ARTICLE

Türkiye's Climate Policy: Aligned with International Climate Politics

İZZET ARI

Social Sciences University of Ankara, Türkiye

ORCID No: 0000-0002-6117-3605

ABSTRACT *The aim of this article is to assess Türkiye's national climate policy framework within the context of international climate change negotiations. Türkiye, as an emerging economy and developing country, hasimplemented a number of climate actions and measures and has ratified significant multilateral climate agreements, such asthe United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement. As a member of the Organization for Economic Cooperation and Development (OECD), Türkiye was put into both Annex-I and Annex-II of the UNFCCC. This starting point for climate negotiationshindered Türkiye's earlier ratification of the UNFCCC. While negotiating under the UNFCCC, Türkiye's EU accession process started, so Türkiye ratified the UNFCCC and the Kyoto Protocol in 2004 and 2009, respectively. This article evaluates Türkiye's national climate change strategy to better implement multilateral climate agreementsin the context of its national climate policy framework. In 2021, Türkiye ratified the Paris Agreement, announced consideration of being carbon neutralas one of the elements of its 2053 development plan, and revisedits institutional structure. The First National Climate Council addresses these aimsand seems to guide Türkiye's policy recommendations. At the end of the study, policies are recommended to help Türkiye achieve its net zero emissions targets and follow a low-carbon development pathway.*

Keywords: UNFCCC, Net Zero Emissions, Green Development, Türkiye

Insight Turkey 2022
Vol. 24 / No. 2 / pp. 89-112

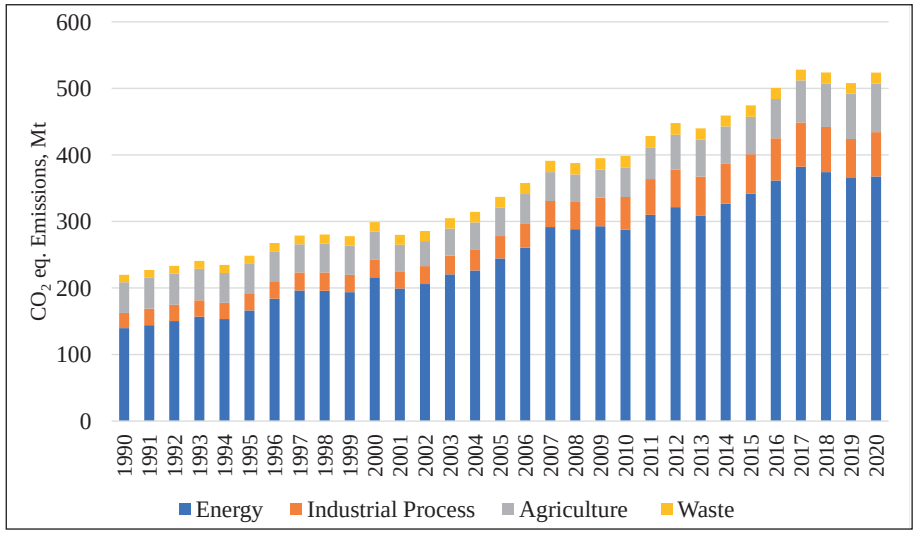
Received Date: 18/4/2022 • **Accepted Date:** 16/6/2022 • **DOI:** 10.25253/99.2022242.6

Introduction

Climate change is one of the biggest challenges of this century.[1] Global climate change is causing extreme weather conditions, increases in average surface temperature, heavy and irregular rainfall, floods and landslides, droughts, and forest fires. International efforts are being made to address the problems posed by climate change, as tackling global climate change requires global cooperative actions. The mitigation actions of all countries, both developed and developing, are essential to prevent dangerous anthropogenic interference with the climate system. The United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement are core multilateral climate agreements that address these aims.

The UNFCCC is the main multilateral platform that aims to stabilize Green House Gas (GHG) concentrations in the atmosphere. Mitigation of GHG emissions and increasing the number and volume of emission sink areas are essential measures being implemented at the global level. Both developed and developing countries have their arguments to supplement global efforts to reduce GHG emissions mitigation and scale up financial resources. More than 75 percent of the parties to the UNFCCC are developing countries whose GHG emissions have been rising in line with their growing populations and increasing economic activities. The main source of emissions in these countriesis energy systems, including power generation, industry, transport, waste, and housing. Developing countries produce the majority of GHG emissions.

Figure 1. Türkiye's GHG Emissions (1990-2020)



Source: *Compiled by the author based on Türkiye's GHG Emissions Inventory*[2]

Thus, mitigation actions are required there. In Türkiye, GHG emissions (CO_2 eq.) reached 523.9 Mt in 2020.[3] As Figure 1 presents, Türkiye's total emissions increased by 138.4 percent between 1990 and 2020.[4] The majority of its emissions come from energy (70.1 percent), which includes power generation, transport, buildings, the manufacturing industry, etc.; agriculture, industrial process, and waste follow the energy sector.

Over the last three decades, Türkiye has implemented its own national climate change strategy and action plan

Türkiye, as a developing country located in the Mediterranean region, is adversely affected by global climate change and has contributed to tackling climate change according to its national capacity, reducing 1.4 billion tons of GHG emissions between 1990 and 2007.[5] Although Türkiye's current emissions comprise only about 1 percent of global emissions, it occupies a challenging negotiation position. Because Türkiye has lower historical responsibility for global emissions than both several OECD members and Group of 77 countries. However its classification as an OECD member during the drafting and adoption of the UNFCCC in the early 1990s, Türkiye was listed among developed countries Annex. Although Türkiye requested to be in a more equitable position, its request was hindered or rejected many times due to the nature of multilateral climate agreements. Over the last three decades, Türkiye has implemented its own national climate change strategy and action plan. It has prepared and submitted its GHG emissions inventories and National Communication report pursuant to substantive provisions of the UNFCCC. While complying with the international climate agreements, between 2000 and 2020, Türkiye progressed in mitigating carbon intensity from 63.1 to 59.5 CO_2 per carbon dioxide per terajoule (TJ) in total primary energy supply system.[6] The utilization of renewable energy sources[7] and progress in reducing energy intensity from 7.7 to 6.1 gigajoule (GJ) per $ thousand in 2015[8] are two prominent measures of these achievements. Türkiye's total renewable energy installed capacity is currently more than 53,000 Megawatt(MW).[9]

The hypothesis of this study is that Türkiye's climate policy has been implemented through domestic actions inalignment with international climate politics since 2021. One of the supporting arguments of this hypothesis is a distinctly historic moment for climate policy in Türkiye in 2021. After ratifying the Paris Agreement in October 2021, Türkiye embarked upon using net-zero emissions (NZE) terminology and reoriented its climate policy toward achieving carbon neutrality in the long run in alignment with the Green Development Initiative or Revolution approach. This approach is unique to Türkiye in the international climate policy discussions. To attest to its willingness to achieve this goal and consistency in its approach, Türkiye reiterated the NZE target in its first National Climate Council and in its follow-ups.

While climate diplomacy plods forward according to its lengthy procedures, climate change continues to accelerate, and the price of inaction or failure to take essential actions has become more costly

This article aims to analyze Türkiye's national climate policy in the context of international climate negotiation positions and arguments. This study focuses on the dynamic, multilateral climate negotiation process, as well as the agreements reached through that process and Türkiye's expectations and position in terms of multilateral climate policy development. This article is structured as follows: After this brief introduction, section two presents international climate change agreements such as the UNFCCC, the Kyoto Protocol, and the Paris Agreement and the status of their ongoing negotiations. It includes an overview of critical historical milestones in multilateral climate policy. Section three analyzes Türkiye's climate policy framework under the UNFCCC. In this section, the road to the Paris Agreement and its implementation are the main focus areas. Finally, the conclusion provides an overview of all these national climate policies, particularly Türkiye's NZE targets, and provides recommendations for better implementation of the multilateral climate agreements.

