



Republic of Türkiye
Updated First
Nationally
Determined
Contribution

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Updated First Nationally Determined Contribution

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INTRODUCTION

The Government of the Republic of Türkiye hereby communicates its first Nationally Determined Contribution (NDC), updated in the context of the Glasgow Climate Pact, which the Parties adopted to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement during the 26th Conference of the Parties.

Through this communication, Türkiye confirms to reduce its greenhouse gas (GHG) emissions by 41% through 2030 (695 Mt CO₂ eq in year 2030) compared to the Business as Usual (BAU) scenario given in Türkiye's first NDC (also INDC) considering 2012 as the base year (reference year). Türkiye's updated first NDC is economy-wide and includes comprehensive mitigation and adaptation actions as well as consideration of means of implementation. Türkiye intends to peak its emissions at the latest in the year 2038. The new mitigation target is a significant increase in ambition based on science and equity and a step forward toward to long-term objective of achieving a **net zero target by 2053**. This updated NDC is also an evidence of Türkiye's intention to implement the Paris Agreement in line with the principle of "common but differentiated responsibilities and respective capabilities" of both the said Agreement and the UNFCCC as well as Decision 1/CP.16, which recognizes special circumstances of Türkiye under the UNFCCC and also states that "Recognizing that Turkey is in a situation different from that of other Parties included in Annex I to the Convention."

As a developing country, Türkiye's historical contribution to global GHG emissions is less than 1%. Türkiye also refers hereby to its Declaration made during the ratification of the Paris Agreement in 2021 that stipulates "Türkiye will implement the Agreement as a developing country and in the scope of its NDC statements, provided that the Agreement and its mechanisms do not prejudice its right to economic and social development"¹.

Türkiye's development policies, with international developments in mind, aim to make progress toward sustainable development by addressing economic, social, and environmental issues in a balanced way. Due to its geographical location, Türkiye is among the countries most affected by climate change. Türkiye pursues a green growth policy and contributes to the global efforts to combat climate change with its special circumstances and national capabilities.

Türkiye's 12th National Development Plan, being prepared for the period of 2024-2028, and long-term strategy towards 2053, will accommodate its increasing climate ambition by harmonizing climate targets and economic growth, streamlining the sustainable development

¹ https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en#EndDec

approaches in all sectors, the manufacturing industry in particular, primarily based on efficiency.

The Turkish government is implementing a substantial and robust package of new policies and strategies across the economy to meet its net zero target. The NDC is prepared in the context of long-term planning and sustainable development priorities. Since combating climate change requires an inclusive and sustainable development approach, policies to combat climate change are determined in line with the Development Plan². Türkiye's new 2030 target is based on the modeled impact of these policies and strategies and is aligned with its net zero target.

GENERAL OVERVIEW OF TÜRKİYE'S CURRENT AND AMBITIOUS CLIMATE POLICIES FOR 2030

Türkiye believes that the Paris Agreement provides a unique opportunity to realize a green and just transition and supports the implementation of its mitigation and adaptation policies therein. Besides, as an access country to the European Union (EU), Türkiye is closely following the EU policies and developing legislation on the climate change and environment to comply with the related acquis. Türkiye's climate change policy is structured by various sectoral, local, and national policy documents, strategies, and action plans on mitigation and adaptation.

In this context, there are various plans and strategies prepared, updated, or being drafted by the line ministries and public institutions to identify and tap Türkiye's mitigation potential.

Overarching legislation and policy documents that guide sectoral policies towards sustainable and climate-resilient development are;

- 11th Development Plan (2019-2023)
- Environment Law (1983)
- Energy Efficiency Law (2007)
- By-law on Fluorinated Gases (2022)
- By-law on Substances that Deplete the Ozone Layer (2017)
- By-law on Monitoring of GHG emissions (2014)
- Strategic Environmental Assessment By-law (2017)
- Communiqué on Monitoring and Reporting Greenhouse Gas Emissions (2014)
- Communiqué on Verification of Greenhouse Gas Emission Reports and Accreditation of Verification Bodies (2017)
- Medium Term Programme (2023-2025)

² Development Plans are the macro-level policy documents prepared for 5 years terms that are adopted by Turkish Grand National Assembly

- National Climate Change Strategy (2010-2023) and Action Plan (2011-2023) (under revision).
- National Climate Change Adaptation Strategy and Action Plan (2011-2023) (under revision)
- Energy Efficiency Strategy and National Energy Efficiency Action Plan (2017-2023) (to be updated)
- National Transport and Logistics Master Plan (2053)
- Türkiye's Green Deal Action Plan (2021)
- Türkiye National Energy Plan (2020 - 2035)
- Climate Council Final Recommendations (2022)
- Hydrogen Technologies Roadmap And Implementation Plan of Türkiye (2023)

The primary legislation and policy documents that are being drafted and aimed to be completed as soon as possible to enhance climate action of Türkiye are as follows:

- 12th Development Plan (2024-2028) (under preparation)
- Long-term low emission development strategy (Long-Term Strategy)
- Climate Law
- Local Climate Change Action Plan By-Law
- Long-Term Climate Change Strategy
- Circular Economy Strategy and Action Plan
- Sustainable Consumption and Production Strategy
- Sustainable Smart Mobility Strategy and Action Plan
- Green Growth Technology Road Map
- Road Map for Emission Intensive Industries
- Secondary Legislation for ETS
- Carbon Dioxide Capture and Utilization Technologies Roadmap and Implementation Plan for Türkiye
- Offshore Wind Roadmap for Türkiye
- A Zero Carbon Roadmap for the Steel, Aluminum, and Cement Sectors

In order to reach the net zero target by 2053, protect the natural environment and improve competitiveness, a resource efficient and sustainable circular economy is important. In this sense, The "Green Deal Action Plan" (GDAP) of Türkiye was published on 16th of July 2021 with the Presidential Circular numbered 2021/15. The Action Plan, including a total of 32 objectives and 81 actions under nine main headings, dwells on the green transformation of Türkiye's industries and the adoption of measures especially in areas related to trade and industry. The GDAP includes actions to be taken in a wide range of areas, such as Combating

Climate Change, a Green and Circular Economy, Green Finance, Carbon Border Adjustments, Clean, Affordable and Secure Energy Supply, Sustainable Agriculture, Sustainable Smart Transportation and Diplomacy in order to facilitate the green transformation towards a low-carbon, resource-efficient and circular economic structure.

As a country that understands the value of adaptation policies, Türkiye has acted decisively in this area and is dedicated to the pursuit of its goals across a wide range of initiatives, including impact, vulnerability, and risk assessments, information systems, legal and political instruments at the national and local levels, capacity building, financing, monitoring, and implementation. Some important adaptation efforts are National Climate Change Adaptation Strategy and Action Plan (NASAP), National Drought Management Strategy Paper and Action Plan (2017-2023), National Report on Land Degradation Neutrality for Turkey (2016-2019), National Basin Management Strategy and Action Plans (2014-2023)

In accordance with international standards, Türkiye is enhancing its green financial ecosystem to foster investment opportunities for more ambitious climate action. Financial institutions are key for greening the financial system. There have been number of developments to improve the green financial ecosystem in Türkiye. One of the most important of these developments is "Sustainable Banking Strategic Plan 2022-2025".

TÜRKİYE'S MITIGATION POLICIES:

Türkiye has developed a monitoring, reporting, and verification (MRV) system to create the infrastructure for future carbon pricing policies in light of global trends. "By-law on Monitoring of Greenhouse Gas Emissions", which is the first published legal by-law on the MRV system in Türkiye, was issued in 2012, revised in 2014, and followed by "Communiqué on Monitoring and Reporting of GHG Emissions" (2014) and "Communiqué on Verification of Greenhouse Gas Emissions Reports and Accreditation of Verification Bodies" (2017). Both communiqués were revised in 2021 and 2022, respectively. The By-law is in line with the European Union Emissions Trading System (EU-ETS); excluding emissions trading, free allowance allocation, carbon capture, and storage.

The By-law covers greenhouse gas emissions from key sectors in Türkiye, such as the combustion of fossil fuels, oil refining, iron and steel, ferrous and non-ferrous metal production, primary aluminum production, mining industry, pulp and paper production, chemical industry, and acid production. More than 700 facilities, accounting for approximately 50% of Türkiye's total GHG emissions, submitted their monitoring plans and have been monitored since 2015.

Carbon pricing instruments are considered cost-efficient mitigation policies. In this regard, establishing an Emission Trading System (ETS) in Türkiye is one of the targets defined in the

Medium Term Programme (2023-2025) and Türkiye's Green Deal Action Plan. The system is planned to include emission-intensive sectors, and the implementation principle is designed as cap-and-trade, which means in the cap-determining process, a cap will be defined according to a mitigation target; thus, emissions within the scope of the system will be limited to a determined level. Realization of the mitigation activities will be distributed among market principles; in other words, the mitigation actions will be taken first where they are the most cost-efficient. Based on the existing Turkish MRV System, Emission Trading System will be one of the primary mitigation instruments in the industry and energy sector. Allocation methods and policies will be determined considering the sectoral abatement costs and mitigation options, among other interrelated policy areas.

