



UNLOCKING TÜRKİYE'S CLIMATE POLICY TOOLS: FROM CARBON LOCK-IN TO POLICY GAPS

Authors: Eda Acara, Ümit Şahin, and Travis Franck



İPM | IPC

Executive Summary

Türkiye faces a widening gap between its international climate commitments and the realities of its domestic policy architecture. While Türkiye has committed to achieving net-zero by 2053, this long-term goal remains far from achievable under current trends. **Approximately 70% of active policies rely on prescriptive regulatory instruments**, while **crucial fiscal, innovation, and informational tools are underexploited**. This policy-instrument imbalance, coupled with **sectoral blind spots** (notably in transport, buildings, industry, agriculture, and forestry) and **fragmented governance**, has reinforced persistent carbon lock-in dynamics and **risks widening the gap between ambition and reality**; and thus also risks delaying the country's decarbonization trajectory.

The results presented here are part of the Raising Ambition project, led by the Climate Policy Lab (CPL henceforth) at Tufts University. The methodology was developed by the CPL and executed by the local partner, the Istanbul Policy Center at Sabancı University.

The research consists of three stages. In the first stage, we collected policy documents into a policy inventory and classified them in accordance with the CPL's methodology outlined below. The inventory was prepared between 2023 and 2025 and covers Türkiye's environmental policies that impact the climate change agenda. It spans from the 1956 Forestry Law to 2024 documents, such as the National Climate Change Adaptation Strategy and Action Plan (2024–2030). However, the inventory's database is cut off as of January 2025 and therefore does not include the recent discussions on the Climate Law. Nevertheless, during the analysis undertaken between March and June 2025, these developments were taken into account. This inventory was then analyzed, and the results are presented in this policy brief.

In the second stage, an expert elicitation survey was conducted to explore gaps in ambition targets across various energy-related sectors. This survey not only informs the policy gap analysis presented here but also contributes to the development of scenarios in the Energy Policy Simulator.¹ Using the Energy Policy Simulator to assess and explore impacts of policy mixes is the third stage, which is still in progress and not a subject of this policy brief.

EXPERT CONSENSUS RECOMMENDATIONS

- **Diversify and sequence policy instruments** to correct the imbalance – pair regulatory standards with market-based incentives (e.g., phased ETS pilot by 2026, innovation grants for storage and grid modernization, and **targeted public-information campaigns**).
- **Define clear, legally binding, sector-specific roadmaps** with milestones for 2030 and 2040, aligned with EU norms (e.g., fossil-vehicle sale ban by 2035; annual retrofit targets in buildings).
- **Strengthen institutional architecture** by empowering a cross-ministerial Climate Coordination Body, backed by law, with budgetary control and stakeholder representation.
- **Mobilize inclusive climate finance** – leverage international funds and recycle carbon revenues to support SMEs, vulnerable communities, and a just transition in coal regions.

Without **comprehensive structural reform**, Türkiye risks deepening economic vulnerabilities, exacerbating social inequities, and facing escalating trade risks (e.g., EU CBAM). **However, by implementing these focused, sequenced reforms**, Türkiye can unlock its renewable potential, **narrow the ambition–reality gap**, and secure a **socially equitable** transition to a competitive, low-carbon economy.

KEY FINDINGS:

Issue Area	Current Status	Key Gaps Identified	Urgency
Climate Targets	Net-zero 2053; Peak emissions 2038; 41% BAU reduction by 2030 (42% BAU reduction by 2035 in the second NDC)	2030 reduction seen as highly weak; Net-zero 2053 faces major ambition gap	Critical
Policy Instrument Mix	~70% of policies are regulatory	Major underuse of fiscal tools (e.g., carbon pricing), innovation incentives, and public informational tools	High
Sectoral Coverage	Power sector heavily targeted	Weak coverage in transport, buildings, industry, agriculture, and forestry	High
Economic Trade-offs	Potential for green growth	Fiscal burden on state budgets; employment shifts need just transition planning	Manageable if proactive
Institutional Capacity	Fragmented governance	Lack of coordination; weak implementation capacity; insufficient stakeholder inclusion	High
Public Acceptance & Equity	Public buy-in possible	Distributional risks if cost burdens not managed	Medium

¹ <https://energypolicy.solutions>

Introduction

Türkiye has articulated ambitious long-term climate policy goals, including achieving net-zero greenhouse gas emissions by 2053. These commitments, announced following Türkiye's ratification of the Paris Agreement in October 2021, signal an intention to align with global decarbonization efforts. Yet a widening gap persists between these headline targets and the country's current policy architecture, sectoral coverage, and implementation capacity. In particular, Türkiye's 42% emissions reduction target from business-as-usual (BAU) levels by 2035² is widely regarded as weak in ambition and credibility, especially given projected emissions growth driven by population increase and GDP expansion. This ambition–reality gap is not only a question of targets, but also of the policy instruments, tools, and governance arrangements through which those targets are expected to be realized.

This policy brief contributes to identifying and explaining this gap by systematically assessing how Türkiye's active climate policies are distributed across sectors and policy instrument types, where critical “tool gaps” persist, and how experts evaluate both the feasibility of stated targets and the bottlenecks in implementation. The analysis forms part of the Raising Ambition project led by the Climate Policy Lab (CPL) at Tufts University and implemented in Türkiye by the Istanbul Policy Center at Sabancı University.³ It draws on two complementary sources: (i) a comprehensive climate policy inventory compiled between 2023 and 2025, covering policies from the 1956 Forestry Law to key strategy documents adopted in 2024⁴ (with the database cut off as of January 2025), and (ii) an expert elicitation survey conducted between June and August 2024 to assess the effectiveness, challenges, and trade-offs of selected active policies. Scenario development using the Energy Policy Simulator⁵ constitutes a third stage of the project and is therefore not covered in this policy brief.

ENTRENCHED CARBON LOCK-IN AND POLITICAL-ECONOMIC DYNAMICS.

Türkiye's climate policy landscape is shaped by a complex interplay of international commitments beyond climate policy (e.g., energy security, trade competitiveness, and growth-oriented development priorities), domestic priorities, and longstanding policy path dependencies. Historically, these entrenched policy trajectories have constrained Türkiye's ability to adopt ambitious climate targets. The country has consistently prioritized short-term economic growth, fossil fuel-based energy security, construction, energy, and extractive industries, often at the expense of environmental and human health (Şahin, 2019). This persistent focus on fossil fuel dependency has led to what can be described as a carbon lock-in, where technological, institutional, and behavioral dynamics collectively reinforce high-carbon development pathways and create significant policy inertia (Şahin, 2018; Seto et al., 2016; Unruh, 2000). Although Türkiye possesses substantial renewable energy potential, including wind, and solar resources, its policy choices – such as continued subsidies for coal and oil, and avoiding coal phase-out – have deepened its lock-in situation (Şahin, 2018). Despite significant opportunities for ecological leapfrogging, ongoing state support for domestic coal and fossil fuel infrastructure increasingly solidifies Türkiye's carbon lock-in, rendering mitigation not merely a technical challenge but a deeply political and institutional dilemma (Şahin, 2018, pp. 35–44).

Although Türkiye ratified the Paris Agreement in October 2021, committing to net-zero emissions target by 2053, its climate policies remain far from robust and consistent. This is largely due to the entrenched influence of its path-dependent energy and industrial systems. The energy sector – comprising power

2 Before the current second NDC in 2025, the target was a 41% emissions reduction from business-as-usual (BAU) levels by 2030. The survey question was based on this earlier target, as set out in the updated first NDC in 2022. Although the BAU baselines differ slightly, there is no substantial difference in the overall ambition of the two targets, and both represent an absolute increase in emissions.

3 <https://ipc.sabanciuniv.edu/en/raising-ambition-project>

4 <https://www.climatepolicylab.org/national-climate-policy-inventories>

5 <https://energypolicy.solutions>

generation, transportation, buildings, and industry – accounts for approximately 72% of Türkiye's total greenhouse gas (GHG) emissions.⁶ Despite this, the country's energy sector remains heavily reliant on fossil fuels, with coal-fired power plants continuing to receive political and financial support.

In recent years, Türkiye's climate policy framework has seen incremental improvements, focusing on increasing renewable energy capacity and enhancing energy efficiency. However, these efforts are insufficient given the growing urgency of climate change. Türkiye's 42% emission reduction from BAU target for 2035 is not ambitious considering the expected scale of emissions growth driven by

population increase and GDP growth. This gap between the country's climate policy rhetoric and climate policy targets reflects a deeper tension between the need to meet international climate commitments and the political and economic drives that continue to prioritize short-term growth over long-term sustainability.

Türkiye's Nationally Determined Contributions (NDC) show reluctance to tackle the most challenging issues, such as coal phase-out and the diversification of energy sources. The Ministry of Energy and Natural Resources (MoENR) outlines a long-term vision for

Türkiye's energy sector, including targets to quadruple solar and wind

capacity to 120 GW by 2035, increase the share of renewable energy to 69.1% by 2053, and reduce reliance on fossil fuels. However, the plan contains no binding timetable for retiring coal-fired power plants. This omission risks locking Türkiye into a high-emissions energy infrastructure for decades to come. External geopolitical developments, including the rise of climate-policy-sceptic agendas in the United States, further complicate Türkiye's climate policy trajectory.

Türkiye's primary focus in the energy sector remains on accelerating the deployment of renewable energy sources and enhancing energy efficiency. The government has implemented programs such as the feed-in tariff mechanism, called the Renewable Energy Sources Support Mechanism (YEKDEM) and the auction mechanism, called the By-Law on Renewable Energy Resource Areas (YEKA), which have driven investments in solar and wind energy to some extent. The country's renewable energy targets in its first NDC for 2030 include 33 GW of solar power and 18 GW of wind power. But in 2024, the targets were improved to 120 GW in 2035. Furthermore, Türkiye plans to increase the share of renewable energy in primary energy consumption to 20.4% by 2030 and establish an emissions trading system (ETS) for emission-intensive sectors (National Energy Plan, 2020).

Path dependency has also constrained climate action in transport, agriculture, buildings, and industry. Investments in low-carbon infrastructure are often undermined by entrenched economic interests, weak enforcement, and limited public and political support. The transport sector plays a critical role in Türkiye's emissions. The country's NDC targets a reduction in the share of road transport and a shift towards more energy-efficient, low- or zero-emission transport options, such as electric vehicles (EVs) and hydrogen fuel cell vehicles. Key policies include the development of a national fast-charging station network for EVs, increasing the electrification of rail networks, and promoting sustainable aviation fuels (World Bank, 2023). In agriculture, the promotion of sustainable practices and the integration of climate resilience into farming have been limited. In the building sector, energy-efficient construction and retrofitting of existing buildings require stronger enforcement of building codes, while investment in green buildings has stagnated amid economic challenges. Additionally, the building sector – both residential and non-residential – lags behind the EU average in energy efficiency (World Bank, 2022).

⁶ According to the latest GHG Inventory (March 2026), Türkiye's GHG emissions reached 584.5 MtCO₂e in 2024, with per capita emissions at 6.8 tCO₂e. In 2024, the energy sector accounted for 71.8% of total emissions, followed by industrial processes and product use (12.9%), agriculture (12.6%), and waste (2.6%). Türkiye's total GHG emissions increased by 5.3% compared to the previous year and by 155% relative to 1990 levels. Emissions from the energy sector alone increased by 192% compared to 1990.