Multilateral Climate Negotiations and Agreements

Climate change is a global threat and a growing risk for all countries. Almost 50 years have passed since initial steps, such as the UN Human Environment Conference at Stockholm in 1972 to discuss the issue beyond national boundaries, and 30 years since the first international agreement, i.e., the UNFCCC.[10] The nature of multilateralism entails a lengthy process of making decisions and taking action. For a multilateral climate agreement to be successful, arriving at a consensus decision is an essential requirement for the adoption of collective decisions. Even to amend such an agreement, a three-fourths majority vote of the parties is a prerequisite for the ratification, approval, and acceptance stages.[11] While climate diplomacy plods forward according to its lengthy procedures, climate change continues to accelerate, and the price of inaction or failure to take essential actions has become more costly.[12]

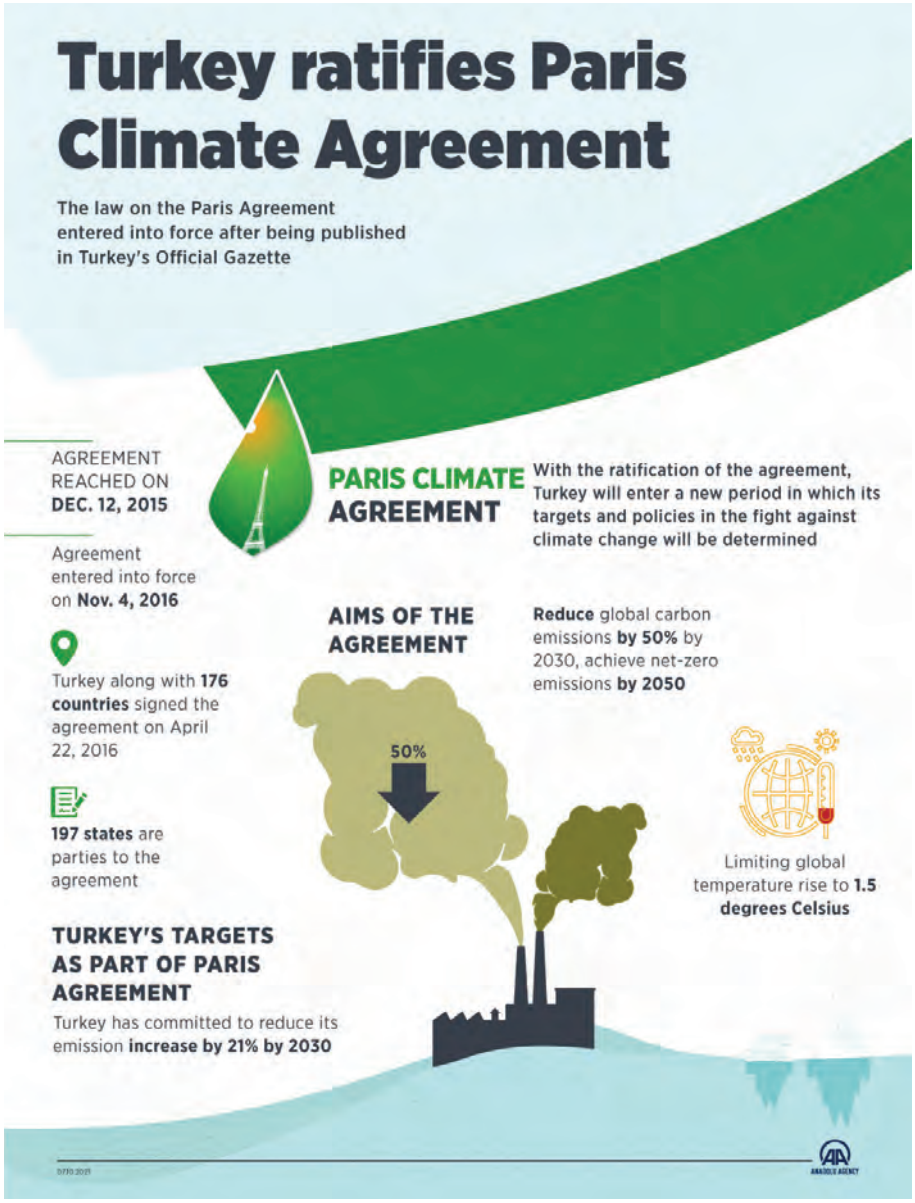
Historical Milestones

Since the early 1970s, several steps have been taken globally to combat climate change. The First World Climate Conference met in 1979 and announced that emissions due to burning fossil fuels posed a danger. Nine years after this conference, the Intergovernmental Panel on Climate Change (IPCC) was established as an international scientific platform to provide assessments on climate change, its implications, and potential risks.[13] In the same year, the issue of

climate change was brought to the UN for the first time with the establishment of the Global Climate Protection agenda. After the IPCC was institutionalized, the Second World Climate Conference was convened in 1990, and the Declaration of Ministers was adopted as part of an international framework convention. In 1991, the Intergovernmental Negotiation Committee (INC) compiled the collective opinions and positions of countries to draft a legal document. In 1992, the UN Conference on Environment and Development (the Rio Summit) adopted the UNFCCC.

The UNFCCC, which aims to stabilize GHG concentrations, entered into force in 1994. According to the UNFCCC, parties will protect the global climate system based on equity, the principle of common but differentiated responsibilities (CBDR), and respective capabilities (RC).[14] The UNFCCC has two Annexes: Annex-I and Annex-II. Annex-I countries that mitigate climate change and GHG emissions are OECD-1990 members, Economies in Transition (EIT) and Türkiye, Monaco, Liechtenstein, Malta, and Cyprus. Annex-II countries are OECD-1990 members. Their responsibilities are GHG emissions reduction and providing financial resources and technology development and transfer to the developing countries. The remaining 150 countries are called 'non-Annex;' these include China, India, Brazil, South Africa, Mexico, Indonesia, etc. Their responsibilities are not explicitly written as Annex-I lists.

After the UNFCCC entered into force, its parties agreed on the preparation of a protocol, namely the Kyoto Protocol, to set a quantifiable GHG emissions reduction target of 5 percent below 1990 levels for Annex-I countries for the period 2008-2012.[15] The Protocol was prepared under the auspices of the UNFCCC. The percentage of emissions reduction depended on Annex-I parties' conditions. For instance, the European Union and Switzerland decided to reduce 8 percent of their emissions, while New Zealand, Russia, and Ukraine offered to keep their emissions level rather than increase them. In other words, the EIT countries in the Annex-I category, such as Bulgaria, the Russian Federation, and Ukraine committed to changing from a centrally planned economy to a market economy.[16] The Kyoto Protocol provided certain flexible mechanisms, such as Joint Implementation (JI),[17] the Clean Development Mechanism (CDM),[18] and the International Emission Trading System,[19] to achieve cost-effective emissions mitigation targets.[20] These mechanisms opened up a new area in which carbon emissions reduction credits are treated as a market commodity. In 2005, the Kyoto Protocol entered into force. However, the Kyoto Protocol's emissions mitigation target was inadequate to achieve the overall objective of the UNFCCC. In addition, rising emissions from developing countries requirethat all countries participate comprehensively and broadly with the aim of emissions mitigation. Until 2015, the main motivation of the international climate change negotiations was to establish new climate agreements that included both developed and developing countries in global



An Infographic summarising Türkiye's participation in the Paris Climate Agreement.

SAİDE NUR TAŞTAN / AA

cooperative actions. The Paris Agreement was drafted and adopted by all the countries at the Paris Climate Conference in 2015. The agreement is considered a historical moment in terms of compromise between developed and developing countries on emissions reduction contributions, without diatomic reference such as the Annexes of the UNFCCC. The Paris Agreement is an inclusive legal document encompassing all countries without any institutional or categorical classification. The Paris Agreement prefers to use the terms 'de-

veloped,' 'developing', and 'least developed' countries; responsibilities to combat climate change are shared among developed and developing countries. The agreement entered into force in 2016. Its objective is to "hold the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels."[21] The Paris Agreement is seen as a revolution in accepting low-carbon development, which signals the end of fossil fuels.

