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TURKEY'S CLIMATE CHANGE POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK



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**TURKEY'S CLIMATE CHANGE
POLICY, LEGAL AND
INSTITUTIONAL FRAMEWORK**

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TURKEY'S CLIMATE CHANGE POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

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ABBREVIATIONS

EU	European Union
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
BOTAŞ	General Directorate of Oil Transportation Via Pipelines Inc.
COP	Conference of Parties
EIA	Environmental Impact Assessment
ÇEVKO	Environmental Protection and Packaging Waste Recovery and Recycling Foundation
WG	Work Group
DASK	Turkish Natural Catastrophe Insurance Pool
DSİ	General Directorate of State Hydraulic Works
EBRD	European Bank for Reconstruction and Development
EİE	General Directorate of Electricity Affairs Survey Administration
EİGM	General Directorate of Energy Affairs
EKK	Economy Coordination Board
EMEP	European Monitoring and Evaluation Programme
ENAR	Energy Sector Research and Development Projects Support Program
USEPA	US Environmental Protection Agency
EPDK	Energy Market Regulatory Authority
EPIAŞ	Energy Markets İstanbul Inc.
GAP	South East Anatolia Project
GCF	Green Climate Fund
GEF	Global Environmental Fund
HPP	Hydroelectric Power Plant
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
İDEP	Climate Change National Action Plan
İDES	National Climate Change Strategy Document
İDHYKK	Climate Change and Air Management Coordination Board
İLBANK	İller Bank
IPA	Instrument for Pre- Accession Assistance
KHK	Decree Law
MRV	Monitoring, Reporting and Verification
MTV	Motor Vehicles Tax
MÜSİAD	Association for Independent Industrialists and Businessmen
NAZCA	The Global Climate Action Portal
OECD	Organization for Economic Co-operation and Development
OTİM	Ozone Layer Depleting Substances
ÖİK	Specialty Commission
ÖTV	Special Consumption Tax
SKH	Sustainable Development Target

STK	Civil Society Organization
TGNA	Turkish Grand National Assembly
TEMA	Turkey Foundation for Combatting Soil Erosion, for Reforestation and Protection of Natural Habitats
TETAŞ	Turkey Electricity Trade and Undertaking Inc.
TKİ	Turkey Coal Operations Authority
TOBB	The Union of Chambers and Commodity Exchanges of Turkey
TPAO	Turkish Petroleum Corporation
TTK	General Directorate of the Turkish Hard Coal Enterprises
TÜİK	Turkish Statistical Institute
TÜSİAD	Turkish Industry and Business Association
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wildlife Fund
YEK	Renewable Energy Sources
YİDEP	Local Climate Change Action Plan

EXECUTIVE SUMMARY

The impacts of climate change have been felt in our country as well as in the world. Turkey is located in the Mediterranean Basin, which is one of the regions expected to be most affected from climate change in the world. In the evaluation reports of Intergovernmental Panel on Climate Change/IPCC, it is foreseen that the general temperature increase in the Mediterranean Basin could reach to 1-2°C, that the drought will be felt in wide regions and in particular the number of extremely hot days and hot air waves will increase particularly in the central sections. In this regard, it was scientifically demonstrated that there will be an increase of 2.5-4 °C in annual average temperatures in Turkey, and that the country will be hotter, more arid and have a more uncertain climate structure in terms of precipitations.

This study demonstrates the attitude of Turkey at the international level in relation to policies Turkey has created in combatting climate change and the legal and institutional structure at the national level.

The study first draws the framework of the responsibility Turkey has undertaken at global level in its struggle against climate change within the scope of international conventions/agreements which are a part of domestic law and involve international commitments. From the point of international approach towards climate change, the position of Turkey over the years has been examined and its position and policy expansions in relation to Paris Agreement, which shapes the new climate change after 2020, have been evaluated.

The intermingled relationship between sustainable development policies and combatting climate change has been handled under a separate title and the elements of combatting climate change in the development plans and programs have been examined.

Laws that involve provisions regarding mitigation of emissions and adaptation to the impacts of climate change have been examined in detail. After the demonstration of the existing regulations, it was discussed by including some code law examples in the world whether it is required to regulate the issue of climate change in our country from all aspects.

The relationship between the finance policy, which is one of the legal tools and an important instrument of public finance policy, and the climate change has been evaluated.

In order to demonstrate the institutional structure, the aspects from which the public institutions and organizations with responsibilities and tasks on the issues of combatting climate change, mitigation and adaptation have undertaken roles were shown with the organizational regulations.

The legal framework and administrative structure in combatting climate change was examined at local level following the central administration.

The evaluations made within the framework of issues handled in relation to policies, legal and institutional infrastructure in climate change are included at the end of the study. In this scope, whereas the issue of climate change is sufficiently handled in the regulations, corporate structure and public policy documents in Turkey, more focus could be put on maintaining the commitment of climate struggle with a more integrated approach.

TURKEY



1. POSITION OF TURKEY FROM THE POINT OF INTERNATIONAL COMMITMENTS ON CLIMATE CHANGE

In today's world when the international relations have become intense and complex, it has become an obligation for the state to regulate such fields which have global impacts as environment and climate change, and to determine certain standards and to conduct monitoring. As in the case of all issues, regulations contained in the texts signed under various names such as agreement, convention and protocols in the field of climate change, have legally binding character for the party states both in domestic law and at the international level.

According to the final paragraph of Article 90 of the Constitution of the Republic of Turkey, international agreements have the legal status of laws, and therefore are a part of domestic law. Agreements as a source of law could be directly applicable with their provisions, and there is not need to repeat or confirm the regulations contained by them with a separate law. A regulation could be issued relying on an agreement to which one is a party.

Turkey is a party to United Nations Framework Convention on Climate Change and Kyoto Protocol, which directly regulate the issue of climate change¹. Paris Agreement has been signed but not yet ratified. Turkey also is a party to some international agreements/conventions focused on environment which, though not directly including provision on climate change, are focused on environment with direct relation with climate change. Within the

framework of obligations that arise from the convention in question, Turkey's elements of combatting climate change and its adequate policies are handled.

It could be said that the international reflection of the climate change policy of our country echoes the approach that all countries should contribute in the global emission mitigation efforts to the extent of their respective capabilities so as not to hinder their socio-economic developments and sustainable developments on the basis of common but differentiated responsibilities.

¹ Hereinafter called in the text as "Convention".

TURKEY'S INTERNATIONAL STEPS IN THE POLICY OF STRUGGLING AGAINST CLIMATE CHANGE	
October-November 2001	The "special conditions" of Turkey have been officially recognized in Marrakesh COP7 Conference. Turkey remain in Annex 1 list of the Convention, and was excluded from Annex 2 list.
May 2004	Turkey became a party to the Convention
January 2007	Turkey Climate Change First National Communication was submitted to the Convention Secretariat
August 2009	Turkey became a party to Kyoto Protocol.
May 2010	National Climate Change Strategy Document / IDES (2010 - 2020) was ratified by YPK.
July 2011	Climate Change National Action Plan (IDEP) (2011-2023) was put into implementation.
November 2011	Turkey Climate Change Adaptation Strategy and Action Plan (2011- 2023) was put into implementation.
June 2013	Turkey Climate Change Fifth National Communication was submitted to the Convention Secretariat (by collecting the second, third, fourth and fifth communications under one single heading).
October 2015	Turkey officially submitted its INDC Report to the Convention Secretariat.
January 2016	First and Second Biannual Report was presented to the Convention Secretariat
March 2016	Turkey Climate Change Sixth National Communication was submitted to the Convention Secretariat
April 2016	Turkey signed Paris Agreement.
January 2018	Third Biannual Report was presented to the Convention Secretariat
May 2018	Turkey officially communicated its intention to be excluded from Annex 1 of the Convention to the Convention Secretariat.
December 2018	Turkey Climate Change Seventh National Communication was submitted to the Convention Secretariat

1.1. International Approach of Turkey Towards Climate Change in the Process Reaching to Paris Agreement

1.1.1. Within the Scope of United Nations Framework Convention on Climate Change

United Nations Framework Convention on Climate Change, which is the first international convention that is based on combatting climate change, was carried to the global agenda with the United Nations Conference on Environment and Development (UNCED) which met in Rio de Janeiro in June 1992. The Convention, which aimed at limiting the amount of greenhouse gases released to the atmosphere as a result of human borne activities in order to stop climate change and preventing the negative impacts on the climate system, came into force in 1994, two years after being opened for signature.

The Convention, which is considered as the "Constitution" of the international legal documents

related to climate change, has drawn a general framework for intergovernmental efforts in combatting climate change and the final objective is defined as keeping the greenhouse gas accumulations in the atmosphere at a level that will prevent hazardous human borne impacts on the climate system.² The Convention defines the obligations of the parties towards these with two interrelated policy interventions against climate change:³ Mitigating the emissions of greenhouse gases and ensuring adaptation to the impacts of climate change.

The convention relies on the idea that some countries should undertake more responsibility since they emit more greenhouse gas, which cause climate change, to the atmosphere after the industrial revolution compared to other countries. For that reason, general principles have been determined taking into account the development priorities and special conditions of the countries for the mitigation of greenhouse gas emissions:

² See. accessed at: <http://unfccc.int>

³ Party: Government of the country that is party to United Nations Framework Convention on Climate Change and the EU

- i) Equality Principle (Article 3.1)
- ii) Common but Differentiated Responsibilities Principle (Article 3.1)
- iii) Precautionary Principle (Article 3.3)
- iv) Right and obligation to support sustainable development (Article 3.4).

These principles are taken into account in the design of the policies of countries to struggle against climate change at global level and in the direction of the practices.

In addition to the provisions that are valid for all parties in the Convention, the countries have been classified under different obligation categories according to levels of development and positions. This classification is as follows: i) Obligations imposed on ANNEX 1 Parties (Article 4.2); ii) Annex 2 Obligations imposed on ANNEX 2 Parties (Article 4.3, 4.4, 4.5) and iii) obligations applicable for all Parties (Out of ANNEX, Article 4.1).

Annexes of United Nations Framework Convention on Climate Change

ANNEX 1 countries are obliged to limited greenhouse gas emissions, protect and develop greenhouse gas sink, and also to notify precautions and policies towards climate change and communicate their greenhouse gas emissions. This group includes countries which are OECD members as of 1992 (including Turkey) EU Countries and countries which are in the process of transition to market economy (a total of 42 countries and the UE).

ANNEX 2 countries are responsible in addition to the obligations they have undertaken under the first group to transfer the environmentally adaptable technologies to partner countries in the way of development or to encourage, facilitate and finance access to these technologies (23 countries and the EU). Since OECD countries were in this category, Turkey was also included in this category.⁴

Countries excluded from the ANNEX are encouraged to mitigate their greenhouse gas emissions, engage in collaboration related to research and technology transfer and protect their greenhouse gas sink, but are not taken under any obligation (A total of 154 countries)

Turkey was referred as both ANNEX 1 and ANNEX 2 countries in the Convention. This classification was not found to be fair from the point of Turkey when compared with industrialized countries that have historical responsibilities in terms of causing the climate change. This situation means that Turkey should take concrete measures in the path of combatting climate change and provide financing to the developing countries.

In this direction, Turkey has defended in the long lasting and challenging international climate negotiations that it wants to be removed from Annex 2 list. Ultimately, it was officially resolved in the 7th Conference of Parties in 2001 (Marrakesh, COP7)⁵ that Turkey shall be removed from ANNEX 2, that it remains in "Annex 1 countries" with special conditions, however that its special conditions should be taken into consideration with the emphasis that it has a position that is different from the countries that are in this list (FCCC/SBI/2001/L.8).

This resolution relation to Turkey explained briefly that "*underlining the fact that the humanity is required to preserve the climate system for the benefit of current and future generations in accordance with the common but differentiated responsibilities on the basis of equality and in accordance with their capabilities, and taking note of the request of Turkey and its new recommendation presented for deleting its name from ANNEX 2 under Conference of Parties-6/1 (the Hague); it was resolved to delete the name of Turkey from ANNEX 2 and that the Parties are invited to accept the special conditions of Turkey which make it different from other parties in ANNEX 1 after becoming a party to the Convention.*" Thus, Turkey

⁴ Turkey was removed from Annex 2 list of the Convention in 2001.

⁵ COP: Conference of the Parties

has been kept immune from the obligation of providing financing support and/ or technology transfer to the developing countries as a country which has special conditions in the path of combatting global climate change. Following this decision Turkey has become party to the Convention in 2004⁶.

1.1.2. Within the Scope of Kyoto Protocol

Upon the fact that the greenhouse gas emissions continue to increase at global scale and the negative impacts of climate change gradually become felt more, Kyoto Protocol was signed in order to ensure that developed countries undertake binding obligations and to strengthen the Convention. The Protocol was based on the commitment by the industrialized countries to mitigate their greenhouse gas emissions rates by 5% between 2008 - 2012, which is the first commitment period, based on the year 1990.

The protocol was adopted in 1997 and came into force in the year 2005 when the condition of signature by countries that emit 55% of the greenhouse gases to the atmosphere took place. In 2009, Turkey has become a party to the Kyoto Protocol in the year 2009⁷.

Turkey has preserved its current position in the 16th Conference of Parties in 2010 (Cancun, COP2016) and its position of meeting special conditions under the Convention as ANNEX 1 "developed" country was confirmed once more. In the 18th Conference of Parties held in 2012 (Doha, COP18), with a decision that encouraged ANNEX 2 countries to provide technology transfer, capacity building and financing support of countries having special conditions, this special condition of Turkey was referred again.

⁶ Law dated 16/10/2003 No. 4990 on Ratification of Our Participation in United Nations Framework Convention on Climate Change

⁷ Law dated 05/02/2009 No. 5836 on Ratification of Our Participation in Kyoto Protocol for United Nations Framework Convention on Climate Change

In the process of implementation Kyoto Protocol, the "Doha Amendment to the Kyoto Protocol" have been adopted in 2012 in the 18th Conference of Parties (Doha, COP18). With the Doha Amendments, the Annex B list of Kyoto Protocol, which included the emission mitigation obligations of the countries for the second commitment period covering year 2013 - 2020, was regulated again and it was resolved to mitigate the emissions of countries by minimum 18% compared to 1990 in 2020; and it was agreed that a new climate agreement will replace the Kyoto Protocol after the year 2020.

Turkey has ratified the Doha Amendment to the Kyoto Protocol with the Cabinet Decision that was published in the Official Gazette dated 2 October 2017⁸. When the relevant communications were delivered to the Convention Secretariat, the process of becoming a party will be completed. Turkey has not quantitative target of greenhouse gas mitigation in the first and second period of Kyoto Protocol.

1.1.3. National Correspondences of the Provisions of the Agreement and the Protocol

Turkey, which has become a party to the Convention as annex 1 country and to the Kyoto Protocol, is obliged to communicate its strategies, policies, plans and programs, data and up to date status within the context of struggle against climate change to UNFCCC Secretariat by National Communications, National Greenhouse Gas Annual Inventory Reports and Biannual Reports. The activities within this framework are summarized below.

National Climate Change Strategy (2010-2020):

National Climate Change Strategy Document (IDES), which is the basic policy document on climate change, was prepared through an efficient period of work with the participation of public institutions,

⁸ Law dated 08/03/2017 No. 6973 on the Ratification of Amendments Made in Kyoto Protocol in the Doha Conference

private sector representatives, NGOs and universities and was approved by the then Prime Ministry State Planning Organization Supreme Planning Board in May 2010. The Strategy, which is characterized as a guide on what to do in relation in combatting climate change, the mitigation, adaptation, financing and technology policies of Turkey, which it could performed within the scale of its national opportunities and accessibility of international financing and grants, were included within the framework of "common but differentiated responsibilities" principle of the Convention.

Climate Change Action Plan (2011-2023) (IDEP):

IDEP, which is foreseen to be prepared in line with National Climate Change Strategy and the objectives of Ninth Development Plan, involves policies and measures for greenhouse gas emission mitigation and climate change. IDEP basically comprises two main action plans, these are: Greenhouse Gas Emission Control Action Plan and Climate Change Adaptation Action Plan. IDEP included various sub-actions for the targets included in the National Climate Change Strategy and the institutions/ organizations responsible for putting these into life and the timing have been identified. IDEP has a detailed technical content within the framework of energy, industry, forestry, buildings, transportation, waste and adaptation to climate change, under eight headings and within the framework of long and medium term targets. Within this framework, actions were bring together in relation to institutional organization and policy creation, technology development and transfer, financing and economic instruments, data and information system, education and capacity building areas, and monitoring and evaluation mechanisms of IDEP.

Turkey Climate Change Adaptation Strategy and Action Plan (2011- 2023): Turkey Climate Change Adaptation Strategy and Action Plan, which is the first

policy document of Turkey on developing adaptation capacity to the impacts of climate change, have determined vulnerability areas in five issues overall Turkey and defined very comprehensive targets and actions in these fields. These areas are: i) water resources management, ii) agricultural sector and food security iii) ecosystem services, biodiversity and forestry iv) natural disaster risk management and v) human health issues.

Climate Change National Communications:

Turkey, as a party to Convention ANNEX 1, is obliged to prepare a Climate Change National Communication every four years. In relation to the reporting obligations in question, Turkey has presented to the Convention Secretariat the First Climate Change National Communication in 2007 and the second, third, fourth and fifth communications in 2013 with the Fifth Climate Change National Communication. The Six Climate Change National Communication was submitted to the Secretariat in 2016 March. Finally, the Seventh National Communication was submitted to the Secretariat in December 2018.

Greenhouse Gas Emission Annual Inventories:

Turkey, which is a Party to UNFCCC ANNEX 1, is obliged to present to UNFCCC Secretariat its National Greenhouse Gas Emission Inventory every year. As it has become a Party to the Convention in 2004, Turkey has presented its first Greenhouse Gas Emission Inventory covering the years 1990 - 2004 to the Convention Secretariat in 2006. Since 2006 up to date, the annual Greenhouse Gas Emission Inventory Reporting is performed under the coordination of Turkish Statistical Institution (TUIK) and submitted to the Convention Secretariat.

Intended Nationally Determined Contributions: In the process of preparation to Paris Agreement, all parties have presented their Intended Nationally Determined Contribution (INDCs)⁹ to the Convention

⁹ In Paris Agreement this title was revised as *Nationally Determined Contributions /NDCs* (Article 4, Paragraph 2)

Secretariat including their policies and concrete (numerical) targets that they are decisive in mitigating greenhouse gas emissions and adaptation to the climate impacts, so as to support the new climate regime. When this communication is examined, it could be understood that the INDC of the countries included not only digitalized greenhouse gas emission mitigation figures but also concrete targets under the issues included under each title of the new global climate agreement (Paris Agreement) (such as plans for adaptation to impacts in climate struggle, policies for loss and damage, transition to climate friendly technologies and financing policies etc.)

Turkey has submitted its INDC to the Convention Secretariat in October 2015. With this document, Turkey has declared an official digitalized greenhouse gas mitigation promise as the first time: When INDC is examined from the point of the sectors, it could be seen that there are many targets that could meet the needs in many areas, such as:

i) conducting studies for increasing waste use as an alternative fuel in the suitable sub-sectors in the industry sector; ii) implementing sustainable transportation approaches in urban areas in the transportation sector; iii) minimizing the energy demand in the building sector and disseminating green building, passive energy, zero energy house designs in order to ensure local energy production; iv) rehabilitating the pasture lands in the agricultural sector and supporting minimum earth ploughing methods, decreasing electricity transmission and distribution losses in the energy sector to 15% in the year 2030; v) obtaining methane gas from regular landfill gases in the regular landfills which are management and not managed in the waste sector; and vi) increasing the sink areas in the forestry sector and mitigating the deterioration on the earth.

Climate Change Biannual Reports: Pursuant to the decisions taken in the 17th Conference of Parties that took place in the Durban city of South African Republic in 2011 (Durban, COP 17), ANNEX 1 parties

of the Convention are obliged to prepare Biannual Reports. Biannual Reports include information on the distance taken by countries, which are Parties of the Convention and are listed in Annex 1, in relation to the mitigation of greenhouse gases and the financial, technologic and capacity supports provided to developing countries outside the annex. The First and Second Biannual Report of Turkey was presented together to the Convention Secretariat in January 2016. Turkey has delivered the Third Biannual Report to the Secretariat as of January 1, 2018. The third Biannual Report included the greenhouse gas emission inventory for the period 1990 -2015 as shared currently by Turkish Statistical Institute (TUIK) with the public and the emission projections about the year 2030 (as per the "special conditions"). These projections include the information on how the total greenhouse gas emissions will be in 2030 in line with the "21% greenhouse gas emissions mitigation from increase" scenario indicated in the INDC of Turkey (measures taken).

Regulation on the Monitoring of Greenhouse Gas Emissions, which was published in 2012 within the scope of secondary regulations for the purposes of meeting the obligations under the Convention and Kyoto Protocol and renewed with the same title in 2014, covers the principles and procedures on works and processes for monitoring, reporting and verifying the greenhouse gas emissions. The Communique on Verification of Greenhouse Gas Emission Reports and Accreditation of Verification Institutions, which was issued in 2015 and renewed in 2017, was published together with the Communique on Monitoring and Reporting of Greenhouse Gas Emissions dated 2014 based on the Regulation.

Regulation on Fluorine Greenhouse Gases, which was enacted based on the Convention and the Protocol, was published in the Official Gazette on 04/01/2018. The Regulation is directed towards controlling the use of products or equipment that involve fluorine greenhouse gas as well as the

fluorine greenhouse gases. Pursuant to the regulation, the mitigation of import of fluorine greenhouse gas will start gradually after 01/01/2019.

