, C., (2017): "How have investors met their ESG and climate reporting requirements under Article 173-VI?" SCORE France N° 2017-074, Paris: Ernst & Young, p. 2.
 - 61 The provisions on regulation of financial institutions and the percentage of the state budget to be linked to climate action are, however, still subject to debate, as news reports on the further progress of the development of the law suggest (see article from 24 June 2019 in El periodico de la energia: "El Gobierno modifica el Anteproyecto de Ley de Cambio Climático y Transición Energética: estos son los principales cambios", accessed 12 January 2020: <https://elperiodicodelaenergia.com/el-gobierno-modifica-el-anteproyecto-de-ley-de-cambio-climatico-y-transicion-energetica-estos-son-los-principales-cambios/>).
 - 62 Danish Ministry for Climate, Energy and Utilities (2019): "Danmark har fået en aftale om ambitiøse og bindende klimalov", accessed 20 January 2020: <https://kefm.dk/temaer/en-ny-ambitioese-og-bindende-klimalov/>
 - 63 A summary paper showing discrepancy between projected and actual emissions is available (in German) from DIW: von Lüpke, H. & Neuhoﬀ, K. (2019) Ausgestaltung des deutschen Klimaschutzgesetzes: Grundlage für eine bessere Governance-Struktur. DIW-Wochenbericht, Volume 86, Issue 2019:5, pp 75-81
 - 64 Separate sector-specific committees for implementation of the National Climate Agreement for 2030 will be set up under the supervision of the relevant ministers. Interestingly, this institutional setup is not mentioned in the National Climate Act, which puts the brunt of the responsibility on one ministry. See Government of the Netherlands (2019): "Climate deal makes halving carbon emissions feasible and affordable", accessed 14 January 2020: <https://www.government.nl/latest/news/2019/06/28/climate-deal-makes-halving-carbon-emissions-feasible-and-affordable>
 - 65 After an institutional reorganisation in 2016, this Ministry is now called the Department of Communications, Climate Action and Environment.
 - 66 The Spanish draft law of June 2019 now includes the creation of a "Committee on Climate Change and Energy Transition" (which was not in the February 2019 draft), but other than the duty to produce an annual report it is not really defined in the law. "Composition, organisation and operation" are to be defined by subsequent legal instrument.
 - 67 For a detailed analysis of the CCC's work, see Averchenkova, A., Fankhauser, S., Finnegan, J. (2018) The role of independent bodies in climate governance: the UK's Committee on Climate Change. LSE Grantham Institute on Climate Change and the Environment. London
 - 68 See France Stratège (2019): "Création du Haut Conseil pour le climat", accessed on 15 January 2020: <https://www.strategie.gouv.fr/actualites/creation-conseil-climat>
 - 69 See website of Finnish Climate Panel at <https://www.ilmastopaneeli.fi/kysymyksia-ja-vastauksia/> (Accessed 20 January 2020).
 - 70 Personal conversation.
 - 71 The Finnish panel's composition is not included in the law, information was taken from the body's website at <https://www.ilmastopaneeli.fi/tiedotteet/valtionuuvosto-nimitti-uuden-ilmastopaneelin-puheenjohtajana-jatkaamarkku-ollikainen/> (Accessed 20 January 2020).
 - 72 These include: the heads of the Environmental Protection Agency, the Sustainable Energy Authority, the Economic and Social Research Institute and Teagasc, the state agricultural research body.
 - 73 Weaver, S., Lötjönen, S., Ollikainen, M. (2019) "Overview of national climate change advisory councils", Finnish Climate Change Panel, Report 3/2019, accessed 20 January 2020: <https://www.ilmastopaneeli.fi/wp-content/uploads/2019/05/Overview-of-national-CCCs.pdf>
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 - 76 European Parliament and Council (2003): Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC; European Parliament and Council (2001): Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.
 - 77 See Stockhaus, H. (2018) Stakeholder exclusion likely? Public Participation under the Governance Regulation. An Assessment of Article 10 in the light of the Aarhus Convention. Ecologic Institute. Berlin
 - 78 The PlanUp project has analysed the NECP processes in a number of countries and found shortcomings in several cases - see individual assessments on the project website at www.planup.eu. They have also checked for best practices. See for example Donnerer, D. (2019): "Main findings in good practice governance: Summary of main findings in good practices in energy and climate governance in EU Member States," PlanUp Report, accessed 12 January 2020: <https://cdn.webdoos.io/planup/8796e0620db7f235c0b4213b5f466bd7.pdf>
 - 79 Climate Change Committee (2019): "About the Committee on Climate Change," accessed 13 January 2020: <https://www.theccc.org.uk/about/>
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 - 81 The Spanish title is "El Consejo Nacional del Clima (CNC)", Ministry website, accessed 15 January 2020: <https://www.miteco.gob.es/es/cambio-climatico/temas/organismos-e-instituciones-implicados-en-la-lucha-contra-el-cambio-climatico-a-nivel-nacional/el-consejo-nacional-del-clima/>
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 - 84 See specifics on the critique of the implementation as discussed in late January 2020 at CleanEnergyWire news report "Former coal commission members say German government breached landmark exit compromise" accessed 22 January 2020: <https://www.cleanenergywire.org/news/former-coal-commission-members-say-german-government-breached-landmark-exit-compromise>
 - 85 Traub (2019): "There's Only One Way for Democracies to Save the Planet", Foreign Policy, accessed 14 January 2020: <https://foreignpolicy.com/2019/12/21/foreign-policy-has-only-one-way-to-save-the-planet-netherlands/>
 - 86 Janssen, J. (2018): "Towards a climate and energy plan: will Dutch polder model succeed?" Amsterdam: Stek
 - 87 See Donnerer (2019) for a more detailed description of the composition and functioning of the Dutch Climate Council.
 - 88 Traub (2019)
 - 89 See, for example, Donnerer (2019) and Duwe et al. (2019)
 - 90 Germany also employed a first of its kind citizen engagement process as input to the development of its Climate Protection Plan 2050 in 2015 - Duwe et al (2017) for details.
 - 91 Citizens Assembly (2019): "The Eighth Amendment of the Constitution", accessed on 15 January 2020: <https://www.citizensassembly.ie/en/the-eighth-amendment-of-the-constitution/>
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 - 96 Ibid.
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 - 101 Donnerer, D. (2019)
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