
Legislating for a low carbon and climate resilient transition: learning from international experiences

Summary policy brief

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Summary policy brief

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Summary policy brief

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This brief provides a summary of a longer working paper titled 'Legislating for a low carbon and climate resilient transition: learning from international experiences' available at <http://www.realinstitutoelcano.org>. Its objective is to inform policy experts, legislators and decision makers on recent trends in climate change policymaking around the world and to draw lessons from existing experiences in designing and implementing climate-change legislation and executive climate-change policies. The analysis draws on the experience of seven countries: China, Chile, France, Germany, Mexico, the UK and the US. The study specifically aims to contribute to the current debate in Spain on a draft climate change and energy transition law, as well as aid other countries currently working on climate legislation.

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Drivers for low carbon and climate resilient transition

The urgency of action

Climate change is one of the most pressing issues for global and national development agendas. With the last 19 years having contained 18 of the warmest ones on record globally, the urgency to address both the causes and impacts of climate change is clear. According to the Fifth Assessment Report (AR 5) by the Intergovernmental Panel on Climate change (IPCC) for a likely chance of more than 66% of keeping the global mean temperature increase below 2°C, global emissions of all greenhouse gases need to be net zero by 2100 (IPCC, 2014).

The economic and commercial case for accelerated low carbon transition is strong

Reaching the target of net zero emissions globally by the end of the century is technically and economically feasible but requires urgent action. Over the past two decades the world has experienced rapid technological change and significant reductions in the costs of the key low-carbon technologies, which provide a solid foundation for accelerated decarbonisation. Ambitious action on climate change could yield a direct economic gain of US\$26 trillion in the 2018-30 period compared with a business-as-usual scenario according to recent analysis by the New Climate Economy project (Garrido *et al.*, 2018). Most of the policy and investment decisions shaping the next two decades will be taken over the coming two-three years, which makes it a critical period for adopting appropriate policy frameworks (NCE, 2018).

Scaled-up action requires overcoming barriers to the low carbon transition

Barriers related to the risk-reward relationship of low carbon investments, issues with the country's wider investment climate, capacity shortages and a relative lack of experience with low carbon technologies in the local markets could be addressed through price and policy signals, as well as mitigated through lowering or sharing the investment risks. Carbon pricing instruments, which now cover around 20% of global greenhouse gas emissions over 25 countries,² have been shown to be particularly effective in improving viability of low carbon investments. The growing development of new financial instruments, such as green bonds, and the recent advances in the financial regulation on sustainable finance and risk disclosure, are further driving investment towards more sustainable technologies.

Shifts in the international policy landscape require ambitious national action

The adoption of the UN Sustainable Development Goals and the Paris Agreement on climate change in 2015 has marked a substantive shift in climate-change governance and set the goal for the global transition to net zero emissions in the second half of this century. Achieving the goals of the Paris Agreement requires not only successful domestic implementation of the current emission pledges but also a major political transformation in how countries approach climate action and define their ambition. In this context, domestic framework climate change legislation comes to the forefront as the key means to consolidate political support for the climate agenda, to provide the framework for implementation of the Paris

² <https://carbonpricingdashboard.worldbank.org/>.

Agreement domestically and for assessing progress, as well as to enable ratcheting-up of ambition going forward.

Global trends in climate legislation

National climate change legislation and policies have grown twenty-fold over the past 20 years, with a remarkable growth in developing countries in recent years

Over time the attention has shifted from putting in place framework climate legislation or strategies to the articulation of the greenhouse gas emission targets. In 2017 over 70% of global greenhouse gas emissions were covered either by nationally binding climate legislation or by executive climate strategies with a clearly designated coordinating body, while climate legislation alone covered 44% of emissions and 36% of the population (Iacobuta *et al.*, 2018).

Domestic laws and policies are not yet consistent with international commitments

Most countries need to align their domestic emission targets, enshrined in domestic legislation, and those committed through the nationally determined contributions (NDCs) to the Paris Agreement. In order to meet these targets and to be able to ratchet them up in the future, countries need to put in place strong domestic institutional frameworks and policies. In this context many more countries are looking to develop and adopt new laws, strengthen their existing laws and policies and align them with the Paris Agreement.