Energy Sector

Regarding mitigation, since 2015, Türkiye has made significant investments in many sectors, especially in the energy sector, which greatly affected the reduction in GHG emissions. Like many other countries, the energy sector has the highest GHG emission share compared to others. Therefore, policies and measures to reduce GHG emissions have had a higher focus on energy policies with clear renewable energy generation targets, particularly in the power sector. Türkiye continues to work to increase this rate even higher. Country energy policy has prioritized utilizing renewable energy sources to the maximum extent while decreasing import dependency by improving the security of supply. Türkiye's main mitigation policy in the energy sector for 2030 is utilizing the energy efficiency and renewable potential at the highest level possible by considering feasibility, market conditions, and energy security. The Renewable Energy Sources Support Mechanism (YEKDEM) and By-Law on Renewable Energy Resource Areas (YEKA) have significantly contributed to the acceleration of renewable energy investments, especially wind and solar power. Several policies and legislation have also addressed energy efficiency in buildings and industry.

As of September 2022, the total installed capacity is 102,281 MW. Renewable energy sources have 55,630 MW and constitute 54 percent of Türkiye's electricity generation installed power capacity. This year, Türkiye has become one of the 14 countries in the world with an installed power exceeding 100 thousand megawatts. Among 54% in the share of renewable energy sources, the share of hydro, wind, solar, geothermal, and biomass are 30.9%, 10.9%, 8.8%, 1.6%, and 1.8%, respectively. In the last two years, 97% of commissioned energy sources were from renewables; the rest is cogeneration, which is a good practice of efficiency. In 2021, approximately 3,000 MW of solar plus wind power was commissioned. In this sense, Türkiye is among the leading countries in the world.

Türkiye is the 12th in the world and the 5th in Europe in terms of renewable installed capacity and the 1st in geothermal and the 2nd in hydraulics in Europe. In addition, the share of wind plus solar electricity generation in total production exceeded 15.5%, reaching the highest rate of the Asian continent. In addition, Türkiye is 2nd worldwide for the intensity of energy recovery systems according to the International Energy Agency 2022 Renewable Energy Statistics. Moreover, the Hydrogen roadmap was published, and CCUS (carbon capture storage) roadmap is being prepared.

The primary guiding policy documents and sectoral legislation for energy sector are listed below;

- Energy Efficiency Law (2007)
- Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy (2005)
- Geothermal Resources and Mineral Waters Law (2007)
- Electricity Market Law (2013)
- Natural Gas Market Law (2001)
- Law on Establishment and Operation of Nuclear Power Plants and Energy Sales (2007)
- By-law on Documentation and Support of Electricity Manufacturing from Renewable Energy Resources (YEKDEM) (2013)
- By-law on Increasing Efficiency in the Use of Energy Resources and Energy (2011)
- Türkiye's Hydrogen Technologies Strategy and Its Roadmap (2023)
- Energy Efficiency Strategy Paper and National Energy Efficiency Action Plan (2017-2023 and will be updated)
- Türkiye National Energy Plan (2022-2035)

Türkiye's leading mitigation policies in the energy sector for 2030 are as follows;

- To utilize energy efficiency and renewable potential at the highest level possible by considering feasibility, market conditions, and energy security,
- To reach approximately 33 GW of solar-installed power capacity, 18 GW of wind-installed power capacity, 35 GW of hydroelectric-installed power capacity, and 4.8 GW of nuclear-installed power capacity, according to Türkiye National Energy Plan,
- To reach the battery and electrolyzer capacity of 2.1 GW and 1.9 GW by 2030, respectively,
- To increase renewable energy sources in primary energy consumption to 20.4% by 2030. It is predicted that the primary energy intensity will be 0.113 TOE/thousand \$2015 and the final energy intensity will be 0.08 TOE/thousand \$2015 in 2030,

- To establish an Emission Trading System will be one of the mitigation instruments in emission-intensive sectors based on cap-and-trade and market principles.

Industry Sector

Türkiye's industry policies support the green transition, increase energy and resource efficiency, use of alternative fuel and raw materials, encourage the use of renewable energy, and disseminate clean technologies in the industry.

Türkiye strives to strengthen further research and development (R&D) and innovation ecosystem, which is the main driving force behind green transition in industry to support climate change mitigation and adaptation. Türkiye's main R&D and innovation supports have focused on combating and adapting to climate change and transitioning to a net zero economy. Within these ecosystems, universities, public institutions, research institutes, and the private sector are conducting climate change and energy transition-related research and development studies.

In addition, the "Green Growth Technology Roadmap" is being prepared to identify the technologies needed to increase green production in industry and support R&D studies for the development of the determined technologies. The Green Growth Technology Roadmap focuses on achieving a green transition in iron-steel, aluminum, cement, chemicals, plastics, and fertilizer sectors.

Besides comprehensive policies for reducing CO₂, N₂O, and CH₄ emissions, Türkiye has been implementing relevant international legislation regarding other GHGs. Türkiye is a Party to the Montreal Protocol and ratified the Kigali Amendment on November 2021 as an A-5 (developing) country. Türkiye has completed the necessary legislative preparations to phase out Ozone Depleting Substances (ODSs) by January 1, 2025. In addition, schedules for phasing down hydrofluorocarbons (HFCs) production and consumption for the next decades have been established. Within this scope, it is aimed to reduce of HFC consumption by 80% over the next 30 years. The reduction of HFCs substantially will affect Türkiye's GHG emissions and shows the country's interest in promoting synergies between the Paris Agreement and the Kigali Amendment. On the scope of the Kigali Amendment, the Kigali Implementation Plan, which will be adopted as the National Strategy Document for the phasing down of HFCs, will enter into force in 2024.

Energy efficiency improvement is a prominent tool to mitigate GHG emissions from industrial facilities. This improvement offers significant opportunities for reducing GHG emissions, decreasing energy consumption, improving process efficiency, and upgrading technological development levels. According to the Energy Efficiency Law, industrial enterprises with a

specific size should commission energy efficiency audits and establish energy management units. In addition, support mechanisms such as Efficiency Improvement Support Program are provided to reduce the energy intensity of industrial installations. Within the scope of the Program, 346 projects were supported in the 2009-2021 period, and 76 thousand TOE energy savings were achieved.

In addition, the Borsa Istanbul (BIST) Sustainability Index, other ESG (Environmental, Social and Governance) indexes, sustainability disclosure frameworks and standards, the sustainability and integrated reports made voluntary by the private sector supports measures to mitigate emissions and manage climate change risks.

Many environmental legislations regulate industrial emission reduction, control, and monitoring. Primary guiding policy documents and sectoral legislation on the industry are listed below:

- Energy Efficiency Law (1983)
- By-law on Monitoring of GHG emissions (2014)
- By-law on Fluorinated Greenhouse Gases (2022)
- By-law on Substances that Deplete the Ozone Layer (2017)
- Framework of Energy Labelling By-law (2021)
- By-law on Eco-design Requirements for Energy-Related Products (2022)
- Environmental Labeling By-law (2018)
- Control of Industrial Air Pollution By-law (2014)
- Air Quality Assessment and Management By-law (2008)
- Environmental Permit and License By-law (2014)
- Environmental Inspection By-law (2008)
- By-law on Management of Industrial Emissions with Best Available Techniques (being drafted)
- Communiqué on Voluntary Carbon Market Project Registration, Communiqué on Continuous Emission Measurement Systems (2013)
- Communiqué on Monitoring and Reporting of Greenhouse Gas Emissions (2014)
- Communiqué on Verification of Greenhouse Gas Emission Reports and Accreditation of Verifying Bodies (2017)
- Communiqué on Certification of Natural and Legal Persons Interfering with Equipment Containing Fluorinated Greenhouse Gases or whose Operation Relies on These Gases (2020)
- Communiqué on Integrated Pollution Prevention and Control in the Textile Industry (2011)

- Communiqué on Refuse Derived Fuel, Additional Fuel and Alternative Raw Material (2010)
- Halon Circular (2007)
- Türkiye's Green Deal Action Plan (2021)
- The 2023 Industry and Technology Strategy (2019)
- The National Air Quality-Monitoring Network
- National Industrial Emission Strategy in Accordance with Integrated Pollution Prevention and Control Action Plan (being drafted)
- National Sustainable Consumption and Production Action Plan (being drafted)
- National Circular Economy Action Plan (being drafted)

Türkiye's main mitigation policies in the industry sector for 2030 are as follows:

- To increase using biofuels, refuse-derived fuel (RDF), alternative fuel, and raw materials in industrial facilities.
- To reduce the carbon footprint of industrial products and increase using renewable energy and resource and energy efficiency in the industry sector.
- To prepare National Cooling Action Plan covering sustainable and natural cooling technologies, as well as innovative financing solutions and higher energy efficiency cooling gases (being drafted).
- To conduct Green Growth Technology Roadmap studies for the iron-steel, aluminium, cement, chemicals, plastics and fertilizer sectors, which are critically important for Türkiye's economy and have high carbon emissions.
- To support "Green Transition in the industry" by prioritizing certification of industrial facilities that use "Best Available Techniques" as an indicator for clean and green industrial production.