Although, the current situations of developed countries described themselves as more climate friendly, their historical responsibilities still continue to take more ambitious actions

Climate Negotiation Arguments and Blocs

For more than 30 years, the UNFCCC has tried to find a balance between responsible and vulnerable countries for climate change agreements. The UNFCCC is fundamentally based on the principle of CBDR and RC. This principle declared at the UN Conferenceon Environment and Development in 1992,[22] has two features. One is that 'common' is the concept of a common heritage and earth and recalls countries' duty to preserve common resources. The differentiated responsibility is concerned with countries' national circumstances, such as socio-economic conditions and institutional capacity, to determine the equitable allocation of responsibilities for footing the bill for preserving the global climate system.[23] The implication of this principle for climate policy is seen in the preamble, provisions, and substantive commitments of the UNFCCC. CBDR places the main responsibility on developed countries to mitigate climate change. In the climate change negotiations, developing countries' negotiating groups, particularly the Group of 77 (G77) and China, as well as African and Arab Groups, appreciate the CBDR principle.[24] They argue that they are not historically responsible for the current climatic problems,[25] therefore, the cost should be allocated among developed countries for emission mitigation and financial resources should be made available according to differentiated responsibilities.[26] Developing countries argue that developed countries have already transcended an intense emission economy or have enabled carbon leakage to developing countries.[27] Although, the current situations of developed countries described themselves as more climate friendly, their historical responsibilities still continue to take more ambitious actions. According to this argument, emissions reduction should be undertaken by developed countries, because the majority of emissions currently in the atmosphere originated from actions taken by the developed countries in the process of creating their own prosperous societies.[28]

Developed countries dispute the categorization of countries as Annex-I and non-Annex or developed and developing countries and argue instead for a

The Paris Agreement is thus the first global reconciliation on climate change to achieve convergence among countries because it is the first time that an agreement has ignored the boundaries and differences of the parties

dynamic approach to applying CBDR based on mitigation efforts.[29] Addressing their concerns is crucial, aswithout the active participation of developing countries, it may not be possible to reach the ultimate objective of the UNFCCC.[30] Although the Kyoto Protocol was a first step to limiting and reducing quantified GHG emissions,[31] its commitments only cover Annex-I of the UNFCCC. Non-Annex countries, such as China, India, South Africa, Brazil, Mexico, Indonesia, Saudi Arabia, and Argentina, signed the Protocol without committing to reduce their GHG emissions and argue for the right to development and the principle of historical responsibility. Therefore, the principle of equity has been questioned by developed countries. In this context, the mandated negotiation platform for the preparation of a comprehensive agreement (the Paris Agreement) provided a significant opportunity to involve developing countries in both mitigation efforts and agreements regarding financial-contributions to combat climate change. This opportunity made no distinction between Annex-I, non-Annex, developed, or developing countries.[32] It has been acknowledged that this fundamental change started as an approach to a post-2015 climate regime before the drafting of the Paris Agreement.[33] Thus, the Paris Agreement dismantled the Annex systems in climate diplomacy. In addition to this turning point, Intended Nationally Determined Contributions (INDC) were created as an innovative solution to ensure 'all countries' own active participation in substantive self-commitments. The INDCs were expected to reflect a country's national circumstances, responsibilities, and capability.[34] This innovation can be considered a complementary tool to the CBDR principle.[35] To reach the overall goal of the Paris Agreement (e.g., keep the global temperature well below 2°C above pre-industrial levels), the signatory countries committed to combatting global climate change through mitigation, the creation of sinks and reservoirs, changes to markets and non-markets, adaptation, restoration of loss and damage, support, transparency, and global stock-taking.[36] The Paris Agreement is thus the first global reconciliation on climate change to achieve convergence among countries because it is the first time that an agreement has ignored the boundaries and differences of the parties. In this context, the Paris Agreement covers the commitments of all country parties according to their INDCs with the highest possible ambition to reach the ultimate objective of the agreement.[37]

Table 1 presents the main difference between the UNFCCC, the Kyoto Protocol, and the Paris Agreement in terms of the architecture of the legal documents, coverage of commitments, and targets. The UNFCCC provides a clear

classification of countries and main guiding principles such as CBDR-RC for implementing the substantive articles. The Kyoto Protocol includes countries' targets in its Annex-B, and the Paris Agreement is dynamic and differentiated based on countries' INDCs. While the Protocol aims to reduce emissions of Annex I of the UNFCCC (or Annex-B of the Protocol), the agreement covers all country parties (developed countries and developing countries).

Table 1. Comparison of Three International Climate Agreements

Architecture	Framework agreement with agreement on principles such as CBDR-RC, division of countries into Annexes with different groups of countries with differentiated responsibilities	Differentiated targets based on national offers submitted to the multilateral negotiation process and multilaterally negotiated common metrics	NDC is subject to transparency, multilateral consideration of progress, and common metrics in inventories and accounting.
Coverage of Commitments	Annex I Parties with a GHG stabilization goal, all Parties to take policies and measures	UNFCCC Annex I/Kyoto Annex B parties only	All parties
Targets	GHG stabilization goal for Annex I parties ('quasi target')	Legally binding, differentiated mitigation targets inscribed in the treaty	Non-binding contributions incorporated in parties' INDCs, and provisions including those relating to the highest possible ambition, progression, and CBDR and RC in light of different national circumstances

Source: *IPCC, (2022)*

Türkiye's Climate Policy Path

In line with the principle of CBDR-RC and national circumstances, Türkiye, as a developing country, has been actively participating in global efforts to tackle climate change, such asincreasing the share of renewable energy sources, promoting energy efficiency, prioritizing clean fuel and environmentally-friendly vehicles and urban public transportation, encouraging railway transport systems, improving building standards through introducing the concept of nearly zero energy building (NZEB) and promoting a zero-waste approach.[38] Türkiye has worked to share these efforts and underscore its special circumstances with equity-based emissions mitigation actions in platforms such as the COP.[39]

Türkiye's contribution to climate change negotiations started during the period of the Intergovernmental Negotiation Committee (INC), which drafted the UNFCCC. The INC classified countries for the UNFCCC based on institutional categorization. In the early 1990s, discussions around the South and North were framed in terms of the developed countries' collaboration and cooperation. For example, the OECD was dedicated to being the leader in the

mitigation of climate change, providing financial support to developing countries and transferring technology for climate-friendly projects and programs. Since Türkiye was a founding member of the OECD, it is directly listed in both Annex-II and Annex-I of the UNFCCC to reduce emissions and provide finance and technology transfer. Being an Annex-II and Annex-I country under the UNFCCC was not apolitical decision. Instead, it had to do with the allocation of duties for tackling climate change based on historical responsibilitiesand status as an OECD member.[40] However, Türkiye was not at the same development level as other OECD members. Annex I was formed among developed countries, which need to take historical responsibility for past emissions. The developed countries listed in Annex-II have pecuniary liability, i.e., they are required to provide financial support to developing countries. In consideration of its emissions as compared to developed countries, Türkiye attempted to be removed from the UNFCCC Annexes and to be re-categorized as a non-Annex country.[41]

Meanwhile, Türkiye's EU candidacy position brought an additional influence over the country's climate positions such as progress in monitoring of GHG emissions and escaping from additional inefficient fossil fuel subsidies and investment in energy. Like other Annex I countries, Türkiye was required to make emissions mitigation commitments under the Kyoto Protocol. Moreover, two new climate negotiations platforms[42] (post-2012 and post-Kyoto) were set to cover all countries' emissions mitigation measures and extend the implementation period of the Kyoto Protocol. Türkiye strategically decided to take an active position on these platforms, inalignment with the EU *acquis communautaire*. However, Türkiye did not declare any quantifiable emissions reduction targets in the Protocol. Türkiye's main negotiation strategy on these platforms was to clarify its special circumstances. Finally, in 2001, at COP7 in Marrakesh,[43] Türkiye's requests were partially granted; it was removed from Annex II and designated as a party in Annex I with special circumstances.[44] This COP decisions invited other countries to recognize Türkiye's special circumstances, which put Türkiye in a different position from other Annex-I countries.[45] Over time, these circumstances continued to be refined. COP16,[46] COP17,[47] and COP18[48] resulted in three new decisions for Türkiye to be eligible to receivefinancial resources for mitigation, adaptation, technology development, and capacity building. COP20 reiterated the final COP decisions for Türkiye's position[49] in 2014. However, clear guidelines for Türkiye's utilization of Green Climate Fund were not explicitly added to these COP decisions.