Legislating climate change: learning from existing experiences

Framework legislation can help maintain policy continuity and enable implementation

Countries take different approaches to govern their domestic climate-change policy. Some adopt legislation while others act through decisions by the executive branch of the government. Putting policy into law with a parliamentary oversight helps reduce the scope for backtracking from earlier policy commitments, focuses the political discussions on implementation and provides a mandate for policy-makers to advance action (Duwe *et al.*, 2017). The case studies on climate laws in Mexico and the UK show that climate legislation has improved the quality of the political debate and helped maintain and strengthen the political consensus on and commitment to the long-term climate objectives through turbulent political times (Fankhauser *et al.*, 2018; Averchenkova & Guzman, 2018). The case of the US demonstrates how the lack of climate legislation can make climate policy extremely vulnerable to the change of leadership.

The adoption of climate change legislation requires building political support

Developing a positive narrative around the benefits of the climate change legislation and creating positive political momentum are key for the success of the process. A positive narrative also helps avoid polarisation of the political debate as was the case in the US. Integrating climate-change objectives with economic and social ones and linking the legal framework with a country's self-interest, development priorities and opportunities or co-benefits of climate action, such as in the example of China, have proved to be effective in getting political and public support for climate policy. Furthermore, following an inclusive process of cross-party development of the key features of the legislation and strong ownership by civil society through stakeholder consultation, as well as personal leadership on climate change from the country's leader, have proved to be effective in getting political buy-in for the legislation in Mexico, the UK, California, France and Germany. Cross-party and citizen support are the best tools against the risk of legislative reversal.