Transport Sector

In Türkiye, total emissions in the transport sector were 80.7 Mt CO₂ eq. in 2020. The major contributor to these emissions was the road transport sector, with 76.6 Mt CO₂ eq. (94.9% share) in 2020. Share of road transport (passenger-km) is 93.6% of total transport in Türkiye. To support sustainability in the transportation sector, over the recent years, Türkiye has invested in projects such as extending the railroad network as well as implementing the smart city concept in the metropolitan areas to increase energy efficiency. In the last two decades, Türkiye has allocated big budgets for introducing High-Speed Rail (HSR) and Rapid Rail (RR) services. Currently, there is a 13,128 km railway network consisting of an 11,668 km conventional line, 1,241 km HSR network, and 219 km RR network. There is also significant

use of suburban rail in major cities, with 220 million travelers in 2019. In addition, alternative transport systems have been promoted; the “Inter-city Transport and Tourism Bicycle Routes Master Plan” has been prepared for the 3165 km route. The “Electric Scooter Regulation” has been prepared to increase the use of micro-mobility vehicles. Also, emission regulations for cars, vans, lorries, buses, and motorcycles are compatible with EU standards to ensure possible lowest CO₂ emissions and reduced pollutant emissions.

The primary guiding policy documents and sectoral legislation in the transport sector are listed below;

- Fuel Quality By-law (2017)
- By-law on Procedures and Principles Regarding the Improvement of Energy Efficiency in Transportation (2019)
- By-law on Bicycle Roads (2019)
- By-law on Combined Transport (2022)
- By-law on E-scooter (Trilateral By-law,2021)
- By-law on Monitoring of Greenhouse Gas Emissions from Aviation Activities
- By-law on Sustainable Aviation Fuel (SAF) (2022) (being drafted, harmonizing the relevant EU Directive)
- National Transport and Logistics Master Plan (2022-2053)
- National Intelligent Transportation Systems (ITS) Strategy and 2020-2023 Action Plan
- Mobility Vehicles and Technologies Strategy Roadmap (2022)
- Inter-city Transport and Tourism Bicycle Routes Master Plan (2021)
- Directive on Sustainable Aviation Fuel (SAF) (2022) (being drafted)

Türkiye’s main mitigation policies in the transport sector until 2030 are as follows;

- To ensure balanced utilization of transport modes in freight and passenger transport by reducing the share of road transport and increasing the share of maritime and rail transport;
- To develop low or zero emission, energy-efficient, and alternative clean fuel transportation options and expand urban passenger and freight transportation by rail for international and intercity.
- To increase the use of electricity and alternative energy resources instead of fossil fuels on highways,
- To promote electric vehicles by establishing a national fast charging station network,
- To increase the efficiency and coverage of the intercity rail network and its electrification,

- To implement sustainable transport approaches in urban areas;
- To promote sustainable aviation fuel production via national sources,
- To support and incentivize sustainable aviation fuels at international airports,
- To expand green port implementations,
- To implement Ship Scrap Regulation,
- To enhance combined transport,
- To promote alternative fuels and clean vehicles,

Additionally, National Transport and Logistics Master Plan, which adopted the Environmental (Sustainable) Scenario, is a guide to attain sustainability targets for the sector. Master Plan takes the railway sector as the main priority to achieve sustainability targets.

The National Transport and Logistics Master Plan (2022-2053) sets out substantial targets in the sector by 2030, namely:

- A sustainable, liberalized, economically profitable, high-technology railway sector will be developed.
- It is planned to construct a total of 4690 km of railway routes, including 4088 km of high-speed train routes.
- Railway Passenger transportation share will increase from 0.96% to 4.15% and railway freight transportation share will increase from 5.08% to 11.24%.
- Annual railway passenger transport will increase from 19.5 million to 98 million.
- Annual railway freight transportation will reach 146 million tonnes from 55 million tonnes.
- Railway infrastructure will be developed in line with the changing mega trends in the sector and based on sector dynamics.
- By 2030, a total of 29 billion Dollars (with 2019 prices) of railway investment is foreseen.
- The share of highways in annual freight transportation will be reduced from 71% to 67%.
- Highly renewable energy resources will be used in ports.
- Emission monitoring, reporting, and verification infrastructure will be established, and carbon emissions will be strategically managed in air transportation.

Agriculture Sector

Since 2015, the implementation of policies and plans supporting effective management and control of GHG emissions from the agriculture sector has also increased. Rehabilitation of grazing lands, land consolidation in agricultural areas, supporting the minimum tillage methods, environmental agricultural land protection program, chemical fertilizer management,

animal manure management, reducing food loss and waste, adopting innovative technology and practices, organic agriculture, and good agricultural practices are policies that have critical importance in managing and controlling GHG emissions directly or indirectly.

Land consolidation has been a significant and long-term policy in Türkiye. Increasing agricultural efficiency and fuel savings are also essential and long-term policies in Türkiye's fight against climate change. 4.76 million hectares of land suitable for consolidation within the existing 14.3 million hectares of agricultural land were completed by the end of 2020. Regarding inland consolidation, a total of 8.5 million hectares will be completed in 2023.

Türkiye is below the world average in consumption of both meat and dairy products. Considering the increasing population, emission management in the sector has become a critical issue. Türkiye's methane emissions originating from the agriculture sector will be managed by policies that ensure not risking food security and additional international financial resources are needed for advanced policies of methane emission management.

The primary guiding policy documents and sectoral legislation in the agriculture sector are listed below;

- Soil Conservation and Land Use Law (2005)
- Amending the Law on Soil Conservation and Land Use Law (2014)
- Law on Land Arrangement in Irrigated Areas (1984)
- Ecosystem-Based Adaptation Strategy for Anatolian Steppe Ecosystems (2022-2036)
- Türkiye's Strategy and Action Plan for Combatting Agricultural Drought (2023-2027)
- Strategic Plan of The Ministry of Agriculture and Forestry (2019-2023)
- Türkiye's Green Deal Action Plan (2021)
- Türkiye's National Climate Change Strategy (2010-2023)
- Türkiye's National Climate Change Action Plan (2011-2023)
- Environmentally Purpose Agricultural Land Protection (ÇATAK) Programme (2005-2020)
- Climate Council Final Declaration of Recommendations (2022)
- Green Growth Technology Roadmap for Fertilizer Sector (2022)

Türkiye's main mitigation policy in the agriculture sector until 2030 are as follows;

- To control methane emissions by regulating animal feed rations,
- To ensure optimum nitrogen fertilizer use in plant production,
- To increase the manuring process in biogas plants,
- To reduce the use of nitrogen fertilizers alternately with legumes in crop production,

- To improve practices in cattle breeding, rational feeding, and regulation of the number of animals,
- To use of agricultural biomass for energy generation and the improvement of methane production from manure; enhancement of rice cultivation technology using a subsurface irrigation system,
- To optimize the crop allocation combined with improvement of application methods and standards of mineral and organic fertilizers,
- To train farmers on new methods and technologies,
- To improve risk reduction against natural hazards for food security, including agriculture-related adaptation measures, such as crop rotation, agrotechnical development of forecasting, and soil conservation practices to reduce drought, water, and wind erosion.
- To assess the volume of water availability for use in a basin and dividing up the available water for sectoral use (e.g. irrigation, industry, energy production) and ecosystem maintenance via water allocation plans.

Building Sector

Türkiye is progressing towards low-carbon development in the building sector, primarily through energy efficiency and renewable energy, with its legislative studies and policies in residential and non-residential buildings in the content by law on Energy Performance of Buildings. Accordingly, Türkiye has published the By-laws regarding energy efficiency in the buildings, Energy Performance Certificate (EPC), the green certificate, and environmentally friendly design, including wood-based products. The main targets of the By-laws are environmental protection, emission reduction, and energy efficiency.

A By-law on the Energy Performance of Buildings was adopted in 2008 to regulate the procedures and principles regarding the effective and efficient use of energy in buildings. It aims to control GHG emissions originating from buildings and covers all new and existing buildings with some exemptions. EPC is the primary tool for the implementation of this By-law. To regulate EPC, the Ministry of Environment, Urbanization and Climate Change uses a software to define and control buildings' energy consumption and GHG emissions. Besides, EPC is also mandatory for existing buildings; Nearly Zero Energy Building (NZEB) concept has been introduced and accepted with an updated By-law on the Energy Performance of Buildings in February 2022. In this concept, high-energy performance, with a certain extent renewable energy usage in buildings, is the main motivation for this update. According to NZEB, as of 2023, buildings over a construction area of 5000 m² must have an EPC with at least "B" class or better and renewable energy sources must supply at least 5% of the building's total primary

energy consumption. Furthermore, as of 2025, the buildings over a construction area of 2000 m² must have an EPC with at least "B" class or better, and renewable energy sources must supply at least 10% of the building's total primary energy consumption.

The primary guiding policy documents and sectoral legislation in the building sector are listed below;

- Energy Efficiency Law (2007)
- Law on Transformation of Areas under Disaster Risk (2012)
- Energy Performance of Buildings By Law (2008)
- Green Certificate for Building and Settlement By-law (2022)
- Planned Areas Zoning By-Law (2017)
- Unplanned Areas Zoning By-Law (2022)
- By-Law on Eco-Design of Energy-Related Products (2022)
- By-Law on Indication by Labeling and Standard Product Information (2017)
- Water Insulation in Buildings By-law (2017)
- Presidential Circular on Energy Saving on Public Buildings numbered (2019)
- National Climate Change Strategy (2010-2023)
- National Climate Change Action Plan (2011-2023):
- Energy Efficiency Strategy (2010-2023)
- The National Energy Efficiency Action Plan (2017-2023)
- TS 825 Thermal Insulation Requirements for Buildings (2008)

Türkiye's main mitigation policies in the building sector until 2030 are as follows;

- To renovate existing buildings,
- To construct more energy-efficient buildings,
- To use district heating solutions in densely populated areas,
- To use new techniques where applicable (i.e., renewable technologies, heat pumps, cogeneration plants, microgeneration systems, geothermal energy for residential heating, prevention of wasting heat, use of waste heat, and options for storage of heat) in areas far from the city center,
- To develop and promote integrated building design, Building Information Modeling (BIM), and modular construction technologies by using the best available techniques throughout the entire planning, construction, and life cycle of buildings to increase resource and energy efficiency and reduce environmental impacts and carbon emissions,

- To regulate the construction sector by legislation on water efficiency in buildings and providing incentives for the use of grey water and rainwater, the establishment of zero waste systems,
- To increase renewable energy self-consumption.
- Implement building performance codes and standards residential and non-residential buildings.
- Implement renewable portfolio targets, energy-efficiency labeling, retrofitting of existing buildings, smart-grid systems, and district energy systems,
- To increase the use of technologies such as combining heat and power, waste heat boilers, efficient lighting, green building, green boiler, green chiller, efficient electric motors, gas pipeline networks, solar PV and solar water heaters, and so forth,
- To increase the use of energy-efficient white goods and household electrical appliances.