Before the Paris Climate Conference, in September 2015, Türkiye submitted its first INDC, which it prepared with an analytical study in 2015. The INDC was based on Türkiye's National Climate Change Strategy and Action Plans. The INDC is substantive provisions of the policy documents under the UNFCCC official web site. Türkiye's argument for operationalization of the CBDR

and RC principle found its place within the INDC, recalling its historical responsibility as 0.7 percent of global historical emissions.[50] The INDC covered the period of 2020-2030 and aimed to reduce emissions up to 21 percent by 2030 compared to the Business-as-Usual (BaU) scenario. However, many scholars argue that the INDC was neither realistic nor ambitious enough, claiming that Türkiye's BaU scenario would not be as high as announced in the INDC.[51] For example, Yeldan *et al.* estimated that Türkiye's GHG emissions would be around 851 Mt CO_2 under the high-growth scenario and about 659 Mt CO_2 under the realistic-growth scenario.[52] These estimations are well below the BaU indicated in Türkiye's calculations (1,175 Mt CO_2 eq.). Similarly, CAT estimated that the policies and measures in Türkiye's INDC would be between 668-791 Mt CO_2 eq., rather than 929 Mt CO_2 eq.[53] Critics argued that Türkiye's commitment is not aligned with the Paris Agreement goal or the EU climate policy and strategy.

Since the adoption of the Paris Agreement in 2015, Türkiye has requested from the UNFCCC about the definition of developed and developing countries with common understandings

For its part, Türkiye explicitly declared financial needs and national circumstances and aimed to use the carbon pricing mechanism with the international carbon market in its INDC.[54] Although many of the sectoral policies in the INDC are based on general plans, there are some guiding targets, such as increasing solar and wind capacity to 10 and 16 GW by 2030, respectively.[55] Türkiye's INDC also includes targets for renewable energy, reducing electricity transmission and distribution losses, commissioning nuclear power plants such as Akkuyu NPP,[56] improving the efficiency of power plants, and establishing co-generation facilities. Additionally, Türkiye sets energy efficiency targets in line with its National Strategy and Action Plan on Energy Efficiency targets for industrial facilities, buildings, and the transport and agriculture sector and promotes low-emission transportation modes and zero-energy buildings preventing land degradation and waste minimization. However, INDC does not include the emissions reduction contribution of any specific targets and also does not emphasize phasing down coal and other fossil fuel energy usage to reach peak year for GHG emissions.[57]

Türkiye signed the Paris Agreement in 2016 and ratified it in 2021.[58] Since the adoption of the Paris Agreement in 2015, Türkiye has requested from the UNFCCC about the definition of developed and developing countries with common understandings. Besides, Türkiye requested to clarify its position through proposals, statements, and speeches at COPs for being eligible for the Green Climate Fund and delete its name from Annex I of the UNFCCC.[59] However, neither the UNFCCC Secretariat nor the other country parties assist in clarify-

ing Türkiye's request. Meanwhile, the European Green Deal[60] and draft Carbon Border Adjustment Mechanisms regulation[61] has become the driving force for starting Türkiye's ratification process of the Paris Agreement.

Türkiye's Arguments in International Climate Discussions

Türkiye bases its arguments on equity-based effort sharing, the right to development, historical responsibility, and the principle of CBDR-RC. Türkiye's historical responsibility argument is related to past emissions and their respective impacts on the global climate system. This argument is based on the 'polluter pays' principle and on the measurable, historical emissions of industrialized countries since the industrial revolution.[62] Although Türkiye's statements regarding fair climate regime expectations are not as rigid as those of developing countries, especially G77 members, they do emphasize historical responsibility.[63] Türkiye's share of cumulative emissions since the Industrial Revolution is less than 1 percent. Acknowledged COP decisions and historical responsibility throughout this argument give the leading role to developed counties. Türkiye's special circumstances are expected to be recognized by all countries for putting Türkiye in different places from other Annex-I countries.[64] However, the discussions to deepen the scope of the historical responsibilities were interrupted before the Paris Agreement negotiations focused on new legal documents or agreements for global climate actions. Therefore, Türkiye did not continue to request clarification of its statusand preferred to declare itself as a developing country in the context of its historical responsibilities.[65] Türkiye has only clarified its position with the interpretative declaration instrument while ratifying the Paris Agreement.

Türkiye focuses its argument on the right to development and the aim of achieving sustainable development rather than the right to produce emissions.[66] The rationality of this argument is based on its growing population and economy and the consequently increasing energy demand.[67] Türkiye aims to ensure its energy supply security and diversify its primary sources of energy supply to include fossil fuels, renewable energy sources, and nuclear energy.[68] Although renewable energy sources have gained significant momentum in recent years, fossil fuels still outweigh the total primary energy supply. Natural gas and oil imports are increasing to meet energy demand, especially in electricity generation, transportation, housing, and industrial sectors.[69] This situation leads to dependence on fossil fuels and high GHG emissions levels. According to TURKSTAT, as of April 2022, Türkiye's GHG emissions had reached 523.9 Mt and have increased by 138.4 percent compared to the 1990 level.[70] The factors driving this increase are economic growth, population growth, continuing industrialization, and technological developments not yet reflected in production processes. Sustainable consumption patterns have not yet been reached,

given the population's increase in emission-intensive individual and social activities.[71]

Establishing infrastructure for the green industrial zones certification system and adopting business models within the scope of the Turkish Environmental Label system can standardize the manufacturing industries

Türkiye's arguments regarding the CBDR-RC principle in climate change negotiations focus on the fair responsibility-sharing for the mitigation of GHG emissions, stressing that all countries should strive within the framework of the CBDR-RC principle. Türkiye is among the countries most affected by climate change. Accordingly, its position is that industrialized and developed countries should make an emissions reduction commitment commensurate with their historical responsibility. The amount of this commitment should be adjusted according to the development levels of all countries. In making this argument and request, Türkiye clearly diverges from the other countries in the UNFCCC's Annex-I list.[72] Türkiye's argument is expressed very similarly in negotiations by other developing countries, especially the G77 and China negotiating group, which does not support Türkiye's statements, proposals, or submissions, indicating how divided the political negotiating blocs in the climate change negotiations are.[73] Neither Annex-I countries nor non-Annex countries have supported Türkiye's arguments and position. This might be both a reason and a consequence of Türkiye's absence from any political negotiation blocs, of which there are many –the G77/China,[74] the Africa Group,[75] the Arab Countries Group,[76] the Umbrella Group,[77] the Environmental Integrity Group,[78] and the EU[79]– in international climate negotiations.[80] This makes Türkiye's climate negotiation style and method more challenging. In climate change negotiations, countries form climate political negotiating groups to strengthen their arguments and increase cooperation with other countries and negotiations blocs.[81]

Türkiye's Position Regarding the Paris Agreement

Türkiye's New Climate Policy Paradigm

During the process of ratifying the Paris Agreement in September 2021, Türkiye announced its 2053 carbon neutrality target –the country's most ambitious– in the UN General Assembly.[82] Although Türkiye insisted on not taking any legally binding, absolute emissions mitigation targets during the drafting of the Paris Agreement, this long-term target toward decarbonization represents a revolution in Türkiye's climate policy. In this context, Türkiye released a Green Development Initiative or Revolution report[83] as a guidebook for its climate change and sustainable development approach in relation to multilat-

Türkiye explicitly has accelerated establishing policy and institutional frameworks for climate change to transform both economy and society towards NZE targets

eral climate agreements. As part of its ambitious plan, Türkiye's Ministry of Environment and Urbanization was restructured and renamed the Ministry of Environment, Urbanization and Climate Change, and a Directorate of Climate Change was established. This institutional reorganization underscores Türkiye's international climate change negotiations agenda and its national climate policy actions framework.

