

# Climate Law implementation: challenges and barriers

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**Abstract** European Climate Law (ECL), adopted by the European Union in 2021, set the ambitious goal for climate neutrality by 2050 for EU countries, aiming to ensure that all EU policies contribute to zero net carbon emissions and all sectors of society and economy are involved (ECL, 2021). Towards this direction the Greek national climate law enacted in 2022, provides a coherent framework for improving Greece's adaptive capacity and climate resilience. Its main scope is to ensure the transition to climatic neutrality by 2050 and adaptation to climate change, in an environmentally sustainable, socially just and cost-effective way. Present work focuses on the implementation of the climate law in practice, examining its alignment with the European Climate Law mainly on adaptation and resilience and the tools provided by Natural Environment and Climate Change Agency (NECCA) to support it.

**Keywords:** Climate neutrality, participatory processes, adaptation and mitigation actions

## 1. Introduction

Climatic hazards such as biodiversity loss, droughts, water scarcity, extreme weather events, floods are some of the main challenges that human, natural, social and economic systems face worldwide. European Union (EU) as a leading force to climate action adopted in 2021 the European Climate Law (ECL) (EU Regulation 2021/1119). ECL marked a pivotal moment in EU climate policy, inducing legally the goal to reach climate neutrality by 2050 and reduce net greenhouse gas (GHG) emissions. ECL is focusing on instruments, institutions and processes for making, implementing and developing substantive climate policies. This procedural climate governance is arguably of crucial importance for the success of the EU's transition towards climate neutrality. (Koulovesi et al., 2024). Towards this direction, Greece enacted its first national climate law (Law 4936/2022), positioning itself among the early adopters of a comprehensive domestic climate framework. Greece's National Climate Law (NCL) is an ambitious legal framework providing governance architecture for a transition to net-zero. Main pillars of this transition are phasing out use of coal, limiting deforestation, promoting electric cars and increasing

renewable energy sources. NCL outlines advisory councils, sectoral carbon budgets, public transparency and monitoring tools. Greece's climate law mirrors the European Climate Law in its core objectives. It sets a binding national target of climate neutrality by 2050 and introduces the intermediate targets of 55% reduction in GHG emissions by 2030 (compared to 1990 levels) and 80% reduction by 2040. To ensure implementation the law mandates annual progress reports on emissions reductions and mandatory local emissions reduction plans.

Natural Environment and Climate Change Agency (NECCA) is the competent authority on supporting the Ministry of Environment and Energy (MEEN) for the implementation of the national climate law. NECCA supports MEEN in terms of governance, planning and monitoring. Publicly accessible Carbon Footprint Report Submission Platform has been developed (<https://climaregistry.necca.gov.gr/>) and maintained by NECCA since October 2023. Operation of the Platform is foreseen in Article 26 of the NCL. The Platform is not only serving for uploading Carbon footprint Reports (Companies) and Municipal Emissions Reduction Plans & Progress reports (Municipalities) but also operates public consultations via the Climate dialogue Forum. Discussion in following section provides an overview of the alignment of the NCL to ECL.

## 2. Discussion

The ECL sets a legally binding target for the EU to achieve climate neutrality by 2050, as it commits Member States to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. A 2040 climate target will be proposed to guide progress toward 2050. The law introduces also an EU greenhouse gas budget for 2030–2050 and establishes a Scientific Advisory Board to ensure independent oversight. All EU policies must align with these climate goals, with progress reviewed every five years. Furthermore, ECL requires Member States to submit a 2021–2030 NECP outlining policies, investments, and measures to meet the renewables, and efficiency targets. Greece's first NECP adopted in 2019, following a set of actions towards climate neutrality that led to the legislation of the NCL (figure 1). NECP updated

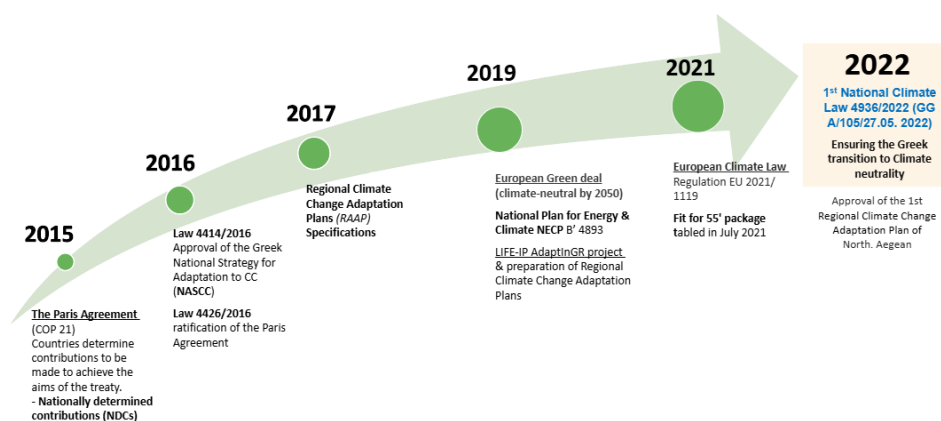
in 2024 outlines detailed pathways to meet the 2030 and 2050 targets, covering energy, transport, agriculture, waste, and industry. Those plans are periodically updated and scrutinized by the Commission for alignment with EU goals. The Greek law institutionalizes a clear governance framework for climate action, including the Five-year Carbon Budgets, specific Sectoral emission reduction targets, periodic National Climate Risk Assessments and the establishment of a National Climate Council to provide independent advice. Implementation in practice requires transforming legal commitments into sectoral measures that align with EU-wide legislation. Greece has pursued this through actions and measures in key sectors, such as the energy sector, transport and mobility as well as buildings and energy efficiency. More specifically coal phase-out has accelerated as according to NCL all lignite-fired power plants are scheduled to close by 2028, supporting the EU Just Transition Mechanism. NCL incentivize electric vehicle (EV) adoption through subsidies, tax benefits, and the rollout of charging infrastructure. The climate law mandates minimum energy performance standards for public buildings, beginning in 2023. To ensure financial support on related actions, Greece's climate law obliges public investments and procurement to be "climate-aligned," reflecting the European Parliament's insistence on climate mainstreaming across EU funding instruments.

Challenges identified by NECCA within the first year of monitoring indicated lack of public awareness and

behavioral change policies, especially in transport and consumption. Limited administrative capacity in small municipalities to prepare climate plans is evident by the very low participation 10 out of 332 municipalities have submitted their report. These gaps underscore the importance of continuous monitoring, technical assistance, and coherent policy design.

### 3. Conclusions

Both the European Union and Greece have acknowledged the urgent need for climate adaptation, and mitigation, especially in the context of intensifying heatwaves, droughts, and wildfires. Greece's implementation of its national climate law demonstrates a strong commitment to aligning with the European Climate Law and the European Parliament's climate agenda. Through legislative adaptation, sectoral transformation, and strategic use of EU funds, Greece is making real progress toward its climate targets. However, realizing the full potential of its climate law will require sustained political will, administrative reforms, and stronger public engagement. As the EU strengthens its post-2030 climate framework, Greece's evolving approach offers valuable insights into the challenges and opportunities of translating EU ambition into effective national action.



**Figure 1.** Roadmap towards the implementation of Greek National Climate Law – May 2022

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