Figure 1. Building blocks of a framework climate-change legislation

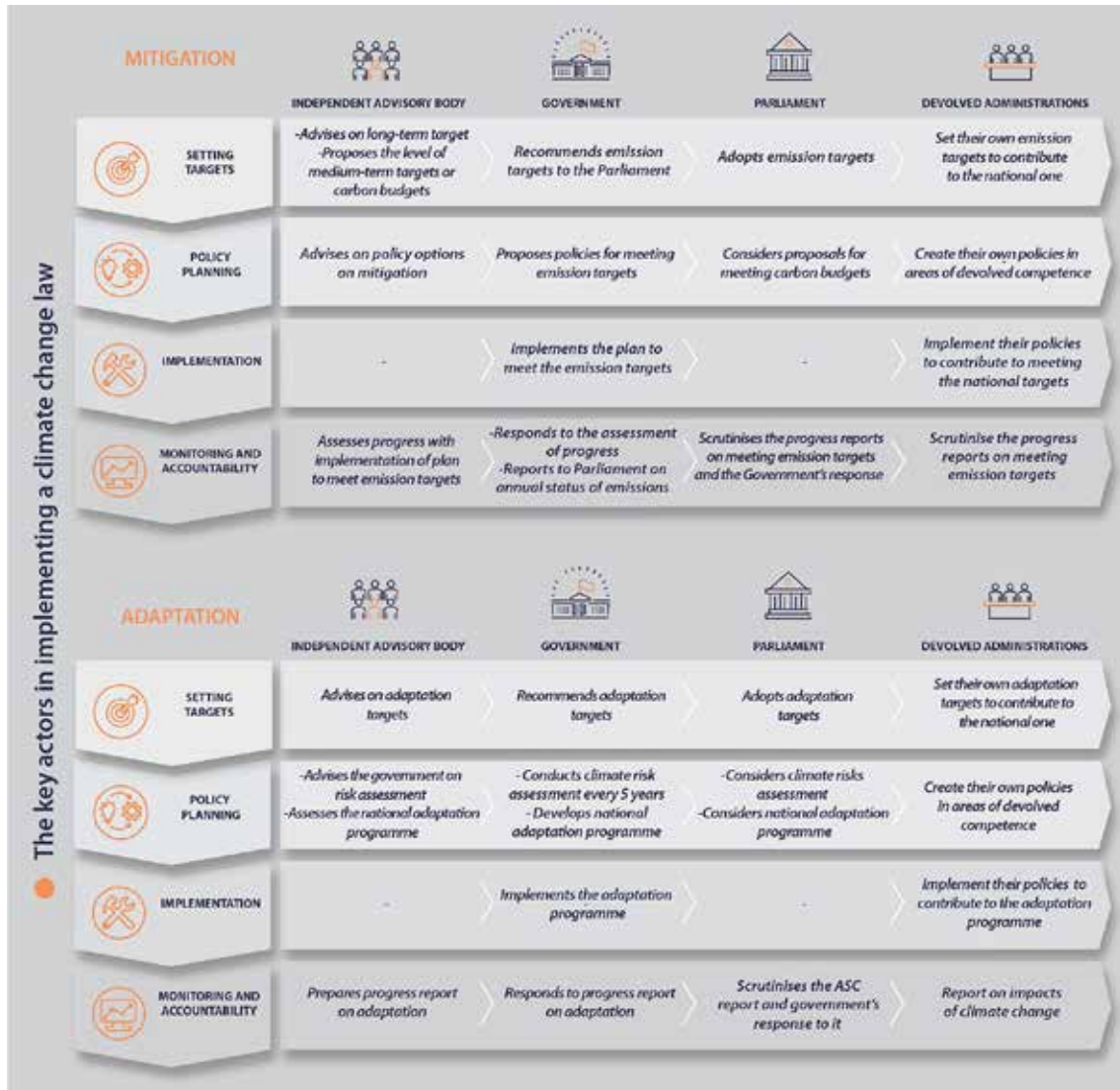


Source: the author.

Definition of scope of the law

The scope of a legislative instrument is one of the first critical decisions that need to be taken when developing a new law. The scope of the law should cover the key elements of a national climate framework (see Figure 1). Being too broad and trying to achieve too much could impede the effectiveness and delay adoption, as demonstrated by France's Energy Transition Law. The excessive complexity of a law in terms of a number and types of targets and policy instruments could challenge the ease and effectiveness of its implementation. The Mexican model of setting an overarching long- and mid-term climate change targets complemented by a clean energy target in a climate-change law, and its Energy Transition Law provide useful examples to draw from in this context. Yet it is important to ensure that there are no major gaps in the coverage. One such gap across the case studies has been, for example, the coverage of adaptation. The UK's provisions of mandatory risk assessments and adaptation plans, with a strong role of an independent advisory body embedded into a law, provides a useful model for consideration. Spain's experience as one of the first countries to develop a national adaptation programme potentially provides a good basis to develop best practices in legislating on adaptation. It is important that the legislation foresees a clear pathway for risk assessments and adaptation planning and an independent assessment by the advisory climate change body.

Figure 2. Functions and mandates in the implementation of a climate-change law



Source: the author.

Specificity versus flexibility in policy prescription

Framework climate laws differ in the extent they outline the details of specific policies: some integrate policies into the legislation while others set a process for the government to design them. A flexible approach, as in the UK and California, that delegates the choice of specific policies to meet the climate targets to the government could offer greater political acceptability for the law and flexibility to adjust the course based on changing economic conditions and lessons learnt. However, the model requires that clear institutional processes and statutory timelines for how and when the government should develop the detailed policies are specified in the law, are backed by strong parliamentary oversight and that there are provisions for an independent review by an advisory body.

Institutional mandates and key functions

Depending on the national circumstances, the core features of the overall institutional framework may already be in place and determined by prior legislation or executive regulation (eg, as in the case of France and the UK), hence the framework climate change and energy transition laws in such countries focus on clarifying the mandates of existing institutions, setting out new mandates that arise from the law and creating new institutions where gaps exist (see Figure 2). The latter in particular relates to setting up new independent advisory and consultative bodies. An important criterion for institutional provisions in the legislative (and executive) instrument is the level of clarity of the mandates they set.

Parliamentary oversight and accountability

A common challenge for all legislative and executive frameworks considered is enforcement and accountability for implementation. For the legal instruments considered in this study the key mechanism for accountability is parliamentary oversight. In Mexico and France the laws considered do not give much prominence to Parliament. In both cases the lack of parliamentary oversight has been noted as a weakness to the accountability mechanisms. Another key feature of the accountability mechanisms for climate change and energy transition laws is independent assessment and consultation. All four laws considered in this study establish new independent consultative bodies to this end. The track record in their performance, however, varies. Based on the case studies, there are several factors that determine the relative success of the independent advisory bodies (see Figure 3).

Figure 3. Key factors of success of the independent climate-change advisory bodies



Source: the author.