One of the first actions of the Climate Change Directorate was to organize the First National Climate Council.[84] Two important commissions, namely Green Finance and Carbon Pricing and Mitigation, focus on the 2053 NZE target and transformation of the economy. The first commission considers Türkiye's 2053 NZE target while recommending appropriate policies focusing on the completion of essential studies on green financing, strategies, policies, and infrastructure. In the Council, the necessity of the National Green Finance Strategy was underscored to coherently implement GHG emissions mitigation and adaption action. The Council recommended the establishment of Working Groups to prepare a green transformation guide and green taxonomy for the country and to ensure a common understanding of green financial instruments and their classification in Türkiye's financial system. To support this recommendation, the commission also suggested establishing economic infrastructure by 2024 to better manage climate change-related financial risks and to create a framework for insurance coverage in climate-vulnerable sectors.

Türkiye has not yet created a national or domestic emission trading system (ETS). This issue has been raised in the Council.[85] In the short term, a Climate Law might design an ETS that can be linked with the EU Carbon Border Adjustment Mechanism (CBAM) and that could benefit from the Paris Agreement carbon market approaches. This policy recommendation can focus on studies to prepare the second version of the NDC and align it with the draft EU regulation on CBAM while establishing the national ETS. However, there is insufficient information about the marginal abatement cost (MAC) curves or cost-benefit analysis for possible ETS sectors.[86] In addition to ETS, adjusting and reforming the current tax system toward transforming indirect or implicit taxes for carbon pricing (carbon trade and tax) is a challenging issue. It has been suggested in the Council that the auctioning revenue from the ETS should be used in line with targets of green development, NDCs, low-carbon development, and requirement for just transition actions to support the most



A view of Lake Aktaş, also known as Kartsakhi Lake, which straddles the border between Georgia and Türkiye's province of Ardahan. The lake is home to pelicans and has experienced a serious drop in water levels due to the decrease in precipitation, as seen on December 15, 2021.

GÜNAY NUH / AA

vulnerable groups of the society. It is recommended by the Council that at least 50 percent of this revenue should support GHG emissions mitigation actions of the reel sectors. If it is applied appropriately, the percentage share for the reel sector utilization would increase over the period. The challenging point is to reform the country's current tax collection and budget allocation system.

The mitigation commission of the Council recommends GHG emissions mitigation and land-use change in seven sectors:energy, transport, industry, agriculture, waste, Land Use, Land-Use Change and Forestry (LULUCF), and buildings. These policy recommendations are generally based on previous national climate policy documents.[87] In line with the 2053 NZE targets, a long-term energy plan is required as a roadmap for resource diversification, including alternative energy sources, hydrogen energy production and storage, and natural gas extraction. This roadmap is essential because, as Şahin emphasizes,[88] there are no clear guidelines or specific policy measures through which to achieve the policies recommended by the Council. For example, a new National Energy Efficiency 2030 Vision, Strategy, and Action Plan would be supportive documents of the Strategy.

Electrification of the transport sector, including urban, intercity, and maritime transport, and battery and charging infrastructure are highlighted in the

mitigation commissions. Whether the electricity is generated from renewable energy sources or nuclear energy, there is significant room for cost-effective GHG emissions mitigation in the transport sector. Reducing industrial carbon production patterns can also contribute to the 2053 NZE target. These production patterns are pursuant to the circular economy[89] and sustainable production and consumption principles. For instance, establishing infrastructure for the green industrial zones certification system and adopting business models within the scope of the Turkish Environmental Label system can standardize the manufacturing industries. This green infrastructure with labeling measures might trigger a change in other sectors, including transport, power, buildings, etc., to help meet the 2053 NZE target.

In addition to mitigating GHG emissions sources, conserving emissions sink areas through forest and land management is gaining recognition as an important step in achieving the 2053 NZE targets. For example, forest firesare the main risk for Türkiye. To achieve the 2053 NZE target, additional forest areas must be added as emissions sink. Türkiye's experience in controlling forest fires in extreme weather conditions has revealed that risk reduction strategies and assessmentsneed to be adjusted according to changing climate conditions.[90]

Financial Challenges and Opportunities

Türkiye has experienced rapid economic growth and industrialization, which is strongly correlated with energy consumption and GHG emissions. Over the last three decades, as an emerging economy with a more than 4.5 percent annual average economic growth rate,[91] Türkiye gradually seeks to decouple its GHG emissions from GDP growth.[92] Transition to low-carbon development gained momentum after the ratification of the Paris Agreement, the installed capacity of renewable energy sources has exceeded 53,000 MW, and the total installed capacity is more than 100,000 MW.[93] These installed capacities are so close to achieving the INDC target by 2030. After ratification of the agreement, new additional coal and lignite-based power plants are negligible, around 20 MW.[94] Even though these new coal and lignite power plants are very small, for better implementation of the agreement and convergence to carbon neutrality, decommissioning of these plants needs to be on the agenda of the country. Even so, Türkiye explicitly has accelerated establishing policy and institutional frameworks for climate change to transform both economy and society towards NZE targets. As recommended bythe Climate Council, several new strategies, policies, and targets (e.g., NZE targets by 2053) will be set in line with the ultimate goal of the Paris Agreement and Article 4.19, which requires the preparation of low-emissions development strategies.[95] Türkiye seems to enhance its contribution to global mitigation efforts within this context and approach.

Türkiye's main position in climate negotiations is based on climate justice with respect to industrialized countries' historical responsibilities, the CBDR-RC principle, and equity-based burden-sharing among all parties

Mitigation of emissions has a side benefit of reducing dependency on imports to foreign fossil fuel resources on the path to green transition and NZE. Moreover, as an EU candidate, Türkiyeneeds to recognize the EU's climate strategy and policy. For instance, European Green Deal and its complementary steps (e.g., fit for 55 and Carbon Border Adjustment Mechanisms) aim to reduce GHG emissions both in domestic actions and with trade partners.[96] In this context, Türkiye's foreign trade, particularly exportation, will contribute to its progression into a high-income country. When these climate actions are considered with Türkiye's fossil fuel import dependency, particularly for natural gas, imported coal, and oil for energy conversion, appropriate strategies, policies, and measures must be announced while updating NDC and long-term lower emissions development strategies.

Türkiye's first NDC requires an emission reduction of around 1,800 million tons of CO_2 equivalent in total by 2030.[97] This reduction includes industrial, agricultural, waste emissions, land-use change, and forestry sectors. There is no information, data, or explanation about the cost and finance requirements. Arı and Yıkmaz focus on policies and measures –and their cost– for the power sector and their estimation ranges between $10.73-12.52 billion in 2018.[98] When the remaining sectors are considered in connection with the absolute emissions target and NZE approach, there will be an enormous financial demand for implementing the Paris Agreement.

Moreover, located in the Mediterranean region, Türkiye is already suffering from the impacts of climate change. New financial resources are required to reduce the damage caused by climate change, both in the inland and coastal areas of the country. Türkiye should mobilize its domestic financial resources and find new, additional finance sources from multilateral development banks and regional banks and through bilateral cooperation and investments. Although Türkiye is currently eligible to use the Global Environmental Facility (GEF), it has insufficient financial assistance to trigger the transformationto green economy. Furthermore, Türkiye's eligibility for accessing the Green Climate Fund (GCF) is not precise. In other words, even though Türkiye is eligible to receive GCF support, the GCF's resources are insufficient for the least developed countries and developing countries,[99] and projects from Türkiye may not be on the GCF's urgent action list. Therefore, Türkiye should seek new ways to financeclimate mitigation measures through public and private sector projects

Although Türkiye's institutional classification under the UNFCCC is one ofthe biggest reasonsfor this problem, Türkiye prefers to overcome this challenge through self-differentiation as a developing country under the Paris Agreement according to the given right from the Vienna Convention on the Law of Treaties (VCLT)

rather than relying on the financial mechanisms of the UNFCCC (e.g., the GEF and the GCF), and concessional loan programs with multilateral and regional development banks should be rethought.