Türkiye's Nationally Determined Contributions (NDC) show reluctance to tackle the most challenging issues, such as coal phase-out and the diversification of energy sources.

Türkiye's industries are at risk because its manufacturing processes are more carbon-intensive than those in the EU, Türkiye's largest trading partner;⁷ and the EU is implementing a Carbon Border Adjustment Mechanism (CBAM). In industry, Türkiye aims to reduce reliance on fossil fuels by increasing the use of sustainable fuels, such as biofuels and alternative raw materials. Policies also focus on improving energy efficiency. However, these policies have not been planned in line with the capacities of industrial partners (such as the steel sector), and lack comprehensive consultations (Baş, 2023). Industrial mitigation measures thus lack a holistic approach that integrates finance, information, and innovation to manage the transformation costs.

Türkiye's extensive forested areas serve as vital carbon sinks, offsetting a portion of the country's net emissions. Nevertheless, increasing deforestation in recent years has eroded this potential. In parallel, Türkiye's climate framework includes adaptation measures focusing on water management, agriculture,

and urban resilience, such as river basin management plans, irrigation modernization, and early warning systems. These measures, however, also face coordination and implementation challenges.

Türkiye's current climate policy mix exhibits a heavy reliance on regulatory tools while underutilizing economic, informational, and innovation-based instruments ...

Understanding Türkiye's climate policy gap is therefore essential. The effectiveness of climate action depends on whether policy instruments and tools (definitions and typology provided in the Appendix) are diversified, appropriately sequenced, and supported by institutional capacity across governance levels. Within this context, Türkiye's current climate policy mix exhibits a heavy reliance on regulatory tools while underutilizing economic, informational, and innovation-based instruments,

reinforcing carbon lock-in and undermining the credibility of long-term climate commitments.

Regulatory instruments and tools – the “prescriptive” mandates such as laws, standards, and directives (Moore et al., 2021) – dominate Türkiye's climate policy mix (Adaman et al., 2017). Examples include emission limits, efficiency standards, and top-down sectoral plans enforced by the government. These measures have been the backbone of Türkiye's approach, reflecting a governance style focused on direct regulation and state guidance.

By contrast, economic tools (e.g., carbon pricing, taxes, trading schemes, or subsidy removal) are notably absent. So far, Türkiye has not implemented a carbon tax or nationwide emissions trading scheme, and it continues to subsidize fossil fuels. Research shows that simply “removing the coal subsidization scheme” could cut Türkiye's greenhouse emissions by around 5% “without harming its economy” – a clear opportunity for a market-based climate policy that remains untapped (Acar & Yeldan, 2016). Informational tools – such as public awareness campaigns, transparency measures, or eco-labeling – and innovation-based tools – such as R&D support, clean technology incentives, and pilot projects – likewise play a marginal role in Türkiye's climate governance.

In what follows, we first present the methodology, then the analysis sections. The analysis comprises a review of the policy inventory, followed by the expert elicitation survey. In the final section, we synthesize these results to draw a series of policy recommendations.

7 The EU is Türkiye's largest trading partner, accounting for roughly 40% of its total exports (European Commission, 2024).

Methodology: Climate Policy Inventory Framework

The research consists of three stages. In the first stage, we collected policy documents into a policy inventory and classified them in accordance with the CPL's methodology outlined in this policy brief. The inventory was prepared between 2023 and 2025 and covers Türkiye's environmental and economic policies that impact the climate change agenda. It spans from the 1956 Forestry Law to 2024 documents, such as the National Climate Change Adaptation Strategy and Action Plan (2024–2030). However, the inventory's database is cut off as of January 2025. Policies are selected from Türkiye's NDC and from desktop research focusing on Official Gazette. However, the inventory does not include the recent discussions on the Climate Law. Nevertheless, during the analysis undertaken between March and June 2025, these developments were taken into account. This inventory was then analyzed, and only active policies were taken into consideration, and the results are presented in this policy brief. In the second stage, an expert elicitation survey was conducted to explore gaps in ambition targets across various, energy-related sectors. This survey not only informs the policy gap analysis presented here but also contributes to the development of scenarios in the Energy Policy Simulator, still in progress.

POLICY INVENTORY METHODOLOGY

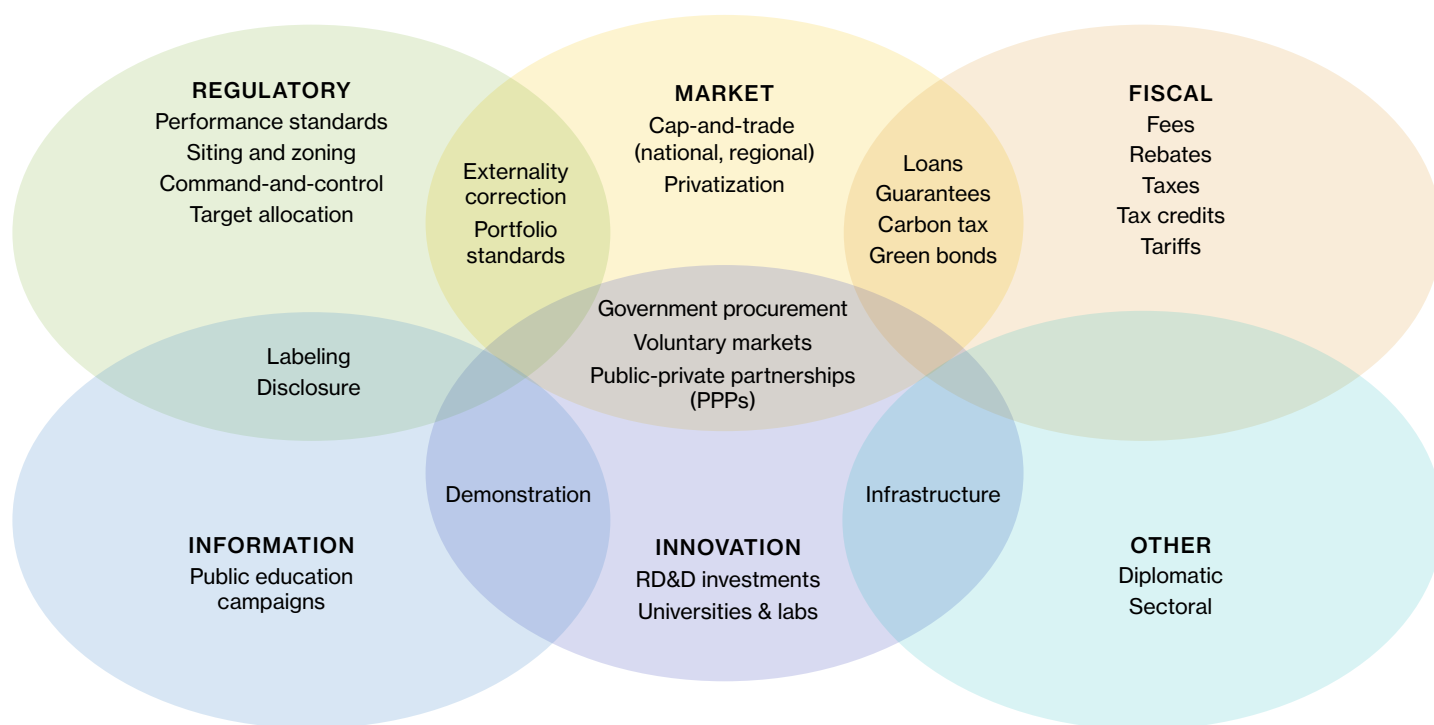
This section outlines the methodology employed to construct a comprehensive inventory of climate policies, serving as the foundational basis for analyzing policy tools and assessing gaps within Türkiye's climate policy framework. The primary objective of this inventory is to systematically capture key dimensions of climate policies, including their legal basis, sectoral focus, objectives, and implementation status. The framework has been designed with careful consideration to ensure consistency and comparability across diverse policy contexts, with a particular emphasis on identifying and addressing policy gaps. Approximately 300 policy documents relevant to both mitigation and adaptation have been identified and classified as part of this process (Climate Policy Lab, 2025). The following provides a detailed account of the methods used for the identification and classification of these policies.

Illustrated in the inventory, the initial step involved identifying specific climate actions. Examples from other countries include the Inflation Reduction Act (United States), the Electricity Act (India), and the National Strategy for Climate Change 2050 (Vietnam). This classification approach is aligned with methodologies used in other national contexts, providing a common framework for comparing and contrasting climate policy actions. **Legislation (kanun/mevzuat in Turkish)** refers to policies passed by legislative bodies, such as parliaments or congresses, which provide the legal authority for implementing climate-related measures. **Government agency policies (yönetmelik and yönerge in Turkish)**, on the other hand, encompass actions initiated by executive bodies, such as ministries or regulatory agencies, to enforce or implement climate-related measures. **Plans, strategies, and guidelines** are high-level directives or frameworks that set overarching goals, targets, and principles for climate action without necessarily having enforceable legal status. This categorization helps ensure alignment with Turkish legal structures while maintaining international consistency in the classification of climate actions.

In the inventory, once climate actions were identified, the next step was to classify each individual policy. A **policy** is defined as an enforceable measure targeting a broader climate action. For instance, the Inflation Reduction Act (United States) includes specific policies such as the **Hydrogen Production Tax Credit** and the **EV Tax Credit**, which can be categorized as enforceable, distinct measures within the broader legislative framework. Policies are further classified by their type, illustrated in Figure 1 below, which serves to differentiate the policy instruments and tools used to address climate change. These types include:

- **Regulatory:** Standards, zoning rules, or command-and-control mechanisms.
- **Market:** Instruments such as ETS or privatization efforts.
- **Fiscal:** Measures involving fees, rebates, taxes, or tax credits.
- **Information:** Public education campaigns or disclosure requirements aimed at raising awareness or encouraging behavioral change.
- **Innovation:** Investments in research and development (R&D) or technology demonstrations to foster new solutions.
- **Other:** Diplomatic measures or sector-specific initiatives not easily categorized within the aforementioned types.

Figure 1. Policy Types (Climate Policy Lab methodology)



Following the classification of policies by type, the next step involved categorizing the policies based on the sector they target. This step ensures a comprehensive understanding of the sectoral reach of climate policies. Policies were grouped under the following sectors: **Economy-wide** (for policies impacting

multiple sectors), **Transportation, Power/Energy, Agriculture and Land Use, Forestry, Green Cities/Buildings/Residential/Energy Efficiency**, and **Industrial**. These categories provide a clear picture of how climate actions are distributed across different sectors of the economy and society.

To further enhance the inventory, the start and end dates of each policy were recorded, establishing a timeline for their implementation. This allows tracking the temporal evolution of climate actions and understanding the duration of their effectiveness. Additionally, related policies – such as amendments, complementary measures, or policies that have been replaced – are documented to capture the evolution of Türkiye's climate actions over time.