Recommendations for designing framework legislation on climate change

1. *Timeframe for adoption of a law*: countries should adopt comprehensive national framework climate change or energy transition laws compatible with the requirements of the Paris Agreement as soon as possible and ideally by 2020, ahead of the expected revisions of the NDCs to feed into the Global stocktake under the Paris Agreement. Setting a long-term direction for decarbonisation and climate resilience and the delivery mechanisms through the laws would help consolidate and maintain political buy-in for climate policies in the face of future changes and enables acceleration of transition.
2. *Long-term objectives and net zero target*: to be consistent with the objectives of the Paris Agreement, climate legislation should contain a long-term emission reduction target to 2050 and define the timeline for coming to net zero. These need to be in line with the scenarios of achieving global net zero emissions by the end of the century, the temperature goal of keeping warming below 1.5°C-2°C and the requirement for developed countries to take the lead. Spain should consider the approaches adopted by the leading EU countries, some of which have already set the timeframes for achieving net zero emissions either in their laws (Sweden by 2045), or through executive regulation (Germany 'largely climate neutral by 2050') or statements (France by 2050).
3. *Mid-term emission reduction targets* in Spain should be consistent with the EU's NDC to the Paris Agreement and with the Spain's respective contribution under the effort sharing agreement.
4. *Legislation should envision provisions for progressive ratcheting-up of ambition* to be consistent with the Paris Agreement. Carbon budgets have shown to be an effective tool in this context and the relevant provisions set out in the UK's Climate Change Act and the France's Energy Transition Law serve as useful models.
5. *An inclusive and transparent stakeholder consultation process* should accompany the development, negotiation and implementation of a climate law to get public acceptance and buy-in from the private sector, civil society, devolved governments and sectoral agencies. As evidenced by the experiences in Chile, France and Germany, to be effective the stakeholder consultation process needs to have clear objectives, structure and a plan for how its outputs would feed into the legislative process. A longer-term arrangement for stakeholder engagement that extends into the implementation phase could be included in the law to help ensure sustained legitimacy and political support, particularly for countries without an established robust stakeholder engagement channel.
6. *The law needs to set clear mandates for key climate governance functions*, including responsibility and timelines for setting the levels of emission targets, for the design of underlying policies to implement the law and achieve the emission reductions, for the coordination of implementation among the key sectors, for independent monitoring,

policy evaluation and strategic assessment and for climate risk assessment and adaptation planning.

7. *An independent advisory body on climate change and/or energy transition* needs to be created or designated to ensure quality in the policy design, accountability for policy implementation and strengthening political commitment to climate policy.
8. *To be effective, the provisions for the independent advisory body* on climate change or energy transition should define a clear mandate for it to regularly assess government policy proposals and progress with implementation, assign a dedicated budget, ensure high level of expertise and require the government to respond to the body's assessments and recommendations.
9. *Accountability of the government for the implementation* of the law should be strengthened through regular assessment and reporting requirements and direct parliamentary oversight written into the law.
10. *Devolved administrations*: a climate-change law should clearly delineate responsibilities between the national and subnational levels, seeking to empower and enable subnational action and promote a coherent approach. It should do so while leaving enough flexibility for devolved administrations to take ownership and design their own adaptation and mitigation policies or actions. This is particularly important for countries like Spain, with a high degree of devolution. The approach adopted by the UK's Climate Change Act of sharing a common analytical resource in the form of the independent advisory body between the national and devolved administrations to assist in the development and implementation of regional policy frameworks, as well as the establishment of targeted financial instruments to support implementation at the subnational level should be considered.
11. *The law should require a clear mandate to disclose climate risk exposure* to ensure the efficient allocation of capital. This would help meet the goals of the Paris Agreement and would be in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) as well as with the EU's Action Plan on Sustainable Finance. Article 173 of the French Energy Transition law could be used as a role model to develop disclosure requirements subject to the characteristics of the country where it is applied.
12. *A law should be backed up by a clear financing mechanism*. This at least should include a clear mandate to the government to undertake an annual assessment of the financial needs for the implementation of the law and include necessary resources in the budget. Furthermore, financial mechanisms for enabling and encouraging private finance should be considered.

Annex 1. Comparison of the climate and energy transition laws considered in the case studies on Mexico, the UK and France

	Mexico LGCC (2012/2018)	Mexico LTE (2015)	UK CCA (2008)	France ETL (2015)
Scope	Climate change mitigation and adaptation (strengthened in 2018)	Energy transition. Climate mitigation in energy sector	Climate change mitigation and adaptation	Climate Change Mitigation Energy Transition
Institutional system				
Institutional set-up	Creates the overall National Climate Change System. Sets a coordination mechanism, but mandates are vague	Spells out institutional mandates for the existing bodies. Gives new mandates to the existing bodies and the ministries in charge	Defines some new institutional mandates for the existing bodies and the Secretary of State. Creates an advisory body	Institutional mandates for the existing bodies
Independent advice	Creates the Consultative Council on Climate Change (C3)	Creates the Council for Energy Transition	Creates the Committee on Climate Change (CCC)	Sets the Expert Committee for Energy Transition
Devolution	Duty for the states and municipalities to develop and implement climate strategies	Mandate to federal agencies to provide advice and technical support to the states and municipalities	Mandate to devolved administrations to create policies and implement national ones	Mandate for the regional energy efficiency programmes and financial support
Stakeholder engagement	Via the C3	Via the Consultative Council for Energy Transition	Via established channels for public consultation and the CCC	Creates the special Stakeholder Commission
Monitoring, evaluation	Mandates for Inventory, Registry and Transparency framework	Mandates regular MRV, but technical details outlined elsewhere	Mandate to develop MRV for emissions and climate impacts	MRV system set prior, the law does not streamline it