Furthermore, Türkiye would provide evidence for the utilization rate and increase its concessional borrowing capacity for green investments. For example, prior to the 2021 Glasgow Climate Conference, Türkiye announced an Agreement it had reached withthese multilateral development banks for mobilizing $3.157[100] billion for climate action projects.[101] Although this is a positive step, these financial resources are not enough tocover the costs of shifting from overreliance on fossil fuels to a renewable energy system or to transform Türkiye's economy. Although the total financial requirements have not yet been established, it is estimated that the cost to align just the power sector with the first NDC would be more than $10 billion.

Ratifying the Paris Agreement enables to mobilize $3.157 billion, but this amount covers only one-third of the costs of implementing the new policies for the power sector laid out in the current NDC. The Paris Agreement requests more ambitious NDCs in the second cycle;[102] therefore, the present level of funding will not be enough to accomplish the necessary transformation.

Green economy transition and an NZE future are possible with financial support to implement low-emission and less energy-intensive innovations in national economy and domestic sectors. Thus, providing and increasing the financial support at the right points for the maximized effectiveness of the investments is crucial.

Conclusion

Türkiye is contributing to the global solution for climate change. Türkiye's main position in climate negotiations is based on climate justice with respect to industrialized countries' historical responsibilities, the CBDR-RC principle, and equity-based burden-sharing among all parties. Therefore, features of the Paris Agreement such as architecture, coverage of commitments, and targets are aligned with Türkiye's overall climate strategy. Türkiye's expectations re-

garding climate justice are reflected in its efforts to establish fairness in the classification of countries in the UNFCCC.

Türkiye's growing population and increasing economic activities are resulting in rising GHG emissions and increasing the cost of mitigation. Using only its own national capabilities without receiving a grant, loan, or credit, Türkiye has been unable to meet these costs. The main challenge Türkiye faces is a lack of financial assistance in the face of the increasing burden and damage of climate change. Although Türkiye's institutional classification under the UNFCCC is one ofthe biggest reasonsfor this problem, Türkiye prefers to overcome this challenge through self-differentiation as a developing country under the Paris Agreement according to the given right from the Vienna Convention on the Law of Treaties (VCLT).

Türkiye has ratified the Paris Agreement and is currently updating its second NDC with a long-term, low-emissions development strategy, and draft CBAM regulation and other carbon pricing instruments have triggered changes in Türkiye's national climate policy. Therefore, to reach its goals of decarbonization and NZE targets by 2053, the country should scale up its green finance investment. It is supported in this endeavor by a new deal with multilateral development banks for public and private sector projects. After receiving additional finance from multilateral development banks, the NZE targets could be easily achieved through channeling green economy transformation projects. Green development to change patterns of both production and consumption with the aim of achieving carbon neutrality is critical. Such opportunities are supported by international financial flow for climate change actions.

In conclusion, while ongoing international climate negotiations still need to accommodate Türkiye's demand for climate justice, Türkiye should integrate and implement national climate policies into its development plans and programs.

Acknowledgments

The author would like to acknowledge support of the Scientific and Technological Research Council of Türkiye (TÜBİTAK) under the Scientific Research Project 121K009 and Social Sciences University Research Fund under Scientific Research Project SBE-2020-193.

Endnotes

1. Morgan Wairiu, "Technical Summary," *IPCC*, (2018), retrieved from https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_TS_High_Res.pdf.

2. "GHG Emissions Inventory: 1990-2020," *TURKSTAT*, (2022), retrieved from https://data.tuik.gov.tr/Bulten/Index?p=Sera-Gazi-Emisyon-Istatistikleri-1990-2020-45862.

3. "GHG Emissions Inventory."

4. "GHG Emissions Inventory."

5. "The Tenth Development Plan," *Türkiye Cumhuriyeti Kalkınma Bakanlığı*, (2014), retrieved from http://www.kalkinma.gov.tr/Lists/Kalknma Planlar/Attachments/12/OnuncuKalkınma Planı.pdf.

6. "Türkiye's Carbon Intensity of Energy Mix: Data and Statistics," *IEA*, (2022), retrieved from https://www.iea.org/data-and-statistics/data-browser/?country=TÜRKİYEandfuel=CO2 emissions&indicator=-CO2Intensity.

7. "Türkiye's Carbon Intensity of Energy Mix."

8. "Türkiye's Carbon Intensity of Energy Mix."

9. "Monthly Reports," *T.C. Enerji Piyasasi Düzenleme Kurumu*, (March 2022), retrieved from https://www.epdk.gov.tr/Detay/Icerik/3-0-23/elektrikaylik-sektor-raporlar.

10. "United Nations Framework Convention on Climate Change," *UNFCCC*, (1992), retrieved from http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

11. "Multilateral Environmental Agreement: Negotiators Handbook," *United Nations Environment Programme*, 2nd ed., (2007), retrieved from https://wedocs.unep.org/handle/20.500.11822/7946.

12. William Nordhaus, "Climate Clubs: Overcoming Free-Riding In," *American Economic Association*, Vol. 105, No. 4 (April 2015), retrieved from https://doi.org/10.1257/aer.15000001, pp. 1339-1370.

13. "The Intergovernmental Panel on Climate Change," *IPCC*, (2022), retrieved from https://www.ipcc.ch/.

14. "United Nations Framework Convention on Climate Change."

15. "Kyoto Protocol," *UNFCCC*, (1998), retrieved from https://unfccc.int/process/the-kyoto-protocol.

16. "Kyoto Protocol."

17. The JI mechanism allows Annex I countries to implement emission reduction or removal projects in partnership with each other to earn reduction units.

18. The CDM allows Annex I countries to implement emissions reductions or removal projects in developing countries to gain certified emission reduction credits.

19. Annex I countries can buy or sell assignedor allowed amounts on international markets as assigned amount units within a commitment period.

20. İzzet Arı, "Emission Trading for Combating Climate Change and Its Implementation in Türkiye," *Republic of Türkiye, Prime Ministry, State Planning Organization*, (2010); "Kyoto Protocol."

21. "Adoption of the Paris Agreement," *UNFCCC*, (2015), retrieved from http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf.

22. "Common but Differentiated Responsibilities," *The Encyclopedia of Earth*, (2013), retrieved from http://www.eoearth.org/article/Common_but_differentiated_responsibility?topic=49477.

23. "Common but Differentiated Responsibilities."

24. "Summary of the Bonn Climate Change Conference," *International Institute for Sustainable Development*, Vol. 12, No. 580 (2013); Meena Raman, "Different Views of Countries on Work Stream 1 of Durban Platform," *Third World Network*, (2013), retrieved from https://www.twn.my/title2/climate/briefings/Bonn10/BP1.pdf.

25. David A. Weisbach, "Negligence, Strict Liability, and Responsibility for Climate Change," *University of Chicago Law School*, (July 2010), retrieved from https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=3020&context=journal_articles.

26. Charles F. Parker , Christer Karlsson, Mattias Hjerpe, and Björn-Ola Linnér, "Fragmented Climate Change Leadership: Making Sense of the Ambiguous Outcome of COP-15," *Environmental Politics*, Vol. 21, No. 2(2012), pp. 268-286.