Each policy is then classified based on its primary goal: mitigation, adaptation, resilience, climate finance, or climate innovation, **while also flagging policies intentionally designed to achieve synergies across multiple goals** (e.g., mitigation and adaptation). This classification enables an assessment of the overarching objectives of each policy and provides insight into Türkiye's broader climate strategy. For each policy, specific objectives and targets are documented, including quantitative metrics such as emission reduction targets or performance standards. These metrics serve as a basis for evaluating the ambition and effectiveness of climate actions. The identification of relevant data sources is also a key part of this step to ensure that the inventory is accurate and reliable.

Finally, the implementation status of each policy is assessed, noting whether it is being implemented as planned or if deviations have occurred. Any discrepancies are recorded, along with the reasons for these deviations, which could include factors such as lack of resources, political challenges, or changes in the economic landscape. Each policy is categorized as either **direct** (e.g., policies to increase renewable energy deployment) or **indirect** (e.g., public education campaigns that influence behavior change but do not result in immediate, measurable reductions in emissions), based on its impact on mitigation goals. This classification further enhances the understanding of how policies are contributing to their stated goals and provides a basis for future policy recommendations. In sum, this methodology provides a systematic and structured approach to developing a comprehensive inventory of climate policies, allowing for an in-depth analysis of Türkiye's climate actions and the identification of gaps that may hinder progress toward climate goals.

SURVEY METHODOLOGY

The expert elicitation survey was developed using the Climate Policy Lab's standardized template and adapted for local context by the Istanbul Policy Center. CPL has conducted this survey with local partners in nine countries including Indonesia, Mexico, Brazil, and South Africa. The core of the survey is questions asking experts which policies are working, and which are not. When localizing for Türkiye, a list of active climate change policies was selected from the inventory. Experts were asked to evaluate this policy list, which is provided in Table 1. The original English questionnaire was translated into Turkish, reviewed for cultural and technical accuracy, and piloted with two in-house colleagues to ensure clarity and consistency. The finalized survey was deployed online via Qualtrics between June and August 2024.

Table 1. Policy List Used for Expert Elicitation

1. Offset market that allows companies to voluntarily reduce their emissions. (Voluntary Carbon Market Project Registration Notice 2013)
 2. Loans and cash support to SMEs for energy efficiency, renewable energy, and green transition projects. (TuRSEFF 2010; SME Energy Efficiency Support Program 2013; Green Industry Support Program 2023)
 3. Fixed-rate Feed-in Tariffs & Power Purchase Guarantee for utility-scale renewable energy sources (YEKDEM 2005, 2013) at a rate of 5 US cent/kWh to 13.3 US cent/kWh, depending on the renewable energy source, and domestic contribution (local content) support of 47 TL Kurus/kWh for 5 years (since May 2024).
 4. Discount of 50% on the electricity distribution fee paid to the grid by distributed renewables producers. (Unlicensed Electricity Generation in the Electricity Market Regulation, 2013)
 5. Reduced fees for approval and acceptance processes for rooftop solar installations (under 10 kW) by electricity distribution companies. (Unlicensed Electricity Generation in the Electricity Market Regulation, 2013)
 6. Price subsidies for domestic manufacturing of renewable technologies and for utilizing locally produced components in Renewable Energy Source Areas. (YEKA 2016).
 7. Market-based, cost-driven bidding mechanism for new renewable energy capacity in Renewable Energy Source Areas. (YEKA 2016)
 8. Zero Waste By-law. (2019)
 9. Binding energy certification guidelines (Energy performance certificate) for all buildings over 50 square meters. (Energy Efficiency Law 2007).
 10. Financial incentives, through energy performance contracts, for energy efficiency investments in public buildings. (Energy Efficiency Improvement Program from 2014 and 2018).
 11. Insulation rules for housing and commercial buildings in the TS 825 thermal insulation regulations for buildings. (Regulation on Energy Performance in Buildings, amended 2023)
 12. Mandatory installation of central heating system for new buildings with area above 2000 m³. (Regulation on Energy Performance in Buildings, amended 2023)
 13. Mandated solar hot water systems in new residential buildings over 2000 m³. (Regulation on Energy Performance in Buildings, amended 2023)
 14. Minimum energy performance standards (MEPs) for consumer appliances (like air conditioners, refrigerators, and washing machines). (Directive on Eco-Design Requirements for Energy Related Products (ECO, 2013) & Directive on Displaying Standard Product Information and Labelling (LAB, 2013))
 15. Mandatory labelling of all products based on electricity consumption. (2011 regulation on energy and resource consumption labelling)
 16. Monitoring and control of afforestation activities. (Regulation on Afforestation 2019)
 17. Grants covering 30% of costs, up to a maximum of 5 million Turkish Lira for energy efficiency projects in the manufacturing industry. (VAP 2011)
 18. Regulations for a minimum 10% reduction in energy intensity of industry. (Regulation on Increasing Efficiency in the Use of Energy Resources and Energy 2008)
 19. Regulatory framework and technical reporting standards for industrial GHG emissions. (Regulation on Monitoring of Greenhouse Gas Emissions 2012)
 20. Planning and infrastructure development guidelines for sustainable transport systems. (Regulation on Procedures and Principles Regarding the Improvement of Energy Efficiency in Transportation 2008)
 21. Vehicle registration tax by vehicle type and engine size; Internal Combustion Engines rates from 45% to 160% and EVs from 10% to 60% of the vehicle's base price. (Special Consumption Tax on Motor Vehicles - OTV)
 22. Mandated blending of at least 0.5% (v/v) biodiesel from domestic agricultural products/waste into diesel types imported and supplied from refineries. (Communique on Blending Biodiesel in Diesel Types 2017)
 23. Voluntary low carbon cargo and green logistics certification program providing discounted licensing and other benefits. (By-law on Combined Transport 2022)
 24. Guidelines for planning and construction of bicycle roads. (By-law on Bicycle Roads 2019)
 25. Regulatory framework and reporting standards for GHG emissions from aviation. (By-law on Monitoring of Greenhouse Gas Emissions from Aviation Activities 2022)
-

Table 2. Expert Survey Participants by Category

CATEGORY	NUMBER OF EXPERTS
Academia	6
Anonymous	6
NGO	6
Private sector/ Industry	4
Think tanks	3
Consultancy	1
International organization	1
Public bank	1
Total	28

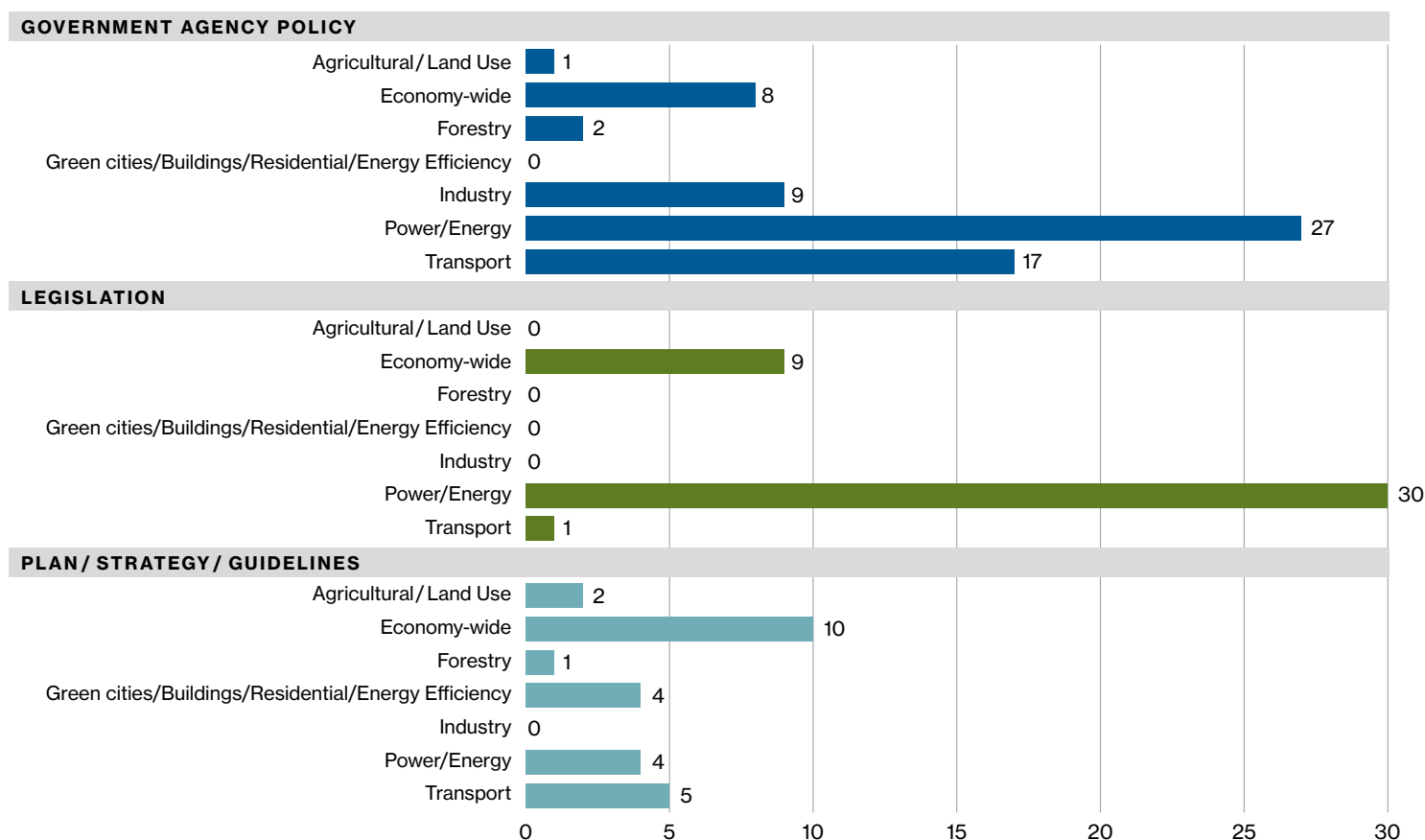
A total of 66 experts – drawn from academia, non-governmental organizations, think tanks, consultancies, international organizations, industry, and public finance institutions – were invited to participate via tailored email invitations. Two reminder notices were sent over a three-week period to maximize engagement. Of those invited, 29 experts accessed the survey, yielding a 44 percent response rate, and 28 completed all required sections. Table 2 summarizes the distribution of responses by stakeholder category.

Türkiye's Climate Change Policy Outlook

A SECTORAL ANALYSIS

When examining Türkiye's climate change policies, the power and energy sectors emerge as the most active areas for policy adoption compared to other sectors. This is evident in the sectoral distribution of active policies, as illustrated in Figure 2. The majority of these policies focus on governance and the deployment of renewable energy, with key regulations such as the *Regulation on the Documentation and Support of Renewable Energy Sources (YEKDEM)*, the *Regulation on Renewable Energy Source Areas (YEKA)*, and the *Unlicensed Electricity Generation in the Electricity Market Regulation*. These frameworks aim to incentivize renewable energy production and integrate it into Türkiye's energy mix.

Figure 2. Direct and Active Policies by Sector



Türkiye has tapped only about 27% of its wind potential and a fraction of its solar potential, underscoring a significant gap between existing capacities and long-term climate and energy-transition ambitions.