Waste Sector

As for Türkiye, the amount of municipal waste generation reached 32.3 million tonnes in 2020. There has been an increasing trend in solid waste management investments, including biological and material recovery facilities and the transition from dumpsites to landfills in 1391 municipalities. As of 2021, 59.6% of collected municipal waste is landfilled which provides landfill gas collection systems or biomethanisation plants. All these investments have significantly contributed to the decrease in methane emissions from municipal waste in the last decade. Only in 2020 303 kt of methane was recovered at these facilities and prevented from being emitted into the atmosphere.

Furthermore, various incentive mechanisms and investments in energy generation from biogas and landfill gas resulted in increasing levels of renewable energy generation from waste. In Türkiye, electricity is generated from biogas and landfill gas in 84 energy production facilities in 55 provinces with an annual production amount of 4,096,452 MWh.

The “Zero Waste” Project, initiated in 2017 in Türkiye was carried to the global scale through the United Nations General Assembly Resolution entitled “Promoting Zero Waste Approaches to advance 2030 Agenda for Sustainable Development”. As a result of this Resolution which was presented by Türkiye and adopted later in the UN 77th General Assembly with the valuable support of 105 co-sponsor countries, Türkiye will contribute to the global efforts to combat climate change, to achieve the Sustainable Development Goals promoting circularity, and to the implementation of the Paris Agreement.

The transition to a circular economy and the zero waste project are critical for the country to achieve its net zero target by 2053. At the same time, these two priorities provide a two-way benefit by reducing GHG emissions and saving raw materials and natural resources.

Some of the primary guiding documents and legislation in the waste sector are listed below:

- Waste Management By-law (2015)
- By-law on Landfilling of Wastes (2010)
- Zero Waste By-law (2019)
- Management of Waste Vegetable and Animal Oils By-law (being drafted)
- Communiqué on Import Inspection of Wastes under Control in terms of Environmental Protection (Product Safety and Inspection: 2023/3)
- National Waste Management and Action Plan (2016-2023)
- Circular Economy Strategy and Action Plan (being drafted)
- Green Growth Technology Roadmap for Plastic Sector (Developing waste management and innovative recycling processes in the plastics industry)

Türkiye's main mitigation policies for the waste sector until 2030 are as follows;

- To prevent waste generation and to reduce produced waste amount within the framework of circular economy principles,
- To increase the recovery rate of municipal waste to 60% by 2035,
- To increase the recovery rate of methane gas from biodegradable wastes,
- To reduce the percentage of landfilled waste to reach the target of zero municipal waste landfilling without pretreatment by 2053,
- To increase refuse-derived fuel (RDF) production from municipal waste,
- To convert wastewater treatment facilities into biorefinery facilities, increase the reuse percentage and to expand the areas of use for treated wastewater.

Land Use, Land-Use Change and Forestry (LULUCF)

Türkiye has been managing its forestry sector with a robust institutional structure shaped by a century-long technical forestry tradition and effective legislation dating back to 1956 with a sustainable forest management approach. More than 23 m/ha of forest land, 29.6% of the Türkiye's land area, is managed and conserved to support the urban and rural population of the country. Türkiye's forests offset around 11% of total GHG emissions with harvested wood products (HWP). According to the latest National GHG Inventory Report of Türkiye, the LULUCF sector is a net sink dominated by forests.

Türkiye's geographical location, topography and soil conditions increase sensitivity to desertification, land degradation. Türkiye, as a country party to the United Nations Convention to Combat Desertification (UNCCD), a national strategy and action plan on combating desertification is being implemented to prevent, control and reduce desertification and land degradation as part of climate change mitigation and adaptation. Moreover, Türkiye has voluntarily set the Land Degradation Neutrality Targets, within the concept of land degradation neutrality (LDN), officially endorsed as a strong vehicle for driving the implementation of the Convention during to COP12 held in Ankara, Türkiye.

Agricultural lands and grasslands are protected against use for other purposes by related legislation. Additionally, agro-forestry will be promoted by the Ecosystem-Based Adaptation (EBA) Strategy.

Some of the primary guiding documents and legislation are listed below:

- Forestry Law (1956)
- Grassland Law (1998)
- Soil Conservation and Land Use Law (2005)
- Strategic Plan of General Directorate of Forestry (2019-2023)
- National Forestry Programme (2004-2023)
- National Sustainable Forest Management Indicators and Criteria Implementation Guide (2019)
- National Forest Inventory (2025)
- National Strategy and Action Plan to Combat Desertification (2019-2030)
- Ecosystem-Based Adaptation Strategy for Anatolian Steppe Ecosystems (2022-2036)

Türkiye's main mitigation policies for the LULUCf until 2030 are as follows;

- To increase the sink capacity of forests by improving/sustainable forest management, afforestation/reforestation, restoration, and long-term planning by rejuvenating existing forest areas
- To encourage nature and/or technology-based solutions that increase sink capacity, such as afforestation, rural agricultural land protection, and grassland improvement.
- To prevent, control and reduce desertification and land degradation.

TÜRKİYE'S ADAPTATION POLICIES:

Paris Agreement aims to strengthen the global climate change response by enhancing adaptive capacity and resilience and reducing vulnerability. Türkiye is one of the most vulnerable countries to the negative impacts of climate change such as heavy rainfalls, floods,

storms, landslides, heat waves, and forest fires. Especially over the last two decades, these hazards are becoming more frequent and severe. Therefore, Türkiye recognizes the importance of adaptation, and the adaptation component is included as a complimentary section to its updated NDC.

As highlighted by the International Panel on Climate Change (IPCC), the Mediterranean region is considered one of the 'hot spots' of climate change, with warming exceeding the global average increase by 20% and a reduction in precipitation in contrast to the general increase in the hydrological cycle in temperate zones between 30°N and 46°N latitude. In Assessment Report 6, Climate Change 2022: Impacts, Adaptation, and Vulnerability of IPCC, it was also stated that cities, especially coastal cities, will be more affected by climate change in the upcoming period. In this respect, it is inevitable that urban areas, where 70% of the world's population will live in 2050, should be tackled seriously. If adequate measures are not taken today, our cities will likely be exposed to at least one of the natural disasters. Further, river runoff and low flows are expected to decrease (possibly by 12–15% or more) in most locations due to reduced precipitation. Groundwater recharge is projected to decrease due to reduced inflow decline by up to 45% in 2100. The largest freshwater lake in the Mediterranean basin, Lake Beyşehir, could dry out after 2070.

Türkiye is experiencing increasing water stress, which also effects food security, and unprecedented disaster events, such as the 2021 forest fires. This vulnerability is due to a combination of climate factors, population exposure (for example, the share of the population exposed to floods and forest fires), and socioeconomic factors (such as the share of agriculture in the economy).

As a country vulnerable to the adverse impacts of climate change, Türkiye has taken significant measures on climate change adaptation and is determined to pursue its efforts under many areas of action, including the impact, vulnerability, and risk assessments, information systems, legal and political instruments at the national and local level, capacity building, financing, monitoring, and implementation.

In the scope of adaptation efforts;

Türkiye published its first National Climate Change Adaptation Strategy and Action Plan (NASAP) in 2012, covering the period until 2023. The update process of the NASAP, including the sectors on agriculture and fisheries/livestock, ecosystems and biodiversity, water management, disaster risk reduction, urban, social development, industry, energy, tourism, cultural heritage, and public health, is ongoing based on the detailed impact, vulnerability, and risk assessments. The NASAP aims to contribute to the achievement of the 2015 Paris Agreement's global goal on adaptation.

Türkiye intends to formulate its local-level climate policy through Regional and Local Climate Change Action Plans. Regional climate change action plans were prepared for seven geographical regions at the regional level. These Action Plans include priority actions to combat climate change for different sectors. At the local level, municipalities in Türkiye are committed through the local climate change action plans to enhance their climate resilience.

Agriculture and Forestry Sector

Especially in Mediterranean countries, including Türkiye, with the adverse effects of climate change being felt, the concepts of drought and humanitarian interventions due to natural events are frequently encountered. In order to combat drought nationwide, short, medium, and long-term measures are taken, and action plans are put in place to reduce the effects of drought on a sustainable basis.