27. Sivan Kartha, Paul Baer, Tom Athanasiou, and Eric Kemp Benedict, "The Greenhouse Development Rights Framework," *Heinrich Böll Foundation, Christian Aid, EcoEquity and the Stockholm Environment Institute,* Vol. 1, No. 2 (2008), retrieved from https://doi.org/10.3763/cdev.2009.0010; Jing Cao, "Reconciling Human Development and Climate Protection: Perspectives from Developing Countries on Post-2012

International Climate Change Policy," *Harvard Kennedy School,* (December 2008), retrieved from https://www.belfercenter.org/sites/default/files/legacy/files/CaoWeb3.pdf; Yi-MingWei, Le-LeZou, Kai Wang, Wen-JinYi, and LuWangi, "Review of Proposals for an Agreement on Future Climate Policy: Perspectives from the Responsibilities for GHG Reduction," *Energy Strategy Reviews,* Vol. 2, No. 2 (2013), retrieved from https://doi.org/10.1016/j.esr.2013.02.007, pp. 161-168.

28. Yosef Bhatti, Kasper Lindskow, and Lene Holm Pedersen, "Burden-Sharing and Global Climate Negotiations: The Case of the Kyoto Protocol," *Climate Policy,* Vol.10, No.2 (2010), retrieved from https://doi.org/10.3763/cpol.2008.0596, pp. 131-147; Michel den Elzen, Marcel Berk, Michiel Schaeffer, Jos Olivier, Chris Hendriks, and Bert Metz, "The Brazilian Proposal and Other Options for International Burden Sharing an Evaluation of Methodological and Policy Aspects Using the FAIR Model," *National Institute of Public Health and the Environment (RIVM),* (1999), retrieved from https://unfccc.int/resource/brazil/documents/rap728001011.pdf; Bert Metz, Marcel Berk, Michel den Elzen, Bert de Vries, and Detlef van Vuuren, "Towards an Equitable Global Climate Change Regime: Compatibility with Article 2 of the Climate Change Convention and the Link with Sustainable Development," *Climate Policy*, Vol. 2, No. 2 (2002), retrieved from https://doi.org/10.3763/cpol.2002.0221, pp. 211-230;Benito Müller and Luis Gomez-Echeverri, "The Reformed Financial Mechanism of the UNFCCC Architecture and Governance," *Oxford Institute for Energy Studies*, (2009), retrieved from https://oxfordclimatepolicy.org/sites/default/files/EV450.pdf; Harald Winkler, Randall Spalding Fecher, and Lwazikazi Tyani, "Comparing Developing Countriesunder Potential Carbon Allocation Schemes," *Climate Policy*, Vol. 2, No. 4 (2002), retrieved from https://doi.org/10.3763/cpol.2002.0236, pp. 303-318.

29. Raman, "Different Views of Countries on Work Stream 1 of Durban Platform."

30. Kartha, *et al.*, "The Greenhouse Development Rights Framework;" AsbjørnTorvanger, Hans Kolshus, and Jonas Vevatne, "Broadening the Climate Regime Design and Feasibility of Multi-Stage Climate Agreements," *CICERO*, Vol. 2, (May 2005).

31. "Kyoto Protocol."

32. "Decisions Adopted by the COP-17," *UNFCCC,* (March 2012), retrieved from https://cites.org/sites/default/files/eng/dec/valid17/E17-Dec.pdf.

33. Joseph E. Aldy and Robert N. Stavins, "Climate Negotiations Open a Window: Key Implications of the Durban Platform for Enhanced Action," *Harvard Kennedy School*, (September2012), retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.414.745&rep=rep1&type=pdf.

34. Christina Voigt and Felipe Ferreira, "Dynamic Differentiation: The Principles of CBDR-RC, Progression and Highest Possible Ambition in the Paris Agreement," *Transnational Environmental Law,* Vol. 5, No. 2 (2016), retrieved from https://doi.org/10.1017/S2047102516000212, pp. 285-303.

35. İzzet Arı and Ramazan Sarı, "The Comparison of G-20 Countries in terms of Climate Change Indicators," *Energy and Diplomacy Journal*, Vol. 1, No. 2 (2015), pp. 14-33.

36. Joanna Depledge, "The "Top-Down" Kyoto Protocol? Exploring Caricature and Misrepresentation in Literature on Global Climate Change Governance," *International Environmental Agreements: Politics, Law and Economics,* (2022), retrieved from https://doi.org/10.1007/s10784-022-09580-9; Voigt and Ferreira, "Dynamic Differentiation," pp. 285-303.

37. Depledge, "The "Top-Down" Kyoto Protocol?;" "Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change," *IPCC,* (2022), retrieved from https://doi.org/10.1017/9781009157926; Voigt and Ferreira, "Dynamic Differentiation," pp. 285-303.

38. "Türkiye's Sustainable Development Goals 2nd VNR 2019," *UN*, (2019).

39. "The Head of State Session for the 24th Parties of the Conference," *UNFCCC*, (December 2018), retrieved from https://unfccc.int/sites/default/files/resource/TÜRKİYE_cop24cmp14cma1-3.pdf.

40. Daniel Bodansky, "The United Nations Framework Convention on Climate Change: A Commentary," *Yale Journal of Internatinal Law,* Vol. 18, No. 451 (1993), retrieved from https://openyls.law.yale.edu/bitstream/handle/20.500.13051/6301/28_18YaleJIntlL451_1993_.pdf?sequence=2.

41. "Review of Information and Possible Decisions under the Article 4.2(f) Submission by Türkiye," *UNFCCC,* (1997), *FCCC/CP/1997/MISC.3*, retrieved from https://unfccc.int/cop5/resource/docs/cop3/misc03.

htm. Proposal to Amend the Lists of in Annexes I and II to the Convention by Removing the Name of Türkiye: Review ofInformation and Possible Decisions under Article 4, Paragraph 2(f) of the Convention. "Report of the Conference of the Parties on the First Part of Its Sixth Session, held at the Hague from November 13 to 25," *UNFCCC*, (2001); Review of Information and Possible Decisions under the Article 4, Paragraph 2(f): Proposals to Remove Türkiye from the Lists in Annexes I and II, *UNFCCC*, *FCCC/CP/1999/6*, (1999), retrieved from https://unfccc.int/resource/docs/cop5/06.htm.

42. The AWG-LCA was established to conduct comprehensive in order to reach an agreed-upon outcome for beyond 2012.The AWG-KP was established to discuss future commitments for industrialized countries under the Kyoto Protocol.

43. 26/CP.7: Türkiye's name is deleted from Annex II to the Convention and its special circumstances are recognized.

44. "Decision 26/CP.7: Amendment to the List in Annex II to the Convention," *UNFCCC,* (2002),

45. "Decision 26/CP.7."

46. 1/CP.16.

47. 2/CP.17.

48. 1/CP.18.

49. 1/CP.20.

50. "Republic of Türkiye Intended Nationally Determined Contribution," *UNFCCC*, (2015),

51. "Türkiye Climate Action Tracker," *Climate Action Tracker*, (2022), retrieved from https://climateactiontracker.org/countries/Türkiye/; Erinç Yeldan, Ebru Voyvoda, Mustafa Özgür Berke, Ümit Şahin, and Funda Gacal, "Low Carbon Development Pathways and Priorities for Türkiye," (2015).

52. Yeldan, *et al*., "Low Carbon Development Pathways and Priorities for Türkiye," (2015).

53. "Türkiye Climate Action Tracker."

54. "Republic of Türkiye Intended Nationally Determined Contribution," *UNFCCC*, (2015c),

55. "Republic of Türkiye Intended Nationally Determined Contribution."

56. The total installed capacity of Akkuyu Nuclear Power Plant (NPP) will be 4,800 MW. According to F. B. Avşar, "Comparative Analysis of First Nuclear Power Plant Projects in Türkiye," *Social Sciences University of Ankara*, (2021). Akkuyu NPP will reduce CO_2 emissions up to 36.3 Mt. F. B. Avşar, "Comparative Analysis of First Nuclear Power Plant Projects in Turkey," (2021).

57. "INDC Portal" *UNFCCC,* (2015), retrieved from http://unfccc.int/2860.php.

58. "United Nations Treaty Collection," *UN*, (2022), retrieved from https://doi.org/10.1108/09504121011057716.