As of 2025, renewables – including hydro, wind, solar, geothermal, and biomass – accounted for approximately 40% of Türkiye's electricity generation, enabling the country to surpass its 2023 target of a 38.8% renewable electricity share ahead of schedule (Republic of Türkiye Presidency of Strategy and Budget, 2019; Ministry of Energy and Natural Resources, 2025c). However, this overall success conceals sector-specific underperformance, particularly in light of the country's heavy reliance on imported fossil fuels and the structural vulnerabilities this creates for energy security (IEA, 2021).

Türkiye's Eleventh Development Plan (2019–2023) targeted 20 GW of wind and 10 GW of solar installed capacity by 2023 (Republic of Türkiye Presidency of Strategy and Budget, 2019). By the end of 2022, installed capacity stood at 11.4 GW for wind and 10.9 GW for solar, meaning wind reached about 57% of its goal while solar nearly exceeded its target (TEİAŞ, 2023).

By the end of December 2024, installed capacity reached 12.9 GW for wind and 19.9 GW for solar (Ministry of Energy and Natural Resources, 2025a). By end-March 2025, wind and solar together totaled 35 GW, indicating continued growth (Ministry of Energy and Natural Resources, 2025b). Yet these gains remain modest compared to Türkiye's estimated technical potentials of 48 GW for onshore wind and at least 120 GW for rooftop solar alone (Ministry of Energy and Natural Resources, 2025; Ember, 2023). This indicates that Türkiye has tapped only about 27% of its wind potential and a fraction of its

solar potential, underscoring a significant gap between existing capacities and long-term climate and energy-transition ambitions.

Government targets anticipate accelerating this trajectory to 120 GW of wind and solar by 2035, implying a need for sustained, faster annual additions over the next decade (Ministry of Energy and Natural Resources, 2025b). This acceleration is also consistent with Türkiye's Second NDC (NDC 3.0), which sets an economy-wide 2035 emissions limit and frames the 2053 net-zero objective as the long-term direction (Republic of Türkiye Presidency of Climate Change, 2025). Key barriers include regulatory delays, grid infrastructure limitations, and financing constraints.

The transportation and economy-wide sectors represent the second most active areas for policymaking in Türkiye. In transportation, policies focus on setting emission standards for logistics, public transportation, and passenger vehicles, alongside initiatives to promote cycling and decarbonize public transit systems. These measures are primarily mandated through regulatory frameworks. For instance, Türkiye has adopted European vehicle emission standards in domestic regulation, including Euro 6 for light-duty vehicles and Euro VI for heavy-duty engines, and has set biofuel blending mandates to reduce carbon intensity (Climate Policy Lab, 2025; DieselNet, 2025). Fiscal incentives – including reduced Special Consumption Tax (ÖTV) for electric vehicles – are intended to promote cleaner transport, yet as of 2024, electric vehicles constituted only 1.1% of the total vehicle stock at the end of 2024 (Gülkaya Taşgın, 2025). In July 2024, Türkiye launched the High-Tech Investment Incentive Program (HIT30), a US \$30 billion stimulus package aimed at domestic electric vehicle and battery production (UNCTAD, 2024).

Despite this incremental progress, important gaps remain. The European Commission (2025) notes that Türkiye does not fully implement the Fuel Quality Directive and is not yet aligned with EU emissions standards for new light- and heavy-duty vehicles. Likewise, although Türkiye adopted a climate law in July 2025 establishing the rules for a domestic emissions trading system, the law remains only partially aligned with the EU acquis (European Commission, 2025). Moreover, municipalities have yet to operationalize low-emission or zero-emission zones, highlighting a governance deficit at the subnational level. (European Commission, 2025).

Economy-wide policies, on the other hand, are disseminated through national plans and regulatory tools, integrating climate-related fiscal concepts into mainstream economic planning. However, these plans often lack concrete, evidence-based targets for fiscal and labor-related outcomes. Instead, they tend to set qualitative and thematic goals, such as promoting green finance or enhancing climate resilience, without specifying measurable milestones or timelines. This approach limits the effectiveness of these policies in driving transformative change.

Sectors such as agriculture/land use, green cities/buildings/residential energy efficiency, and industry remain notably under-engaged in Türkiye's active climate policies. Although some national-level initiatives do exist – such as energy-efficiency guidelines for buildings and industrial processes – these efforts are largely fragmented and lack the scale needed for substantial emissions reductions. While the *National Climate Change Mitigation Strategy and Action Plan (2024–2030)* mentions enhancing building efficiency and promoting clean industrial tech, it lacks quantitative benchmarks and clear policy instruments – for example, no targets for annual energy savings or retrofit rates. In agriculture, which contributed over 12% of Türkiye's greenhouse gas emissions in 2021 (Karakoç & Yeldan, 2025), policy remains at the level of broad directives such as “increased climate resilience” with no specific tonnage reductions or measurable goals.

This lack of diversified policy tools and quantifiable goals undermines commitment credibility. By omitting concrete quantitative targets and enforcement mechanisms, Türkiye's action plans risk remaining aspirational rhetoric rather than genuine drivers of decarbonization. Incorporating measurable goals – such as specific greenhouse gas reductions in agriculture, a building retrofit rate, or industry efficiency targets – is critical to mobilize policy instruments, finance, and institutional coordination needed for accelerated climate action.

The lack of targeted policies to address deforestation, land degradation, and biodiversity loss remains a critical gap.

Forestry stands out as the sector with the fewest active policies, with only two identified in the current inventory. This could indicate that the sector is still in the early stages of implementing active measures or that long-term conservation and reforestation initiatives are being prioritized over immediate

regulatory actions. The lack of targeted policies to address deforestation, land degradation, and biodiversity loss remains a critical gap. Türkiye's forestry sector grew modestly during this period, driven by afforestation and erosion-control efforts, but produced almost no new dedicated forest policy. By the mid-2010s, the only guiding documents were the existing National Forestry Program (2004–2023) and the 10th Development Plan (2014–2018) (World Bank, 2017). Türkiye's National Forestry Program explicitly calls for conserving forest area and biodiversity, yet no updated or expanded forestry strategy has been introduced. This narrow policy base runs counter to Türkiye's international obligations: the Convention on Biological Diversity (CBD) mandates updated biodiversity strategies – with the 2018–2028 Biodiversity Action Plan listing “biodiversity conservation in forestry areas” as a strategic objective (Convention on Biological Diversity, 2019) – and the United Nations Convention to Combat Desertification (UNCCD) requires national desertification action plans and land degradation-neutrality targets, as reflected in Türkiye's 2019–2030 Desertification Strategy (Ministry of Agriculture and Forestry, 2019). In sum, the paucity of new forest-sector policies creates a gap between Türkiye's forestry practice and its CBD/UNCCD commitments, impeding full implementation of those international goals.

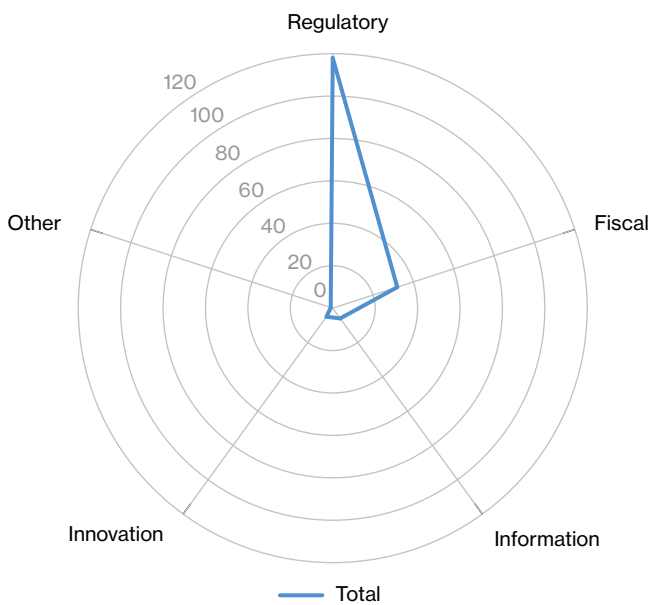
DEEP GAPS IN POLICY TOOLS

A critical insight from the policy inventory is that Türkiye's climate change policy landscape is heavily dominated by regulatory instruments. As mentioned, the Climate Law, despite being a significant step, has drawn criticism for being adopted without an inclusive process and for lacking comprehensive integration of diverse policy tools. While regulatory tools, such as laws, regulations, and standards,

are essential for establishing a structured framework for climate action, their predominance reveals a significant gap in the diversity of other policy tools. Specifically, there is a notable lack of fiscal measures, innovation-driven policies, and capacity building that could complement regulatory efforts and drive more holistic, effective and inclusive climate action (IPCC, 2022).

Figure 3 below illustrates the distribution of policy instruments across Türkiye's active climate policies. The chart highlights the overwhelming dominance of regulatory tools, with fiscal, innovation, and informational instruments representing only a small fraction of the policy mix. This visual representation underscores the need for greater diversification in policy tools to address the multifaceted nature of climate change (OECD, 2025).

Figure 3. Policy Instruments for Active Policies



This matters because the climate policy literature consistently distinguishes between effectiveness (whether policies deliver emissions reductions) and cost-effectiveness (whether they do so at least cost). Regulatory instruments can be highly effective in targeted sectoral applications and often enjoy strong political support, but they “tend to be more economically costly than pricing instruments,” whereas carbon pricing is widely assessed as effective at incentivizing lower-cost abatement options across heterogeneous emitters (IPCC, 2022). In “second-best” settings, where institutional, behavioral, and political constraints prevent an idealized first-best carbon price, regulatory approaches can still drive real change, but may do so with higher implicit abatement costs than broad, well-designed market-based instruments (Bennear & Stavins, 2007).

The same literature is clear that climate mitigation is not a single-instrument problem: beyond the emissions externality, other factors such as innovation spillovers, adoption barriers, and information frictions can slow technological change and diffusion, which provides a strong rationale for policy mixes that pair regulations and/or carbon pricing with innovation and fiscal tools (e.g., public R&D support, demonstration funding, and

adoption incentives) (Fischer & Newell, 2007). Recent cross-sector empirical work also finds that, in many cases, the observed emissions impacts of non-price instruments are larger when they appear as part of a broader policy mix rather than standing alone, reinforcing the argument that “regulatory-only” approaches can leave performance on the table when complementary market formation and innovation instruments are absent (OECD, 2025; Stechemesser, 2024). A related modeling study shows that adding even modest carbon pricing to standards can generate substantial cost savings relative to standards-only approaches (and can approach the cost-effectiveness of pricing-only pathways), which directly speaks to the “what if regulation alone is enough?” question: it can reduce emissions, but it is often not the least-cost route (Dimanchev & Knittel, 2023).

Finally, it is important to note that “more instruments” is not automatically “better.” A growing literature on policy interactions emphasizes that mixes can generate synergies but can also create overlaps, dilute incentives, or produce unintended effects (for example, “waterbed” dynamics under fixed-cap trading systems), so the design, sequencing, and governance of the package are crucial (Böhringer & Rosendahl, 2010; OECD, 2025; Perino et al., 2022).