Türkiye's Agricultural Drought Combat Strategy and Action Plan was implemented between 2008-2012 and revised in 2013 to cover 2013-2017. In addition with the Turkish National Drought Management Strategy Document and Action Plan (2017-2023) determines a result-oriented and policy for watershed-based sustainable drought management, defines the targets together with the responsible institutions, informing the public about the drought. Besides, this strategy document foresees preparation of legislation related to drought management, determining the functions of responsible institutions, and investigating how these organizations can work in a coordinated way to increase the awareness of society on drought and to ensure the management of droughts at the basin scale.

Türkiye's Agricultural Drought Combat Strategy and Action Plan has been revised for 2023-2027. The strategy aims:

- To build an enhanced institutional structure with adequate capacity.
- To establish an integrated combating approach.
- To minimize the agricultural sector's vulnerability to drought.

In the context of the forestry sector in Türkiye, The Strategic Plan of the General Directorate of Forestry of the Ministry of Agriculture and Forestry (2019-2023) includes substantial targets regarding the forests in Türkiye. The objectives of the Strategic Plan are

- To protect the forest and forest resources against biotic and abiotic pests,
- To develop forests, to increase their productivity and to expand their areas,
- To ensure that society benefits from the goods and services produced by forests at the optimum level, and
- To develop institutional capacity.

The Strategic Plan emphasizes sustainable forest management approaches, protection of forests, improvement and sustainable use of degraded lands, and adaptation to climate change as prioritized subjects. In addition, the evaluation and optimization of ecosystem services are highlighted, as well as monitoring and international reporting of the forestry processes. Projects will be the critical enabler to fulfilling global responsibilities in this regard.

Another important document for enhanced adaptation action in Türkiye is the Ecosystem-Based Adaptation Strategy for Anatolian Steppe Ecosystems. This Strategy covers agriculture, grassland and pasture, inland water, and forest for 2022-2036. The Strategy aims:

- To improve resilience in ecosystems that are or will be adversely affected by climate change.
- To ensure climate-resilient rural communities through an enhanced agricultural economy
- To increase carbon sink potential.

Other guiding policy documents are listed below:

- Protection of Cultural and Natural Assets Law (1983)
- National Drought Management Strategy Paper and Action Plan (2017-2023)
- National Forestry Programme (2004-2023)
- National Strategy and Action Plan on Combating Desertification (2015-2023)
- Strategic Plan for Organic Farming (2018-2022)
- Agricultural Research Master Plan (2011-2015)
- National Report on Land Degradation Neutrality for Turkey (2016-2019)
- National Action Plan for Combating Soil Erosion (2013-2017)
- River Flood Control Action Plan (2017)
- National Action Plan on Afforestation and Erosion Control Campaign (2008-2012)
- National Agricultural Development Strategy (2014-2020)
- National Agricultural Drought Strategy and Action Plan (2013-2017)
- Flood Management Plans (2023)
- Drought Management Plans (2023)

Water Sector

According to meteorological observations in 2021, the annual average temperature was about 1 degree Celsius above the 1991-2020 average, while annual total precipitation was 9% below the 1991-2020 averages in Türkiye.

With 1024 extreme weather events, 2021 was the year with the highest number of extreme events. There has been an increasing trend in extreme event occurrences, especially in the last two decades. Most of the extreme events recorded in 2021 were storms/tornados (40%), heavy rain/flood (28%), hail (13%), and heavy snow (7%).

According to climate change studies in Türkiye, annual precipitation averaged across Türkiye is expected to decrease by approximately 10% over the 2071-2100 period.

On the other hand, in northern Türkiye, annual precipitation and heavy rainfall are likely to increase, with flood events becoming more frequent and intense. However, southern regions are likely to receive less precipitation, while droughts are becoming more frequent.

Furthermore, hydrological studies show that it will be difficult to meet the increasing water demand due to available water potential being likely to decrease in some river basins. In order to protect water resources in terms of quality and quantity and to ensure fair water sharing, river basin management plans and sectoral water allocation plans are made and followed for all river basins (25) in the country.

Main policy documents are listed below:

- National Water Plan (2019-2023)
- National Basin Management Strategy and Action Plans (2014-2023)
- Flood Action Plan (2014- 2018)
- Dam Basins Green Belt Action Plan (2013-2017)
- Upper Basin Flood Control Action Plan (2013- 2017)
- All Provinces (81) Drinking Water Action Plans (2020)

Disaster Risk Management

Forest fires are frequently experienced all over the world as a result of the adverse effects of global warming and cause immense damage. In this context, Türkiye has struggled with large fires on its southern coasts in the summer of 2021.

Targets and actions for forest fire risks are included in the Türkiye Disaster Risk Reduction Plan (TARAP, 2022-2030). The Plan aims to disseminate functional fire management plans throughout the country, to benefit from information technologies in the protection of forests and to develop decision support systems, to increase measures for the prevention of forest fires, to strengthen the response capacity, and to develop the volunteer system to combat forest fires and to establish international cooperation for capacity building.

Increased frequency, intensity, and the number of disasters have shown the importance of risk management strategies in agriculture. Türkiye has shifted from crisis management to risk management in agriculture. The agricultural insurance system (TARSİM) has been established under Agricultural Insurance Law. TARSİM aims to reduce the risks of sustainable production that the sector encounters.

The main policy documents are listed below:

- Law on Transformation of Areas under Disaster Risk (2012)
- Disaster Management Strategy Paper and Action Plan for Turkey (2020)
- Roadmap for Climate Change and Related Disasters (2014)
- Flood Management Plans (2023)
- Drought Management Plans (2023)

Urban Sector

The urbanization rate, which was at the level of 24% in the Republic's first years, reached the level of 53% in 1985 and 72.3% in 2012³. In 2021, the rate of people living in provincial and district centers was 93.2%. Therefore, it is crucial to make cities an integral part of the solution to tackle climate change.

Türkiye aims at creating sustainable, energy-efficient, and climate-resilient cities. Türkiye's Spatial Strategy Plan (2053) is the primary policy document in preparation for climate-resilient urbanization. This plan mainstreams the consideration of economic, social, and environmental policies and strategies in spatial evaluations while achieving development and growth goals and ensures a balanced distribution of infrastructure and services for competitive cities.

Türkiye's Spatial Strategy Plan (2053) will be a guide for spatial planning toward creating people-oriented, disaster-resistant, climate-resilient, liveable, and productive cities.

The 2020-2023 National Smart Cities Strategy and Action Plan aims to ensure that the investments are implemented with suitable projects and activities. By directing the Smart City transformation, the plan will accelerate Türkiye's social, economic, and environmental development. "Liveable and Sustainable Cities Adding Value to Life" has been determined as the vision with the strategy. In line with this vision, 4 strategic goals, 9 targets and 40 actions have been decided.

Other main policy documents on the urban sector are listed below:

³ The criteria for urbanization rate has been used as settlements over 20,000 population until 2012. The criteria for the indicator has been changed after 2012.

- Zoning Law (1985)
- Law on Transformation of Areas under Disaster Risk (2012)
- Development Plans
- National Smart Transportation Systems Strategy Document and Action Plan (2020-2023)
- Wastewater Treatment Action Plan (2017-2023)
- Integrated Urban Development Strategy and Action Plan (2010-2023)

Rural Development Sector

National Rural Development Strategy (2021-2023) document aims to establish an integrated policy framework for rural development activities. The National Rural Development Strategy aims to increase the production capacity of producer unions and family businesses and the employability of the rural workforce, improve the quality of life, reduce poverty, increase the welfare level of the rural society by providing regular and sufficient income opportunities, and increase the population in rural areas, with the understanding of sustainable rural development. The document also indicates that increasing the resilience of rural societies to climate change, using natural resources sustainably, protecting and developing ecosystems, and increasing the adaptation capacity of social groups, cities, and economic sectors affected by climate change have great importance. For this purpose, developing and implementing local climate strategy plans, reducing the risks created by climate change, increasing the resilience of sectors affected by climate change, and disseminating innovative practices and technologies for adaptation to climate change are important targets.

Public Health Sector

Considering the adverse health effects of climate change on human health, Türkiye has prioritized its initiatives in line with global developments to protect and improve the health status of its citizens. From this perspective, making health systems resilient against climate change has been prioritized as an adaptation work. In this context, National Program and Action Plan for Reducing the Adverse Effects of Climate Change on Health (2015) will be updated to explore and monitor possible links between climate change and health, to reduce the effects of climate change on health, to protect public health, especially for vulnerable groups, and to improve health response capacity.

Adaptation Goals

Türkiye's main policy preparation actions that support adaptation actions until 2030 are as follows;

- Local Climate Change Action Plan By-Law will be published.
- An electronic and publicly accessible system (E-YIDEP System) for Local Climate Change Action Plan will be developed. This system includes a regional vulnerability analysis and a catalogue of nature-based solutions. Municipalities will use this system when preparing their Local Climate Change Action Plans (YIDEP). Municipalities will also be able to upload their local climate change action plans.
- The reuse of treated wastewater in landscape and agricultural irrigation, industrial use, groundwater recharge, recreational uses, and domestic and industrial applications will be increased.
- The reuse rate of treated wastewater will be increased to 15 % in 2030.
- It is aimed to increase of feeding reuse of treated wastewater to wetlands, prior to 35 wetlands that are or will be dried out.
- The drinking water supply and distribution network loss will be reduced to 25% for metropolitan and provincial municipalities. Drinking Water Supply Management from source to tap has been evaluated by a selected pilot province in line with the preparation of drinking water safety plans. The dissemination of the planning studies will be ensured throughout the country. Rainwater harvesting and reuse of grey water will be disseminated in 10 years across Türkiye.
- River Basins Management Plans and Sectoral Water Allocation Plans will be prepared for 25 river basins.
- Climate change impacts on lakes, wetlands, and coastal areas will be determined along with the adaptation actions.
- High-resolution climate projections will be created, climate change vulnerability and risk assessments will be carried out for 12 NUTS1 Regions across the country.
- Rehabilitation and modernization works will be enhanced in order to increase water-use efficiency in irrigation.
- Flood management plans and drought management plans will be completed for 25 river basins and will be revised every six years.
- Drought management plans has been completed for 15 river basins, and the studies are ongoing for the other 10 river basins.
- Very high and high-priority measures defined in the flood management plans will be implemented by 2030.
- A flood forecasting and early warning system will be established for 25 river basins in Türkiye by 2030.
- A drought forecasting and early warning system will be established for 25 river basins in Türkiye by 2030.