1.2. International Approach of Turkey to Climate Change After Paris Agreement

1.2.1. Paris Agreement and New Climate Regime

The last agreement in relation to climate change is the Paris Agreement which was adopted on 12/12/2015 in the 21st Conference of Parties (COP21) convened in Paris with the attendance of countries that are the parties of the Convention. Paris Climate Agreement, which is characterized as a historical turning point in the global struggle against climate change, was adopted as a result of long negotiations. Paris Agreement was opened to signature by international community on 22/04/2016. The Agreement officially came into force on 04/11/2016 only after months of opening to signature with the satisfaction of the condition of ratification by minimum 55 parties constituting 55% of the global greenhouse gas emissions. In this form, it is the fastest approved international convention in the history of the United Nations.

The Agreement has put the target of long term temperature increase target as the first time in order to strengthen the implementation of the Agreement. The international community has adopted the target of limiting the increase in global temperatures to the 1.5°- 2°C band with Paris Agreement. The Agreement aims at demonstrating efforts to keep the global temperature increase quite below under 2°C compared to Pre-Industrial Period, and to limit the temperature increase at 1.5°C taking into account that it could significantly decrease the impact and risks of climate change, and this has been the most important output which affected the international climate regime in the aftermath of 2020. Rather than being a final product, Paris Climate Agreement is accepted as a new milestone towards a low carbon

future removed from the risks of climate change. Decisions and rules related to the implementation of the Agreement are being prepared in steps and the international negotiations are continued to expand in this direction.

With the Agreement which is put into force by many party states today, a transformation to renewable and clean energy sources has started overall the world in particular in the energy policies which is the most critical area of climate change. Many countries have accepted that producing energy from fossil fuels gradually increases the economic and environmental costs and that this increase will negatively affect the economic systems in the long run. In this regard, countries need new developments and steps in the current climate policies within the framework of responsibilities pointed out by the Agreement. In particular, it is expected that G20 countries implement emission mitigation targets in a more strict level and minimize the impacts of climate change.

Paris Agreement also set out the direction to be followed by the efforts for emission mitigation required in order to reach long term temperature rise targets. According to this, in the second half of this century, in order to reach to a balance between human borne emission and emissions retainer by sink, the parties will increase their greenhouse gas emissions to the top point within shorter periods, differentiation was preferred from the point of developing countries in realizing the target of emissions reaching the top point and it was acknowledged that this process could be longer for them. Here it is highlighted in fact that the struggle against climate change required global cooperation, that the problem is common in relation to the states but that the responsibilities should be differentiated. Any country which causes this problem, including at the top the developed countries, should fulfill the tasks to be undertaken by them according to their capabilities and possibilities. This situation points out the need for establishing a system which will end up with optimum benefit at the global scale which

requires responsibility with just and concrete data that will enable the contribution of all countries, within the framework of the principle that "every country should be evaluated according to its opportunities and capabilities".

Paris Agreement did not take as reference the ANNEX lists that set out the positions of countries in the Agreement. The Agreement only discarded the countries as "developed" and "developing" countries. However, since Paris Agreement is the implementation tool of the Framework Convention and since the Convention is still in force, it could not be said that we have got away from the annex system in its full meaning.

1.2.2. Paris Agreement and New International Attitude of Turkey

Since Turkey is included under ANNEX 1 list of the Convention, namely in the developed countries group, with its current position, it is considered in the status of developed country according to the provisions of Paris Agreement although its special conditions have been recognized. Therefore, it is not considered eligible to receive support in terms of the transfer of financial and technological innovations etc. In this direction, it does not have access to Green Climate Fund (GCF) and multi-stakeholder projects including the Green Climate Fund in the struggle against climate change. As a matter of fact, in the Administrative Document of Green Climate Fund, it is regulated that only developing countries could be eligible for the financial support.¹⁰

Being one of these countries, Turkey has been continuing to take remarkable steps towards implementation within the context of fighting climate change. In order to emphasize once more that it has been a part of the global solution in combatting global climate change since the beginning and to

give the message of being a part of the common efforts once more, it has signed Paris Agreement on the date of opening for signature (22 April 2016), but has not yet ratified it. Here the international attitude which Turkey expects is to operate fairly in the post-Paris process the principle of "common but differentiated responsibilities and relative capabilities", taking into account the development priorities and special conditions of the country. Within this framework, Turkey has been pronouncing its request for ensuring its access to financial and technological supports in the national struggle against climate change and for being exempted from the responsibilities related to greenhouse gas emission mitigation put on the developed countries with Paris Agreement. In summary, the basic concern of Turkey arising from this differentiation is that it may not receive any financing and technology support within the framework of its international responsibilities in combatting climate change.

Although Turkey seems to have not being sufficiently supporting the global transformation that has been accelerate with the Paris Agreement as it has not ratified the Paris Agreement yet, it remains loyal to the principles of sustainable development in almost every field of combatting climate change and reviews its policies, walking on the way to develop its legal, institutional and economic system within the context of new climate economy.

Within this framework, implementations are ongoing in many fields within the scope of combatting climate change with public and private sector resources such as dissemination of renewable energy, implementing resource efficiency of any type including energy efficiency, mitigating greenhouse gas emissions, crating capacity for carbon trade (Turkey is included in the voluntary carbon trade markets since 2005), improving ecosystem services, developing sustainability standards in the sectors. Besides, the

¹⁰ FCCC/CP/2011/9/Add.1, 3/CP.17 para.35 "All developing country Parties to the Convention are eligible to receive resources from the Fund."

legal and institutional infrastructure is being strengthened in order to put into life the investments needed in transition to low carbon economy particularly in the cities, such as smart cities, smart transportation systems, smart networks, green buildings and green infrastructure.

International supports which Turkey will receive in addition to all these policies and practices being carried out at national level for realizing the transformation in its growing economy will create a separate pushing power within the context of adaptation to the impacts of climate change and the mitigation of greenhouse gases.



It should be noted here that the annual investment requirement in the energy sector of Turkey is 10 million USD with an annual energy requirement increase of 6% and this demonstrates that the country has a high emission mitigation potential.

For that reason, Turkey attaches great importance to access to international climate finance mechanisms and in particular the technology transfer. Investments projects in the countries have been gradually increasing towards combatting climate change with the allocation of multilateral funds such as Green Climate Fund, and the multilateral development banks. Due to being included in ANNEX 1 list, Turkey is not considered among the countries eligible for Green Climate Fund and it not accepted even for co-financed projects. Also there is the concern for Turkey that the project and implementation/ investment supports made/ to be made with multilateral development banks could decrease in the future since it is considered in developed country status (for being in ANNEX 1) according to Paris Agreement.

1.2.3. Turkey's Request to Be a Party Excluded from ANNEX 1 List of Convention and Its Justifications

Taking all these conditions into consideration, Turkey has launched initiatives to demand from the UNFCCC Secretariat to be excluded from ANNEX 1 list of the Convention (to be in Non-Annex countries) by including in its agenda a new political and diplomatic maneuver for the purpose of legitimizing its access to international financing and technology support mechanisms. The legal process at national level started within the decisions of the Climate Change and Air Management Coordination Board (İDHYKK) which met in January 2018, and Economy Coordination Board (EKK) which met in May 2018, and official attempts were made before the UNFCCC

Secretariat with the note verbal of the Berlin Embassy of the Republic of Turkey dated 31 May 2018.

The request in question of Turkey was communicated to the national focal points of all party countries by the Secretariat pursuant to the procedural rules of the Convention. This demand basically relies on the following justifications:

- The belief that Turkey will provide more effective contributions to combatting climate change as a Non-Annex country;
- It has no historical responsibility within the context of greenhouse gas emissions;
- Among the ANNEX 1 countries which it is included, Turkey ranks the lowest in terms of the amount of emissions per capita and is far below the average,¹¹
- It intends to be treated at the same level with the countries that are at the similar development level with it;
- It is not considered eligible for access mechanisms to technology and finance supports due to being an ANNEX 1 country;
- It position is uncertain due to the facts that Paris Agreement is structured on the separation of developed and developing countries and the principle of self-differentiation of the responsibilities undertaken by the countries according to their development levels has not yet been implemented.

At this point, the demand of Turkey to be excluded from the list of developed countries (ANNEX 1) which are expected to provide more contribution I climate financing and emission mitigation, was not taken to the agenda of the 24th Conference of Parties of the Convention (Katowice/Poland, COP24, December 2018).

¹¹ Turkey ranks the last with 3.88 t CO₂ in terms of the greenhouse gas amount per capita among Annex 1 countries. Average 14,37 tCO₂e. Greenhouse gas data is taken from accessed at :

http://di.unfccc.int/ghg_profile_annex1 and the population data is taken from the World Bank.

1.2.4. Benefits Foreseen If Turkey Becomes a Party to Paris Agreement

The facts that Turkey is the founding members of OECD, listed among the countries of big economies of the world, has committed state policy towards becoming a member of the EU, that it is an ANNEX 1 country which is accepted by the parties to have a different position than others, that it is the country which increased its emissions the most among OECD and ANNEX 1 countries compared to year 1990 and is the single country which has not put a mitigation target for 2020 among OECD countries (OECD, 2019 :35), its innovations in the legal and institutional structure at national level in combatting climate change and that it has been implemented/ implementing projects at remarkable scales make Turkey an important and indispensable player in its climate struggle at global scale.

When considered from the point of national policies, many sections outside the government in Turkey have been carrying out numerous actions in order to struggle against climate change (local administrations, business world, universities, research institutions and think tanks and civil society organizations). The more Turkey highlights these multilateral and joint actions at the international tables and demonstrates that it follows active policies and has diversity of practices, the more powerful its hand will be in having its rightful demands accepted.

For example, Turkish private sector has an important position in the acceleration of country economy which has demonstrated a rapid grow in recent years and the Business community in Turkey is sufficiently aware of the fact that combatting climate change includes opportunities and/ or threats from various aspects. In addition to the fact that Turkish Business World has for long been aware of the impacts which climate change could have on its community, it has also been taking steps required for managing these impacts and mitigating greenhouse gas emissions.

Within the scope of these actions, a significant speed has been accomplished in recent periods within the framework of voluntary carbon market principles with the emission trade which is an important economic tool in combatting climate change with the existence of public support (regulations, financial directions, incentives etc.). Activities of the business world in the process of Turkey's transition to low carbon economy are remarkable.

In the processes of international climate change negotiations that have been continuing almost for thirty years, Turkey preferred not to take place in the alliance groups and defended its own position and known demands on itself. However, recently these groups have started to become diversified and increase in number in addition to the known alliances (G77 countries, developed countries, less developed countries, European Union, Umbrella Group etc.). Whereas previously there were to basic alliance blocks prevailing the negotiations (industrialized countries and developing countries), today the international arena demonstrates numerous interrelated alliance groups which adopted different priorities and attitudes. Although Paris Agreement make the emphasis on developed and developing countries, it could be seen that this separation would not be as solid and meaningful as it has been in the past. Although the groups have reservations due to our position on being involved in the alliance groups, it could be considered that Turkey should evaluate the message of Paris Agreement towards prospective multi-layer cooperation among all stakeholders in a good manner and it should take its place in the new climate regime on the grounds of the negotiations in question according to its conditions.

In the UN Climate Action Summit which will be organized in New York on 23 September 2019 to be hosted by the UN Secretariat General, a collective attitude is expected from the political wills of all countries for the acceleration of the implementation

of Paris Agreement.¹² The summit will focus on nine interdependent routes which will be carried out under the leadership of 19 countries¹³. One of these routes, namely the Infrastructure, Cities and Local Action route, will be carried out under the leadership of Turkey and Kenya and supported by UN Human Settlements Program (UN-HABITAT). It is known that the work plan of the route will focus on prioritization of ambitious commitments for low- emission and resilient infrastructure, and in particular will concentrate on the financing issues to be provided by private and multilateral development banks in relation to land transportation, buildings, water and waste systems. The route will also draw a path for mobilizing the resources required for developing the budgets and financing the local climate action plans that are in compliance with Paris Agreement, in addition to mobilizing the cities and local administrations. The fact that Turkey has undertaken the responsibility to mobilize global policies related to local climate actions, which are among the main elements in the implementation of Paris Agreement at a leader position is an important issue which sufficiently points out its strong performance in the international community. These new developments will positively affect the climate diplomacy and negotiations of Turkey. The fact that Turkey becomes a party to Paris Agreement as an appropriate political maneuver in this process will demonstrate its remarkable stance in relation to combatting climate change, and constitute a foundation for a rightful negotiation.

1.2.5. Contribution of Non-Party Stakeholders in Combatting Climate Change in Turkey After Paris Agreement

Scientific studies have demonstrated that if the countries remain limited to the targets declared in the national communications, which are one of the

important tripod legs in the implementation of Paris Agreement, an earth that is 2.7°-3.7°C warmer is waiting for the humanity by the end of 21st century. Under these circumstances, important roles have been cast for Non-Party Stakeholders such as the business world, local administrations and NGOs, in addition to the governments to reach 1.5°C-2°C target.

From this point of view, with Paris Agreement, innovative steps have been taken for the roles of non-party stakeholders in terms of the effectiveness of social policies in combatting climate change. Because, if the problem is a multilayered one, the actors to be included in the solution should also be diversified. The Agreement has clearly demonstrated this approach, creating an important difference compared to the existing climate covenants. Here the importance of Paris Climate Agreement relates to the ability of non-party stakeholders to present the opportunities which will question, complement and, more importantly, create alternative solutions for the climate policies that have been implemented.

Role of Non-Party Stakeholders

"Conference of Parties,

Welcomes the efforts of non-Party stakeholders to scale up their climate actions, and encourages the registration of those actions in the Non-State Actor Zone for Climate Action platform;

Encourages Parties to work closely with non-Party stakeholders to catalyse efforts to strengthen mitigation and adaptation action;

Welcomes the efforts of all non-Party stakeholders to address and respond to climate change, including those of civil society, the private sector, financial institutions, cities and other subnational authorities; Recognizes the need to strengthen knowledge, technologies, practices and efforts of local

¹² See. <https://www.un.org/en/climatechange/>

¹³ UN Climate Summit 2019, 9 Routes: 1) Mitigation, 2) Social and Political Factors, 3) Mobilizing the Youth and the Public, 4) Energy Transformation, 5) Industrial Transformation, 6) Nature Based Solutions, 7) Resilience and

Adaptation, 8) Climate Financing and Carbon Pricing, and 9) Infrastructure, Cities and Local Action

communities and indigenous peoples related to addressing and responding to climate change, and establishes a platform for the exchange of experiences and sharing of best practices on mitigation and adaptation in a holistic and integrated manner.”

Paris Agreement (Resolutions: 117, 118, 133, 135)

With the new climate regime following the Paris Agreement, the effect of climate actions of state (Party) and non-state (non-Party) actors on international and national policies has started to become apparent and this situation has put the multilateral works to the agenda in many countries.

The sensitive point that needs to be emphasized here for developing joint actions in the overlapping fields and creating a continuous environment of dialogue is that the non-party actions are not a replacement of but a complementary to the national actions. Actions related to combatting climate change are possibly affected negatively or positively from the strategies followed by another stakeholder group.

For that reason, the more any stakeholders are transparent and open to discussion in its field of action, the stronger the motivation will be, the more the capacity will increase and a total benefit could be ensured. The fact that this social transformation that comes with the new climate regime is the subject of change of participate profiles in the struggle against climate change is also applicable and legitimate for Turkey. In Turkey, there are numerous up to date projects with the support of pre-accession financial assistance of the European Union for the development of fields of activity among party and non-party stakeholders and between these.

Besides, various non-party institutions/ segments of the society create opportunities of dialogue and negotiation that develop and facilitate towards

improving the existing policies (TEMA foundation, Sabancı University Istanbul Policy Center, Global Balance Association, Green Thought Association, Nature Protection Center and others), supporting the climate policy actions from this aspect. Though not being in a continuum, the business world in Turkey is in a joint effort towards combatting climate change with some NGOs (like WWF Turkey). Some civil society organizations (such as ÇEVKO) participate in the global platforms such as NAZCA (Non-State Actor Zone for Climate Action)¹⁴ wherein the actions of non-state actors are shared towards the struggle against climate change.¹⁵

1.3. International Conventions Related to Climate Change to Which Turkey is a Party

Provisions of a series of international agreements related to the protection of environment to which Turkey is a party are indirectly related to the climate change. The implementation of agreements related to environmental protection are evaluated together with the elements of combatting climate change, and within the framework of these agreements, up to date decisions are taken which strengthen the climate struggle at international level.

Among the agreements in question, Vienne Convention and Montreal Protocol for the protection of ozone layer, Long Range Transboundary Air Pollution Convention related to air media, United Nations Convention to Combat Deforestation in relation to sink areas, United Nations Biodiversity Convention, in particular Convention on Wetlands of International Importance as a Environment for Waterfowls, European Landscape Convention, Convention on the Conservation of European Wildlife and Natural Habitats will be studied in summary.

foreseen to follow up the targets and efforts disclosed in relation to mitigating greenhouse gas emissions and adapting to the effects of climate change. From Turkey, private sector is more involved in the NAZCA platform.

¹⁴ The official decision to open NAZCA Global Platform was taken in COP20, Lima Climate Conference (2014)

¹⁵ In the NAZCA platform, which brings together the city administrations, civil society organizations, investors and companies of the countries, it is

International agreements concluded in relation to the environmental protection of certain geographical regions such as Antarctic, Mediterranean and Black Sea will also be mentioned.

1.3.1. Vienna Convention for the Protection of Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer

The **Vienna Convention** which was adopted in 1985 came into force in 1988. The Convention sets out the main lines for the international legal, scientific and technical cooperation, researches, observations, information and technology exchange which will take place in order to protect the ozone layer against negative impacts arising from human activities, encouraging the mitigation and monitoring of chemicals that change the characteristics of the ozone layer.

The Convention is a framework convention which do not include controls or targets that have legal binding. Following the agreement on the convention, actions were launched on a protocol which will enable to control the use and production of substances that deplete ozone layer. As a result of this, **Montreal Protocol** was adopted in 1987 as an implementation tool which will realize the targets of the Convention. Montreal Protocol came into force in 1989.

Montreal Protocol, which stipulates the restriction of human borne substances that deplete ozone layer, has constituted a good example in the preparation of United Nations Climate Change Framework Convention. This model which is implemented for ozone layer constituted a model for the climate change regime.

The purpose of the protocol is to control the production and use of substances that deplete ozone layer, removing them from use by determining mitigation program and rates, researching and developing alternative substances and technologies to replace them, and providing required technical and financial support to the developing countries taking into account the requirement of these countries for these materials.

The mitigation commitments foreseen in the protocol were taken further over time. The annex "Substances Taken Under Control", which is listed under the protocol text, includes updates in various years, taking the new substances under inspection, commercial prohibitions and restrictions as well as other additional precautions. In particular, it is well known that the **Kigali Amendment**, which was adopted in 2016 and foreseen to come into force as of 01/01/2019, and which includes the controlling and mitigation of hydrofluorocarbon (HFC) gases that have strong greenhouse gas impact under the scope of Montreal protocol, will have great contributions in the long run for the realization of heat targets. It is expected that the global temperature increase will be reduced by 0.5°C by the year 2100 with the mitigation of flourous greenhouse gas consumption within a certain framework.¹⁶

Turkey has become a party to the Convention and the Protocol in 1991. Turkey, which is included in the developing countries category pursuant to the protocol, has accepted the four amendments made in the Protocol beforehand. The Kigali Amendment, which was the last amendment, is in the agenda of TGNA. With the ratification of Kigali Amendment by our country, it is expected that there will be a stop in HFC consumption level by the year 2024 and the HFC consumption will start to decreased by the year 2029. Approval of Kigali Amendment is important in terms of the continuity of continuous and harmonized

¹⁶See:<http://www.mfa.gov.tr/viyana-sozlesmesi-ve-montreal-protokolu.tr.mfa>

contribution which Turkey has been providing to international cooperation towards the depletion of ozone layer and prevention of climate change.

For the purposes of meeting the obligations under Vienna Convention and Montreal Protocol, the Regulation on Mitigation of Substances Depleting Ozone Layer was published in 1999 under the scope of secondary regulations. The Regulation was renewed in 2006 and 2008 with the same title, and with the title of Regulation On Substances Depleting Ozone Layer in 2017. The regulation covers the production, foreign trade, utilization, market supply, recycling, reuse, reclamation and disposal of the controlled substances, as well as reporting of information in this scope and informing the public.

Also, Regulation on Mitigation of Use of Methyl Bromide in Agriculture was published in 2000 relying on the Vienna Convention and Montreal Protocol. The regulation covers issues related to the licensing of methyl bromide, which is used as plant protection drug as a controlled substance, for its use in agriculture, its foreign trade, supply to market, its alternatives and public awareness.

For some issues, provisions of Kyoto Protocol, Vienna Convention and Montreal Protocol are complementary. Regulation on Florous Greenhouse Gases, which was published in 2018 relying on United Nations Framework Convention and Kyoto Protocol, is an example of this.

The Natural Focus for the monitoring of national and international studies in relation to Montreal Protocol is the Ministry of Environment and Urbanisation. The General Directorate of Environmental Management Climate Change and Adaptation Department, which carries out the task of National Ozone Unit, is responsible from the collaboration of national activities related to the implementation of the protocol.

In the processes related to the production and trade of the substances within the scope of the protocol, Ministry of Environment and Urbanisation and Ministry of Trade and, as relevant, Ministry of Agriculture and Forestry, are taking roles.

Meanwhile, Turkey has put into force in 2014 the Protocol dated 1997 which amended the International Convention on Prevention of Pollution of Seas by Vessels, which deals with limitation of emissions containing nitrogen oxide and Sulphur oxide released from chimney gases of vessels as well as preventing the emissions that damage the ozone layer arising from the vessels. Besides, there exists a Regulation on Mitigation of Sulphur Rates in Certain Types of Fuel Oil dated 2009, which also includes the maritime fuels.