Regulatory instruments, such as the Regulation on Renewable Energy Sources (YEKDEM), have been the cornerstone of Türkiye's climate policy. These tools are effective in setting mandatory standards and creating a predictable environment for stakeholders. Their top-down design has limitations,

particularly in addressing high upfront investment costs and grid-integration challenges, which often require complementary fiscal incentives and innovation-focused measures (Dilli and Nyman, 2020). For instance, while YEKDEM has successfully encouraged renewable energy investments through feed-in tariffs, it has not fully addressed barriers such as high upfront costs or grid integration challenges, which could be better tackled through complementary fiscal and innovation policies.

Fiscal tools – such as carbon pricing, subsidies for green technologies, and tax incentives – are largely underutilized in Türkiye's climate policy framework. However, carbon pricing mechanisms are now on the horizon, as the draft Climate Law submitted to parliament proposes the establishment of a Carbon Market Board and an Emissions Trading System (ETS), with a pilot phase expected to launch in 2026. This signals a shift from the current top-down regulatory focus and shows recognition of the need for fiscal tools to complement existing frameworks.

Innovation-driven policies, such as research and development (R&D) grants, technology transfer programs, and public-private partnerships, are also scarce. These tools are critical for developing and

deploying new technologies that can accelerate the transition to a low-carbon economy. For instance, Türkiye's solar and wind energy sectors could benefit significantly from targeted R&D investments in energy storage and smart grid technologies, which are essential for addressing intermittency and grid stability issues. The lack of such policies not only slows technological progress but also limits Türkiye's competitiveness in the global green technology market. For example, despite strong renewable energy generation capacity, Türkiye has not yet established large-scale battery storage programs like Germany's "Innovation Auctions" initiatives. Nor does it offer consistent public-

private R&D support comparable to South Korea's Green New Deal technology clusters or Denmark's Energy Technology Development and Demonstration Program (EUDP) (IEA, 2023).

Another significant gap is the lack of policies for target sectors, and climate action goals that focus on providing information, raising awareness, and fostering behavioral change. Informational tools, such as public campaigns, labeling schemes, and educational programs, are crucial for engaging citizens, businesses, and local governments in climate action. The absence of such tools undermines the participatory and inclusive nature of climate action, which is essential for achieving long-term sustainability. In the next section, the experts' opinion on the effectiveness of these policy tools and instruments will be presented.

The lack of [innovation-driven] policies not only slows technological progress but also limits Türkiye's competitiveness in the global green technology market.

Expert Elicitation Results

POLICY BOTTLENECKS, TRADE-OFFS, AND INSTITUTIONAL GAPS

This section synthesizes findings from an expert elicitation survey on Türkiye's climate goals and instruments, analyzing the perceived ambition of key targets, the effectiveness of policy measures, economic and social trade-offs, and expert recommendations for strengthening climate policy.

Figure 4. Türkiye's Climate Target Feasibility Gap (Expert Assessment)

2038 EMISSIONS PEAK
(EASY)
Majority of experts: Achievable under current policy path. – Emissions growth already slowing – Long lead time
2030 EMISSIONS REDUCTION (41% BELOW BAU)
(DIFFICULT)
Experts see as challenging. – Requires sharp curve bending within decade – Current NDC allows growth – Misaligned with 1.5°C pathway
2053 NET-ZERO TARGET
(EXTREMELY DIFFICULT)
Experts highly skeptical. – Huge system-wide transformation – Steep post-2038 decline needed – Current policies not on track

2038 Emissions Peak – “Easy” according to most experts:

The majority of surveyed experts view Türkiye's pledge to peak GHG emissions by 2038⁸ as readily achievable.⁹ In other words, most experts do not foresee major obstacles to merely halting emissions growth by the late 2030s. This likely reflects Türkiye's already slowing emissions growth and the long lead time until 2038. Indeed, independent analyses suggest Türkiye's current policies could over-achieve its NDC without additional effort – meaning emissions might level off or peak by the 2030s under existing trends (Climate Action Tracker, 2025)

2030 Emissions Reduction – Viewed as difficult:

In stark contrast, Türkiye's 2030 emission reduction target (41% below BAU) was regarded as extremely challenging.¹⁰ Achieving a 41% cut relative to BAU by 2030 will require bending the emissions curve within a decade; yet, because emissions continue to rise rapidly, experts believe even this modest reduction goal is hard to attain. Notably, Türkiye's 2030 target is not an absolute reduction from today's levels but rather a slower increase; even so, it demands significant policy action by 2030. The skepticism aligns with analyses criticizing the 2030 pledge as misaligned with a net-zero pathway (CAN Europe, 2022). Türkiye's plan, which still allows emissions to grow through 2030, underscores a gap between its commitments and the global effort needed for 1.5°C.

2053 Net-Zero – Overwhelmingly seen as extremely difficult:

Virtually all experts expressed serious doubts about reaching net-zero emissions by 2053, with nearly all considering it moderately to extremely difficult.¹¹ This reflects the enormous transformation required in Türkiye's economy and energy system after decades of rising emissions. Achieving net-zero just 15 years after an emissions peak in 2038 will necessitate a steep decline in emissions post-peak.

Climate Action Tracker (2025) rates Türkiye's net-zero target as “Poor” in credibility, questioning how the country can neutralize emissions in such a short span without an earlier peak and more aggressive interim cuts. The survey results echo these concerns – experts likely believe that, under current conditions, deep decarbonization by 2053 is unrealistic without dramatic policy changes, technological breakthroughs, and unprecedented investment.

8 This target is in the updated first NDC only.

9 8 of 24 respondents rated this target as “moderately to extremely easy” (Likert 1–4).

10 17 of 24 experts rated this near-term goal as “moderately to extremely difficult” (Likert 5–10).

11 26 of 27 respondents rated the net-zero 2053 goal as “moderately to extremely difficult”.

In summary, peaking emissions (a relatively low-ambition milestone) appears easy, whereas achieving substantial emission cuts by 2030 and full carbon neutrality by 2053 is viewed as daunting for Türkiye. This ambition gap identified by experts suggests that Türkiye's current climate policies have not charted a credible path from a 2038 peak to net-zero 2053. As the next sections detail, experts emphasize ramping up policy ambition – especially given that Türkiye's present NDC is “easily over-achieved” and does not drive transformative change. Bridging the gap will require not only ambition on paper but effective policy implementation and stronger targets.

POLICY INSTRUMENTS: EXPERT VIEWS ON EFFECTIVENESS AND CHALLENGES

The expert survey asked which climate policies are perceived as most effective for achieving Türkiye's targets and which are most challenging to implement. The consensus points to a mix of financial incentives and regulatory measures as key tools – but also highlights certain policies that face implementation hurdles. Below is a summary of the top measures identified by experts:

TOP-RATED EFFECTIVE POLICIES:

Experts were asked which existing or proposed policies would be most effective for helping Türkiye peak emissions and achieve net-zero. The five highest-ranked policies (for near-term carbon peaking) were:

- **Low-cost green finance for industry:** “Loans to SMEs for energy efficiency (EE), renewable energy (RE), and green transition projects.” Concessional green credit for small and medium enterprises was the single most-cited effective policy. Such loans help businesses adopt clean technologies and improve efficiency, directly curbing emissions while boosting innovation and competitiveness. This aligns with broader evidence that access to finance accelerates corporate decarbonization in emerging markets (Güler & Kumar, 2022).
- **Renewable energy Feed-in Tariffs (FiT) with purchase guarantees:** Long-term fixed-price contracts for utility-scale renewables – Türkiye's Renewable Energy Support Mechanism (YEKDEM) – were seen as highly effective in driving investment in wind and solar power. Notably, some experts raised cost concerns about FiTs – discussed later – but in terms of emissions impact, FiTs are considered instrumental.
- **Streamlined rooftop solar permitting:** “Reduced fees and faster approval for small (<10 kW) solar installations.” By lowering administrative costs and delays, more households and businesses can install solar panels, contributing to emission reductions and public buy-in. This measure reflects a broader strategy of empowering consumers as renewable “prosumers” – a trend also seen in peer countries encouraging rooftop solar to supplement grid power (IEA, 2021).
- **Energy efficiency regulations:** Strengthening and enforcing Türkiye's existing efficiency standards is seen as a top mitigation tool. Experts specifically cited the “Regulation on Increasing Efficiency in the Use of Energy Resources and Energy (2008)” – a foundational law setting efficiency requirements for industry and buildings.
- **Vehicle taxes based on engine size:** Differential registration taxes for vehicles (higher taxes on larger, less efficient engines) were also among the top five effective policies.

In addition to the above, when considering policies for the net-zero 2053 horizon, experts highlighted similar instruments with a few additions. Notably, incentives for distributed renewables (e.g., “50% discount on electricity distribution fees for renewable producers feeding the grid”) and transport sector efficiency (e.g., fuel efficiency improvements and promotion of non-motorized transport like bicycle infrastructure) gained prominence for the long-term goal. Overall, the expert consensus on effective measures centers on financial incentives (loans, subsidies, FiTs) to spur clean energy and regulatory standards to lock in efficiency improvements and cleaner technology uptake.

THE LEAST EFFECTIVE POLICIES:

The survey also asked which policies are most difficult to implement. The measures rated “most challenging” are generally those requiring new market mechanisms or broad societal participation. The top challenges identified include:

- **Voluntary carbon offset market:** An “offset market allowing companies to voluntarily reduce emissions” was rated the #1 most challenging policy to implement. That is because voluntary offset schemes depend on corporate buy-in and robust verification. Türkiye currently lacks a regulated carbon market; setting up a credible voluntary offset system would require new institutions, MRV (monitoring, reporting, verification) infrastructure, and trust from stakeholders. Many experts doubt its effectiveness (some even recommended eliminating the offset mechanism altogether due to limited mitigation value. This highlights a preference for direct emission reductions over unverifiable offsets.
- **Electricity grid fee discounts for renewables:** While seen as effective for boosting clean energy, the 50% distribution fee discount policy was also listed among the most challenging to implement.
- **“Zero Waste” initiative:** Türkiye's Zero Waste By-Law, aimed at reducing waste and promoting recycling nationwide, ranked as an ineffective policy due to implementation gap.
- **Urban bicycle infrastructure guidelines:** National guidelines for planning and constructing bicycle roads were also among the most challenging to implement. Promoting cycling in Turkish cities faces hurdles like car-centric urban design, safety concerns, and cultural preferences.
- **Transport and forestry regulations:** The 2008 regulation on improving energy efficiency in transportation and a 2019 afforestation regulation appeared on the list of challenging policies.

In essence, experts view policies that hinge on voluntary action, complex market setups, or widespread compliance as the hardest to carry out.

In essence, experts view policies that hinge on voluntary action, complex market setups, or widespread compliance as the hardest to carry out. The contrast is notable: the policies seen as most effective tend to involve financial carrots or clear technical standards, whereas the hardest-to-implement policies often rely on new governance frameworks or behavioral shifts. This insight suggests Turkish policymakers should prioritize strengthening institutions and incentives to tackle those hard-to-implement areas. Specifically, for the voluntary carbon offset market, the key gap is institutional: experts flagged the absence of credible MRV rules, verification capacity, and trusted governance, which is why experts prefer direct

emission reductions over voluntary offsets. For measures like the 50% electricity distribution fee discount for renewables, the challenge is the regulatory and cost-allocation design needed to apply discounts without creating implementation resistance.