- Revised Türkiye's Agricultural Drought Combat Strategy and Action Plan will ensure resilience to drought.
- Sustainable production in agriculture, which protects natural resources, ecosystems, and biodiversity, will be increased.
- Agricultural crop patterns will be optimized, taking into account the future water availability under climate change scenarios.
- Insurance and agricultural support systems will help to manage risks of sustainable production in the agriculture sector to alleviate the adverse effects of climate change.
- The number of protected areas will be increased.

Institutional Development and Stakeholder Engagement

In pursuit of becoming a party to Paris Agreement, Türkiye has given momentum to its climate action. With Presidential Decree No. 85 published on 29th October 2021, the name of the Ministry of Environment and Urbanization was amended to the Ministry of Environment, Urbanization and Climate Change (MoEUCC). The Directorate of Climate Change (DoCC) has been established as an affiliated institution.

In this direction, Türkiye's first climate council was held in Konya between 21-25 February 2022 under the coordination of the Ministry of Environment, Urbanization and Climate Change. Almost 1,500 stakeholders participated from various sectors including public, private, research institutions, NGOs, and youth. Within the scope of the Council; 7 sub-committees were established on GHG emission reduction (2 committees); science and technology; green finance and carbon pricing; climate change adaptation; local governments; and migration, just transition and social policies. Several issues, such as migration, just transition, and climate justice, were covered in the climate discussions for the first time. At the end of the Council, 217 recommendations were adopted to provide a vision for the 2053 net zero target of Türkiye. 76 of which were prioritized, and all recommendations were shared with the public.

Multi-stakeholder consultations for a draft Climate Change Law were carried out and its outcome the draft law was submitted to the Turkish Grand National Assembly for drafting and negotiation of Law by the members of parliament in the law-making process.

The draft text aims to establish the legal basis of the mitigation and adaptation targets, set up a national emission trading system, planning and implementation tools in line with the green growth and 2053 net zero target in tackling climate change, as well as to improve the legal basis for effective climate action in Türkiye.

During the NDC updating process, stakeholders' engagement and collaboration were encouraged in collecting data, setting assumptions, formulating policies and measures for

scenarios, and discussing results in an iterative process. The forum for inter-ministerial and stakeholders is chaired by the Minister of the MoEUCC. During this process, Climate Change and Adaptation Coordination Board (CCACB), held three high-level consultation meetings and approved the target of the updated first NDC.

Finance

Türkiye is a developing country with an ambitious climate change agenda. Moreover, Türkiye is mentioned as a developing economy in the World Economic Situation and Prospects 2023 Report of the United Nations Conference on Trade and Development. Türkiye has been financing large-scale investments from its national budget to combat climate change. The Turkish private sector is undertaking concrete measures to decrease GHG emissions. In recent years, many companies operating in Türkiye disclosed their mitigation targets and implementation roadmaps to accelerate progress towards Türkiye's 2053 net zero target. However, beyond domestic public and private sources, Türkiye needs significant international financial support for its climate-friendly technical assistance and investment projects to implement its NDC and realize its increased ambition in mitigation and adaptation actions.

In the last decades, the devastating effects of climate change have been putting tremendous pressure on developing countries' economies, including Türkiye. Türkiye faces increasing mitigation and adaptation investment needs to transition to a green, resource-efficient, and climate-resilient economy. In line with Article 9 of the Paris Agreement, Türkiye expects the provision and mobilization of climate finance supporting developing countries in their progress towards and just transition to a net zero target. Türkiye is on the Development Assistance Committee's (DAC) list of Official Development Assistance (ODA) recipients and is classified as an upper middle-income economy by the World Bank. Türkiye has been a long-standing recipient of Global Environment Facility (GEF) support. Therefore, Türkiye's access to new and additional international financial resources is and will be instrumental in achieving its NDC and supporting the green growth vision it has put forward.

Channeling increased levels of climate finance to Türkiye will accelerate the country's climate actions and support it in improving its contribution to the achievement of global climate goals. Unfortunately, Türkiye does not have access to the Green Climate Fund, the largest climate fund under the UNFCCC and the Paris Agreement.

However, as one of the most attractive destinations of climate finance, Türkiye successfully partners with many international financial institutions, including multilateral and bilateral development banks, for financial and technical support that contributes to the country's response to climate change. Türkiye has a strong potential to reduce GHG emissions and

boost climate investments with its high absorption capacity to utilize financial resources. Türkiye's public, private, and financial sectors are well equipped and prepared for delivering bankable green projects with significant demonstration impact.

Türkiye is taking fast and determined steps to combat climate change. The country is strengthening its green financial ecosystem in line with international standards to create an enabling investment environment for enhanced climate actions.

On the public sector side, Türkiye is determined to enhance its green finance ecosystem and has accelerated policy and regulatory action in this regard. In 2020, the "Sustainability Principles Compliance Framework" was announced for public companies. In 2021, Türkiye released its "Sustainable Banking Strategic Plan (2022-2025)". In the same year, Türkiye published its "Sustainable Finance Framework" to issue sovereign green, social, and sustainable debt instruments. In 2022, to encourage the take up of green and sustainable capital market instruments, "Guidelines on Green Debt Instruments, Sustainable Debt Instruments, Green Lease Certificates and Sustainable Lease Certificates" was published. Another development was amending the Turkish Commercial Code in 2022 to empower the relevant institution in Türkiye to determine and publish Turkish Sustainability Standards compatible with international standards.

Moreover, Türkiye is preparing for a national green taxonomy, which will facilitate meeting financial resources with green investments. Also, the public incentive framework will be reviewed with the aim of accelerating the country's green transition. Robust green finance frameworks supported by ambitious climate policies will enhance sustainable investments by the private sector.

The Key Indicators of Transparency⁴ for Updated First Nationally Determined Contribution (NDC)

Indicators	Current (2020⁵)
Greenhouse Gases Reduced with Respect to BAU (Mt CO₂ eq)	-
Avoided CO₂ Emissions with Newly Installed Renewable Power Plants (Million Tons, Cumulative)	19.6
Share of Renewable Resources in Electricity Generation (%)	41.7
Urban Rail Systems Network Length (km, cumulative)	864
Ratio of Forest Areas to Country Area (%)	29.8
Number of Metropolitan Municipality Completed Local Climate Change Action Plan	12
Number of Drinking and Potable Water Treatment Plants	714
Ratio of Municipality Population Served by Wastewater Treatment Plant to Total Municipality Population (%)	89
Proportion of Municipal Population with Landfill Services (%)	88
HFC_s consumption (Mt CO₂ eq) (2022)	46.1

⁴ Key indicators are provided for use in future enhanced transparency framework reports.

⁵ Latest official available data is for year 2020.

Information to facilitate clarity, transparency and understanding

In line with Article 4, paragraph 8 of the Paris Agreement and Decision 4/CMA.1 the Türkiye submits the following ICTU.

1. Quantifiable information on the reference point		
a	Reference year(s), base year(s), reference period(s) or other starting point(s);	The reference period is between 2012-2030. The Business as Usual (BAU) projection year is 2030. (The reference year is 2012 and projection year is 2030 as in Türkiye's first NDC) ⁶
b	Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year	Reference indicator: Net greenhouse gas (GHG) emissions in Mt CO ₂ eq. GHG emissions were 523.9 million tonnes Mt CO ₂ equivalent (excluding LULUCF) in 2020 and 466.9 Mt CO ₂ eq (including LULUCF) according to Türkiye National Inventory Report (NIR) submitted in 2022. The reference indicator will be quantified based on national total GHG emissions, including LULUCF in Türkiye's 2022 National Inventory Report.
c	For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or policies and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information;	n/a
d	Target relative to the reference indicator	41% reduction in GHG emissions by 2030 compared to the BAU Scenario given in Türkiye's first NDC (also INDC) (BAU scenario: 1175 Mt CO ₂ eq including LULUCF by 2030), which almost doubles the previous target of 21%.
e	Sources of data used in quantifying the reference point	The reference indicator is quantified based on national total GHG emissions reported for Türkiye's GHG Inventory figures.