Cont.

	Mexico LGCC (2012/2018)	Mexico LTE (2015)	UK CCA (2008)	France ETL (2015)
Finance	No special provision for funding the implementation is included. Creates a Climate Change Fund. No designated budget for the C3	Mandate to include implementation into draft annual budget. Some provisions and mandates on finance for implementation	No special provision for funding the implementation is included. Designated budget envisioned for the CCC	Mandate to include implementation into annual draft budget. No budget for the Expert Committee for Energy Transition
Accountability	Policy evaluation every two years	Annual evaluation of progress and publication of report. Some penalties for non-compliance	Annual report on progress by the Government to the Parliament. Independent assessment of progress with implementation by the CCC. Response by the Government to the CCC's assessment and recommendations. Every five years a report on climate risks and a programme to address them	
Targets, ratchet and policy instruments				
Long term-targets	50% greenhouse gas emission reduction below the level in 2000 by 2050	Reference is made to the LGCC's targets. A goal for 50% clean energy by 2050 was set later in the Energy Transition Strategy	At least 80% greenhouse gas emission reduction below 1990 levels by 2050. The CCC was requested to develop net zero scenarios in 2018	75% greenhouse gas emission reduction below 1990 levels by 2050. Net zero goal was announced later in the executive strategy

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	Mexico LGCC (2012/2018)	Mexico LTE (2015)	UK CCA (2008)	France ETL (2015)
Near and mid-term targets	Unconditional and conditional greenhouse gas and black carbon reduction goals below BAU by 2030. Peak greenhouse gas emissions by 2026	Clean energy target by 2024. Intermediate goals for 2018 and 2021. Clean energy target for 2030 was set later in the Energy Transition Strategy	A system of five-year carbon budgets for 2008-50 set 12 years in advance	A system of five-year carbon budgets (three years for the first period) for 2015-50 set 10 years in advance
Sectoral targets	Generate 35% of energy from clean sources by 2024. Specific greenhouse gas targets for 2030 for the key sectors	Clean energy targets and mandates to set energy efficiency targets	No sectoral targets in the law itself	Multiple detailed sectoral targets for greenhouse gas emissions, clean energy, waste, etc
Ratchet mechanism	2018 amendment notes the need to increase ambition, but no mechanism yet	Not explicitly set out	The system of carbon budgets provides for ratcheting ambition	The system of carbon budgets provides for ratcheting ambition
Consistency with the NDC targets	Targets consistent with the NDC. Not consistent with net zero target/1.5oC scenarios. Details on ratchet need to be developed	Consistent with the NDC's energy targets	Consistent with the EU's NDC target. Not consistent with the net zero target/1.5oC scenarios	Consistent with the EU's NDC target. Net zero target for 2050 needs to be integrated into the law or the strategies related to it

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	Mexico LGCC (2012/2018)	Mexico LTE (2015)	UK CCA (2008)	France ETL (2015)
Policy instruments	<p>Mandates national strategy on climate change and special programmes with measures to implement the law.</p> <p>Mandate to develop national adaptation plan.</p> <p>Establishes emission trading scheme</p>	<p>Mandates and sets several strategy processes for clean energy, energy transition and energy efficiency</p>	<p>Choice of policies is left to the Government through reports on implementation of carbon budgets to be developed after the budgets are approved.</p> <p>Provisions for emission trading</p>	<p>Mandates a low-carbon strategy to be developed every five years.</p> <p>Sets a multi-year energy planning framework.</p> <p>Defines the level of carbon tax for 2015, 2020, 2030.</p> <p>Outlines policies for reducing air pollution and waste</p>

Source: the author.