Finally, it's worth noting a few policy contradictions from the survey. Some measures appeared on both “most effective” and “most challenging” lists – indicating a split in expert opinions or nuanced trade-offs. For instance, the voluntary offset market was seen by some as a driver of private-sector climate action (appearing in top effective policies for innovation and growth), yet many others questioned its ambition and impact. Similarly, feed-in tariffs were rated effective for emissions, but a subset of experts argued they should eventually be phased out (favoring competitive renewable auctions instead).

TRADE-OFFS: ECONOMIC GROWTH, FISCAL COSTS, EMPLOYMENT, AND EQUITY

A core challenge of climate policy is managing trade-offs between environmental goals and socio-economic outcomes. The expert survey asked which policies would most stimulate or harm economic growth, strain public finances, impact jobs, and affect social equity in Türkiye. The findings reveal perceived co-benefits as well as trade-offs, offering a nuanced picture of Türkiye's green transition:

Impact on economic growth – Accountable policy design is critical:

On balance, experts believe well-designed climate policies can support Türkiye's economic growth, but they emphasized that market-based mechanisms can impede growth if the rules and governance are weak. Notably, some respondents saw the development of a carbon trading/offset market as a growth opportunity, presumably by spurring new green industries and attracting climate finance – this policy was ranked among the top 4 that could stimulate growth. These expectations are consistent with broader assessments suggesting that aligning climate and development objectives could generate net gains (Tör et al., 2024; World Bank, 2022), and that carbon pricing can stimulate private investment when revenues are recycled effectively, and macroeconomic stability is maintained (World Bank, 2022). However, experts were notably more divided on a voluntary offset market, which appeared as a double-edged sword in the survey: while it could create a new market and signal corporate climate action, poor design (weak verification, unclear eligibility rules, and low credibility of offsets) could impose transaction costs and uncertainty on companies without delivering tangible mitigation or competitiveness benefits. This split in expert rankings suggests that the growth impact is not inherent to the instrument itself but depends on whether market mechanisms are designed with strong governance and monitoring that translate compliance costs into measurable, investable outcomes. Afforestation programs and grants for industrial energy efficiency were also viewed as pro-growth. The survey implies most green policies are not inherently at odds with growth, but policy design and accountability matters.

Public expenditure – Fiscal trade-offs and financial planning are crucial:

Experts widely acknowledged that many climate policies will require increased public spending or subsidies in the short term. When asked which measures would most increase Türkiye's public expenditure, respondents overwhelmingly pointed to financial incentive program. Leading the list were concessional green loans to SMEs, fixed-rate feed-in tariffs with power purchase guarantees, and grants covering 30% of costs for industrial energy efficiency projects. Also included were renewable energy production incentives like the grid fee discount and subsidies for domestic manufacturing of RE technologies. These policies are effective in driving decarbonization but come at a direct fiscal cost – either through budget outlays or forgone revenue. Türkiye will need to allocate significant public funds or find innovative financing (e.g., international climate finance or private-public partnerships) to support these measures. The trade-off is that while such spending can yield long-term economic and environmental gains, it may strain the budget or crowd out other investments in the near term. The survey underscores that climate ambition must be paired with financial planning.

Employment effects – Green jobs can be created:

A just transition must be a central concern for policymakers. Turkish experts provided insights on which climate policies help or hurt employment. Encouragingly, many green policies are seen as net job creators. The survey's top policies for boosting employment largely mirror those for emissions reduction: loans for clean energy SMEs, facilitating rooftop solar, and renewable manufacturing subsidies were highly ranked for their job benefits. Additionally, building sector measures (e.g., mandatory building insulation and solar hot water systems) were noted to create jobs, likely because construction and retrofitting are labor-intensive. These results align with global studies finding that renewable energy and energy efficiency investments generate more jobs per dollar than fossil fuel industries (e.g., renewables create ~3 times more jobs per \$1 million investment than fossil fuels) – as supported by research from the UK and others (Climate Action, 2020). Experts anticipate that

growing Türkiye's clean tech sector and improving efficiency will require skilled labor, thus offering an opportunity to boost employment and develop a green workforce.

However, the survey also identified a few policies that could harm employment, at least in certain segments. Interestingly, some financial incentives like green loans and solar fee reductions appeared on the “harm employment” list for a minority of respondents. In addition, vehicle taxation was seen as potentially harmful to employment, perhaps because higher taxes on cars could slow auto industry sales or production jobs.

Experts generally tempered these concerns with long-term optimism. Several noted that most current policies won't significantly harm jobs, and that only more “radical” decarbonization steps (like an abrupt coal shutdown or heavy industrial transformation) would have stronger negative job impacts. One expert emphasized that “a holistic energy transformation will bring benefits in all areas. Renewable energy and efficiency policies boost employment.” This suggests that with careful management and planning – such as re-training programs and regional development for affected workers – Türkiye's climate agenda can be largely compatible with its employment objectives. These survey insights are

consistent with field research from coal-dependent regions in Türkiye, which emphasizes that a carefully managed transition can minimize employment risks while opening new economic opportunities. Case studies from Yatağan and Çan show that while abrupt coal phase-outs may trigger job losses, especially for older workers, a gradual transition combined with early retirement options, re-skilling programs, and investments in renewables, agriculture, and eco-tourism can support long-term employment goals. Crucially, local stakeholders – including unions and civil society – stress the need for inclusive planning and income protection to ensure that coal-dependent communities are not left behind (Akgül et al., 2024).

Overall, experts seem to favor measures that democratize access to clean energy and mobility, thereby sharing the benefits of climate action widely.

Social equity implications – Democratized access to clean energy and mobility must be ensured:

The survey asked which measures would increase or decrease social equity in Türkiye. Policies seen to enhance social equity include those that provide financial support to smaller actors and improve public services. For instance, low-interest green loans for SMEs were viewed as equity-improving. Subsidies for domestic renewable tech manufacturing were also cited as boosting equity, as they can create local jobs and lower technology costs, spreading economic gains to workers and consumers. Sustainable transport initiatives – such as improving energy efficiency in transportation and building bicycle infrastructure – ranked high for increasing equity. Overall, experts seem to favor measures that democratize access to clean energy and mobility, thereby sharing the benefits of climate action widely.

Risks of inequality – Distributional impacts must be mitigated, as much as the emissions:

Experts warned that some policies could exacerbate inequalities. Among those flagged for potentially decreasing social equity were broad-brush instruments like carbon offset schemes and pricing mechanisms, as well as any policy that might raise firm costs without compensation. For example, a poorly regulated offset market or a market-based renewable procurement system might favor large corporations and leave smaller entities behind. These insights highlight the need for designing policy measures with compensatory mechanisms (such as social assistance or tiered pricing) to protect vulnerable populations and avoid disproportionate burdens. Experience from other countries shows that public acceptance of climate policies depends heavily on perceived fairness. France's *gilets jaunes* protests fuel taxes highlighted the backlash when climate measures are viewed as socially unjust (Carattini et al., 2019; Douenne & Fabre, 2022). Turkish experts similarly emphasize that climate actions must be evaluated not only for emissions reductions, but also for their distributional impacts – who bears the costs and who benefits.

POLICY REFORMS AND INSTITUTIONAL NEEDS

Beyond evaluating existing goals and instruments, the expert elicitation gathered open-ended recommendations for strengthening Türkiye's climate policy framework. A consistent theme is that Türkiye needs major policy reforms and institutional capacity-building to bridge the gap between its ambitions and real-world progress. Key expert recommendations include:

Align short-term action with long-term goals:

Experts urge Türkiye to close the ambition gap for 2030 so that it is on a realistic trajectory to net-zero 2053. Specifically, many suggest adopting a more ambitious 2030 emissions target (e.g., an absolute reduction from current levels, not just a slower increase). Thus, experts want to see near-term climate action stepped up through policies like higher renewable deployment (beyond current targets) and ambitious efficiency programs to achieve measurable emissions decline by 2030. They also highlight the need for a comprehensive 2053 roadmap with interim milestones, so that each sector (energy, industry, transport, etc.) has a clear decarbonization pathway in line with net-zero.

In this context, experts specifically recommend setting more ambitious targets for the transportation sector, including adopting binding timelines to ban the sale of fossil fuel vehicles, and establishing long-term emission reduction plans tailored to the sector's decarbonization. They also propose formulating a holistic urban transformation strategy for the buildings sector that realistically integrates mitigation targets into building codes and renovation programs.

Establish a robust carbon pricing mechanism:

Many experts call for moving from voluntary measures to mandatory carbon pricing as a cornerstone of climate policy. In expert discussions, the current voluntary carbon offset market was criticized as ineffective; replacing it with a regulated carbon market with cap-and-trade could address that weakness. Additionally, aligning Türkiye's monitoring and reporting standards with EU norms (as noted in EU progress reports) is a priority. The recommendation is to integrate climate targets into national legislation, creating accountability and transparency – for example, via annual emissions reporting requirements and an independent oversight body to track progress.

Türkiye's parliament adopted parts of Climate Law that would create an Emissions Trading System (ETS) and a Climate Change Agency by 2025. The process of legal negotiations of the law sparked a strong reaction in civil society. These debates reveal significant criticism that further illustrates the need for careful policy design. Critics argue that the draft law disproportionately relies on market mechanisms – particularly carbon trading – over concrete environmental protections. The environmental advocacy groups have warned that the law essentially creates a carbon market framework rather than laying out enforceable climate action, describing it as an “emission trading act” rather than a true climate law (Euronews, 2025). Environmental activists also claim it commodifies air, water, and land, benefitting large corporations at the expense of addressing climate urgency (İklim Adaleti Koalisyonu, 2025). Moreover, analysts highlight the absence of legally binding, medium-term targets (e.g., 2030, 2040) and the lack of a clear fossil fuel phase-out strategy – shortcomings that leave the draft law disconnected from its stated 2053 net-zero goal (Şahin, 2025).

The law has also faced sharp criticism for its opaque drafting process and minimal civil society involvement. It was temporarily withdrawn from parliamentary consideration after widespread backlash from NGOs, professional associations, and opposition MPs, who argued it lacked transparency and neglected resilience, public health, and biodiversity concerns (Euronews, 2025; T24, 2025). These policy design and process flaws of the Climate Law highlight the need for stronger oversight, binding targets, and institutional capacity before the legislation can meaningfully drive climate action.

Phase out coal with a just transition plan:

A prominent recommendation is to develop a coal phase-out strategy that balances climate urgency with economic justice. Türkiye still relies on coal for a significant share of power generation. Experts argue this trajectory must change: no new coal power should be built, and existing plants should be retired well before 2050. Experts advocate for setting a coal exit date (e.g., 2040 or sooner) and creating a Just Transition fund to support coal-dependent workers and regions through this change.

Furthermore, some experts explicitly call for a ban on construction of any new fossil fuel power plants. They stress that fossil fuel phase-out policies must be backed by enforceable moratoria on new fossil-based capacity additions, while simultaneously supporting distributed energy generation through state-backed incentives for unlicensed and small-scale producers.