1.3.2. United Nations Convention to Combat Deforestation

The Convention entered into force in 1996. According to the Convention, the deforestation that occurs as a result of climate change and human activities reduces the resistance of the land it destroys and the productivity of the soil and thus affects the flora and the fauna, decreases food production and causes famine, leading to economic and environmental problems, migration and disputes and social disasters.

The convention is a binding agreement which associates the issue of environment and development with sustainable land management. With the Convention which demonstrates the status of deforestation at global scale, it is aimed at alleviating the effects of drought, contributing in ensuring the sustainable development in countries which are affected from deforestation, develop cooperation in combatting with deforestation and disseminating the good practices. Within this scope, it is necessary to improve efficiency in the affected lands and ensure sustainable management of land

and water resources, and implement long term strategies in order to improve living conditions in particular at the level of local communities.

Some of the basic obligations of the Convention are to prepare National Action Program, contribute in the preparation of Regional Action Programs, integrate actions in combatting deforestation and drought into the sustainable development plan and strategies, and ensuring the awareness and contribution of civil society organizations, local public and in particular women and youngsters in the actions. Within the scope of the Convention, "10-Year Strategy Document" was prepared which covers 2008 -2018 period in order to facilitate for member countries to realize their strategy / action plans.

Turkey has become a party to the Convention in 1998. Turkey is included in the Fourth Annex of the Convention together with other Mediterranean countries that experience the problem of drought.

The national coordination of the Convention in the name of Turkey is being carried out by the General Directorate of Combatting with Deforestation and Erosion of the Ministry of Agriculture and Forestry.

The National Action Program for Combatting with Deforestation, which is the first of the documents that include actions planned to be performed within the scope of combatting against deforestation/ land destruction in Turkey, was published in 2005.

National Strategy Documents for Combatting with Deforestation (2013-2023) was prepared and the roadmap to be followed for combatting with deforestation was set out.

Finally, **Turkey National Strategy and Action Plan for Combating with Deforestation (2015-2023)** was published.

Actions related to drought are under the coordination of the General Directorate of Water

Management of the Ministry of Agriculture and Forestry.

National Drought Management Strategy Document and Action Plan (2017-2023) document was prepared in order to minimize the negative effects of drought.

The Turkey Agricultural Drought Combatting Strategy and Action Plan (2018-2022) document, which was prepared under the coordination of the Ministry of Agriculture and Forestry, should also be indicated.

1.3.3. Convention on Long-Range Transboundary Air Pollution

The Convention which entered into force in 1983 was ratified by Turkey in the same year. With the Convention which reflects the commitment to protect the human and his environment against air pollution, the contracting parties will strive towards limiting the air pollution and gradually decreasing to the extent possible and develop policies and strategies that could be used against the dissemination of air pollutants by exchange of information, counselling, research and monitoring ways.

In the Convention, it is committed to develop best policies and strategies including the air quality administration system in order to struggle against air pollution, and inspection measures in harmony with balanced development, including economically affordable, low and waste-free technology.

It is foreseen in the Convention to research the impact of Sulphur components and other leading air pollutants on human health and environment within the context of agriculture, forestry, material, water and other natural ecosystem and visibility. Besides, the designed content of emission control at national level of the air pollutants is made subject of the exchange of information.

In 1985, Turkey has ratified the **Financing Protocol** which was concluded in order to provide long term financing for the activities under **Cooperation Program for Follow-up and Evaluation of Air Pollution in Europe**, which is a part of the **Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP, 1984)**. However, the country has not become a party to technical protocols created under the scope of the Convention, such as mitigation of sulphur dioxide emissions, control of nitrogen oxide emissions and control of volatile organic components.

Activities within the scope of the Convention and the annexed Financing Protocol has been carried out by the Air Management Department of General Directorate of Environmental Management of the Ministry of Environment and Urbanisation. Within this scope, emission inventory is prepared and reported for national air pollutants on an annual basis.

1.3.4. Convention on the Conservation of European Wildlife and Natural Habitats (Bern)

The Convention entered into force in 1982. Turkey ratified the Convention in 1984. The objective of the convention is to preserve the wild flora and fauna and their living environments.

The contracting parties will develop their national policies for the purposes of preserving the wild flora and fauna and natural living environments, and in particular the living environment of the species that are endangered and could be endangered, and in particular those which are endemic.

While setting out their planning and development policies and taking measures to struggle against pollution, the Parties commit to demonstrate attention to the preservation of wild flora and fauna.

The Regulation on Principles and procedures for Protection of Hunting and Wild Animals and Their Living Environments and Combatting with Hazards, legal basis of which include also the Bern Convention, was published in 2005. Another regulation which was issued based on the Convention is the Regulation on the Handling, Production and Trade of Hunting and Wild Animals and Products Obtained from These, which was also published in 2005.

General Directorate for Protection of Natural Assets of the Ministry of Agriculture and Forestry, carry out tasks on the issues within the scope of the Convention.

1.3.5. Convention on Biological Diversity

Turkey has become a party to the Convention, which entered into force in 1993, in 1996. The Convention which was adopted upon the concern that biodiversity resources are damaged by human borne activities and the extinction of certain species, foresees the determination of national strategies and development of action plans and programs which will be prepared on the issues of protection of biodiversity and their use within the principles of sustainability, and fair sharing of the benefit to arise from the use of genetic resources.

The Cartagena Protocol on Biosafety, an annex to the Convention, which was prepared in order to provide sufficient protection for the safe handling, transportation and utilization of living organisms modified using modern biotechnology, entered into force in 2003. Turkey has become a party to the protocol in 2004.

Turkey, which has a rich ecosystem and natural habitat diversity with its vertebrate and invertebrate species, bird migration paths, sea protection areas and protected coasts, natural parks, has national regulations towards the protection of biodiversity, sustainable use and restoration.

Among these, two regulations issued based on the Convention could be indicated: Regulation on Utilization and Abroad Transfer of Local Domestic Animal Genetic Resources, which was published in 2012, and the Regulation on Utilization of Water Products Genetic Resources for Research Purposes and Their Entry into and Exit from the Country, which was published in 2015.

Within the body of the General Directorate of Nature Conservation and National Parks of the Ministry of Agriculture and Forestry, which is the National Focal Point of the Convention, there exists Biodiversity Department. National Biodiversity Strategy and Action Plan was prepared in 2007. In the same year, "Noah's Ark National Biodiversity Database" was opened to internet access. General Directorate of Agricultural Researches and Policies also has works on the issues within the scope of the Convention.

1.3.6. Convention on Wetlands of International Importance as a Environment for Waterfowls (Ramsar)

The Convention entered into force in 1975. Turkey ratified the Convention in 1994.

The Convention which is related to the protection of wetland areas and the connected animal and plant communities aims at merging far reaching national policies with the coordinated international activities.

There are 135 wetland areas in Turkey that have international importance and of these, 14 are in the Ramsar Convention list. The Wetland Areas Protection Regulation, which was issued based on the Convention and the Environmental Law, was first published in 2002, and was renewed in 2005 and finally in 2014 with the same heading.

In the management of wetland areas, General Directorate for Protection of Natural Assets of the Ministry of Environment and Urbanisation; General

Directorate of Water Management, Nature Protection and General Directorate of Nature Conservation and National Parks and General Directorate of State Hydraulic Works have duties and authorities.

Lakes and Wetland Areas Action Plan 2017 - 2023 document has been prepared under the coordination of the General Directorate of State Hydraulic Works of the Ministry of Forestry and Water Affairs.

1.3.7. Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona)

As the protection of the Mediterranean was included among the priority targets within the scope of "Regional Seas Program", which was established by UN Environment Program (UNEP) in 1974, Mediterranean Action Plan was created with the participation of coast-sharing countries and the EU and the Convention on Protecting the Mediterranean Against Pollution was adopted in order to constitute the legal basis for the activities to be carried out. Turkey has become a party to the Convention, which entered into force in 1978, in 1995.

The Convention was extended in 1995 so as to cover the coastal areas in addition to the maritime environment, and elements such as sustainable development target, public participation and environmental impact assessment were brought. The Convention, which was renewed and renamed as the Convention on Protection of Mediterranean Maritime Environment and Coastal Zone entered into force in 2004. Turkey ratified the Renewed Barcelona Convention in 2002.

The Convention aims at protecting and developing maritime environment of the Mediterranean Region exposed to pollution, its maritime ecologic balance and abolishing the threats directed towards the

sources and legitimate forms of use. There are seven protocols for the Barcelona Convention:

- Protocol for the Prevention of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft
- Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea
- Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (Turkey become a Party with a communication reflects its opinions about UN Maritime Law Convention),
- Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean
- Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities



Turkey has not yet become a party to Protocol on Integrated Coastal Zone Management in the Mediterranean and Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil

1.3.8. Convention on the Protection of the Black Sea Against Pollution (Bucharest)

The Convention which was prepared by the littoral states, including Turkey, has entered into force in 1994. The Parties aim at protecting Black Sea against any type of pollution that arises from land, vessels and atmosphere, and undertake to take measures required for preventing the pollution of maritime environment, mitigating and controlling the existing pollution and to enact relevant regulations.

The Convention was prepared in order to find solutions to environmental problems taking into account the extreme sensitivity of the flora and fauna of the Black Sea, which is a half-closed sea, against the changes that occur in the temperature and component of the water due to specific ecological and hydraulic conditions.

Protocols which were created within the scope of the Convention that regulates cooperation in relation to protection of the maritime environment and living sources of Black Sea against pollution are as follows:

- Protocol on the Protection of the Marine Environment of the Black Sea from Land-Based Sources and Activities
- Protocol on Cooperation in Combating Pollution of the Black Sea by Oil and Other Harmful Substances
- Protocol on the Protection of the Black Sea Marine Environment Against Pollution by Dumping Black Sea Biodiversity and Landscape Conservation

- Protocol to the Convention on the Protection of the Black Sea Against Pollution

The Commission on Protection of Black Sea Against Pollution (Black Sea Commission), which is an executive organ of Bucharest Convention, was established in 2000 in order to determine common strategies for the littoral states, combat against the distortion of ecosystem and pollution in Black Sea, prevent the loss of biodiversity, and carry out common projects and activities, and its secretariat is located in Istanbul.

1.3.9. Antarctic Treaty

The Convention which secures Antarctica as a natural protection area devoted to peace and science was signed in 1959. Turkey became a party to the Convention in 1995.

Antarctica continent is important in terms of its water potential hidden under the glaciers and its living sea sources, regulates the climate of the Earth with ocean streams and constitutes great importance in the sense that it is a sink area for greenhouse gases and is a subject of the researches on the impact of climate change on living things and the sea level.

Agreements that are additional to Antarctica Convention constitute the **Antarctica Conventions System**. These are the 1964 Convention on the Prevention of Antarctic Flora and Fauna, the 1972 Convention on the Protection of Antarctic Bear Fish, the 1980 Convention on the Protection of Marine Living Resources and the Antarctica Convention Environmental Protection Protocol dated 1991, which is also named as Madrid Protocol. The Madrid Protocol, which envisages the protection of ecosystems connected and related to the Antarctic environment, is particularly important with the detailed arrangements to which Antarctica is subject. The protocol also prohibits the extraction of minerals in Antarctica, except for scientific purposes. Turkey has ratified Madrid Protocol, which came into force in

1998, in 2017. It is expected that becoming a party to the Protocol will facilitate and effectuate the participation of Turkish scientists to the scientific research activities in Antarctica.

1.3.10. European Landscape Convention (Florence)

The Convention, which was opened for signing in 2000 and to which Turkey has become a party in 2003, was put into force by the European Council in 2004. The objective of the Convention is to carry out activities in order to develop the protection, management and planning of landscapes, encourage the public and local administrations for comprehending the importance and value of the landscape, and disseminating the environmental consciousness.

According to the Convention, landscape, which has the meaning of an area which is a result of the action and interaction of natural and/ or human elements, involves natural, rural, urban areas and suburbs, as well as land, inland waters and maritime areas.

The parties of the Convention are required to note that landscape as a key element of individual and social welfare and an important part of life quality, has an important public benefit role in the social areas as well as in relation to the environment, that it constitutes a resource that is suitable for economic activities and that its protection, management and planning could provide contribution in the creation of jobs; and that the developments in agriculture, forestry, industrial and mine production techniques and regional planning, urban planning, transportation, infrastructure, tourism and recreation accelerate the transformation of landscapes.

The parties undertake to recognize by means of law the landscapes as an important component of the environments of human beings and an expression of the diversity of cultural and natural heritage and a foundation of their identities; and to include the landscape in their regional and urban planning

policies as well as cultural, environmental, agricultural, social and economic policies and other policies which could have direct or indirect impact on the landscape.

Landscape Protection Branch exists within the body of the Sensitive Areas Department of the General Directorate for Protection Natural Assets of the Ministry of Agriculture and Forestry. In the municipalities, landscape activities are being carried out in units under various names such as urban aesthetics, parks and gardens, green areas etc. The **“National Gardens Project”**, which is being carried out in collaboration with the Ministry of Environment and Urbanisation, should also be noted.

Green infrastructure solutions are to be highlighted in cities which are underlined by the landscape architecture and practices within the scope of putting the Convention into life. Among the benefits of green infrastructure, which is highlighted in the sustainable development of the cities together with roads, sewage system and electric lines, which are called the gray infrastructure, are the carbon sequestration, high air quality, mitigating urban heat islands, and increasing natural life environment and recreational areas.

2. SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE POLICIES IN TURKEY

2.1. Sustainable Development and Climate Change

Today, at the point they reached in their development processes, the humanity and governments face with the problems brought by having considered economic, social and environmental dimensions separate from one another. This situation has demonstrated that there is a need for a financial transformation as is for political, economic, governance, technologic, ecologic and social transformation in order to put the concept of sustainability into life.

Sustainable Development Goals were defined by the United States taking into account the conditions of 21st century and 17 Sustainable Development Goals were determined which were planned to be put into life by the year 2030 (UN General Council Resolution, New York, September 2015). Combatting with a global-scaled crisis such as climate change is an area which has direct and integrated connection with many of the sustainable development goals.

SDG Integrally Connected with Climate Change

- SDG-1 End to Poverty
- SDG-5 Gender Equality
- SDG-6 Clean Water and Sanitary Conditions
- SDG-7 Accessible and Clean Energy
- SDG-8 Decent Work and Economic Growth
- SDG-9 Industrial Innovation and Infrastructure
- SDG-11 Sustainable Urban and Living Areas
- SDG-12 Responsible Consumption and Production
- SDG-13 Climate Action
- SDG-14 Aquatic Life
- SDG-15 Land Life

The urgency in relation to the mitigation of the increasing greenhouse gas emissions caused the questioning of the existing development paradigms all over the world and triggered a new economic understanding. In such a world where the point of viewing the problems has started to change together with Paris Climate Agreement, a need for a significant amount of financing is pointed out in order to realize the targets. These positive transformations which have started in the development policies today (green economy, low carbon economies etc.) started to facilitate combatting climate change problems on one hand and accessing the sustainable development targets on the other.

An increasingly strengthening connection is being established between climate change policies and development economy. It is expected that this situation, which recalls the evolution in a positive sense in energy policies, will be an area of attraction for all relevant sectors in many areas such as production at the scale of need, efficiency energy consumption, and more utilization of renewable energy resources.

It is known that, for the purposes of reaching all these objectives, international finance institutions, multi-lateral development banks (European Bank for Reconstruction and Development etc.), as well as various transnational institutions such as United Nations are in collaboration with finance institutions in order to access the investment funds towards the objective of ensuring the infrastructure required for the countries (financing, technology, capacity development and others). For example, "Sustainable Energy Financing Programs", which have been carried out in many countries (including Turkey) in relation to policies for combatting against climate change, have created/ is creating a catalytic impact in terms of developing of energy and energy efficiency in these countries and directing other resources in line with these critical purposes.

2.2. Climate Change Within the Development Policy of Turkey

The approach of Turkey to combat with climate change has been set out as involving this issue to policies related to important economic issues which are climate-dependent (industry, construction, transportation etc.), or dependent on climate (agriculture, food etc.). Behind this is the fact that the issue of combatting climate change is not only an environmental problem, but also a socio-economic development problem. In order for the existing economic growth policy in Turkey to catch up the sustainability goals in ecologic and social terms, green economy targets and low carbon policies within the framework of specific conditions are included in the development plans and the implementations are carried out in this direction.

Nowadays Turkey's climate change issues has been started to be handled within the context of empowering policy and institutional capacities in other fields (such as adaptation impact policies) that have vital importance to serve sustainability, not only as a mainstreaming to the policies of the energy sector that are directly related to the issue. Examples of some studies which have been conducted with this point of view and serve to the struggle of the country against climate change and its sustainable development together, are given below:

“Mediterranean Forests Integrated Management Project”, which has been carried out by the General Directorate of Forests within the body of the Ministry of Agriculture and Forestry and the support of United Nations Development Program Country Office, provides significant global and national/ local benefits on the issues of other natural resources and ecosystem services in addition to carbon sequestration function and biodiversity of the forests. With an integrated approach towards five forest fields in the Mediterranean (a total of 450.000 hectares) within the scope of this project, studies are being

conducted in relation to carbon sequestration capacity, biodiversity and crating socio-economic benefits, measurement, reporting and verification. The aim of the project is to provide contribution in the development of MRV document and decision support system which will be prepared for the forestry sector. It is expected that this study will constitute a pilot for other forest regions of the country due to its results (SKH15-Land Life, SKH8-Decent Work and Economic Growth).

With **“Ardahan, Kars, Artvin Development Project”**, small producer and non-agriculture enterprise investment and rural infrastructure investment activities have been carried out with the support of UNDP Country Office in order to mitigate rural poverty in these relatively less developed provinces of Turkey. As part of these activities that have been implemented by the Ministry of Agriculture and Forestry, it was ensured to increase the efficiency of the irrigation pumps in the regional villages in order to ensure integrated resource efficiency in the agriculture and agriculture based industry which are among the practices that take into account the impacts of climate change on water resources.

Examples from up to date projects that establish the relationship between energy sector and other sectors are as follows:

Pilot project which minimizes greenhouse gas emission and increases energy efficiency in a public building (Cezeri Green Technology Technical and Industrial Vocational High School, Ankara), within the scope of **“Project for Increasing Energy Efficiency in Buildings in Turkey”**, which has been carried out in order to leverage the building energy performance standards and improve building regulation practices in Turkey with the support of GEF resources and UNDP Country Office (SDG7-Accessible and Clean Energy, SDG-11-Sustainable Urban and Living Areas).

“Project for Increasing the Use of Renewable Energy Resources and Energy Efficiency” which has been carried out in order to ensure development of renewable energy and energy efficiency sectors in GAP (South East Anatolian Project) Region (SDG7 - Accessible and Clean Energy, SDG-9 Industrial Innovation and Infrastructure).

“Project for Increasing Energy Efficiency in the Industry”, which has been carried out for the purposes of improving energy efficiency in Turkish industry by encouraging the industrial organizations in establishing an effective energy management using energy efficiency measures and energy efficiency technologies (SDG7 - Accessible and Clean Energy, SDG-9 Industrial Innovation and Infrastructure)

“Efficient and Low Carbon Heating and Cooling Project”, which is being carried out by General Directorate of Energy Affairs (EIGM) of the Ministry of Energy and Natural Resources for the purposes of developing policies, strategies and solutions related to ensuring a low-carbon energy sector, reaching middle and long term targets for energy efficiency and regional heating and cooling, increasing the application capacity of the new heat regulation which is planned to be published. (SDG 8- Decent Work and Economic Growth, SDG7 - Accessible and Clean Energy, SDG-9 Industrial Innovation and Infrastructure)

Integrating the adaptation to the impacts of climate change into national development plans in Turkey will bring together reaching the sustainable development goals by the country. It could be said that, in terms of handling the issue, adaptation to the impacts of climate change constitutes a bridge between the commitments of Paris Agreement and UN Sustainable Development Goals.

As a matter of fact, in the new global climate regime, there is a significant reference to the importance of three dimensions of adaptation to the impacts of

climate change. These are, i) strengthening the adaptation capacity; ii) mitigating the vulnerabilities and increasing resistance with a view of sustainable development, and iii) securing the taking of sufficient adaptation measures within the scope of temperature target. Although the issue of supporting the global adaptation objective with qualitative indicators as in the case of long term temperature target, since the adaptation needs change depending on local, regional and national conditions, it was considered that it would be better for the parties to adopt the precautions themselves, and a qualitative objective was set by following a bottom-to-top path. One of the duties of the parties within the framework of the adaptation action with Paris Agreement is for the countries to make “adaptation planning”. According to Article 7.9, parties will carry out adaptation planning as appropriate. This provision has been extended the adaptation plans prepared previously only by the developing countries to include other parties. Whereas adaptation planning is a requirement, the method, scope, objective and priorities were left to the parties to be selected according to national conditions.

Another issue that has to be noted here is that it is important to increase the adaptation financing scale due to the urgency of the needs of vulnerable countries and the deepening impacts of climate change. In this regard, the fact that the priority is taken by the mitigation actions in climate financing since the beginning (starting from the Convention) needs to be revisited. In recent period, Turkey has been working to follow a policy with a “Regional” weight as a method of planning to adapt to the impacts of climate change. Within this framework, the focus is put on Black Sea Region, which is one of the vulnerable geographical regions of the country against climate change.