59. "The Head of State Session for the 24th Parties of the Conference," *UNFCCC,* (December 2018), retrieved from https://unfccc.int/sites/default/files/resource/TÜRKİYE_cop24cmp14cma1-3.pdf; "Proposal from Türkiye to Amend the List of Parties Included in Annex I to the Convention," *UNFCCC*, (2019), *FCCC/CP/2019/INF.3*, retrieved from https://unfccc.int/sites/default/files/resource/cp2019_i03E.pdf.

60. "European Green Deal," *European Commission,* (2021), retrieved from https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en.

61. "Draft Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism," *EC*, (2022), retrieved from https://eur-lex.europa.eu/legalcontent/en/TXT/?uri=CELEX%3A52021PC0564.

62. Madeleine Heyward, "Equity and International Climate Change Negotiations: A Matter of Perspective: Climate Policy," Vol. 7, (2007), pp. 518-534.

63. "The Head of State Session for the 24th Parties of the Conference."

64. "The Cancun Agreements," *UNFCCC,* (March 2011).

65. "UN Treaty Collection," *UN,* (2021), retrieved from https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en#EndDec.

66. Christian Egenhofer, Bo Kjellén, Sivan Kartha, and Vivek Kumar, "Positive Incentives for Climate Change Action: Some Reflections," *European Climate Platform*, Vol. 5, (2008).

67. "National Development Plans," *T.C. Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı,* (2019), retrieved from http://www.sbb.gov.tr/kalkinma-planlari/.

68. "Energy Balance Tables," *T.C. Enerji ve Tabii Kaynaklar Bakanlığı,* (2022), retrieved from https://enerji.gov.tr/enerji-isleri-genel-mudurlugu-denge-tablolari.

69. "Energy Balance Tables."

70. "GHG Emissions Inventory."

71. Jeffrey D. Sachs, Christian Kroll, Guillaume Lafortune, Grayson Fuller, and Finn Woelm, "In Sustainable Development Report 2022: From Crisis to Sustainable Development - The SDGs as Roadmap to 2030 and Beyond," *Cambridge University Press*, (2022), retrieved from https://books.google.com.tr/books?id=Qvw7EAAAQBAJ&pg=PA89&lpg=PA89&dq=Sachs,+J.+D.,+Lafortune,+G.,+Kroll,+C.,+-Fuller,+G.,+andWoelm,+F.&source=bl&ots=W3CX6gBi49&sig=ACfU3U20kP6aEt8EvgtDe-OeTsMFg_Nu-KA&hl=en&sa=X&ved=2ahUKEwjZ2c3AmOT4AhVfQvEDHdy7Aa8Q6AF6BAgCEAM#v=onepage&q=-Sachs%2C%20J.%20D.%2C%20Lafortune%2C%20G.%2C%20Kroll%2C%20C.%2C%20Fuller%2C%20G.%2C%20andWoelm%2C%20F.&f=false.

72. İzzet Arı and Ramazan Sarı, "The Comparison of G-20 Countries in Terms of Climate Change Indicators," *Energy and Diplomacy Journal,* Vol. 1, No. 2 (2015), pp. 14-33.

73. "Türkiye ve Paris Anlaşması," *İklim BU*, (2017), retrieved from http://climatechange.boun.edu.tr/turkiye-ve-paris-anlasmasi/.

74. This group is the most numerically influential group in climate negotiations. The transfer of technical and financial aid to developing countries is one of the most basic policies it focuses on. This group blames Annex I countries for climate change. Their main stance is not to take any legally binding emissions reduction targets.

75. The Africa Group was founded in 1995. All members of the group are non-Annex countries. The group's main objective is to underscore the need to adapt to climate change. In general, their approach is similar to the G77/China Group's main negotiating strategy.

76. Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen, all of which participate in negotiations as non-Annex.

77. Australia, Belarus, Canada, Iceland, Israel, Japan, New Zealand, Kazakhstan, Norway, the Russian Federation, Ukraine, and the United States are group member countries. The group has common opinions but generally does not take a common position. Itrequires emissions reduction commitments of developing countries. The group also adjusts its statement according to the positions taken by developing countries, especially China and India.

78. Switzerland, Mexico, Liechtenstein, Monaco, South Korea, and Georgia. The only negotiating group that includes both Annex I and non-Annex countries together. It is a cooperation of countries formed by group members that want to be active in negotiations.

79. The EU is the leading party for committing to emission reductions. It argues that developing countries should also commit to emissions reduction.

80. "MEA Negotiator's Handbook Multilateral Environmental Agreement Negotiator's Handbook-Second," *United Nations Environment Programme*, (2007).

81. "Party Groupings," *UNFCCC,* (2020), retrieved from https://unfccc.int/process-and-meetings/parties-non-party-stakeholders/parties/party-groupings.

82. "Statement of Türkiye at 76: UN General Assembly," *TCCB,* (2021), retrieved from https://www.tccb.gov.tr/konusmalar/353/130649/bm-76-genel-kurulu-nda-yaptiklari-konusma.

83. "Green Development Initiative," *T.C. İletişim Başkanlığı,* (2021), retrieved from https://www.iletisim.gov.tr/turkce/haberler/detay/iletisim-baskanligindan-yeni-kitap-yayini-turkiyenin-yesil-kalkinma-devrimi.

84. The Council's studies started in December 2021 and ended in February 2022 with a grand council. More than 1,000 representatives from the public sector, including experts, scholars, private sector representatives and NGOs, participated in the related commissions of the Council.

85. "Closing Plenary of Climate Council," *Climate Council*, (2022), retrieved from https://iklimsurasi.gov.tr/haber/cevre-sehircilik-ve-iklim-degisikligi-bakani-kurum-iklim-surasi-kapanisinda-konustu.

86. MAC curves and cost-benefit analysis can provide input for preparing the position of whether Türkiye will purchase or sell carbon credits in the international ETS.

87. "Closing Plenary of Climate Council."

88. Ümit Şahin, "The Climate Council: Groundbreaking Work or Missed Opportunity?" *Cambridge Core Blog*, (2022), retrieved from https://www.cambridge.org/core/blog/2022/04/29/the-climate-council-groundbreaking-work-or-missed-opportunity/.

89. For definition see, "Circular Economy: Definition, Importance and Benefits," *European Parliament*, (December 12, 2015), retreived from https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits#:~:text=The%20circular%20economy%20is%20a,reducing%20waste%20to%20a%20minimum.

90. "Closing Plenary of Climate Council."

91. "World Development Indicators," *World Bank,* (2022), retrieved from https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=TR.

92. "Türkiye 2021 Energy Policy Review," *IEA*, (2021),

93. "Monthly Reports."

94. "Monthly Reports."

95. "Adoption of the Paris Agreement."

96. "European Green Deal."

97. "Republic of Türkiye Intended Nationally Determined Contribution," *UNFCCC,* (2015).

98. İzzet Arı and Rıza Fikret Yıkmaz, "The Role of Renewable Energy in Achieving Türkiye's INDC," *Renewable and Sustainable Energy Reviews,* Vol. 105, (2019), retrieved from https://doi.org/10.1016/j.rser.2019.02.004, pp. 244-251.

99. İzzet Arı and Mine Işık, "Assessing the Performance of the Developing Countries for the Utilization of the Green Climate Fund," *Frontiers in Climate*, (February 2022), retrieved from https://doi.org/10.3389/fclim.2022.813406. retrieved from https://doi.org/10.3389/fclim.2022.813406, pp. 1-10.

100. The source of this finance is not the GCF; rather, it is from the World Bank and bilateral financial flows from Germany and France. See, Şahin, "The Climate Council."

101. "Türkiye to Receive $3.157B from Green Climate Fund," *Anadolu Agency*, (2021), retrieved from https://www.aa.com.tr/en/enviroment/Türkiye-to-receive-3157b-from-green-climate-fund-erdogan/2404478; Şahin, "The Climate Council."

102. "Adoption of the Paris Agreement."