Eliminate or reform ineffective policies:

Some experts proposed phasing out fixed feed-in tariffs over time – not because renewables support isn't needed. The idea is to gradually move from subsidy-driven deployment to market-driven growth as technologies mature, while ensuring investor confidence through transparent auctioning. Another policy marked for potential elimination was the Zero Waste bylaw in its current form. Some experts worry it may be more symbolic than effective; they advise redesigning waste management policies to include enforceable recycling targets and circular economy incentives, rather than broad directives. The biodiesel blending mandate (requiring biodiesel in diesel fuel) was also listed as ineffective by some. Other experts suggest resources might be better spent on electrifying transport and improving public transit instead of minimal biofuel use. Current electric vehicle (EV) tax incentives were perceived to be insufficient and should be significantly expanded to accelerate EV uptake across income groups.

Strengthen institutional coordination and governance:

A recurring theme is the need to bolster institutions for climate action. Experts pointed out that Türkiye's climate efforts are fragmented across agencies, and climate considerations are not yet fully embedded in sectoral planning. They recommend establishing a high-level Climate Change Coordination Body (or empowering the existing Climate Change Directorate) to coordinate policies across energy, industry, transport, agriculture, and urban development. This body should ideally be backed by law, have a clear mandate to enforce climate objectives, and include stakeholders from government, business, and civil society to ensure buy-in. Improving inter-ministerial coordination is critical, for example, aligning energy policy with climate goals to avoid contradictory investments. Experts also highlight the importance of capacity building: many institutions, from municipalities to regulatory agencies, will need training, funding, and staffing to implement new climate policies effectively. For instance, if an ETS is launched, regulators must be equipped to monitor emissions and manage the market; if building efficiency codes are tightened, local authorities need capacity to enforce them. Strengthening Türkiye's climate governance also means greater stakeholder engagement and transparency – experts encourage involving industry associations, academia, and NGOs in policy design so that policies are practical and have public support.

To strengthen policy implementation, experts also recommend specialized training programs for local governments and municipalities to ensure enforcement capacity at local level. They further suggest expanding technical support for SMEs to enable their participation in energy efficiency and green technology programs. In the industrial sector, experts propose increasing both the incentive rates and coverage of existing energy efficiency grants – which currently cover 30% of project costs – while prioritizing innovation, domestic manufacturing, and SME-specific support. Effective monitoring systems for industrial energy intensity reduction targets are also urgently needed to ensure policy compliance. In the forestry sector, experts call for stronger monitoring and control mechanisms for afforestation activities to ensure both climate and biodiversity benefits.

The expert assessments above reveal significant concerns about Türkiye's ability to meet its stated climate targets, particularly due to structural weaknesses in its current policy framework. To fully understand the roots of the ambition gap, it is necessary to examine the sectoral distribution of climate policies, and the types of policy instruments Türkiye currently relies upon. The following section provides this detailed mapping, which sheds light on why experts consistently emphasize the need for policy diversification, stronger fiscal tools, innovation incentives, and institutional reforms.

Conclusion

Türkiye stands at a critical juncture: its long-term climate goals remain formally ambitious, yet short-term goals, policy instruments and institutional practices fall short of delivering the deep, rapid decarbonization required. **Three analytical lessons emerge:**

- ① **Policy-instrument imbalance:**
Regulatory measures dominate ($\approx 70\%$ of active policies), while fiscal, innovation and informational tools are underutilized. This skew has reinforced carbon lock-in by mandating standards without creating market signals or supporting behavioral change, limiting private-sector innovation and public engagement.
- ② **Sectoral blind spots:**
The power sector has seen significant activity, but transport, buildings, industry, agriculture and forestry lag. Without concrete, measurable targets (e.g., retrofit rates, emission caps by sector) and tailored instruments in these areas, Türkiye cannot close its 2030 and 2053 ambition gap.
- ③ **Implementation capacity and stakeholder inclusion gaps**
While the inventory documents a large number of active policies, the analysis repeatedly points to implementation and enforcement gaps. The expert elicitation reinforces this by identifying the most challenging policies as those requiring new governance capacity and institutional infrastructure, for example a voluntary offset market that would need credible MRV systems and trusted oversight, and by highlighting concerns about limited stakeholder inclusion in major climate-policy processes such as the Climate Law.

Building on these lessons, we offer **four focused recommendations** drawn directly from expert consensus and the policy inventory:

- ① **Diversify and sequence policy tools:**
Pair regulatory standards with market-based incentives – roll out a phased carbon-pricing mechanism (ETS pilot by 2026, full operation by 2027); complement feed-in tariffs with innovation grants for energy storage and grid modernization; and launch targeted public-information campaigns (e.g. home-energy labelling, EV benefits) to build buy-in.
- ② **Define sectoral roadmaps with milestones and targets:**
Develop legally binding, sector-specific 2035 and 2040 roadmaps aligned with EU norms. For transport, set a fossil-vehicle sale ban date (e.g., 2035), mandate fleet-renewal schedules and expand charging networks. For buildings and industry, establish annual retrofit or efficiency targets linked to financial support. For forestry and agriculture, adopt clear hectares-reforested or soil-carbon objectives under CBD/UNCCD frameworks.

3

Strengthen institutional architecture and accountability:

Empower the Climate Change Directorate (or new high-level council) with cross-ministerial authority, budgetary control and stakeholder representation. Invest in regulator training (MRV systems for carbon markets, permit enforcement for renewables and retrofits) and establish a permanent just-transition secretariat to coordinate regional support funds and worker reskilling.

4

Mobilize climate finance and partnerships:

Leverage international green funds (e.g., Global Environment Facility, KfW) and public-private climate partnerships to de-risk high-impact projects – coal-phase-out funds, battery-manufacturing clusters, rural adaptation schemes. Recycle carbon revenues into subsidies for SMEs and vulnerable communities to ensure a socially equitable transition.

Implementing these measures in a coherent, sequenced manner will narrow Türkiye's ambition–reality gap, unlock latent renewable potential, and position the country competitively in a decarbonizing global economy – while ensuring that no region or community is left behind. ●

References

- Acar, S., & Yeldan, E. (2016, November 10). *Türkiye: Notes from a state of (climatic) emergency*. Climate Home News. <https://www.climatechangenews.com/2016/11/10/Türkiye-notes-from-a-state-of-climatic-emergency>
- Adaman, F., Akbulut, B., & Arsel, M. (2017). *Neoliberal Türkiye and its Discontents: Economic Policy and the Environment under Erdoğan*. I.B. Tauris.
- Akgül, O., Baş, D., Aşık, G., Özenç, B., & Şahin, Ü. (2024). *Türkiye'de adil geçiş algısı ve politikalar: Yerel vaka çalışmaları: Yatağan ve Çan*. İstanbul Politikalar Merkezi.
- Baş, D. (2023). *Advancing steel sector decarbonization in Türkiye: An introductory assessment (Executive Summary)*. Istanbul Policy Center. <https://ipc.sabanciuniv.edu/Content/Images/CKeditorImages/20240418-11044379.pdf>
- Benneer, L. S. & Stavins, R. N. (2007). Second-best theory and the use of multiple policy instruments. *Environmental and Resource Economics*, 37, 111–129. https://stavins.scholars.harvard.edu/sites/g/files/omnuum8111/files/stavins/files/benneer_stavins_for_ere_revised.pdf
- Bilgen, S., & Sarıkaya, İ. (2016). Contribution of efficient energy use on economy, environment, and sustainability. *Energy Sources, Part B: Economics, Planning, and Policy*, 11(12), 1166–1172.
- Birkland, T. A. (2019). *An introduction to the policy process: Theories, concepts, and models of public policy making* (5th ed.). Routledge.
- Böhringer, C. & Rosendahl, K. E. (2010). Green serves the dirtiest: On the interaction between black and green quotas in energy markets. *Resource and Energy Economics* 37, 316–325.
- Capano, G., & Howlett, M. (2020). The knowns and unknowns of policy instrument analysis: Policy tools and the current research agenda on policy mixes. *SAGE Open*, 10(1), 1–15.
- Carattini, S., Kallbekken, S., & Orlov, A. (2019). How to win public support for a global carbon tax. *Nature*, 565(7739), 289–291. <https://doi.org/10.1038/d41586-019-00124-x>
- Climate Action Network (CAN) Europe. (2022). *Türkiye's new climate target does not take the country's 2053 net-zero goal seriously* [Press release]. CAN Europe. <https://caneurope.org/publications/turkeys-new-climate-target-does-not-take-the-countrys-2053-net-zero-goal-seriously>
- Climate Action Tracker. (2025). *Türkiye*. Climate Action Tracker. Retrieved June 18, 2025, from <https://climateactiontracker.org/countries/Türkiye/>
- Climate Policy Lab. (2025). National Climate Policy Inventories: Türkiye [Data set]. <https://www.climatepolicylab.org/national-climate-policy-inventories>
- Convention on Biological Diversity. (2019). *Türkiye: National Biodiversity Strategy and Action Plan (2018–2028)*. <https://www.cbd.int/nbsap/about/latest>
- DieselNet. (2025). *Emission Standards: Türkiye*. <https://www.dieselnets.com/standards/tr>