2.3. Reflections of Climate Change to the National Development Plan

According to Article 166 of the Constitution, the aim in development planning is to ensure balanced and harmonized development of industry and agriculture at the country level and to use country resources by making a breakdown and analysis. The plan should include measures that increase national saving and production, provide balance in foreign payments and stability in prices, and develop investment and employment; respect public benefit and requirements in the investments and target at using the resources in an efficiency way. Since the development initiatives will be realized according to the plan, it is particularly necessary to issue laws that involve economic support and incentives, in line with development plans, aims and targets.

There is a direct relationship between putting the climate change policies into life and the development and growth targets of the country. In order to see the future of combatting climate change, it is necessary to examine the development goals which Turkey aims at reaching. It is necessary to take the development plans into consideration as they reflect the policies and targets towards future.

Situation analysis is made for almost every sector with the development plans that are characterized as higher policy documents, objectives and targets are determined and policies to be carried out in these areas are explained. Targets and objectives related to main climate-dependent and fossil fuel sectors are also included in the development plan.

Principles and procedures related to the preparation, ratification by Turkish Grand National Assembly (TGNA) and implementation of development plans are regulated under **Law on Enforcement of Development Plans and Protecting Their Integrity**

dated 30/10/1984 No. 3067. The Law indicates that TGNA commissions will examine the draft bills and the amendment proposals given on these with regard to compliance with the development plan. Another regulation foreseen for ensuring compliance with the development plan is the referral to Planning and Budget Commission of the draft bills related to the plan, which is the substantial commission. Planning and Budget Commission also discusses the development plan together with budget and final account laws as a single commission.

The Public Financial Management and Control Law Dated. 10/12/2003 No. 5018 regulates the execution of activities by public administrations in line with policies and targets included in the development plans and programs, effective, economic and efficiency acquisition and use of public resources, structure and processing of public financial administration in order to ensure accountability and financial transparency, preparation, implementation and financial control of the budgets. Pursuant to the law, the public administrations are also obliged to prepare strategic plans and activity reports.

It is also necessary to talk about **Agricultural and Rural Development Support Institution**, which was established in order to carry out the activities towards implementation of rural development programs within the framework of principles and targets foreseen in the national programs and strategies. The Institution, foundation and duties of which were regulated in the 1st Presidential Decree Law,¹⁷ is the relevant institution of the Ministry of Agricultural and Forestry.

It is also beneficial to speak about the **Law on Turkey Development and Investment Bank Inc.**, dated 11/10/2018 No. 7147. Among the objectives of the bank are supporting investments and projects

¹⁷ Presidential Decree No. 1 (Official Gazette dated 10.07.2018 No. 30474).

towards sustainable growth in line with the development targets of our country using modern development and investment banking tools.

2.3.1. Climate Change in Previous National Development Plans

It could be seen that a separate Climate Change Specialty Commission was established under the targets of the, which covers the years 2001-2005, and the climate change is referred to at a couple of points. Under the **Eighth Development Plan**, responsibilities of Turkey in relation to the protection of global climate system in Turkey and combatting with climate change have been tied to the principle of differentiated obligations. This principle is still valid. Sectors that are highlighted in the Eighth Development Plan in relation to the mitigation of emissions and increasing the energy efficiency were the transportation, energy, industry and housing sectors. The Plan included the target to make regulations towards increasing energy efficiency and ensuring saving for controlling and mitigating the greenhouse gas emissions arising from these sectors.

The climate change was quoted less in the **Ninth Development Plan**, which covers the years 2007 - 2013, compared to the Eighth Plan. In the Plan, which was prepared in a period when discussions were ongoing on Turkey's being a party to Kyoto Protocol, only it was expressed under the "Environmental Protection and Development of Urban Infrastructure" that Turkey is a Party to United Nations Framework Convention on Climate Change and that it shall fulfill the obligations arising from this Convention, and it was stated that a National Action Plan would be prepared which demonstrates the policies and measures related to the mitigation of greenhouse gas emissions.

2.3.2. Tenth National Development Plan and Climate Change

The Tenth Development Plan covers the period 2014 - 2018. The Development Plan in question was adopted as a resolution in the 127th session of TGNA General Assembly dated 01/07/2013. The first point that is to be highlighted in the Tenth Development Plan is that the issue of climate change is quoted more compared to the Eighth and Ninth Development Plans. Although this reference is solely a determination of status that does not include concrete targets, it could be considered in the sense of putting an emphasis on climate change.

In the Tenth Plan, the climate change is referred directly in the First Section under the main title of "Global Developments and Trends", in the part titled "Global Trends and Turkey Interaction" and the titles "Climate Change and Environment" and "Effective Use of Food, Water and Natural Resources"; and also under the main title of "Livable Spaces, Sustainable Environment" which is shown as one of the basic policy areas of the Plan in the Second Section, and in many parts of the Plan, although the expression of climate change is not directly used, issues directly related to climate change are quoted and analysis is made and policies are explained.

It is expressed in the plan that policies related to the issued of environment, including the climate change, have been carried out within the framework of sustainable development principles in Turkey. Also in the Plan the basic policies are emphasized as determining the economic values of natural resources, developing the environmental standards in production and consumption with the competitive and green growth understanding, and the necessity to observe the sustainable use of biodiversity and combatting climate change. In the Five-Year Plan period, the targets include ensuring water saving in the basins by evaluating the impact of all activities in the water basins on the water amount and quality,

including at the top the climate change, taking measures required for combatting drought and preventing pollution.

The Plan seems to include the reflections of the concept of “green growth”, which is one of the searches for a new growth model. Whereas the concept of “clean production” is included in the Plan, the concept of “low carbon economy” could not be seen. Although there is no apparent difference between the concepts of green growth and low carbon growth, it could be said that green growth includes policies that strengthen economic growth and low carbon growth requires sacrificing from economic growth. In fact, emission mitigation measures have an important place within the context of green growth policies. It is possible to say that the Plan was almost not discussed in TGNA elaborations from the point of climate change. The issue of climate change never came to the agenda in the negotiations of the Plan in the General Assembly. In the Planning and Budget Commission Report related to the Plan, it is indicated only in a reservation note that the impact of climate change on cities is ignored. It could be said that there is a need to increase parliamentary awareness and sensitivity in order to discuss the development plans, which plan the future and targets of which should be supported with laws to be adopted, so that they are discussed from a view point of sustainable development and climate change and become climate friendly.

In the Tenth Development Plan, 25 special implementation programs were established which involved detailed action plans under the name of “**Priority Transformation Programs**”. The Priority Development Programs were designed for critical reform areas which are important for the Plan to reach its objectives, could provide solution to the basic structural problems, provide contribution to the transformation process, are included under the field

of responsibility of several ministries, and require effective coordination and responsibility between the institutions. The objectives and targets of each program have been explained, components are set, actions are shown among the components and performance indicators were demonstrated. Among the programs, those which are directly related to climate change are as follows:

- Energy Efficiency Development Program
- Energy Production Program Based on Local Resources
- Program for Effectuating Water Use in Agriculture
- Urban Transformation Program Which Develops Competitiveness and Social Cohesion

2.3.3. Eleventh National Development Plan and Climate Change

The preparations of **Eleventh Development Plan** which covers 2019 - 2023 period were regulated with the Prime Ministry circular published in the Official Gazette dated 29/07/2017, and 42 Specialty Commissions (OIK) and 32 Work Groups (CG) were created in order to produce the reports on which the plan is based. The circular emphasized that the works of OIK and CG shall be carried out with a point of view towards protection of environment, sustainable use and management of natural resources, qualified urbanisation, mitigating the disaster risk; ensuring urban development, with a sustainable and comprehensive development oriented outlook. Specialty commission and work group were not established directly on the issue of climate change in the preparation period of the plan.¹⁸ Eleventh Development Plan was prepared taking into account the UN Sustainable Development Goals which are planned to be put into life by the year 2030. Considering that the policies towards combatting climate change will constitute an important bridge

¹⁸ Reports of specialty commissions have not been yet published as of the date of delivery of this study.

between Paris Agreement and SDGs, it is expected that this issue will be taken into account in the objectives of the Plan.

2.3.4. Climate Change in Turkey's Medium-Term Program and Annual Program.

Pursuant to the Presidential Decree Law No. 1 About the Organization of Presidency, it is the task of the Ministry of Treasury and Finance to prepare jointly with the Strategy and Budget Department by acquiring the opinions of Policy Board within the body of the Presidency and relevant public administrations the development plan, Presidency Program, medium term program, medium term financial plan, Presidency annual program, sectoral plan and programs within the framework of fundamental targets, principles and objectives set out by the President.

The Medium Term Program, which covers years 2019-2021 and was published in the Official Gazette dated 20.09.2018 (**New Economy Program**), was presented with the motto of "Balancing, Discipline, Change), and was established on targets and measures in five fundamental areas including inflation, public finance, employment, current deficit, banking and real sector. The Program which does not involve detailed evaluations on sectoral basis states among the policies and measures foreseen for reducing the current deficit increasing the share of solar, wind, biomass, renewable energy and local coal resources in electricity generation, and localization of energy technologies with renewable energy resource areas (YEKA) model. It is foreseen that the energy input costs could be reduced within the framework of National Energy Efficiency Action Plan. It is emphasized in relation to fossil fuel resources that the exploration for petroleum and natural gas resources will be accelerated, including the seas at the first place.

Also sectors which will have priority in decreasing the current deficit include petrochemistry and energy sectors, and it is stated that petrochemical clustering will be put into life.

Among the issues that are to be highlighted are the determination of environmental sensitivity of products and services by establishing National Environmental Labelling System and information for the preparation of infrastructure for transition to smart cities by establishing Turkey National Geographical Information System.

The Presidency Annual Program for Year 2019 which was published in the Official Gazette dated 27/10/2018, macroeconomic indicators under the light of developments in world and Turkish economy in harmony with the development plan systematic, and the evaluations over the data for years 2017 and 2018 under the title of sectors, are demonstrated. Approach related to climate change policy is explained under the title of "Environment Protection and Sustainable Development" and issues related to climate change are mentioned under the sustainable environment issues, livable spaces and agriculture and food, energy, tourism, construction, disaster management, earth and soil management. In this scope:

The following were stated under the title "**Innovative Production, Stable High Growth**"; development of environmentally sensitive new technologies is important in the automotive industry; green technology is among the main focus of the transformation in the production industry; efficiency and domestic added value will increase with green production capacity; drug, petrochemistry, energy, machinery/ equipment and software sectors will be supported for decreasing the current deficit; Turkey Industry Strategy Document will be prepared to cover years 2019 - 2023; petrochemistry clustering will be put into life;

Under the title **"Agriculture and Food"**; the increase in the number of undernourished people highlights the climate change, sustainability in agricultural production and protection of natural resources; changes seen in climate conditions and precipitation regime in our country affect the price formation; the demand for land has increased due to demands coming from non-agricultural sectors such as urbanisation and industrialization; the balance between protection - utilization in agriculture, forest, grass and pasture land areas protect its importance; planes where soil loss and land distortions develop rapidly are identified as big plane protection area; measures towards protection and effective use of agricultural lands have a priority; local species and plant gene sources protect their importance in vegetative production sector; protection and reclamation of grasslands and pasturelands are insufficient; distortion of natural resources will be prevented with integrated basin management projects for the effective use and sustainable management of our forests; priority will be given to forestation for the purposes of earth protection and combatting with forest fires and pests; development of food and agriculture system based on sustainable production and consumption taking into account the soil and water resources and forest assets, is the fundamental objective;

Under the title of **"Energy"**; Turkey does not have rich fossil fuel reserves except lignite; high foreign dependence in primary energy sources create a supply safety risk; explorations for oil and natural gas are ongoing; share of domestic coal sources in electricity energy production will be increased; In this framework, actions are being carried out for establishing thermal plans in five separate fields taking the environmental issues into account within this scope; actions are ongoing for establishing offshore wind energy plans and new solar energy plants by creating major scaled renewable energy sources within the scope of renewable energy investments incentive policy; the foundation for Akkuyu Nuclear Plant was constructed and the

Nuclear Regulatory Authority was established; National Energy Efficiency Action Plan covering years 2017 - 2023 came into force; the basic purpose in the energy sector is to use domestic and renewable energy resources at the highest level, using nuclear technology in electricity production, increasing efficiency, preventing waste, mitigating energy intensity and minimizing the environmental impacts of energy;

Under the section related to the **"Tourism"** sector; the coastal areas where tourism activities are concentrated are under pressure due to negative pressure created by global climate and human borne uses; different institutions have authorities in the planning, construction and inspection processes towards these areas; there is a need to create a new integrated coastal areas management model; It is targeted to realize sustainable development taking into account protection - utilization balance with the natural and cultural assets in the sector.

It was aimed at providing the **"Construction"** sector with a human oriented and environmentally friendly structure; National Green Building Information System software program and regulations will be created for the production of structures that are environmentally friendly and energy efficient;

Under the title **"Livable Spaces, Sustainable Environment"**; there is a need for a new urbanisation regulation which will resolve the structural and functional problems of zoning and planning system; in the urban transformation, first the areas that have disaster risk will be renewed taking into account the environmental dimensions; energy efficiency will be increased in the houses; Water resources have been rapidly contaminated due to such reasons as constructions on water basins, discharge of urban and industrial waste waters without treatment, using agricultural drugs and fertilizers, and releasing solid wastes to the receiving media irregularly waste water treatment plant management model will be developed; it is important to disseminate the use of

public transportation systems instead of private cars in the in-city transportation; investments and practices towards alternative transportation types such as pedestrian and bicycle will be encouraged;

Under the title of **“Environment Protection and Sustainable Development”**; policies and strategies are developed towards internalization of green growth approach; there is a need to develop capacity to adapt to climate change; contributions and participation are provided to the United Nations negotiation process, where the policies for combatting global climate change are determined, after 2020; for that purpose, the request for being removed from Annex 1 List of UN Framework Convention on Climate Change has been communicated; opportunities and threats against our country will become clear with the implementation mechanisms in Paris Agreement technical negotiations; the number and surface area of the preserved areas have increased; Green growth is targeted with environmentally friendly approaches in areas such as energy, industry, agriculture, transportation, construction, services and urbanisation; Capacity building actions will be continued towards protecting the nature and preventing the pollution including as the first water, air a software, machinery and equipment needs for environmental monitoring and inspection activities which are to be conducted for the purposes of monitoring air quality, developing infrastructure and preventing pollution in the seas; Continuing the works for calculating, monitoring and projecting greenhouse gas emissions and thus ensuring the monitoring of national contribution presented to the Secretariat of UN Framework Convention on Climate Change; Harmonization and awareness raising activities will be carried out in sectors which will be affected from climate change;

Under **“Soil and Water Management”**; Actions will be carried out towards increasing the capability and capacity of agricultural sector towards adaptation to climate change; assessment of impacts of climate

change on agriculture and forest ecosystems will be started to be evaluated as the agricultural data bases are integrated to works on issues such as basin, drought, deforestation; river basin management plans will be prepared for the effective use and protection of water resources;

Under the scope of **“Disaster Management”**; the magnitude and frequency of natural disasters have been increasing with the effect of distortions in climate and environmental conditions; negative effects of disasters increase due to wrong land use and irregular structuring; National Disaster Strategy and Action Plan have been prepared;



3. CLIMATE CHANGE IN LAWS

Regulations have an important place among the policy tools in combatting with climate change. There are regulations in the legal provisions which are directly and indirectly related to climate change. Under this title, the extent to which the laws related to the issue contributes in or prevents the combat with climate change, will be analyzed.

In order to evaluate the laws in a systematic manner, a classifications were made according to the areas of regulations and sectors and laws were analyzed under the titles of energy, agriculture, sink areas, structuring, motor vehicles, products and consumers. The Environmental Law was separately quoted as it is a fundamental law.

3.1. Laws Related to Energy

Energy sector is the primary sector in carbon emission which is the basic reason for global warming and thus the climate change. For that reason, laws regulating the energy production, use of resources and energy consumption are directly related to climate change according to their contents. Within the scope of this sector, Energy Efficiency Law, Law on Use of Renewable Energy Resources for the Production of Electric Energy and laws regulating the energy markets as well as laws related to fossil fuels are analyzed.

3.1.1. Laws Related to Fossil Fuels

Fossil fuel resources, namely oil, natural gas and coal exploration, that cause climate change are regulated with laws.

The purpose of **Turkish Oil Law** dated 30/05/2013 No. 6491 is to ensure fast, continuous and effective exploration, development and production of oil resources in accordance with national interests.

The law defines oil as raw oil and natural gas. The law which covers the principles and procedures related to the regulation, direction, encouraging and inspection of oil exploration and production activities characterizes any actions or omissions in the activities that leads or could lead to distortion of human health, pollution of environment, and destruction of the assets or places under the scope of Law on Protection of Cultural and Natural Assets as dangerous action and puts sanction on such actions. It is emphasized in the Law that the oil right holder shall not create any hazardous action and that the installations and equipment required could only be established in a manner not cause any burden on the local community, damage and endanger the nature and the environment. The law further indicates taking the required measures for protecting the surface, underground, coastal and sea waters in quality and quantity during oil exploration and extraction activities.

Ministry of Energy and Natural Resources and Mining and General Directorate of Mining and Oil Affairs are authorized for the enforcement of the Law.

Under the scope of the Law, Turkish Oil Law Implementation Regulation was enacted in 2014.

It is also necessary to remind the Law on Principles of Intervening in Emergencies and Compensating the Losses in case of Pollution of Sea Environment with Oil and Other Hazardous Substances, dated 03/03/2005 No. 5312, which was enacted taking into account the rights and obligations arising from international law and domestic law on the issue of protecting sea during extraction and transportation of oil.

With the Law On Transit Passage of Oil Through Pipelines dated 23/06/2000 No. 4586, principles and procedures are determined in relation to transit passage of oil through pipelines. Under Article 7 of the Law titled "Environment", the obligation of not causing any damage on the environment, including ground, underground and inland waters, sea, air,

lake, fauna and flora and other natural resources during the performance of project activities.

The extraction of coal, which is another type of fossil fuel, is being realized within the scope of **Mining Law** dated 4/6/1985 No. 3213. The Law includes provisions related to observing the harmony with environment during works and processes related to mining.

Under Article 7 titled "Permissions in Mining Activities" of the Law, it is indicated that restrictions could be imposed taking into account the environmental impacts of the investment to be made. According to the same Article, it is necessary to obtain permission from relevant institutions for the mining activities on special environmental protection zones, national parks, wild life protection and development, fields, preserved forests, areas that are required to be protected according to Coastal Law and the degree 1 site areas. Permission should be given according to the provisions of the Forestry Law for activities to be carried out in the public forests. Permission could be given within the principles specified in the environmental impact assessment report for the activities in wild life protection and development fields. Provisions are foreseen under the Article related to performing the mining activities, which could affect drinking and utilization water reservoirs, in a manner not to damage environmental and human health. Mining activities which are determined to have damaged environmental and human health should be stopped under relevant measures are taken. It is indicated that Environmental Impact Assessment (EIA) processes would be performed by the Ministry of Environment and Urbanisation and an activity without EIA decision is tied to an administrative fine.

With the amendment made in the Mining Law with the Law dated 10.09.2014 No. 6552, which was indicated in the justification section to be made due to the grief accident experienced in the coal mine in Soma in the same year, new conditions were foreseen in mine enterprises and labor safety was tried to be

increased. Afterwards, regulations were made three times in the Law in order to cover the cost increases of underground mine enterprises that extract lignite and coal.

The implementation institution of the Law is the General Directorate of Mining and Oil Affairs, which is an affiliated body of the Ministry of Energy and Natural Resources.

Law on Acquisition of Real Estates in the Coal Basin dated 05/06/1986 No. 303 and the Law on Operation by the State of Quarries in Ereğli Coal Basin dated 30/05/1940 No. 3867, are specifically dealing with the coal basins located in Western Black Sea Region.

It is also necessary to indicate the Law Regulating the Processing of Boron Salts Trona and Asphaltite Mines and Nuclear Energy Raw Materials, and Return of Some of Lignite and Iron Fields dated 10/06/1983 No. 2840. The annex of the Law indicates the lignite sources that will be operated by public institutions.

Law on Installation and Operation of Electric Energy Production Facilities with Build - Operate Model and Regulation of Energy Sales, dated 16/07/1997 No. 4283, which was issued in order to determine the principles and procedures related to the sales of energy and permitting the installation and operation of thermal plants, cover the thermal plants which use as resource the coal, natural gas and fuel oil. Plants that will be operated with other renewable energy resources, hydroelectric, geothermal, nuclear plants are excluded from the scope of the Law. Since the energy investments expected could not be ensured with the Law on Assignment of Other Institutions Than Turkish Electricity Institution for Production, Transmission, Distribution and Trading of Electricity dated 4/12/1984 No. 3096, the sales, investment and operating of electricity energy with the ownerships to be held by the owners of thermal plants were regulated with this Law and it was aimed at transition of Build - Operate system. Thereafter, some regulations related to hydroelectric production

facilities were added to the Law with provisional articles.

General Directorate of Turkey Hard Coal Enterprises (TCC), General Directorate of Turkey Coal Enterprises (TKI), General Directorate of Turkey Petroleum Corporation (TPAO), General Directorate of Petroleum Pipeline Corporation (BOTAŞ) are the public economic enterprises operating in the fossil fuels sector.

3.1.2. Energy Efficiency Law

Energy efficiency was regulated with a code law. The fact that it is regulated under a separate law could be considered as an indicator of the importance put on the subject. Contribution to low carbon economy by providing energy efficiency is very important in a country like Turkey where carbon emission is mostly due to the energy sector and which is dependent to abroad in energy.

The purpose of Law No. 5627 dated 02/05/2007 is the efficient use of energy, prevention of waste, alleviating the burden of energy costs on the economy and increasing efficiency in the use of energy resources and of energy to protect the environment.