Annex 2. Comparison of executive frameworks on climate change in China, Chile, Germany and USA

	China	Chile	Germany	US
Primary instrument	13th five-year plan. Currently developing a climate law	Developing a framework law on climate change	The Climate Action Plan 2050	No federal climate change framework; action is mainly at the subnational level
Institutional set-up	Centralised top-down approach led by the National Development and Reform Commission of China (NDRC). National targets are allocated to provinces. Implementation at the provincial and city level	Centralised approach with extensive stakeholder engagement. The Permanent Presidential Advisory Commission on Climate Change	Centralised approach with stakeholder engagement	The EPA is in charge at the national level. Currently decarbonisation efforts are led by subnational actors
Targets, ratchet and policy instruments				
Long-term emission target	None	None for greenhouse gas emissions. Sectoral target for renewable energy	'Largely climate neutral' by 2050	None at the federal level. NDC target: 83% below 2005 by 2050
Near and mid-term targets	13th FYP: Reduce carbon intensity of GDP by 18% by 2020. NDC targets for 2030: to peak CO2 emissions by around 2030 and try to peak earlier; to reduce carbon intensity of GDP 60%-65% below 2005 levels and 20% of primary energy consumption from non-fossil energy sources	Reduce the CO2 intensity of GDP unconditionally by 30% from the 2007 levels by 2030, and by 35%-45% subject to international finance	At least 55% reduction in greenhouse gas emissions below 1990 levels by 2030	NDC target: 26%-28% below 2005 levels by 2025 (equivalent to 14% to 19% below 1990 levels). The Clean Power Plan (suspended): to cut carbon dioxide emissions from the power sector by 32% below 2005 levels by 2030. A number of state and city initiatives in line with the NDC target

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	China	Chile	Germany	US
	Targets, ratchet and policy instruments			
Sectoral targets	<p>Cap energy consumption at 5 bn tonnes of standard coal equivalent by 2020 and eliminate 500 million tonnes of surplus coal capacity in five years.</p> <p>By 2020 reach 150GW of solar, 200-300GW of wind and 58GW of new nuclear capacity.</p> <p>Turn 1 million hectares of marginal cropland into forest or grassland, increase forest coverage to 23.04% in five years</p>	<p>The share of renewable energy in power generation of 60% by 2035 and 70% by 2050 (up from 40% in 2017).</p> <p>Energy Efficiency Roadmap to reduce final energy demand by 20% below BAU by 2025.</p> <p>Moratorium on new coal-fired power plants without CCS capacity and a plan to phase out coal</p>	<p>61%-62% greenhouse gas emission reduction from energy sector; 49%-51% reduction for industry; 66%-67% reduction for buildings, 40%-42% for transport and 31%-34% reduction of emissions in agriculture</p>	N/A
Ratchet	None	None	Updates every five years	None at the federal level
Consistency with the NDC targets	<p>Domestic targets in 13th FYP go to 2020, they are considered generally consistent with the NDC.</p> <p>Not consistent with net zero target/1.5oC scenarios</p>	<p>Lacks domestic policy framework that integrates the NDC targets</p>	<p>Consistent with the NDC, but is behind on the actual performance</p>	<p>Pending withdrawal from the Paris Agreement, federal action is not consistent with the NDC.</p> <p>Actions by states and non-state actors are estimated to meet about half to two-thirds of emission reductions required under the NDC</p>

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	China	Chile	Germany	US
Policy instruments	<p>Adopted National Climate Change Programme (2007), the Climate Change Adaptation Strategy (2013), the National Plan for Climate Change (2014-20) and integrated climate goals, targets and plans into the FYPs.</p> <p>From 2016 a moratorium on new coalmine approvals for three years.</p> <p>Energy efficiency standards.</p> <p>Emission trading scheme</p>	<p>National Strategy on Climate Change (2006).</p> <p>The National Action Plan for Climate Change (2008-12).</p> <p>The National Action Plan for Sustainable Consumption and Production (2017-22).</p> <p>The National Energy Policy 2050.</p> <p>Carbon tax.</p> <p>Electric mobility strategy</p>	<p>The <i>Energiewende</i>.</p> <p>A detailed programme of implementation measures to be published in 2018</p>	<p>The CPP is being repealed.</p> <p>New state guidelines for greenhouse gas emissions from power plants are under discussion. Planned relaxation of fuel efficiency standards for personal and freight vehicles, delays to methane emission reduction regulation, plans for expansion of offshore oil and gas exploration, and increase of import tariffs on solar cells and modules in January 2018.</p> <p>Most policy drivers in favour of low carbon transition are currently at the state level</p>

Source: the author.

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