- Dilli, B. & Nyman, K. J. (2020). *Türkiye's Energy Transition: Milestones and Challenges*. World Bank Group. <http://documents.worldbank.org/curated/en/249831468189270397>
- Dimanchev, E., & Knittel, C. R. (2023). Designing climate policy mixes: Analytical and energy system modeling approaches. *Energy Economics*, 122. <https://doi.org/10.1016/j.eneco.2023.106697>
- Douenne, T., & Fabre, A. (2022). Yellow Vests, pessimistic beliefs, and carbon tax aversion. *American Economic Journal: Economic Policy*, 14(1), 81-110. <https://doi.org/10.1257/pol.20200092>
- Ember. (2023). *Türkiye can expand solar by 120 GW through rooftops*. <https://ember-energy.org/latest-insights/turkiye-can-expand-solar-by-120-gw-through-rooftops/>
- Euronews. (2025). Türkiye'nin tartışmalı ilk iklim kanunu yürürlüğe girdi. <https://tr.euronews.com/2025/07/09/turkiyenin-tartismali-ilk-iklim-kanunu-yururluge-girdi>
- European Commission. (2024). EU trade relations with Türkiye. Directorate-General for Trade. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/turkiye_en
- European Commission. (2025). *Türkiye 2025 report*. Directorate-General for Enlargement and Eastern Neighbourhood. https://enlargement.ec.europa.eu/turkiye-report-2025_en
- Fischer, C., & Newell, R.G. (2008) 'Environmental and technology policies for climate mitigation', *Journal of Environmental Economics and Management*, 55(2), 142-162.
- Gülkaya Taşgın, İ. (2025). *EV adoption in Turkey is expected to reach 20% or more of the total vehicle fleet by 2034*. Climate Scorecard. <https://www.climatescorecard.org/2025/03/ev-adoption-in-turkey-is-expected-to-reach-20-or-more-of-the-total-vehicle-fleet-by-2034>
- Howlett, M. (2004). *What is a policy instrument? Policy tools, policy mixes, and implementation styles*. In P. Eliadis, M. Hill, & M. Howlett (Eds.), *Designing Government: From Instruments to Governance*. McGill-Queen's University Press.
- İklim Adaleti Koalisyonu. (2025). *10 maddede halkın iklim kanunu*. <https://iklimadaletikoalisyonu.org/10-maddede-halkin-iklim-kanunu>
- International Energy Agency (IEA). (2021). *Türkiye 2021 Energy Policy Review*. <https://www.iea.org/reports/Turkiye-2021>
- International Energy Agency (IEA). (2023). *Innovation Gaps and Priorities for Clean Energy Transitions*. <https://www.iea.org/reports/clean-energy-innovation>
- IPCC (2022) *Climate Change 2022: Mitigation of Climate Change (AR6 WGIII)*, Technical Summary; Chapter 13; Summary for Policymakers. <https://www.ipcc.ch/report/ar6/wg3/>
- Karakoç, U., & Yeldan, A. E. (2025). Role of agriculture in green transition in Türkiye (Research Paper No. 8). United Nations Conference on Trade and Development. https://unctad.org/system/files/information-document/unda2030d08-turkiye-agriculture_en.pdf
- Ministry of Agriculture and Forestry of Türkiye. (2019). *Çölleşmeyle Mücadele Ulusal Stratejisi ve Eylem Planı (2019–2030)*. Çölleşme ve Erozyonla Mücadele Genel Müdürlüğü. https://webdosya.csb.gov.tr/db/cem/icerikler/collesme-ile-mucadele-ulusal-stratejisi-ve-eylem-planı_k-20211111075541.pdf
- Ministry of Energy and Natural Resources of Türkiye. (2025a). *2024 "Faaliyet Raporu."* https://enerji.gov.tr/Media/Dizin/SGB/tr/Faaliyet_Raporlari/2024/ETKB2024_FR.pdf
- Ministry of Energy and Natural Resources of Türkiye. (2025b). "Elektrikte Kurulu Güç 118 Bin Megavatı Aştı." <https://enerji.gov.tr/haber-detay?id=21486>
- Ministry of Energy and Natural Resources of Türkiye. (2025c). *Electricity*. <https://enerji.gov.tr/infobank-energy-electricity>
- Moore, B., Benson, D., Jordan, A., Wurzel, R. K. W., & Zito, A. (2021). Governing with multiple policy instrument types? In A. Jordan & V. Gravey (Eds.), *Environmental policy in the EU: Actors, institutions and processes* (4th ed., pp. 299–316). Routledge.
- OECD. (2025) *Packaging and sequencing policies for more effective climate action*. https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/04/packaging-and-sequencing-policies-for-more-effective-climate-action_51d3656b/fced4e28-en.pdf
- Perino, G., Ritz, R. A. & van Benthem, A. (2019, revised 2022) *Overlapping Climate Policies*. NBER Working Paper No. 25643. https://www.nber.org/system/files/working_papers/w25643/w25643.pdf
- Republic of Türkiye Presidency of Climate Change. (2025). *Türkiye'nin ikinci ulusal katkı beyanı (NDC 3.0)* [Türkiye's second nationally determined contribution (NDC 3.0)]. Republic of Türkiye. [https://iklim.gov.tr/db/turkce/icerikler/files/%C4%B0kinci%20Ulusal%20Katkı%20Beyanı%C4%B1%20\(NDC%203.0\)_TR.pdf](https://iklim.gov.tr/db/turkce/icerikler/files/%C4%B0kinci%20Ulusal%20Katkı%20Beyanı%C4%B1%20(NDC%203.0)_TR.pdf)

- Republic of Türkiye Presidency of Strategy and Budget. (2019). *Eleventh development plan (2019–2023)*. https://www.sbb.gov.tr/wp-content/uploads/2022/07/Eleventh_Development_Plan_2019-2023.pdf
- Şahin, Ü. (2018). Carbon Lock-In in Türkiye: A Comparative Perspective of Low-Carbon Transition with Germany and Poland. Istanbul Policy Center. <https://ipc.sabanciuniv.edu/Content/Images/CKeditorImages/20200312-11034993.pdf>
- Şahin, Ü. (2019). The politics of environment and climate change. In A. Özerdem, & M. Whiting (Eds.), *The Routledge Handbook of Turkish Politics* (pp. 177–189). Routledge.
- Şahin, Ümit. (2025). *İklim Kanunu Neden Çıkmalı? Aposto*. <https://aposto.com/s/iklim-kanunu-neden-cikmali>
- Salamon, L. M. (2002). *The Tools of Government: A Guide to the New Governance*. Oxford University Press.
- Schneider, A. L., & Ingram, H. M. (1997) *Policy Design for Democracy*. University Press of Kansas.
- Seto, K. C., Davis, S. J., Mitchell, R. B., Stokes, E. C., Unruh, G., & Ürgü-Vorsatz, D. (2016). Carbon lock-in: Types, causes, and policy implications. *Annual Review of Environment and Resources*, 41, 425–452. <https://doi.org/10.1146/annurev-environ-110615-085934>
- Stechemesser, A., Koch, N., Mark, E., Dilger, E., Klösel, P., Menicacci, L., Nachtigall, D., Pretis, F., Ritter, N., Schwarz, M., Vossen, H., & Wenzel, A. (2024). Climate policies that achieved major emission reductions: Global evidence from two decades. *Science*, 385(6711). <https://doi.org/10.1126/science.adl6547>
- T24. (2025). STK'lardan İklim Kanunu Teklifi'ne tepki: Halkın katılımını sağlamalı ve hesap verebilir olmalıdır. <https://t24.com.tr/cevre/stk-lardan-iklim-kanunu-teklifi-ne-teпки-halkin-katilimini-saglamali-ve-hesap-verebilir-olmalidir.1222979>
- Tör, O. B., Kat, B., Teimourzadeh, S., Demirkol, K., Künar, A., Voyvoda, E., Yeldan, E., & Şahin, Ü. (2024, May). *Türkiye's decarbonization pathway: Sectoral cost-benefit analysis (2020–2030)*. Istanbul Policy Center, Sabancı University. <https://ipc.sabanciuniv.edu/Content/Images/CKeditorImages/20240808-11084160.pdf>
- Turkish Electricity Transmission Corporation (TEİAŞ). (2023). *Kurulu Güç Raporu – Aralık 2022 [Installed Electricity Capacity Report – December 2022]*. <https://www.teias.gov.tr/kurulu-guc-raporlari>
- UNCTAD. (2024). Türkiye – Introduced \$30 billion incentive package for high-tech and green investment. *Investment Policy Monitor*. <https://investmentpolicy.unctad.org/investment-policy-monitor/measures/4794/introduced-30-billion-incentive-package-for-high-tech-and-green-investment>
- Unruh, G. C. (2000). Understanding carbon lock-in. *Energy Policy*, 28(12), 817–830.
- Weible, C. M. (Ed.). (2023). *Theories of the policy process* (5th ed.). Routledge.
- World Bank. (2017). *Türkiye – Forest Policy Note: Toward Sustainable Forest Management*. <https://documents1.worldbank.org/curated/en/694751507885204989/pdf/12-10-2017-13-48-33-TürkiyeForestPolicyNoteweb.pdf>
- World Bank. (2022). *Türkiye country climate and development report*. <https://openknowledge.worldbank.org/entities/publication/01826a0c-059f-5a0c-91b7-2a6b8ec5de2f>
- World Bank. (2023). *Deploying electric vehicle charging infrastructure in Türkiye*. <https://www.worldbank.org/en/country/Türkiye/publication/deploying-electric-vehicle-charging-infrastructure-in-turkiye>

Appendix: Key concepts and Definitions

Policy instruments and policy tools are the mechanisms through which governments pursue climate action. This policy brief explores Türkiye's climate governance through the lens of policy process, divided into **policy instruments and policy tools**. This policy brief analyzes Türkiye's climate governance through a policy-process lens by distinguishing **policy instruments** from **policy tools**, and by separating both from **climate actions**. (Howlett, 2004; Jordan et al., 2005). **Policy tools** are the concrete administrative or operational devices used within those instrument categories to deliver interventions (Capano & Howlett, 2020; Salamon, 2002). According to one definition the policy tools are “the elements in policy design that cause agents or targets to do something they would not otherwise do with the intention of modifying behavior to solve public problems or attain policy goals.” (Schneider & Ingram, 1997, p. 93) These tools may be both technical and social with both concrete and abstract dimensions, and they aim to organize relations between government and citizens. Therefore, they constitute certain aspects such as rules, narratives and agency (Weible, 2023). Policy tools may

FOR ACADEMIC CITATION:
Acara, E., Şahin, Ü., & Franck, T. (2026, May). *Unlocking Türkiye's climate policy tools: From carbon lock-in to policy gaps* (policy brief). Climate Policy Lab, The Fletcher School at Tufts University.

ABOUT THE AUTHORS:
Dr. Eda Acara is a researcher and project coordinator at the Istanbul Policy Center, Sabancı University.

Dr. Ümit Şahin is Senior Scholar and Coordinator of Climate Change Studies at the Istanbul Policy Center, Sabancı University.

Dr. Travis Franck is Climate Modeling and Policy Director at the Climate Policy Lab and Research Professor at The Fletcher School, Tufts University.

FUNDING FOR THIS RESEARCH:
This research was made possible with support from the William and Flora Hewlett Foundation and the Rockefeller Brothers Fund. The opinions and views expressed in this publication are those of the authors and do not necessarily reflect those of the funders. Any errors or misrepresentations are the sole responsibility of the authors.

be direct or indirect, implemented by central or local governments, economic (or fiscal) or political, and more coercive or more voluntary. Laws and regulations, services, taxes, grants, subsidies, licensing, sanctions, capacity building and learning tools could be among the policy tools (Birkland, 2019). By contrast, **climate actions** are the on-the-ground measures or outcomes (e.g., installing renewables or improving efficiency) that policies seek to induce. In other words, governments pursue climate goals through instrument categories and their associated tools (Capano & Howlett, 2020), while climate actions are the tangible mitigation or adaptation steps that result from those instruments and tools. Building on these definitions, the policy brief assesses how Türkiye's policy instruments are distributed and constructed, and how certain policy tools have contributed to structural policy gaps and path dependencies that undermine climate ambition. The table below provides the definitions and examples of the policy instruments and policy tools used to prepare the policy inventory for this brief.

Table A1. Definitions and Examples of Policy Instruments and Tools

	DEFINITION	EXAMPLES
Policy instruments	Categories of mechanisms to influence policy goals: - regulatory - innovation based - informational - economic	- laws and regulations - government agency policies - strategies - plans - guidelines
Policy tools	Administrative or operational devices within policy instruments: - rules - narratives - agency	- services - taxes - grants - subsidies - licensing - sanctions - capacity building - learning tools

ACKNOWLEDGEMENTS:
This policy brief draws on a collaborative research effort conducted jointly by the Istanbul Policy Center (IPC) at Sabancı University and the Climate Policy Lab (CPL) at The Fletcher School, Tufts University. We wish to thank Harshad G. Vaswani and Siddharth Jain, who contributed to the methodological design and analytic work, as well as Seth Owusu-Mante, for his initial analysis of the elicitation results and participation in meetings related to data collection for subsequent modeling efforts. We are also deeply grateful to the broader IPC network of experts, friends, and allies who generously took part in the study; their insights, engagement, and candid contributions were invaluable to this research.