The law covers principles and procedures related to increasing and supporting energy efficiency in industrial enterprises, buildings, electrical power generation facilities, transmission and distribution networks and transportation, increasing and support energy efficiency, energy awareness in the society, and benefiting from renewable energy resources.

Energy efficiency is defined as increasing life standard and service quality in the buildings and reducing energy consumption in industrial enterprises without causing any fall in production quality and amount.

Under Article 6 of the Law titled "training and awareness rising", the training and awareness rising activities towards increasing the effectiveness of

energy efficiency services and raising energy awareness include the issues of importance of energy efficiency in protecting the environment and climate change as well as efficiency use of energy in the daily life. In this format, Energy Efficiency Law is among the rare laws that directly include the expression of climate change.

The Law also includes provisions related to transportation sector. Under paragraph (f) of Article 7 which regulates the practices aimed at increasing energy efficiency; it is stated in relation to increasing energy efficiency in transport that the procedures and principles regarding the reduction of unit fuel consumption of vehicles, increasing the efficiency standards in vehicles, expanding public transportation, and establishing advanced traffic signaling systems will be regulated by regulation.

The following are regulated in Energy Efficiency Law in relation to efficient use of energy in the buildings:

- Appointment of energy manager in buildings and schools of a certain size or energy consumption
- In buildings with central heating system, devices providing heat or temperature control and systems enabling sharing of heating costs as per heat utilization amount shall be used
- Energy performance in buildings with a certain size will be regulated by a regulation to cover the issues of architectural design, heating, cooling, heat insulation, hot water, electricity installation and illumination, and utilization permit shall not be given in case of any violation;
- In certain construction projects, energy identity certificate will be issued which involves the information related to energy requirement, insulation characteristics of the buildings, efficiency of heating and/ or cooling systems and energy consumption classification of the building.

The Law also imposed tasks and responsibilities to industrial enterprises for ensuring energy efficiency.

The Law also regulates the implementation, research and development projects towards reducing energy intensity and for energy efficiency.

It is indicated also in the Law that the principles and procedures related to having the thermal plants benefit from waste heats, open area illuminations, and encouraging alternative fuel use such as biofuel and hydrogen, will be set out in the regulation. With the additional Article 1 which is added to the Law with Law No. 21/03/2018 No. 7103, public institutions and organizations were provided with the opportunity to conclude energy performance contracts without being subject to Public Tender Law in order to reduce their energy consumptions or energy expenses.

The ministry related to the implementation of the Law is the Ministry of Energy and Natural Resources. General Directorate of Electricity Affairs Survey Administration (EIE), which is shown as the main service unit in the Law, was closed in 2011 and replaced first with General Directorate of Renewable Energy and then General Directorate of Energy Affairs. The Energy Efficiency Coordination Board, which was established with the Law, was abolished, and it was determined with the Presidency Circular No. 3 that the tasks and authorities of the Board would be used by the Ministry of Energy and Natural Resources.

Regulations issued relying on the Energy Efficiency Law are as follows:

- Energy Performance in Buildings Regulation (2008)
- Regulation on Increasing Efficiency in the Use of Energy Resources and Energy (2019)
- Regulation on Principles and Procedures Related to Increasing Energy Efficiency in Transportation (2008)
- Energy Efficiency Inspection Regulation (2018)
- Regulation on Assignment of Energy Manager in Schools Affiliated to the Ministry of National Education (2009)

Among the important documents related to the purpose and scope of Energy Efficiency Law are Energy Efficiency Strategy (2012-2023) and National Energy Efficiency Action Plan (2017-2023).

3.1.2.1. Energy Efficiency Strategy (2012 - 2023)

The document which includes energy policy targets related to energy efficiency aims at reducing the amount of energy spend per gross domestic product of Turkey as of 2023 by minimum 20%. Seven strategic areas have been identified in order to reach this target.

1. Mitigating energy intensity and energy losses in the industry and services sector
2. Mitigating the energy demands and carbon emissions of the buildings; disseminating sustainable environmentally friendly buildings that use renewable energy sources
3. Ensuring transformation of energy efficient products to the market
4. Increasing efficiency in electric generation, transmission and distribution; mitigating energy losses and hazardous environment emissions.
5. Mitigating the unit fossil fuel consumption of motor vehicles, increasing the share of railways for load and passenger transportation and public transportation within the city and prevent unnecessary fuel consumption for in-city transportation and mitigate emissions that are hazardous to the environment.
6. Using energy efficiency and effectively in public institutions
7. Strengthening corporate structures, capacities and collaborations, increasing advance technology use and awareness activities and creating financing environments outside the public.

Under the strategic objective related to buildings, the document defines actions towards bringing maximum energy requirement and maximum emission limitation to buildings and imposing administrative sanctions to those whose carbon

dioxide emission amount is above the minimum values defined in the regulations.

3.1.2.2. Energy Efficiency Action Plan (2017- 2023)

In the document published in the Official Gazette dated 02/01/2018, it is targeted to perform fifty-five actions under a total of six categories including building and services, energy, transportation, industry and technology, agriculture and horizontal issues between 2017 - 2023, and thus to mitigate the primary energy consumption of Turkey by 14% compared to the baseline scenario (continuity of the current status) in the year 2023.

The Action Plan which is quite comprehensive revisits the works to be conducted under the scope of development plan and strategy in line with up to date conditions.

3.1.3. Law on Using Renewable Energy Resources for the Purposes of Producing Electric Energy

This law dated 10/05/2005 No. 5346 includes dissemination of using renewable energy sources for the purposes of electricity energy generation, providing these sources to the economy in a reliable, economic and quality manner, increasing resource diversity, mitigating greenhouse gas emissions, evaluating the wastes, protecting the environment and protecting the manufacturing sector needed for realizing these purposes. The Law is important in the sense that it is the only law that includes the expression of greenhouse gas emission.

Renewable energy sources are defined in the law as non-fossil energy sources such as hydraulic, wind, solar, geothermal, biomass, gas (including landfill gas), wave, current energy and tide from biomass.

With the amendments made with Law dated 29/12/2010 No. 6094, it could be said that the renewable energy sector has been revitalized

significantly and attracted the interest of investors after the revision of fixed price guarantees.

The Law includes support a mechanism (YEKDEM) based on fixed price guaranteed purchase from which those performing production activities based on renewable energy sources could benefit, which has been in force since 2011.

While the Law serves towards mitigating the greenhouse gas emission by supporting energy production from non-fossil resources, it also constitutes a contradiction by hosting the risk of negatively affecting carbon sink areas with certain incentive elements it contains. Under Article 8 titled "applications related to land need", it is regulated that real estates with the character of forest could be used by permission for energy transmission line up to the network connection point and access roads or facilities for the purposes of generating electricity energy from renewable energy resources.

In case that the real estate to be used is a pasture land, summer pasture, winter pasture or grassland and pastureland owned by public under the scope of Pasture Land Law, the same Article regulates whether these could be rented by registration in the name of the Treasury after changing the purpose of allocation, or whether easement right could be established.

The Article also regulates that Forest Villagers Support Revenue, Forestation and Erosion Control Revenue shall not be received from the Enterprises.

It is also stipulated in the Article that installation of electricity production facilities based on renewable energy sources could be permitted on national park, natural park, natural monument and nature protection areas, preservation forests, wild life development fields, special environmental protection regions by receiving no objection of the Ministry and on natural sit areas of the relevant protection regional board.

Ministry for Energy and Natural Resources, the Energy Market Regulatory Authority, State Hydraulic Works, General Directorate of Mineral Research and Explorations, EIE, Turkey Electricity Transmission Corporation of Turkey Electricity Trading and Contracting Company (TETAS) are authorized for the execution of works and processes related to the Law. General Directorate of Renewable Energy, which has undertaken the tasks of EIE after its closure, was not organized as a separate unit in the Ministry in the new structuring, and its tasks and authorities were transferred to General Directorate of Energy Affairs. TETAS was closed and merged with Energy Exchange Istanbul.

Some of the regulations issued based on the Law are as follows:

- Regulation on Electricity Production Facilities Based on Solar Energy (2011).
- Regulation on Unlicensed Electric Production in Electricity Market (2013) (With amendments made in 2016 in this Regulation, arrangements were made in relation to renewable energy production cooperatives).
- Regulation of Contest In Relation to Associate Degree Applications Made for Establishing Production Facility Based on Wind or Solar Energy (2017)
- Regulation on the use of Geothermal Resource Areas Towards Electricity Energy Production (2008)
- Regulation on Certification and Supporting of Renewable Energy Resources (2013)
- Regulation on Principles and Procedures Related to Signing of Water Utilization Right Agreement in Order to Engage in Production Activities in the Electricity Market (2019)
- Regulation on Energy Sector Research - Development Projects Support Program (ENAR) (2010).
- Renewable Energy Resource Areas Regulation (2016).

- Regulation on Supporting Domestic Parts Used in Facilities Producing Electricity Energy from Renewable Energy Resources (2016).

It is also necessary to indicate the Principles and Procedures Related to Unlicensed Production Applications for Production Facilities Based on Solar Energy and Connected from Same Measurement Point with The Consumption Point in the Electricity Market and Utilization of Energy in Excess of Need, which was published in the Official Gazette as Energy Market Regulatory Authority Decision on 18/01/2018. Principles facilitate the installation of mini solar plans applied to roof and front and provide for using the excess energy.

An important document for the renewable energy policies towards future is the Turkey National Renewable Energy Action Plan covering 2013-2023 period, which was prepared relying on the Climate Change Action Plan, which is one of the guidance documents in the field of energy. In the Action Plan, the target was identified as leveraging the electricity production based on renewable energy sources such as hydraulic, wind, solar and geothermal up to minimum 30% by the year 2023.

Renewable energy could be the subject of incentives with tax regulations. For example, with an amendment made in the Value Added Tax Law with the Law No. 7161 dated 17/01/2019, the construction of renewable energy facilities in organized industrial zones and small industrial sites and delivery of goods to and performance of services for them are taken under the scope of exemption.

3.1.4. Law on Geothermal Sources and Natural Mineral Waters

The purpose of the Law No. 5686 dated 03/06/2007 is to regulate the principles and procedures related to effective exploration, research, development, protection of geothermal and natural mineral water springs, entitlement on these sources and transfer of

rights, usage and abandoning in compliance with environment. The Law also regulates the use of gases of geothermal origin.

The importance of protection of spring reservoir is highlighted in the Law and it is indicated that the protection of geothermal system that creates the spring, not wasting the spring and protection of the environment are primary issues and that it is necessary to perform survey for protection areas of the source before the operating activity.

Despite the fact that geothermal sources are included in the Law on Using Renewable Energy Sources for Electricity Energy Production, geothermal sources have become a subject of a separate law due to the presence of ways of use other than energy production.

According to the law companies which carry out geothermal source distribution and production are considered as industrial enterprises and waste treatment organizations and are able to use all incentives and rights granted to industrial organizations and waste treatment organizations, including at first the electricity rates.

For the works and processes related to the implementation of the Law, Ministry for Energy and Natural Resources and its affiliated organizations, General Directorate of Mining Affairs, General Directorate Mine Exploration and Analysis and the provincial special administration of the place where the resource is located, are authorized. In the restructuring, the General Directorate of Mining Affairs and General Directorate of Oil Affairs have merged to create General Directorate of Mining and Oil Affairs.

Based on the Law, the Regulation on the Use of Geothermal Resource Areas for Electricity Energy Production (2008) and Geothermal Resources and Natural Mineral Waters Law Implementation Regulation (2007) have been issued.

Whereas geothermal resources in Turkey were used for thermal tourism purposes until recently, nowadays their use for the heating of residential areas and electricity production with geothermal energy plants are increasing.

3.1.5. Laws Regulating Energy Markets

Electricity Market Law dated 14/03/2013 No. 6446 sets out its purpose as presenting the electricity to the use of consumers in a way that is compliant with the environment and the provisional Article 8 grants period until 31/12/2019 in order to make the production facilities in compliance with environmental regulations. In the Law, there are provisions that facilitate and encourage the production of electricity on renewable energy resource areas. With Annex 2 article added to the Law with the Law No. 7164 dated 14/02/2019, it become possible to finalize within a certain period the permits to be received on forest and national park fields for construction and timely commissioning of facilities related to transmission and distribution of the energy, and to receive half of the permit charge; and to grant permit to those whose forestry permit processes have been completed.

Natural Gas Market Law dated 18/04/2001 No. 4646, indicates in the objective article that the natural gas will be presented to the use of consumers so as not to damage the environment.

Law Amending the Liquefied Petroleum Gases (LPG) Market Law and Electric Market Law No. 5307 dated 02/03/2005, characterizes actions or omissions that cause or could cause the pollution of the environment as hazardous actions and brings conditions related to environment for those who will engage in activities in the market.

Oil Market Law dated 04/12/2003 No. 5015 brings conditions related to environment for persons to engage in activities in the market.

Laws that regulate the energy markets according to their sources regulate the obligations of those who operate in the market, sanctions, as well as the operation of the market and principles and procedures related to licenses. Excluding the incentives towards using the renewable energy resources in the law that regulates the electricity market, other regulations are not directly related to the combat with climate change and include certain provisions on not damaging the environment and compensating the damage to be given to the environment, which relates to environmental protection approach.

3.2. Laws Related to Agriculture

Since the agricultural activities are dependent on nature and meteorological conditions, the agricultural sector is among the most sensitive sectors against climate change, which will be directly affected. Agricultural sector is a sector which, in addition to supplying the food, provides raw material to connected industries and creates employment. When viewed from this aspect, the impacts of climate change on agriculture could lead to important results in social and economic terms.

Whereas the prevention of climate change is highlighted from the point of land use within the scope of agricultural soils which are sink areas, the regulation of agricultural activities and precautions and opportunities towards risks become important when viewed in relation to adaptation to climate change.

3.2.1. Agricultural Law

The purpose of Law dated 18/04/2006 No. 5488 is to determine policies for developing and supporting the agricultural sector and rural area in line with the development plan and strategies and to make relevant arrangements in that direction.

Agriculture Law regulates the issues which are closely related to climate change such as protection of environment, development of soil and water resources, protection of biodiversity and ecosystems, and combatting natural disasters.

The Law also includes principles of sustainability with integral approach in agricultural production and development, human health and environmental sensitivity among the principles of agricultural policies.

Among the priorities of agricultural policies are the following issues which could be considered within the scope of adaptation to climate change.

- Developing risk management mechanisms against natural disasters;
- Performing land use plan;
- Developing and rational use of soil and water resources

The Law included “supports for protection program for agricultural lands for environmental purposes” within the scope of agricultural support tools. Accordingly, it is foreseen that in agricultural lands which are exposed to erosion and negative environmental impacts, protection programs for agricultural lands for environmental purposes could be provided in order to encourage the producers which engage in processed agriculture to use their lands for natural vegetation, pasture lands and grass lands, organic agriculture and forestation. Besides, environment is among the priority and preferential issues in the agricultural support practices.

The Law includes regulations related to protection and development of biodiversity, genetic sources and ecosystems and ensuring biosafety.

The Law also stipulates identification of agricultural basins for the intensification of agricultural production on areas suitable for the ecology,

support, organizing, specializing and executing in an integrated manner.

Provisions of the Law related to rural development includes the principles of developing agricultural and non-agricultural employment in rural areas, increasing and differentiating the revenues, taking measures towards leveraging the training and entrepreneurship level of the women and young population, participation in rural, development programs, projects and activities, bottom to up approach, developing local capacity and institutionalization.

Some of the regulations issued within the scope of the Law are as follows:

- Agricultural Basins Regulation (2010)
- Agricultural Production Registry System Regulation (2014);
- Regulation on Good Agricultural Practices (2010);
- Regulation on Protection and Sustainable use of Water Products Genetic Resources (2012).

Ministry of Agriculture and Forestry is responsible principally from the implementation of the Law. The Agricultural Support and Orientation Board, which was included in the Law, was abolished and it was indicated with the 3rd Presidential Circular that the tasks shall be fulfilled by the Ministry of Agriculture and Forestry and Ministry of Treasury and Finance.

It is important that Agricultural Law, which regulates the agricultural sector on the basis of policies, principles and supports, should be implemented with the approach of climate change.

3.2.2. Soil Protection and Land Use Law

Law dated 03/07/2005 No. 5403 sets out the basic principles for the protection, development, balanced and efficient use of the soil and its management; and regulates the principles and procedures which will ensure classification of agricultural lands, and

planned use of agricultural lands in accordance with the principle of sustainable development with environmental priority.

It is indicated in the Law that suitable land use forms will be determined taking into account the characteristics of the soil, capability of the land and other land features in line with the principle of sustainable development with environmental priority based on the water potential, soil data loss and maps, which constitute foundation for land use plans and country and regional plans and other physical planning, and that the land utilization plans will include agricultural lands, pasture lands, forest lands, areas identified under special laws, residential areas, infrastructure facilities for social and economic purposes and other land use forms.

Besides, it is also regulated in the Law to prepare soil protection projects in order to prevent soil losses that occur as a result of natural events in addition to land utilization plans and projects for agricultural purposes.

It is regulated under Article 15 of the Law that the areas sensitive against erosion shall be determined and protected. The Article has reference directly to climate change in its provision which foresees that relevant measures shall be taken in collaboration between public institutions and organizations, NGOs in relation to areas that are exposed to deforestation where soil distortion is seen due to various reasons, including climate changes and human activities in arid, semi-arid and low-precipitation places.

As a new are of protection, the regulation which is directed towards determining the planes, which have high agricultural production potential and where soil loss and land distortions rapidly develop due to such reasons as use for unintended purpose or erroneous use, pollution, erosion, as big plane protection area. The number of planes which are determined as big plane protection area, which are resembled to "agricultural site area", is still 257.



The Law will serve in combatting climate change with the protection and development of agricultural soils. However, it is known that reductions and non-purpose use on agricultural soils are ongoing.

The principle responsible from the implementation of the Law is the Ministry of Agriculture and Forestry, General Directorate of Agricultural Reform.

Regulation on Protection, Utilization and Planning of Agricultural Lands, and Land Consolidation Implementation Regulation (2017) and Regulation on Actions and Processed for Granting Agricultural Land (2018) have been published based on the Law.

3.2.3. Agricultural Reform Law on the Land Regulation of Irrigation Lands

The purpose of the Law dated 22/11/1984 No. 3083 is to ensure that on irrigation areas and areas deemed necessary by the President, the soil shall be efficiently operated, protected, that farmers with no soil shall be able to establish agricultural family enterprises, that agricultural soils are consolidated and prevented from being defragmented, and new settlement sites shall be established.

Lands which remain outside the borders of the forest, lands where agricultural production is performed, which are used as pasture lands, summer and winter pastures, or lands which could be opened for production, are characterized as agricultural land under the scope of the Law.

It is aimed with the Law to use the soil in accordance with the ecological and economic conditions of the region it is located, using soil and water resources in accordance with modern agricultural procedures, protecting the same, processing or operating by increasing efficiency.

It cover such activities as in-field development services, field paths and artworks, open and closed

draining, irrigation facilities, land reclamation using chemicals, soil protection and reclamation of brook bed.

The land consolidation and in-field development services included in the Law are being carried out by General Directorate of State Hydraulic Works, and other services by the Ministry of Agriculture and Forestry.

3.2.4. Agricultural Insurances Law

Agricultural Insurances Law dated 14/06/2005 No. 5363 is one of the laws that should be handled within the scope of adaptation to climate change. The purpose of this Law is to compensate the losses of the producers due to the risks including such climate events as drought, frost, hail, flood, storm, hurricane and landslide.

Climate change will inevitably affect the agriculture. The importance of the Law in relation to adaptation to the impacts of climate is apparent in the face of gradual increase of frequency and magnitude of extreme weather conditions in our country and heavy loss incurred by the producers.

Works and processes in relation to the implementation of the Law are being carried out by the General Directorate of Agricultural Reform of the Ministry of Agriculture and General Directorate of Forestry and Insurance of the Ministry of Treasury and Finance.

The Regulation on Working Principles and Procedures of Agricultural Insurances Pool, and the Agricultural Insurances Implementation Regulation, which were enacted based on the Law, are dated 2016.

3.2.5. Law on Aids to be Given to Farmers Suffering Natural Disasters

Law dated 20/06/1977 No. 2090 is another law which is related to climate change with the subject of covering the loss incurred by farmers as a result of disasters that occur after extreme weather conditions triggered by climate change.

The purpose of the Law is to determine the principles and procedures related to assistance to be provided to farmers who incur loss as a result of fire, earthquake, landslide, storm, flood, overflow, frost, hail, drought, pests and diseases.

The principle responsible from the implementation of the Law is the Ministry of Agriculture and Forestry, General Directorate of Agricultural Reform. Regulation on Assistance to be Made to Farmers Who Suffered Loss from Natural Disasters issued based on the Law dated 2006, indicates that the producers who have not procured agricultural insurance may not benefit for risks which are included in the implementation year under the scope of Agricultural Insurances Law.

3.2.6. Seeding Law

One of the laws which should be handled within the scope of protection of biodiversity in relation to adaptation to the impacts of climate change, is the Seed Growing Law dated 31/10/2006 No. 5553

The purpose of the Law is to increase efficiency and quality in vegetative production, provide quality assurance for the seeds, and regulate the production and trade of seeds.

The Law covers the regulations in relation to recording of species and genetic resources pertinent to reproduction material related to field plants, garden - vineyard plants, forest plant species and

other species, production of seeds, their certification, trade, and market inspection.

Ministry of Agriculture and Forestry is responsible principally from the implementation of the Law.