⁶ Türkiye converted its submitted INDC (2015) as Türkiye's first NDC after ratifying the Paris Agreement in 2021.

f	Information on the circumstances under which the Party may update the value of the reference indicator	<p>The GHG Inventory of Türkiye is reviewed regularly by UN technical experts. It is revised yearly to incorporate methodological improvements, changes to international reporting guidelines, and new data where necessary. Reference year and target year emissions will be based on the 1990-2030 Türkiye GHG Inventory submitted to the UNFCCC in 2032.</p> <p>Information on reference values would be updated, revised, and recalculated due to methodological improvements applicable to the inventories, new modeling results, or long-term low-emissions development strategies in line with Article 4.19 of the Paris Agreement. Information on updates will be included in the Türkiye's Biennial Transparency Reports.</p>
2. Time frames and/or periods for implementation:		
a	Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA);	01 January 2022 – 31 December 2030
b	Whether it is a single-year or multi-year target, as applicable.	Single year target, 2030
3. Scope and coverage:		
a	General description of the target;	Reduce economy-wide GHG emissions in 2030 by 41%, compared to the BAU scenario given in Türkiye's first NDC. This NDC covers the period between 2012 and 2030. The target covers all economic sectors and all GHGs. The accounting contribution of LULUCF to Türkiye's target is determined as described in 5(e).
b	Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines	<p>This NDC is economy-wide. It reflects all major anthropogenic GHG emissions and removals as reported in the National Inventory Report (NIR).</p> <p>The sectors, gases, categories and pools covered by Türkiye's NDC are based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories,</p> <p><u>Sectors:</u></p>

		<p>Energy; Industrial Processes and Product Use (IPPU); Agriculture; Land-use, Land-Use Change and Forestry (LULUCF); and Waste. (Major emission categories according to NIR and Common Reporting Format (CRF) tables)</p> <p><u>Gases</u> Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃)</p> <p><u>Pools and Reservoirs</u> LULUCF pools are included in the NDC: living biomass, DOMs, Soil including harvested wood products carbon reservoir.</p>
c	How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21;	Türkiye's NDC is an economy-wide target that includes all categories of anthropogenic emissions and removals from all carbon pools of Forestland land use of LULUCF sector also includes harvested wood products carbon stock changes.
d	Mitigation co-benefits resulting from Parties' adaptation efforts and/or economic diversification plans, including description of specific projects, measures and or initiatives of Parties adaptation actions and/or economic diversification plans	<p>Considering the co-benefits in climate action planning is essential for more effective use of resources in terms of providing a holistic perspective that includes many social, environmental, and economic components and being a solution to the problems in different sectors. Therefore, in the scope of the Climate Promise Project, which was conducted by the Ministry of Environment, Urbanization and Climate Change, a co-benefit catalogue has been prepared so that local authorities and institutions can identify actions that provide both mitigation and adaptation while determining their actions. This catalogue includes co-benefits of actions for different sectors such as energy, transport, water resources, agriculture, biodiversity, waste, and health.</p> <p>Türkiye has launched several action plans and strategies for sustainable land management. Turkey Resilient Landscape Integration Project (TULIP) project is one of them and aims to apply Nature Based Solutions in pilot watersheds. There are also rehabilitation projects, mostly towards erosion and desertification control. The General Directorate of Forestry under the Ministry of Agriculture and Forestry implements all these projects. If the funding for land restoration coupled with capacity building continues, then the resiliency of ecosystems and locals will</p>

		<p>improve with mitigation co-benefits. Türkiye is also investing in wildfire prevention and suppression with several projects on local and national scales. In the framework of these projects, hundreds of volunteers have been trained in wildfire prevention. These demonstrative projects have substantial benefits for capacity building that may improve the prevention and management of disasters.</p>
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4. Planning processes:

(a) Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans including, as appropriate:

<p>a(i)</p>	<p>Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner;</p>	<p>Domestic Institutional Arrangements: The Ministry of Environment, Urbanization and Climate Change (MoEUCC) is the primary authority for environmental issues, including climate change. The Directorate of Climate Change (DoCC), affiliated with the MoEUCC, was established in 2021 and is leading in the identification of Türkiye's climate change policies and UNFCCC negotiations. DoCC is responsible for the preparation of NDC in coordination with relevant stakeholders. Thus, DoCC coordinated the work on "updated first NDC of Türkiye." Climate Change and Adaptation Coordination Board (CCACB) also provides the forum for inter-ministerial and stakeholder coordination on the studies on the determination of national and international policies and taking measures to combat climate change and is chaired by the Minister of the MoEUCC.</p> <p>The CCACB is composed of a cross-section of relevant public and private sector stakeholders, namely the Ministry of Foreign Affairs, Ministry of Energy and Natural Resources, Ministry of Agriculture and Forestry, Ministry of Interior, Ministry of Treasury and Finance, Ministry of Transport and Infrastructure, Ministry of National Education, Ministry of Health, Ministry of Industry and Technology, Ministry of Trade, Presidency Office of Strategy and Budget, The Directorate of Climate Change Office, Council of Higher Education, Türkiye Environment Agency, Turkish Statistical Institute, The Scientific and Technological Research Council of Türkiye, Turkish Industry&Business Association, The Union of Chamber and Commodity Exchanges of Türkiye and Independent Industrialists and Businessmen's Association.</p>
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Working groups dedicated to mitigation policies and National GHG Inventory under CCACB made up of representatives of members of CCACB. They met ad hoc to steer the NDC preparation process and provide strategic feedback when necessary. Coordination Board members, public and private sector representatives, academics, and NGOs engaged in the NDC preparation process. During the preparation process, over 70 meetings were conducted with stakeholders to collect data and discuss assumptions, policies, and scenario results.

The final projection results were submitted to CCACB, and the updated first NDC was approved by the Board.

Public Participation:

The public participation process started on 16th of December 2021 with the stakeholder engagement meeting, which was held with approximately 300 representatives from the public, private sector, NGOs, and academia.

1,500 stakeholders involved in various sectors in public, private, research institutions, NGOs, and youth to Climate Council. Minimum three rounds of online meetings on each topic and sub-topics, and 3-day in person sectoral discussions were held on :

- GHG emission reduction
- Carbon pricing and emission trading system,
- Green finance
- Climate change adaptation policies
- Local governments
- Migration, just transition, and social policies
- Science and technology

Climate Council was finalized with 217 recommendations prioritizing 76 of them following the high round table meetings based on the final statements. Another achievement was the gender balance, with 50% women participating.

The inclusive approach and bottom-up analysis of existing and potential policies and measures, accounting for investments, technology trends, infrastructure needs, and

continued national policies and measures were prioritized. The analysis considered multiple pathways across all sources of GHG emissions:

- The energy sector, including electricity, transportation, buildings, agriculture, waste, and industry;
- Land sector CO₂ including forests and soil carbon, as well as other opportunities for emissions reductions
- Non-CO₂ GHGs including methane (CH₄) and Nitrous oxide (N₂O)

Youth and Gender Responsive Action:

DoCC has a gender balance in the middle and senior management positions (50%). Climate Council hosted around 1500 participants with 50% female. One of the sub-commission focus was solely on the gender issue. 5 out of 217 decisions of the Climate Council are about gender equality and women's leadership. Türkiye is among the countries that assigned UNFCCC gender focal point. Besides, Türkiye has been carrying out the necessary studies for implementing NDC and gender consideration for all relevant stakeholders in climate policies.

Another milestone for the inclusive policy-making process on climate is the Climate Envoys Movement. This movement was launched in November 2021 to strengthen youth engagement in climate change mitigation and adaptation. 209 representatives from universities across the country was part of the green transition with the name 'Climate Friendly Campus' under the "Cooperation Protocol in the Field of Establishment of Sustainable and Climate Friendly Campus." They also produced and presented a statement during the Climate Council.

Young Climate Envoys are governed by an institutional mechanism established by themselves, based on the annual electoral process. They aim to support young and public awareness and involvement in climate action.

Another issue addressed at the social level of Türkiye's climate policies is children. The national climate change adaptation strategy and action plan will include actions on vulnerable groups and children's rights in the social development sector.

		In addition, children's participation in the processes and awareness-raising activities will be included in the Turkey Child Rights Strategy Document and Action Plan (2023-2028), which is still in progress.
a(ii)	Contextual matters, including, inter alia, as appropriate:	
a(ii)a	a. National circumstances, such as geography, climate, economy, sustainable development and poverty eradication	<p>For Türkiye's national circumstances, including climate, population and economy, please see Türkiye's latest National Communication Document.</p> <p>NC8&BR5 of Türkiye is under preparation at the time of NDC's submission.</p> <p>Türkiye is committed to implementing the UN Sustainable Development Goals (SDGs). Parallel to its national priorities, Türkiye has adopted the implementation and monitoring of Sustainable Development Goals (SDGs) by integrating them into the 11th National Development Plan and other relevant sectoral strategies to establish an effective follow-up and review mechanism. At this point, there are specific links and synergies between adaptation/mitigation efforts and efforts toward the SDGs. Besides, National Sustainable Development Coordination Board was established on 19/07/2022. The Board aims to reflect SDGs in sectoral and thematic policy documents, to increase awareness of SDGs throughout the country, and to monitor and evaluate the implementation at the national scale in an effective and participatory manner.</p>
a(ii)b	Best practices and experience related to the preparation of the nationally determined contribution;	<p>Türkiye developed its NDC to be both ambitious and achievable.</p> <p>It promotes the achievement of the Paris Agreement's aims, including holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit global average temperature increase to 1.5°C, as well as the need to drive toward net zero global emissions in the second half of this century.</p> <p>The NDC was developed based on sector-by-sector assessments of emission reduction potential informed by an expanded stakeholder engagement process.</p>