In the justification of the Law, it is indicated that the role of private sector in seed growing has become stronger and the seed growing area is regulated accordingly. The fact that global and industrial agricultural companies prevail the market and the certification practice brought with the Law may put the local producers and villagers in a hard position to produce and sell the seeds. In this aspect, there could be the risk of decrease of agricultural activities based on domestic seed species, which have flexibility and resistance against climate change. Taking into account the increasing interests towards domestic cereal species used in the pastries and towards organic agricultural products, the efforts to research, protect, develop and disseminate the domestic species resistant against drought, in particular the wheat and barley seeds, should be supported. In this scope, it is important that the Regulation on Recording, Producing and Marketing of Domestic Species was issued in 2018, which regulates the reproduction, marketing, on-site maintenance and sustainable use of seeds for the purposes of preventing the genetic erosion of local species of field plants, garden - vineyard plants and other plant species in our country.

Separate regulations have been issued for species such as ornament plants, natural flower onions, forest plants, fruit, grains, oily, fibrous, medical and aromatic plants, feed plants and grains for food. Some of the other regulations are as follows:

- Regulation on Transfer of Plant Species, Candidate Species and Reclamation Materials to Seed Growing Institutions, Sales of Seed Production and Marketing Title (2014)
- Regulation for Recording of Plant Species (2008).

3.3. Laws Related to Sink Areas

Areas such as forests, pasture and grass lands have an important place in the slowing down of climate change from two aspects; first for the mitigation of greenhouse gas emissions, and the second is for adaptation to the impacts of climate change. When considered from the point of view of mitigation of emissions, these areas sequester the carbon dioxide in the air through photosynthesis and function as sinks. In particular, forest and wetland areas are important ecosystems for the storage of carbon. These areas could be incurred to negative impacts such as drought and erosion that arise together with climate change. This situation causes the change of the ecosystem and damage of the biodiversity. It is important not to decrease natural resistance of land and maritime ecosystems against the impacts of climate change.

Resources which lead to the highest number of sinks for Turkey are forests, agricultural areas, pasture lands and wetland areas. Sea and inland waters of our country are more than forest and agricultural areas in terms of surface area. Since agricultural areas were handled within the scope of agricultural sector, this section deals with laws that regulate or affect the protection areas which are special ecosystems in terms of their characteristics in addition to wetland areas and forests and pasture lands.

3.3.1. Forest Law

Forests are at the top in the list of sink areas. Forest Law No. 6831, which was adopted on 31/08/1956 and was amended more than forty times up to now and some provisions of which were cancelled by five separate decisions given by the Constitutional Court, is an important law in terms of protection of forests and sustainable forest administration. Forests which have an important function in combatting with climate change, are frequently exposed to interventions due to such purposes as tourism and

energy investments, mine field, opening of new housing and agricultural areas.

Practices under paragraph (B) of Article 2 of the Law regulating the areas which are to be excluded from the forest borders, are known as 2B in the public.

Third and fourth paragraphs of Article 17 of the Law includes regulations related to giving permission so as not to exceed 49 years upon any consideration of public benefit and necessity to construct or locate defense, transportation, energy, communication, water, waste water, oil, natural gas, infrastructure, solid waste disposal and landfills facilities; dams, lakes, street animal shelters and cemeteries, health, education, judicial service and sports facilities of the state, as well as any place and building pertinent to these, on public forests.

With the additional Article 16 which was added to the Law with the Law dated 19/04/2018 No. 7139, it was made possible to register in the name of Treasury in the title deed the areas for which no benefit is considered to protect as forest within the context of science, and which could not be transformed into agricultural areas, as well as stony, rocky, unproductive areas on which residential sites are located or which are suitable for the construction of residential areas as of the date of enforcement of this Article, by excluding outside the borders of forests. A remedial is foreseen by establishing a forest on the real estate so as not to be less than two folds the area that is excluded from the borders of the forest.

Pursuant to the Forest Law, it is prohibited to burn straw or similar vegetation within the borders of villages that are located four kilometers to forests or which include forests within their legal borders.

Tasks under the scope of Forestry Law are basically carried out by the General Directorate of Forestry affiliated to the Ministry of Agriculture and Forestry.

Some of the regulations issued based on the Law are as follows:

- Regulation on Private Forests and Forests Owned by Public Institutions That Have Legal Personality (2016)
- Regulation on Separation and Administration of Preservation Forests (1984)
- Regulation on Determination and Administration of Plateau Areas in Public Forests (2013)
- Forest Engagement Regulation (2008)
- Forest Cadaster and 2/B Implementation Regulation (2012)
- Regulation on Places to be Excluded from Forest Borders According to paragraph (A) of Article 2 of Forest Law No. 6831 (2007)
- Regulation on Benefitting from Trees and Shrubs in Places Which Are Not Considered as Forests (2012).

It is also worth mentioning National Forestation and Erosion Control dated 23/07/1995 No. 4122 which regulates the forestation and erosion control works to be carried out for the purposes of increasing the forest field and tree assets on areas under the control and disposition of the state, lake and river sides, and lands under the ownership and disposition of legal persons, to establish and develop the balance distorted between soil, water and plant, and to protect environmental values.

3.3.2. Law on Supporting Development of Forest Villages, Evaluation of Sites Excluded from Forest Borders in the Name of Treasury and Selling of Agricultural Lands owned by the Treasury (2B Law)

The reason for naming the Law dated 19/4/2012 No. 6292 as 2B Law is that it relates to the exclusion from the forest borders based on paragraph (B) of Article 2 of the Forest Law and the evaluation of these areas.

The purpose of the Law is to determine principles and procedures in relation to evaluating the places which are excluded from forest borders in the name of the Treasury, creating new forest areas, settling the villagers from the villages located in or adjacent to the public forests which are resolved to be transported and thus supporting the development of forest villagers, as well as selling of agricultural lands owned by the treasury.

Engaging in agricultural activities on forest lands, constructing houses and various facilities lead to legal problems and various legal regulations have been made in order to resolve the actual and constricted situation, however these were cancelled by the Constitutional Court. Finally, the intention was to resolve the property problems with this Law.

After being public in 2012, the application and payment periods were extended with the law in 2014 and 2016, with Cabinet Decision in 2017 and also with law in 2018.

Works and procedures under the scope of the Law have been carried out by the General Directorate of Forestry affiliated to the Ministry of Agriculture and Forestry, Ministry of Treasury and Finance, Ministry of Environment and Urbanisation and its affiliated organization Public Housing Administration.



3.3.3. Cadaster Law

Law dated 21/06/1987 No. 3402 indicates the borders of real estates on the land and the map and aims at determining their legal status.

The importance of Cadaster Law from the point of view of climate change is related to the planning of forest cadaster, soil and water resources management and land use planning. The Cadaster Law is important in protecting and developing the forests which are the leading carbon sink areas. As a matter of fact, it is necessary to determine the forest borders in a healthy manner for a forest management. This is only possible with forest cadaster. Although forest cadaster is being made according to the Forest Law, with the amendments made in the Cadaster Law and Forest Law, it was regulated that forest cadaster would be made according to the Cadaster Law if there is any forest with cadaster completed on areas where cadaster work is being performed.

Tasks within the scope of Cadaster Law are being carried out by the General Directorate of Title Deed and Cadaster affiliated to the Ministry of Environment and Urbanisation.

3.3.4. Pasture Land Law

Pasture Land Law dated 25/02/1998 No. 4342 regulates the identification of pasture lands, summer pasture lands, winter pasture lands, grasslands and grassy areas, their limitation and allocation, having them used in accordance with the rules, performing their maintenance and reclamation and thus increasing and maintaining their efficiency, inspecting their use, protecting them and changing the purpose of use when required.

In this scope the Article of the Law which is most amended is the Article 14 which is titled "Modification of the Purpose of Allocation". Whereas, in the initial

version of the Article, it was possible to amend the purpose of allocation for mining and oil activities, tourism investments, public investments and preparation of settlement plans, the Article in question was amended eight times for various reasons. With these amendments, it was regulated to allocate pasture lands, summer pasture and winter pasture lands when needed for urban transformation and development project areas, construction of energy plants, oil transmission activities, electricity and natural gas market activities, industrial zones, technology development zones, organized industrial zones and free zones, electronic communication infrastructure, and finally as amended by the Law dated 17/01/209 No. 7161, for geothermal springs and natural mineral waters.

With the provisional Article 3, which was added to the Law in 2004 and was amended for three times afterwards, it was tried to resolve the ownership issues in relation to places which could not be technically used as pasture lands, summer and winter pasture areas as being occupied as residential areas and remaining within the borders of municipality and the vicinity area.

The duty to ensure reclamation and protection of pasture lands, grasslands and summer and winter pasture lands, is undertaken by the General Directorate of Vegetative Production of the Ministry of Agriculture and Forestry.

Based on the Law, Regulation on Principles and Procedures Related to Animal Grazing in Forests and on Pasture Lands, Summer and Winter Pasture Lands in Forests, dated 2012, and the Pasture Land Regulation dated 1998, were enacted.

3.3.5. Tourism Incentive Law

Tourism Incentive Law dated 12/03/1982 No. 2634 regulates the tourism sector, as the name suggests, and the investments and incentives related to this. The Law which regulates an important sector for

Turkey has been subjected to 15 changes since the date of issuance.

The provision of Tourism Incentive Law that is directly related to climate change is the Article 8 which regulates the allocation of forests to tourism investments.

With the additional Article 5, which was added to the Law with the Law dated 23/5 2019 No. 7175, the allocation of facilities for accommodational purposes in forest areas and the recreational areas in the accommodation facilities, were regulated.

General Directorate of Investments and Enterprises carries out the tasks and authorities granted to the Ministry of Culture and Tourism in relation to the determination, and announcement of tourism regions, areas and centers and the plans of these places.

Among the regulations which were issued within the scope of the Law are the Regulation on Allocation of Public Real Estates for the Tourism Investments (2006), Regulation on Preparation and Approval of Zoning Plans in Culture and Tourism Protection and Development Regions and Tourism Centers (2003) and Regulation on Determination and Announcement of Tourism Centers and Culture and Tourism Protection and Development Regions (2004).

3.3.6. National Parks Law

Law dated 09/08/1983 No. 2873 aims at identifying and protecting the national park, natural park, natural monument and natural protection areas. The fact that the areas protected by the Law function as sink is important in terms of combatting climate change. However, there exists a risk from the point of national parks that according to the Law, permission could be given for research and operating licenses or concessions pursuant to mining and oil laws for real and private law legal persons in order to construct

buildings and facilities for tourism purposes and for any type of plans, projects and investments to be made by public institutions and organizations.

Ministry of Agriculture and General Directorate for Protection of Natural Assets and General Directorate of Natural Assets Protection of the Ministry of Environment and Urbanisation have duties and authorities to manage the national parks, natural parks, natural monuments and natural protection areas.

National Parks Regulation (1986) covers the works and processes in relation to allocation, planning, development, protection, management and presentation of national parks, nature parks, nature monuments, nature protection fields and in-forest resting sites.

Regulation On Principles and Procedures Related to Determination, Registration and Approval of Protected Areas (2012) identifies the principles and procedures related to registration, approval and announcement of national parks, nature parks, nature monuments, natural protection areas and wetland areas, as well as the determination, registration, approval, amendment and announcement of nature assets, natural site areas and special environmental protection zones.

3.3.7. Protection of Cultural and Natural Assets Law

Natural assets listed under the scope of Law dated 21/07/1983 No. 2863, are the site areas, preservation areas and natural site areas, which are required to be protected due to their natural characteristics, and these are exceptional places and values that are located in the sink areas. From this point of view, the Law is important as a climate-friendly regulation to the extent that it is efficiently enforced in line with its purpose. It is foreseen under the Law to prepare zoning plan and management plan for protection purposes for areas which are required to be

protected, and principles and procedures in relation to the protection and utilization of these areas are set out.

The Law foresees the establishment of Cultural Assets Protection Regional Boards in regions to be determined and Cultural Assets Protection Higher Board affiliated to the Ministry of Culture and Tourism, in order to ensure that services related to real estate cultural assets to be protected are carried out in accordance with scientific principles. The relevant unit of the Ministry is the General Directorate of Cultural Assets and Museums.

The ministry authorized and mandated in relation to natural assets, other than movable natural assets, natural site areas and the protection areas related to these, is the Ministry of Environment and Urbanisation. It is foreseen under the Law to establish Natural Assets Protection Central Commission and, at the peripheral level, Natural Assets Protection Regional Commission, within the body of the Ministry.

Some of the regulations issued based on the Law are as follows:

- Regulation on Replacement of Real Estates with Construction Prohibition Located in Natural Assets, Natural Site Areas and Special Environmental Protection Regions, With Treasury Properties (2013)
- Regulation on Plans to Be Made on Protected Areas (2012)
- Regulation On Procedures and Principles of Work and Establishment of Natural Assets Protection Commissions (2011)
- Regulation on Administration of Places Under State Ownership and Disposition Located in Natural Asset and Natural Site Areas and Specially Protection Areas (2013).

3.3.8. Law on Reclamation of Olive Cultivation and Grafting of Foreign Olives

Law dated 26/01/1939 No. 3573 aims at protection and maintenance of olive cultivation areas and development of olive cultivation sector. Despite being a very old Law, it was modified only for three times in the years 1939, 1995 and 2008. The Law aims at preventing any interventions on the olive cultivation areas other than for olive cultivation activities. Under Article 20 of the Law, it was emphasized that olive cultivation fields would not be narrowed down and the structuring exception brought afterward was kept very limited. According to this amendment which was made in 2008, in case that the olive cultivate fields which are located within the municipality borders are included within the scope of zoning limits, the total structuring will not exceed 10 % of the olive cultivation area and the removal of olive trees on these fields shall be subject to permission and no olive tree shall be cut off and removed from its place if there is no obligation to do so. Areas where the Law shall not be implemented were shown under the Annex Article 2, which was added to the Law with the amendment in 1995.

The regional organization of the Ministry of Agriculture and Forestry include Olive Cultivation Research Institute in Bornova/Izmir and Hatay, and Olive Production Station Directorate in Edremit/Balikesir.

The Regulation on Reclamation of Olive Cultivation and Grafting of the Wild, which was issued relying on the Law, is dated 1996.

3.3.9. Laws Related to Wetland Areas and Water Resources

According to Ramsar Convention and the Environmental Law, wetland areas are defined as all waters, natural or artificial, permanent or temporary, still or flowing, fresh, salty or bitter, as well as swamps, reeds, wet grasses and peat beds. Wetland areas which cover sea, lake, river and underground waters as well as coasts and more are important for the balancing of climate as being reservoirs that accumulate and collect significant amount of carbon. Wetland areas, which regulate the water regime and undertake preventive function against natural disasters, store the water and reduce the impact of floods when there is excessive precipitation, and when the precipitation is less, they release the water they stored and provide solution to water scarcity; they prevent ingress of sea water on coasts, and they protect the coastal line. Wetland areas, which are the ecosystems which enable for the sheltering of characteristic plant and animal communities and in particular water birds, and produce high organic substance, have a significant function in the protection of biodiversity. Wetland areas have a high economic value due to providing opportunities for fishery, agriculture, stockbreeding and recreational activities in addition to being a source of drinking, utilization and irrigation water.



There are various laws in relation to wetland areas. According to the **Law on Underground Waters** dated 16/12/1960 No. 167, underground waters are considered as general waters and under the administration and disposal of the state. Any type of research, utilization, protection and registration of these waters is regulated under the Law and no utilization certificate is issued without establishing the measurement systems. The Underground Water Statute, which was issued relying on the Law is dated 1961, and the DSI Underground Water Technical Regulation is dated 1972.

The **Coastal Law** dated 04/04/1990 No. 3621 has been regulated in order to determine the principles of protecting the coasts of sea, natural and artificial lakes and rivers as well as coastal zones encircling the coasts by respecting their natural and cultural characteristics and using the same for public purposes and community benefit. According to the Law, technical and social infrastructure areas could be regulated on lands which could be obtained by filling and drying taking into account the ecological characteristics in seas, lakes and rivers, if the public benefit requires this. With an amendment made in the Coastal Law with the Law dated 29/11/2018 No. 7153, it became possible to construct renewable energy production plants on areas which are announced as renewable energy resource area by the Ministry of Energy and Natural Resources. With the zoning plan decision. The regulation which was foreseen as water area so as to involve lakes in the Draft Bill, was accepted by being limited in the form of sea in the General Assembly.

According to **the Law on Protection Against Flood Waters and Water Overflows** dated 14/01/1943 No. 4373, the limits of areas which remain under water or incur water floods by the overflowing of rivers or closed waters, shall be determined by Presidential Decree Law.

The **Environmental Law** dated 09/08/1983 No. 2872 characterizes water as a natural resource and defines

the coastal inland water areas where eutrophication risk is high as sensitive areas; and regulates that soil and water areas which have ecological importance and are sensitive against environmental pollution and distortion as Special Environmental Protection Region. According to the Environmental Law, it is a principle to protect the natural structures and ecological balances of the wetland areas. Land could not be acquired through refilling and drying of the wetland areas. The Law also emphasizes that ensuring that sea, underground and surface water resources and water products production areas are used by protection and are protected against pollution is fundamental. In the penalty provisions of the Law, administrative fine is foreseen for those who discharge wastes to drinking and utilization water protection areas in violation of the protection principles, to the resource itself and to underground and surface waters feeding this source, as well as irrigation and drainage canals.

It is under the responsibility of the Ministry of Environment and Urbanisation to create policies and ensure coordination in relation to waste water management. Recipient media standards related to water products production areas shall be determined by the Ministry of Agriculture and Forestry.

The objective of **Regulation on Protection of Wetland Areas**, which was issued in 2014 based on the Law, is to protect wetland and related habitats and set out the principles for rational use, management and development.

Regulation on Protecting Underground Waters Against Pollution and Distortion is dated 2012.

The purpose of **Water Pollution Control Regulation** dated 2004 is to determine the legal and technical principles in order to realize prevention of water pollution in compliance with the development targets, in order to ensure the protection of underground and surface water resources potential and their use in the best manner.

Some regulations related to wetland areas are as follows, though the basis is not the Environmental Law Regulation on Monitoring of Surface Waters and Underground Waters dated 2014; Regulation on Protection and Improvement of Waters Where Trout and Carp Type Fish Live dated 2014 and Regulation on Protection of Waters Against Nitrate Pollution Arising from Agriculture Dated 2016.

It is required to protect, plan and manage the wetland areas as ecosystems that have valuable functions and values in a basin system. **Basin Protection Action Plans** for made for 25 basins determined in our country with the approach of integrated basin management. Among these, Büyük Menderes, Konya, Meriç-Ergene and Susurluk basins Basin Protection Action Plans were converted into **River Basin Management Plans. 2014-2023 National Basin Management Strategy** has been prepared by the Ministry of Forestry and Water Affairs. The same Ministry has prepared **Upper Basin Flood Control Action Plan (2013-2017)**.

3.4. Laws Related to Settlements

It is possible to say that cities consume energy at significant amounts and produce greenhouse gas and wastes in exchange of this. With healthy planning and practices, energy demand and wastes of cities could be reduced, in-city transportation could be regulated, green areas could be increased, and thus the cities could be prevented from being the source of and sacrifice for climate change; and cities could have a resistance and sustainable structure.

Within this scope, it is important in the Energy Efficiency Strategy that at least one fourth of the building stock in 2010 should be converted into sustainable buildings by the year 2023 and sustainable qualifications should be sought for the licensing of the buildings, and actions should be put into life for dissemination of on-site production practices in public houses.

3.4.1. Law on Construction Control

The purpose of this Law dated 29/06/2001 No. 4708 is to ensure project and construction inspection in order to ensure constructing suitable buildings that are in compliant with development plans, scientific, artistic and health rules in order to ensure safety of life and property, and to regulate the principles and procedures pertinent to construction inspection.

With the Law, a comprehensive inspection has become possible from the reports on the foundation of the land where the building will be constructed to the technical and standard characteristics of the materials to be used in the buildings. When the provisions of the law are evaluated together with relevant regulations, it is possible to reduce energy use by bringing a solution to heat insulation problem in the buildings and thus preventing the increase in greenhouse gas emissions by energy saving.

In the implementation of the Law, Ministry of Environment and Urbanisation, municipalities, and governor's offices outside the borders of the municipality have a role. Construction inspection organizations fulfill the task of construction inspection.

Among the tasks and responsibilities of the construction inspection institutions as indicated in the **Regulation for the Application of Construction Inspection** dated 2008, there is the control of whether measures are taken for protecting the environmental health and safety in the construction area.

3.4.2. Zoning Law

The purpose of the Law dated 03/05/1985 No. 3194 to ensure that the settlement areas and constructions are built in accordance with the plans, scientific, health and environmental conditions.

Article 3 of the Law includes the following provision as the "general principle": *"Any field may not be used for purposes in violation of the principles of plans of any scale, conditions of the region located as well as the provisions of the regulation."*

In the amendment made with the Law dated 29.11.2018 No. 7153, "Master Plan" and "Environmental Order Plan" definitions were changed and "Spatial Strategy Plan" definition was added. The Law indicates that the spatial plans shall comprise "Environmental Order Plans" and "Zoning Plans" in accordance with Spatial Strategy Plans from the point of the areas covered and their purposes, and the zoning plans will be prepared as master plan and implementation zoning plans.

Spatial Strategy Plan which will be prepared overall the country and regions where deemed necessary will associate economic, social policies and environmental policies and their strategies with the space and direct the physical development and sectoral decisions; and will take into account the development plan and regional plans if any, regional development strategies and other strategy documents.

Environmental Order Plan will determine the principles and criteria within the framework of general land use decisions that direct the lower scale plans related to sectors as well as location and development areas, and will be prepared at the scale of region, basin or province.

The Master Plan, which will be the basis for the implementation zoning plans, will show the general utilization forms of land pieces, as well as development directions and sizes of settlement areas, population densities and thresholds, as well as transportation systems.

Paragraph (h) under Article 8 which determines the principles to be complied with in the plans mentions about the climate sensitive and ecologic plans,

projects and structures and regulates that the Ministry could prepare or have prepared plans and projects in relation to these settlements, construct buildings with this quality, provide loans and support them. It is emphasized in the same Article that agricultural lands could not be planned for being used for any purpose other than agricultural purposes without obtaining permits specified in the Soil Protection and Land Use Law. It is indicated in the Article that only spatial strategy plans, environmental order plans and zoning plans decisions shall be complied with in land use and construction.

With the additional Article 6 added to the Zoning Law with the Law dated 29/11/2018 No. 7153, bicycle paths and bicycle park stations for transportation purposes have become obligatory in the new zoning plans after 01/06/2019 and it was foreseen that pedestrian ways shall be regulated at places where bicycle path could not be constructed due to topography and land slope.

The provisional Article 16 added to the Zoning Law with the Law dated 11/05/2018 No. 7143, includes regulations for registration of structures which are unlicensed or in violation of the license, under the title of "**settlement peace**". With the 1st Article of the same Law, it has become possible to subject the real estates, which have problems in the ownership, in Sultanbeyli district of Istanbul, to processes under the scope of 2B. Principles and Procedures for Issuing Building Registration Certificate for finding a solution for around 13 million buildings in Turkey which were constructed in violation of the zoning regulations, were published in the Official Gazette dated 06/06/2018. Beforehand, "Title Deed Allocation Document" was given to the illegal buildings under the Law on Amendment of One Article of the Zoning Law No. 6785 and Certain Processes to be Implemented on Structures in Violation of Zoning and Shelter Houses Regulated dated 24/02/1984 No. 2981. The practice which is perceived as the zoning amnesty in the public is being carried out in order to permit the actual uses upon failure to perform the

processes required to have been done against construction completed in violation of zoning regulations. By the implementation of zoning regulations without any fault it will be possible to prevent unqualified constructions which cause the destruction of nature, as well as emergence of areas that are not resistance against the impacts of climate change.

In the implementation of the Law, Ministry of Environment and Urbanisation, municipalities, and governor's offices outside the borders of the municipality have a role.

The Spatial Plans Preparation Regulation dated 2014, which was issued relying on the Law, determines the principles and procedures in relation to preparation and implementation of spatial plans that brings land use and construction decisions and are prepared in order to protect and develop physical, natural, historical and cultural values, ensure protection and utilization balance, support sustainable development at the level of country, region and city, create healthy and safe environments with high life quality.

Planned Areas Zoning Regulation dated 2017 determines the principles and procedures related to construction and structuring in accordance with plans, science, health and sustainable environmental conditions as well as project design and inspection.

Planned Areas Zoning Regulation dated 1985 was issued in order to ensure that the buildings on areas where there is no plan are constructed in accordance with the conditions of science, health and environment.

Although not issued relying on this Law, another regulation that should be indicated in terms of its relation with the building sector is the **Green Certificate Regulation for Buildings and Settlements**. The purpose of Regulation dated 2017 which was issued relying on the Decree Law on

Organization and Tasks of the Ministry of Environment and Urbanisation (KHK), is to create evaluation and certification systems in order to mitigate the negative impacts of buildings and settlements on the environment by using natural resources and energy efficiently. Another regulation dated 2017 which was issued relying on the same KHK is the **Regulation on Rain Water Collection Storage and Discharge Systems**. The Regulation which includes principles related to the relationship between urban planning and technical infrastructure planning and the rain water harvest systems, has designed an applicable model for Turkey.

Meanwhile, it will be beneficial to indicate also the **Public Building Standards Guide**, which was prepared in collaboration with the Ministry of Environment and Urbanisation. The Guide which is the subject of Presidential Circular No.9 includes energy efficient design principles at the architectural project stage.

3.4.3. Law on Transformation of Areas Under Disaster Risk

Law dated 16/05/2012 No. 6306, which was issued in order to create healthy and safe living environments by converting the urban areas that have disaster risk, should be evaluated from the point of combatting climate change in the cities. As a matter of fact, the relationship between building sector policies and climate change is very important. At the top of greenhouse gases that cause climate change in cities is the fossil fuels that are used for heating and illuminating the houses. An important renewal is targeted in the building stock within the scope of the Law, which is known as "Urban Transformation Law" in the public.

In the implementation of the Law, Ministry of Environment and Urbanisation and its affiliated organization Public Housing Administration, municipalities and provincial private administration

outside the borders of the municipality, have tasks and authorities in the implementation of the Law.

Under Article 18 titled "Planning process" in the Implementation Regulation of Law No. 6306 dated 2012, it is indicated that, according to the characteristics of the area, the plans for the application area should ensure mitigating of disasters risks, improvement, protection and development of physical environment, ensuring social and economic development and increasing life quality with energy efficiency and climate sensitivity.

3.4.4. Disaster Insurances Law

The purpose of the Law dated 09/05/2012 No. 6305 is to determine the principles and procedures related to compulsory earthquake insurance which will cover the tangible losses that could occur in the buildings following an earthquake as well as compensations that could cover the damages that could occur as a result of various disasters and risks for which no coverage is provided by the insurance companies or there are obstacles for providing the same.

According to the Law, although the Turkish National Catastrophe Pool (DASK) provides for earthquake security, if coverage is not provided by the insurance companies, it could provide coverage if required from the point of public benefit for earthquakes, floods, landslides, storms, hails, frosts, avalanche and similar natural disasters. It shall be determined by the President which of these securities will be given by the Organization.

The Law regulates the real estates for which it is obligatory to provide mandatory earthquake insurance and it is indicated that the existence of the insurance will be sought for in the official processes related to the real estates.

Ministry of Treasury and Finance and its affiliated organization, Natural Disaster Insurances Institution, shall be authorized for the implementation of the Law.

Regulation on Working Principles of Natural Disaster Insurances Organization (2012) was issued pursuant to the Law.

It is known that the buildings incur heavy damages in disasters other than earthquake. Given the importance of insuring the buildings for adaptation to the impacts of climate change, compulsory earthquake insurance is not made unless there is a necessity for an official procedure.

3.4.5. Law on Aids to be Provided and Measures to be Taken Due to Disasters That Affect General Life

Law dated 15/05/1959 No. 7269 regulate the measures to be taken at places which are damaged or could possibly be damaged so as to affect the general life in buildings and public facilities in case of earthquakes, fires, water floods, landslides, rock falls, avalanche and similar disasters.

Among the regulations enacted based on the Law are the Regulation on Basic Rules Related to Effects of Disasters on General Life (1968), Regulation on Things to Do in Disaster Areas (2007), Disaster Regulation for Infrastructures (2013) and Turkish Building Earthquake Regulation (2018).

Development of disaster management against increasing natural disasters is important within the scope of adaptation to climate change.

3.4.6. Income Tax Law

Law dated 31/12/1960 No. 193 regulates taxation received over income.

Under Article 9 of the Law titled "Artisans exempted from tax", with the amendment made by the Law dated 21/03/2018 No. 7103, real persons who sell the electricity energy which they produce from production facilities based on renewable energy resources applied on fronts and roofs, with a

maximum installed power of 10 kW (including 10 kW), which they have established within the scope of activities they could carry out without license in the residential areas (including those established by property owners in order to meet the common electricity energy need of the real estate), have been included under the scope of artisans exempted from income tax, as a measure to encourage energy efficiency and saving. The justification of the amendment indicates that it was aimed at encouraging the electricity energy in line with the target of benefiting from the renewable energy sources at the top level.

Under Article 40 of the Law titled “deductible expenses”, the expenses which are accepted for deduction for the determination of net earning in the commercial earnings included, with the Law dated 15/07/2016 No. 6728, also the expenditures for ensuring heat insulation and energy saving which increase the economic value of the real estate included in the enterprise.

Similarly, under Article 74 titled “Expenses”, the expenses which will be deducted from the gross proceedings for deriving the net revenues for the real estate capital included, with the law dated 20/08/2016 No. 6745, the expenditures towards ensuring heat insulation and energy saving which increase the economic value of the real estate.

3.5. Laws Related to Motor Vehicles

Motor land vehicles are among the important elements that cause climate change by greenhouse gas release as they operate with fossil fuels. Motor vehicles have a close, even interwoven relationships with transportation, land use, urbanisation and energy sector.

One of the most important reasons of climate change is in-city transportation and here the intense fuel oil use of motor vehicles should be highlighted. Some

precautions such as emphasizing the public transportation in the renewed settlements could decrease the amounts of greenhouse gas emission. Policies and practices in relation to preferences such as electric and other alternative fuelled vehicles, public transportation and bicycle use, are important in combatting climate change.

In this section, the relationship between legal regulations related to motor vehicles and their relationships with climate change were examined. Before passing to relevant laws, it will be suitable to emphasize a regulation which regulates the issue of energy efficiency in motor vehicles within the scope of energy and urbanisation interaction. Regulation on Principles and Procedures Related to Increasing Energy Efficiency, which was issued as the first time in 2008 based on Energy Efficiency Law, which was indicated in the section that dealt with laws related to energy sector, includes important regulations in relation to mitigation of air pollutants and greenhouse gas emissions arising from motor vehicles. The Regulation which was renewed in 2019, includes principles and procedures related to reducing unit fuel consumptions of motor vehicles, increasing efficiency standards in vehicles, encouraging environmentalist alternative fuel use, spreading of public transportation, efficient implementation of smart transportation systems, improving transportation infrastructures in a sustainable manner and preparation of urban transportation plans.

3.5.1. Special Consumption Tax Law and Motor Vehicles Tax Law

Tax regulations could be used for encouraging vehicles with low fuel consumption and with electric motors and removing from the traffic the old vehicles that have high emission, for the purpose of mitigating greenhouse emission in the transportation sector.

According to Article 1 of Special Consumption Tax dated 06/06/2002 No. 4760, Special Consumption Tax (OTV) is received from the motor vehicle at the initial sales. Motor Vehicle Tax (MTV) is received from the motor vehicles every year pursuant to Motor Vehicles Tax Law dated 18/02/1963 No. 197.

In the taxation of vehicles, the main criteria in OTV is the cylinder volume (motor size), and the additional criteria is OTV basis, whereas in MTV the main criteria are cylinder volume and additional criteria is the value and age of vehicle. In principle, since it is a taxation system based on motor cylinder volume and that there is no motor cylinder in the electric vehicles due to the differences in technologies, the definition of "motor power" was added in the taxation criteria with the amendment made in the MTV Law with the Law Amending Certain Laws and Decree Laws and Tax Laws dated 21/03/2018 No. 7103, and the MTVs and OTVs in the vehicles were determined again according to this.

With the regulation made in the OTV Law, determination is made only according to the motor power rates for "electric motor" vehicles only, and the practice of keeping OTV lower compared to the equivalent vehicles has continued. With the adjustment made in the MTV Law, it was foreseen that motor vehicle tax would be taken from electric motor vehicles at a rate of one fourth of the tax received from equivalent vehicles in terms of value and age.

In the vehicle taxation system, there are still ongoing practices such as applying lower OTV and MTV to automobiles with small engines and operating with electricity in first acquirement and annual taxation, and providing price advantage with tax rates for fuel types such as biofuel, liquified natural gas, which have less greenhouse gas emission compared to other fuel types. However, it could not be said that the tax practices in question sufficiently support low greenhouse gas emission in motor vehicle preferences.

3.5.2. Laws Related to Scrap Vehicle Incentive

Another issue of taxation related to motor vehicles that is to be handled within the context of climate change is the separation of old vehicles as scrap. Since separating the old vehicles as scrap by providing incentives such as tax deduction, deleting tax and other penalties ensure vehicles with high emission to be removed from traffic, this prevents the greenhouse gas emission arising from the transportation sector to increase.

With the provisional Article 3 added to OTV Law with the Law on Amending Certain Laws and Granting Tax Exemption to Foundations, which was enacted on 30/07/2003 with No. 4962, many old vehicles were discarded as scrap by making OTV discount to the vehicles aged 20 and above if they are discarded as scrap.

With the provisional Article 2 of Law on Amendment of Certain Laws issued on 18/02/2009 with No. 5838, it was resolved that tax debts and penalties of motor vehicles with model year 1979 or older would be deleted if they are discarded as scrap

With the provisional Article 1 of Law on Amendment of Certain Laws and One Decree Law and Restructuring of Certain Receivables dated 18/05/2017 No. 7020, MTV and administrative fines of the vehicles aged 1997 and older were deleted conditional upon being discarded as scrap.

With the Law on Amendment of Tax Law and Certain Laws and Decree Laws, dated 21/03/2018 No. 7103, the period in Law No. 7020 was extended until the end of 2019 and it was made possible to benefit from the provisions of the article if such vehicles were exported. Besides, with the provisional Article 1 of the Law, OTV deduction was brought for the procurement of new law if vehicles aged 16 and above are discarded as scrap or are exported. The justification of the Article indicates that, by removing from traffic the vehicles with advanced model year

which are worn and encouraging the procurement of new vehicles, it was aimed at mitigating the damages caused by old vehicles on the environment. Finally, with the Law dated 30.05.2019 No. 7176, the upper limit for OTV to be collected in case of procurement of new vehicles was increased from 10.000 to 15.000TL.

In summary, with laws that encourage discarding to scrap the old vehicles with high emission, greenhouse gas emission increase arising from the transportation sector could be prevented and contribution could be given to fight against climate change. However, these laws are issued for being implemented for a period of time and do not have a continuity. If it is encouraged that old vehicles are discarded to scrap directly when they reach to a certain age, climate change struggle could be further supported.

3.5.3. Highways Traffic Law

The purpose of the Law dated 13/10/1983 No. 2918 is to ensure traffic order from the point of safety of commodities and life on highways, and indicate the precautions related to traffic safety. The law regulates the technical principles in relation to motor vehicles.

With the amendment made in the Law dated 29/11/2018 No. 7153, the tasks and authorities of the General Directorate of Highways were expanded to include warning signboards in regions where there are possible living areas of wild animals and to construct cage wire fence in order to prevent the traffic accidents that could arise from wild animals on the highways, in addition to constructing vents, ecologic bridges and other facilities to permit the transition of wild animals, after obtaining the opinion of the General Directorate of Nature Protection and National Parks in places where highways divide the habitats.

It was regulated under Article 29, which is titled "suitability of vehicles for the highway and technical

principles", it was regulated that it is necessary that the vehicles should comply with the highway structure and traffic safety in terms of construction and utilization, and that Type Approval Regulation and other related regulations shall be issued at the stage of construction.

In the Article 30 titled "compliance of vehicles with technical specifications", it was regulated that it was compulsory to keep the vehicles in accordance with technical conditions in the way and form specified in the regulations, and in Article 34 titled "inspection of vehicles", it was stated that whether the motor vehicles to travel in traffic complies with technical specifications will be inspected and determined at certain time intervals.

In this scope, some regulations that were issued based on the Law on Preparation and Implementation of Technical Regulations Related to Products and Highways Traffic Law contain certain regulations on greenhouse gases arising from motor vehicles as well as fuel efficiency.

Regulation Related to Type Approval of Motor Vehicles In Terms of Accessing Vehicle Repair and Maintenance Information and Emissions Released from Heavy Duty Service Vehicles (Euro 6) (2011), and Regulation on Type Approval of Motor Vehicles In Terms of Access to Repair and Maintenance Information and Emissions Released By Light Passenger and Commercial Vehicles (Euro 5 and Euro 6) (2009), indicate principles and procedures such as measurement of compliance with technical specifications, circulation, resistance of control devices, measurement of fuel consumption and Coe, in order to ensure that the gas emission released from the motor meet the Euro emission limit values, for the purposes of protecting health and environment in the construction and use of motor vehicles.

Regulation on Labelling of Tires by Observing Fuel Efficiency and Other Principle Parameters dated 2012 encourages the use of safe tires with fuel

saving and low noise level in order to protect health and environment, and involves provisions related to increasing road transportation safety and economic and environmental efficiency, and labelling the information related to tire parameters.

Regulation on Type Approval Related to Emissions Released from Acclimatization Systems in Motor Vehicles (2009) sets out the principles and procedures related to emissions that arise from acclimatization systems mounted to the vehicles in order to protect health and environment and to meet the obligation of complying with highway structure and traffic safety in relation to construction and utilization of motor vehicles.

In the **Regulation on Production, Amendment and Mounting of the Vehicles** (2016), alternative fuels are shown as fuels such as electricity, hydrogen, natural gas and LPG which could be partially used instead of fossil fuel resources, increase the environmental performance of transportation sector, decrease or have the potential to decrease carbon release.

Regulation on Type Approval Related to Emissions of Heavy Duty Vehicles and Motors (Euro IV and Euro V) (2007), involves measures to be taken against the emissions of pollutants in gas form.

3.6. Laws Related to Products and Consumers

Laws which regulate the production of products, their characteristics and trade and the protection of consumers cover the motor vehicles and electric vehicles, and relate to climate change from the point of environmental impacts and energy consumption.

3.6.1. Law on Preparation and Application of Technical Regulations Pertinent to Products

The purpose of the Law dated 29/06/2001 No. 4703 is to regulate the conditions of launching the products to market, compliance assessment, obligations of producers and distributors, market supervision and inspection.

The basic requirements for the products are defined by the Law as human health, safety of life and property, animal and plant life and health, which are defined as the minimum safety conditions which should be present for the protection of the consumer. The obligation to meet the technical standards in the production and import of products was brought by the Law. According to the Law, all products supplied to the market should be tested, certified and marked according to the determined technical specifications.

In the technical regulations related to products, issues of greenhouse gas emission of products, gases that affect the ozone layer and energy efficiency are reflected to the requirements in line with relevant international agreements, laws and secondary regulations.

The Law enables the users to set out their preferences knowing the energy consumption of motor vehicles and electric tools which they will purchase.

The fundamental responsibility for the implementation of the Law is undertaken by the Ministry of Trade.

Based on the Law, regulations were published in relation to energy efficiency conditions and labelling of electric tools such as house type refrigerators, freezers and air conditioners and vehicle tires, as well as emissions released by motor vehicles. Among the Regulations, **Building Materials Regulation** (2013) is important from the point of climate change. The Regulation indicates among the "Basic Requirements

for Construction Works” that, in the design and construction, not poisonous gas, hazardous particle, volatile organic components, greenhouse gas and hazardous substance shall be released and no dangerous materials should leak to underground waters, sea waters, surface waters and soil.

Also according to the Regulation, the construction works and the heating, cooling, illumination and ventilation facilities used in these works should be designed and built so as to require less energy use taking into account the local climate conditions and residential requirements in order to ensure saving from energy and preserve the heat, and energy efficiency should be provided to the extent possible during construction and removal of building works.

In the **Regulation on Criteria for Construction Materials** (2009), compliance with the construction regulations related to energy saving and heat protection is also indicated within the scope of “Basic Requirements” that determine the criteria that the construction materials should meet.

Some of the regulations other than those which are related to motor vehicle enacted based on the Law are as follows:

- Regulation Related to Environmentally Sensitive Design of Products Related to Energy (2010)
- Regulation on Efficiency Requirements of New Hot Water Boilers Fuelled by Liquid and Gas (2008)
- Regulation on Type Approval in Relation to Measures to be Taken Against Pollutant Emissions in Gas and Particle Form Released by Internal Combustion Engines Attached to Mobile Machines Used Outside Highway (2007)

3.6.2. Law on Protection of Consumer

The purpose of the Law dated 07/11/2013 No. 6502 is to regulate the measures which protect the health and safety of the consumer and its economic interests, compensate their losses, ensure protection against environmental dangers, illuminate and raise awareness in the consumer.

The Law enables the users to set out their preferences knowing the energy consumption of electric tools which they will purchase. According to the Law, it is required to label the energy class of electrical tools and their specifications so as to be easily understood by the consumer.

Under Article 55 of the Law, it became obligatory to sell the commodities, which are presented to the use by the consumer, together with Turkish operation manual, with label covering international symbols and signs.

It was emphasized under Article 76 of the Law that consumer products and services provided to the consumer shall not damage the safety of goods and properties and the environment, and shall be in accordance with administrative and technical regulations.

Ministry of Trade General Directorate of Consumer Protection and Market Supervision is assigned for the implementation of the Law. The Ministry shall be authorized to fulfill market supervision and inspection of consumer products in accordance with the provisions of Law on Preparation and Implementation of Technical Regulations Related to Products.

According to the **Promotion and Operation Guide Regulation** (2014) which was issued relying on the Law, it is necessary to include in the promotion and operation manual, goods which consume energy, the information on efficient use of the commodity from the point of view of energy consumption.

Another regulation which is issued relying on the Law is the **Regulation on Performance of Heat Generators Used for Hot Water Production and Media Heating in New or Existing Non-Industry Buildings and Internal Hot Water Distribution and Heat Insulation in Non-Industry New Buildings.**

The purpose of this Regulation is to determine the principles related to ensuring energy saving and heat insulation which will protect the environment and will have impact on energy consumption in the new heating systems with rational and economic use of energy.

Pursuant to the **Regulation on Showing Energy and Other Resource Consumptions by Labelling and Standard Production Information** (2011), communiques were issued in relation to energy labelling of washing machines, driers, dish washers, TV, electric lamps and illumination armatures, stoves, aspirators, site heaters, water heaters and vacuum cleaners. It is considered beneficial to apply energy labelling in small house appliances which, though having a small volume, do not have low energy consumptions.

According to **Commercial Advertisement and Unfair Commercial Applications Regulation** (2015), if there is information on energy efficiency or price in the advertisements related to goods which are required to be energy labelled, it is obligatory to indicate the energy efficiency class.

Regulation on Raising Awareness Among Consumers on Fuel Economy and CO² Emission of New Automobiles (2003) has been enacted relying on the Law on Preparation and Implementation of Technical Regulations Related to Products and Law on Protection of Consumers.