		<p>NDC is based on the scientific Times Macro model. 7 sectors (energy, industry, buildings, transport, waste, agriculture, and LULUCF) have been modelled with country-specific aspects under the TIMES Macro model. It is also based on broad discussions in the Climate Council. Moreover, approximately 100 stakeholder engagement meetings were held to discuss the data, projections results, and mitigation actions. 3 high-level meetings were held with related stakeholders to collect data, set assumptions, formulate policies and measures for scenarios, and discuss results in an iterative process.</p> <p>Economy-wide projections about future GHG emissions were conducted using a detailed, bottom-up model accounting for capital stock turnover timelines and relative costs of technology and equipment in each GHG emitting sector of the economy.</p> <p>The analysis considered the emissions-reducing benefits from actions, including standards, investments, incentives, taxes, programs, and support for innovation. These analyses show that the Türkiye can deliver on its NDC by investing in efficiency, electrification, clean energy, addressing direct GHG emissions from industrial processes, climate-smart agriculture and forestry, innovation, and other priorities. These actions will also create good jobs, improve public health, and help to advance equity and achieve environmental justice priorities.</p>
a(ii)c	Other contextual aspirations and priorities acknowledged when joining the Paris Agreement;	<p>Türkiye signed Paris Agreement on 22nd of April 2016 and ratified on 7th of October 2021 (published in the Official Gazette dated 07.10.2021, No. 31621) and become a party to the agreement on 10th of November 2021.</p> <p>The Republic of Türkiye, on the basis of “equity, common but differentiated responsibilities and respective capabilities” as clearly and accurately recognized under the United Nations Framework Convention on Climate Change of 9 May 1992 and the Paris Agreement, and by recalling decisions 26/CP.7, 1/CP.16, 2/CP.17, 1/CP.18 and 21/CP.20 adopted by Conference of the Parties to the Convention, declares that it will implement the Paris Agreement as a developing country and within the scope of its nationally determined contribution statements, provided that</p>

		the Agreement and its mechanisms do not prejudice its right to economic and social development.
b	Specific information applicable to Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, n/a 16 paragraphs 16 18, of the Paris Agreement;	n/a
c	How the Party's preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement;	n/a
d	Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co - benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:	Referred to 3(d)
d(i)	How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;	n/a
d(ii)	Specific projects, measures and activities to be implemented to contribute to mitigation co - benefits, including information n/a 17 on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to,	In the scope of Enhancing Adaptation Action in Türkiye Project, local climate change adaptation action plans are being prepared for 4 pilot cities (Konya, Muğla, Samsun and Sakarya) in Türkiye. Sectoral vulnerability and risk assessments have been completed, and actions are being identified.

<p>key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries.</p>	<p>These action plans will have activities that have strong synergies between the mitigation of GHG emissions and adaptation to climate change.</p> <p>Ecosystem-Based Adaptation Strategy for Anatolian Steppe Ecosystems (2022-2036) includes adaptation activities with mitigation co-benefits.</p> <p>Also see 3(d)</p>
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5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:

a	<p>Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA;</p>	<p>Under the modalities, procedures, and guidelines outlined in Decisions 4/CMA.1 and 18/CMA.1, Türkiye will publish an annual National Inventory Report and Biennial Transparency Report by 31 December 2024 at the latest, and biennially thereafter, and submit them to the UNFCCC Secretariat. The National Inventory Report will account for Türkiye anthropogenic GHG emissions and removals, and the Biennial Transparency Report will report on progress toward Türkiye's NDC through a structured summary.</p> <p>To account for Türkiye's NDC, Türkiye will compare achieved net GHG emission reductions with the NDC target for 2030.</p> <p>Türkiye will comply with future UNFCCC reporting guidelines on tracking and reporting progress on the NDC.</p>
b	<p>Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution;</p>	<p>Türkiye will also apply specific assumptions and methodologies, when appropriate, when assessing progress made under the policies and measures related to the implementation of its NDC in its Biennial Transparency Reports (BTRs)</p>
c	<p>If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate;</p>	<p>see 5(a)</p>

d	IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	Methodologies: 2006 IPCC Guidelines (or any updated IPCC guidelines that may be agreed upon by the CMA in the future) Metrics: Global warming potential (GWP) values on a 100-year timescale in accordance with IPCC's Fifth Assessment Report will be used to calculate CO ₂ equivalents.
e	Sector-, category- or activity specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:	
e(i)	Approach to addressing emissions and subsequent removals from natural disturbances on managed lands;	The major disaster type that affects emissions is wildfires in Türkiye. Türkiye's wildfire management strategy is shifting to prevention and preparedness from suppression. This policy shift will help reduce not only fire emissions but also the costs of fire management. Drones and technological tools are also used. One of the significant areas that have the potential to improve is public participation and awareness. Türkiye is working on this specific issue because locals have a vital role in fire management, and their collaboration and contribution are invaluable.
e(ii)	Approach used to account for emissions and removals from harvested wood products;	Türkiye is using the "Production Approach" (IPCC 2006. Vol.4 Chapter 12.A.1) to calculate its emissions from Harvested Wood Products (HWP). As elaborated in IPCC (2006), this approach only covers inventories of carbon in wood products from domestically harvested wood and does not provide a complete inventory of wood carbon in national stocks. The calculation algorithm is based on a Tier 1 method with country-specific coefficients.
e(iii)	Approach used to address the effects of age-class structure in forests;	National Forest Inventory is in the development phase. It will be finalized by the end of 2025 and then repeated in 5-year cycles. Currently, the Forest Service uses inventories on temporary sample plots for management purposes repeated in 10-year intervals. However, considering that forests are appropriately managed by a strong national agency (General Directorate of Forestry), Türkiye may assume that the age class structure will enable the continuation of the increase in Net Primary Productivity. One issue that Türkiye considers is the stocking of the forests. The recent data from the current planning database indicates that it may require more effort than before to increase the standing stock of the forest stands.
f	Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if	

	applicable, estimating corresponding emissions and removals, including:	
f(i)	How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used;	The reference indicator for the NDC is net GHG emissions in 2030, as published in the National Inventory Report on an annual basis in accordance with the IPCC 2006 Guidelines for GHG emission in consistent with decision 18/ CMA.1 The definitions, data sources, and models used to estimate net emissions are those described in the Inventory.
f(ii)	For Parties with nationally determined contributions that contain non greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable	n/a
f(iii)	For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;	n/a
f(iv)	Further technical information, as necessary;	n/a
g	The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.	As considerations for the use of market mechanisms under Article 6 of the Paris Agreement are ongoing, Türkiye reserves the right to use voluntary cooperation under Article 6 of the Paris Agreement. Should Türkiye decides to use such voluntary cooperation, corresponding adjustment would be applied and reporting requirements consistent with any guidance adopted under Article 6 by the CMA would be fulfilled.
6. How the Party considers that its NDC is fair and ambitious in the light of its national circumstances		
a	How the Party considers that its NDC is fair and ambitious in the light of its national circumstances	Türkiye needs to improve its development level in social and economic fields such as education and employment. According to its GDP per capita (\$8600 for 2020), Türkiye falls behind developed countries and some of the developing countries. Additionally, Türkiye's GHG emissions per capita (6.3 tonnes CO ₂ equivalent for 2020) is below the average of developed countries. Although having challenges, Türkiye adopted the most possible ambitious mitigation targets based on its national

		special circumstances in line with the principle of common but differentiated responsibilities (CBDR) and respective capabilities (RC). It also promotes the goal of keeping 1.5 degrees alive on the global average temperature increase.
b	Fairness considerations, including reflecting on equity	Türkiye adopts equity principle with CBDR-RC approach presented in the UNFCCC and the Paris Agreement
c	How the Party has addressed Article 4, paragraph 3 of the Paris Agreement	In line with the Paris Agreement and relevant CMA decisions, Türkiye decided to update its first NDC, which was submitted to UNFCCC Secretariat in 2015. Türkiye's first NDC covered the period between 2012 and 2030. Türkiye has made significant investments in many sectors that considerably accelerated the reduction (see Introduction Part). Ambition increased from 21% reduction to 41% reduction from 2030 levels compared to Türkiye's first NDC BAU scenario. The current target is also consistent with the long-term objective of reaching net zero target by 2053.
d	How the Party has addressed Article 4, paragraph 4, of the Paris Agreement	Türkiye is not one of the countries required to continue the leadership role under this article, pursuant to the decisions taken under the Convention and adopted with the consensus by the Conference of the Parties regarding its special circumstances. However, Türkiye, as a developing country, is determined to carry out its mitigation efforts with the highest possible ambition in the light of its national conditions.
e	How the Party has addressed Article 4, paragraph 6, of the Paris Agreement	n/a

7. How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2

a	How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2	In line 6 "6. How the Party considers that its NDC is fair and ambitious in the light of its national circumstances" Türkiye has contributed to the ultimate goal of the Convention and objective of the Agreement as its communicated updated NDC. The principle of common but
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		differentiated responsibilities and respective capabilities in the light of national circumstances and equity will continue to guide Türkiye for achieving its NDC.
b	How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement	<p>Türkiye adopted the most possible ambitious mitigation targets based on its national special circumstances.</p> <p>Draft Climate Law that include 2053 net zero target has being considered by the Turkish Grand National Assembly at the time of preparation of this NDC. Türkiye will communicate its long-term strategy to reach 2053 net zero target as explained 6a and 6b.</p>