3.7. Environmental Law

The purpose of Environmental Law dated 09/08/1983 No. 2872, is to ensure protection of the environment in line with sustainable environment and sustainable development principles. When the General Assembly discussion minutes of the Law dated 26/04/2006 No. 5491, which makes comprehensive changes in the Law, are examined, the awareness of climate change could be seen. In the amendment that was made with the Law dated 29/11/2018 No. 7153 and entered into force after being published in the Official Gazette dated 10/12/2018, evaluations related to causes and results of climate change and adaptation to its impacts were reflected to minutes. Although the Law does not regulate the issue of climate change, the expressions of climate change, carbon trade and emission fee are mentioned in the text.

Under Article 3 of the Law, general principles were listed in relation to protection and improvement of environment, and prevention of pollution. Among these principles, the following are to be highlighted within the context of climate change:

- Observing the principle of sustainable development in land and resource use;
- Evaluating the benefit of economic activities and their impact on natural resources over long run within the framework of sustainable development principles.
- Using environmentally adaptive technologies which reduce the occurrence of waste and recycling of the wastes for the purposes of efficiently using the natural resources and energy in any type of activities.
- Using standards that are compulsory to be complied with for the protection of environment, prevention and removal of environmental pollution, encouragement of tax, duties, participation fees, renewable energy sources and clean technologies, receiving emission fee and pollution fee, carbon trade

and other market based mechanisms and economic tools and incentives

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trade and other market based mechanisms and economic tools and incentive.

With the amendment that was made with Law No. 7153, mitigating the use of plastic bags, plastic packaging, applying deposit, recycling contribution share, receiving security towards preventing pollution have also been included in the market based mechanisms and economic tools and incentives to be used.

Under Article 9 titled "protection of environment", it was regulated to prepare environmental management plans on the basis of region and basin in order to constitute a basis for the master plan and application zoning plans in order to prevent environmental pollution that could occur as a result of meeting the requirements such as accommodation, working, resting, transportation of urban and rural population by observing the balance between protection - usage in line with the sustainable development principle in the physical adobe of the country.

Under Article 18 titled "Collection of environmental contribution fee, other revenues and budget allocations", deforestation and climate change combating actions are also included among the works for which allowance shall be foreseen in the Ministry budget.

Under Article 20 which regulates the administrative fines, it is regulated to impose administrative fine to those who open enterprises that could crease chimney gas emission that cause air pollution without permission, or those which cause more emission than the specified amount, and to the owners of motor vehicles who have not conducted emission measurement. With the amendment that was made with Law No. 7153, administrative fines have been defined towards those who do not meet the required criteria in exhaust emission measurement according to the situations encountered in practice. In order to impose sanctions in the prevention of air pollution

arising from heating and to deter the actions, administrative fines have been determined towards any violation of solid fuel regulations. The amount of penalty applied for illegal discharges made to the seas from ships has been updated. Besides, administrative fines required for establishing an effective collection system for the wastes and ensuring recycling/ reuse of the wastes, have been regulated.

With the recent change and with the provision inserted in Article 24 in relation to authority in administrative fines, it was clarified that the Ministry of Agriculture and Forestry would impose sanction to those who act in violation of the principles and procedures of protecting and using wetland areas and those who destroy biodiversity.

Some other regulations in the Environmental Law which are important in terms of climate change are as follows:

- As indicated under Annex Article 1; determining the principles and procedures related to protection of soil and prevention and removal of pollution; prohibition of burning of straws, destruction of pasture lands and grasses
- As indicated under Annex 4, determining with a regulation the principles and procedures related to exhaust emission measurements and standards of vehicles travelling in the traffic;
- As indicated under Annex 6, obligation to produce and use clean and quality fuels and burning systems, with priority given to national energy sources, in order to protect air quality and prevent air pollution;
- Some of the regulations issued pursuant to the Environmental Law are as follows:
 - Regulation on Recycling to the Nature of Lands Distorted Due to Mining Activities dated 2010.
 - Regulation on Exhaust Gas Emission Control dated 2017 related to exhaust gases arising from motor vehicles travelling in the traffic;

- Regulation on Control of Air Pollution Arising from Heating dated 2005 prepared in order to mitigate and inspect the negative impacts on air quality of pollutants in the form of smoke, fog, dust, gas, steam and aerosol arising from incineration facilities for heating purposes;
- Regulation on Follow Up of Greenhouse Gas Emissions dated 2014;
- **Environmental Impact Assessment (EIA) Regulation** dated 2014, which includes measures to be taken for mitigating the emissions and determination of greenhouse gas emission amount as part of the environmental impacts of projects during construction and operating and measures to be taken;
- Waste Management Regulation dated 2015. (It is indicated under Article 10 that, as part of the obligations of waste treatment facilities, it should also be indicated to perform the processes of collecting, processing and using gases which could arise from facility, including the greenhouse effect, so as not to damage the environment and human health).
- Regulation on Permanent Organic Polluters dated 2018.

Environment Label Regulation dated 2018 creates an environment label system based on volunteerism in order to provide for information flow to consumers based on correct and scientific foundations, encourage products or services with mitigated environmental effects during the life cycle. Environment Label System aims at preventing the distortion of ecosystems in all processes from the natural resource use and raw material stage of products or services to the production, utilization, consumption, recycling and final disposal, as well as mitigating the negative impacts on the environment, human, health, climate and natural life in the consumption of natural resources. Mitigating the energy consumption that has negative impact on climate change and biodiversity and encouraging the renewable energy use will be taken into account in

determining the environmental performance of the products.

Another regulation that should be indicated from the point of evaluation of the impacts of climate change is the Strategic Environmental Assessment Regulation, which is evaluated with EU adaptation processes and which came into force in 2017. The Regulation regulates the administrative and technical procedures and principles to be complied with in the Strategic Environmental Assessment process implemented for the preparation of the plan/ programs expected to have important impacts on the environment and integration of environmental elements to the approval process, in line with the principle of sustainable development in order to ensure protection of environment.

Strategic Environmental Assessment Regulation covers the principles and procedures prepared in relation to waste management, fishery, energy, coastal management, spatial planning, forestry, industry, water management, agriculture, telecommunication, tourism and transportation sectors and related to the preparation of Strategic Environmental Assessment for the plans/ programs that create framework for projects included in Annex 1 and 2 lists of EIA Regulation.

In the annex of the Regulation, the plans and programs for which Strategic Environmental Assessment will be applied are listed as management, action and expertise plans related to basins; various plans and programs such as region, coast, environmental order as well as strategies and expertise plans of some sectors. Also the annex of the Regulation indicates sensitive regions that are required to be protected which could have possible negative environmental impact on plans/ programs.

According to the Regulation, sectors which have high impact on the environment and which case climate change, such as energy, defense and transportation, will be taken under the scope of Strategic

Environmental Assessment after 2023. In fact, the starting point of Strategic Environmental Assessment Regulation is to minimize the negative environmental impacts of the plans and programs in all sectors, increasing their positive impacts to the highest level and maintaining the process with a participatory approach. Within this framework, it is important to handle the elements of combatting climate change in every sector area within the scope of the Regulation.



4. CODE LAW METHOD IN COMBATting CLIMATE CHANGE

Code law is a law that independently regulates an area or a sector. From the point of legal technique, framework law is used to mean the law that makes a change in an existing law. The issue of climate change is handled in our country in various laws. However, combatting climate change has not been a subject of the code law in the form of a special regulation on its own.

Under this title, some country examples that have code law for combatting climate law are mentioned. A discussion of whether there is a need for a code climate law in Turkey taking into account the progress in the World, is also included.

4.1. Code Climate Change Laws in Some Countries

Some countries have adopted the code law models which are evaluated below as a means of implementing green growth policies and combatting with climate change.

4.1.1. United Kingdom Climate Change Law

United Kingdom Climate Change Law, which constitutes the framework of combatting climate change in a comprehensive manner, came into force in 2008.

The law provides a long term framework for developing carbon management, ensure transition to low carbon economy and encouraging investment in low carbon products. The Law has a binding target of ensuring a minimum mitigation of 80% by the year 2050 based on the year 1990 in greenhouse gas emission. The Law establishes a carbon budgeting system that covers emissions of 5 years in order to assist progressing towards 2050 goals. The Law also

involves regulations that contain incentives towards domestic wastes and biofuels.

Under the Law, a Climate Change Committee was established as a new, independent, specialist organ that provides recommendations to the Government in the form of policy development priorities in order to ensure progress in the meeting of carbon budgets. The Committee prepares annual reports. Whereas these reports are responded regularly, the transparency and accountability could also be ensured. Adaptation Sub Committee was created under Climate Change Committee in order to examine adaptation works of the Government and make recommendations.

An annual report could be presented to the Parliament for the status of British emissions and the policies implemented by the Ministries in order to meet their carbon budgets. Besides, as least once every 5 years, United Kingdom could report the climate change risks and publish a program on how these will be handled.

A report titled "**Ten Years of United Kingdom Climate Change Law**", which was prepared by Grantham Climate Change and Environmental Research Institute in relation to the Law, was published on 01/04/2018. It is indicated in the Report that this Law experience provides for lessons that will be applicable at the international level for the construction of law on climate change. The report which sheds light on how the climate change regulation should be formulated in order to be effective, handles whether the regulations lead to expected consequences, the political challenges in the implementation and compliance of the Law with the purposes of Paris Agreement.

It is explained in the report in question that the implementation of the Law and operation of carbon budgets in the market assists in mitigating the emissions in the energy sector in particular in the United Kingdom, accompanied by the growth of

economy. The report also evaluates that Climate Change Law is effective in progressing the climate action, however that there is a need to make a reform in the Law in order for the United Kingdom to fulfill its climate obligations. It is indicated in the report that, although it is technically in harmony with Paris Agreement, it will be necessary to replenish the Law possibly by the year 2020 by including a target – such as reaching net zero emission.

The Report also expresses that the Law requires new precautions which will force the government to keep the climate change administration much tighter, for example moving to further stages in emission mitigating by assigning a certain period to the government in order to public carbon plans, that there are inequalities between the government units in terms of fulfilling the responsibilities despite the union of opinions on climate change, and that it is highly important that all institutions of the state enforce the Law in a loyal manner.

The report indicates that a good code law has the following characteristics:

- It is a tool required for coordinating and progressing the climate action towards mitigating greenhouse gas emissions and increasing climate resistance;
- It would include concrete targets, assign open tasks and responsibilities and provide long run clarity in relation to the course;
- It should foresee multiannual targets that are set in advance within the context of economy and assist in drawing a flexible roadmap which is clear, tailored towards long term target;

The report also emphasizes that a strong and independent institution has a critical importance in combatting climate change so as to ensure decision making based on data and following a consistent policy.

4.1.2. Swedish Climate Law

A comprehensive climate code law with high targets came into force in Sweden on 01/01/2018. Swedish Climate Law includes provisions on the climate policy works of the government, the purpose of actions and how they should be carried out. The Law orders that the government should follow a climate policy that aims at preventing hazardous interventions in the climate system, and will assist protecting the ecosystems and current and future generations against the dangerous impacts of climate change. The Law also emphasizes the mitigation of carbon dioxide and other greenhouse gas emissions, protecting and developing the characteristics of the environment in order to struggle against climate change and its negative impacts. According to the Law, the climate policy efforts of the government should rely on long term, time-dependent emission targets that are determined by the Parliament.

The Climate Law indicates that the government should prepare a climate policy action plan every 4 years in order to express how it will reach to climate targets and to present the climate report in the budget discussions every year. The main target is that Sweden should have net greenhouse gas emission by the year 2045, in other words that it should be carbon-neutral. It is indicated that climate will be kept at the forefront in every policy after the Law which is considered as a reform in Swedish public.

4.1.3. French Energy Transformation for Green Growth Law

The Energy Transformation for Green Growth Law was announced in France on 18/08/2015. It is expected that the Law will help the protection of environment and making access to energy with a competitive cost more effective.

The fundamental objective in the Law is to prepare for post-oil period and to establish a robust and sustainable energy model in exchange of energy supply problems in the new process, price, global developments, resource consumption and the obligation to protect the environment.

In order to provide a framework for the common actions of citizens, enterprises, regions and the state, the Law indicates middle and long term targets:

- Mitigating greenhouse gas emission by 40% between 1990 and 2030;
- Reducing final energy consumption by 50% in 2050 compared to 2012 level (Interim target: Ensuring 20% reduction in 2030 compared to 2012)
- Reducing the primary energy consumption of fossil fuels by 30% in 2030 compared to 2012
- Increasing the share of renewable energies to 23% of the gross final energy consumption in 2020 and 32% of the gross final energy consumption in 2030;
- Increase the share of nuclear energy in electricity production up to 50% until the year 2025;
- Ensuring an energy performance in accordance with “low energy building standards” for all housing stock by 2050;
- Combatting energy poverty: Allocating “energy coupon” in order to help in particular the low income households pay their invoices;
- Enabling the households with right to access energy without extreme cost;
- Decreasing the amount of waste by 50% by the year 2025;
- The Law covering different basic areas of energy transformation and involving various precautions;
- Renewal of the existing building stock making use of big amendments (roof, front amendment etc.) in order to significantly improve energy performance, and improvement of energy and environmental performance of new buildings;
- Developing clean transportation: Targeting 7 million recharging points for electrical automobiles in the year 2030, renewal of public vehicles with low emission vehicles
- Waste management and recycling economy: Increasing channels for decomposition at source method (such as food wastes and work wastes) and recycling channels (for example construction sector);
- Developing renewable energies, in particular simplification of procedures, modernizing management of hydroelectric concessions
- Strengthening nuclear safety: For example, improving the transparency of local information commissions, strengthening the inspection and sanction authorities of Nuclear Safety Organization, or clarifying the operating, closure and detachment procedures of nuclear facilities that have been operated for more than 40 years
- Simplification of procedures and clarification of regulatory framework: Developing a new method for the calculation of electricity sales rates and thus guaranteeing the competitive power of energy-intense companies, clarifying the responsibilities of the operators and facilitating the connections for renewable energy production facilities.

4.1.4. Climate Laws of German States

There is no code law at federation level in Germany in relation to the protection of climate; however, this exists in some provinces. North Ren Westphalia, which emits almost one third of all greenhouse gases produced in Germany, has adopted a law related to targets of combating with climate change as of 23/01/2013. Law for combatting climate change was adopted in Baden-Württemberg on 31/07/2013. A nation-level law in Germany is being pronounced in the election campaigns of parties and by various NGOs. The official gazette of the German Federal Assembly Bundestag indicates that such an organization is planned for year 2019 according to the political statements.

In addition to the discussions on law which aims at making the targets in climate protection binding, setting a date for total abandoning of coal, finance support to regions affected from coal illegality, ecological industry policy and inter-sectoral climate policy are among the titles that constitute the climate agenda in Germany.

The opposing opinions, which defend to withdraw from national and international organizations and organs on this issue by being positioned outside the climate policy agreement and characterizing the climate change as a "false crisis", are also pronounced in Germany.

4.1.5. Climate Protection Law in Austria

The purpose of Climate Protection Law, which was issued in 2011 in Austria, is to ensure that effective measures are implemented in a coordinated manner for combatting climate change. The long title of the Law is "Federal Law on Monitoring the Maximum Amounts of Gas Emissions and Developing Effective Measures for Climate Protection", and it is briefly called the Climate Protection Law.

The Law foresees that, with annual activity reports, adaptation to greenhouse gas emission mitigation will be presented according to the sectors.

The Law was amended in year 2013 for reinforcement with more energy and climate policy measures and the targets for mitigating greenhouse gas emissions for 2013 - 2020 period were foreseen on sectoral basis. Emission ceilings were set for a total of six sectors including energy and industry (other than EU emission trade), traffic, building, agriculture, waste management and flourous gases.

The Law regulates the incorporation of National Climate Protection Committee, which represents a wide range of stakeholders from ministries, scientists, industry and civil society in order to provide recommendations on basic issues related to climate policy, and which is foreseen to meet at least once a year.

Another law in Austria which is directly related to climate change is the **Climate and Energy Fund Law**. The Law supports development of a sustainable energy system and mitigation of greenhouse gas emissions for Austria. The Law, which includes among its targets the mitigation of energy consumption and reduction of energy intensity, focused its activities under the Fund on three main areas: Developing and testing research, new transportation systems in renewable energy systems and accelerating commercial climate mitigation measures.

4.1.6. Ireland Law on Withdrawal from Fossil Fuels

Within the scope of combatting climate change, Ireland Parliament has adopted the Law on Withdrawal from Fossil Fuels on 12/07/2018. With the Law, Ireland Strategic Investment Fund will withdraw its investments in fossil fuel companies and it will be completely prohibited to make any new investments in the future in fossil fuel sector. The Law defines the companies, whose revenue obtained from exploring, extracting or refining fossil fuels covering coal, oil and natural gas is 20% or more than their total revenues, as fossil fuel companies. It is known that the Fund, which has a total asset of more than 8 billion Euros, has 318 million Euro investment in 150 companies overall the world. Ireland has been the first country which has undertaken to completely withdraw public investments towards fossil fuels. As this law is enacted, it is indicated that no facility will be established in Ireland that produces energy from coal, oil or gas. In fact, Ireland is being criticized for its climate policies among EU countries due to the fact that its numerical/quantitative greenhouse gas mitigation commitments are not sufficient and only 1% emission mitigation is targeted until the year 2020. It is expected that Ireland will act faster for the issue of climate action and renew its climate commitments soon. There are considerations that the adoption by Ireland of such a law will constitute and example for other countries.



4.2. Increase Trend in Code Climate Laws

Number of countries that adopt comprehensive climate laws has been gradually increasing. For example, a comprehensive draft climate law has been submitted to the Netherlands Parliament on 28 June 2018 as reflected to the press. It is indicated that the draft bill, which brings together the government and the opposition, was supported by seven parties and it was expected that the draft bill will rapidly come into force. It is expressed that in Holland, which is one of the most developed countries of the world, the greenhouse gas emission was 9.6 tons per capita according to 2016 data, which is two folds the global average, that with the draft bill, it will be legally binding to reach the target of 49% until the year 2030 and 95% until the year 2050 (compared to 1990 emission levels) and that this process would be carried out in harmony with Paris Agreement. It is also indicated that the draft bill obliges the Holland governments to review and update their climate plans every five years after 2019 and the Ministry of Energy and Climate to regularly follow up and report the targets.

According to the "**Global Trends On Legislation and Judicial Processes in Climate Change: 2018 Status Report**", which was prepared by Grantham Climate Change and Environment Research Institute, there is an increase in the climate laws and policy documents of the countries and all of 197 countries which signed and ratified Paris Agreement have at least one national law or policy document on climate change.

The Report, which was published on 30/04/2018 and indicated that there are more than 1.500 national climate change laws and official policy documents overall the world, indicates the following opinions on the issue: "*28 of 106 new laws and policies, which were adopted since Paris Agreement, have clear references to Paris Agreement. There is a need for more analysis in order to determine whether these*

new laws and policies are consistent with Paris Agreement and national contribution statements of the countries. Among national and international targets, the adaptation will have a significant role in reaching Paris targets."

The study also highlights a specific point: "*The capability to transfer the international targets announced to national laws and policies will have a great impact on the success of Paris Agreement."*

The report also evaluates in relation to climate justice that "*new strategic legal test cases that connect climate and rights together, has been arising*". According to the study, climate cases could have an important effect on holding the governments responsible from greenhouse gas emissions and climate change. The Report also emphasizes the relationship between climate cases and Paris Agreement. "*New cases make it necessary for the courts to rule for consistence between Paris Agreement and the actions of countries*".

4.3. Is Code Climate Law Necessary for Turkey?

In Turkish legislation, climate change has not been regulated under a single law as a whole. The concept of climate change is used directly in the Environment Law, Soil Protection and Land Use Law and Energy Efficiency Law. Greenhouse gas emission is mentioned in the Law on Use of Renewable Energy Resources for Producing Electric Energy. The expression of climate change is directly mentioned in the provisions of 1st Presidential Decree Law regulating the organization and tasks of the Ministry of Environment and Urbanisation, Ministry of Agriculture and Forestry, Ministry of Industry and Technology and Ministry of Transportation and Infrastructure¹⁹ and provisions of 4th Presidential Decree Law regulating the organization and tasks of the Meteorological Service. It could be seen that the

¹⁹ Presidential Decree No. 4 (Official Gazette dated 15.07.2018 No. 30479).

issue of climate change is not covered in a comprehensive, detailed and systematic manner in the laws and Presidential Decree Laws in question, and it is mentioned within the context.

It could be said that the basic policies implemented in relation to climate change rely on UN Framework Convention on Climate Change, Kyoto Protocol and international agreements related to protecting ozone layer and combatting with deforestation.

It is disputed whether the issue of climate change should be regulated within a code law.

If it is made the subject of code law regulation, it could be said that the purpose of the law would be mitigating the climate change, reducing its impacts and ensuring adaptation. The scope of the law could be expressed as regulating the principles and procedures related to limiting the activities that cause climate change, mitigating greenhouse gas emissions and adaptation to the impacts of climate change. Regulations to be covered by the Law will include definition of concepts related to climate change, pointing out relevant public institutions and organizations, expressing the activities that lead to climate change, identifying the measures towards mitigation of greenhouse gas emissions, protecting and developing the sink areas.

The fact that the issue of climate change is compiled under a law in a systematic manner could ensure that the issue of climate change in no more an environmental problem but should be taken into account strategically within public policies and is an area that should be taken into account separately. Regulating the principles, activities and targets related to mitigation and adaptation policies in combatting climate change with a code law could provide stability and power for implementation in terms of commitment and being binding.

The opinion that the issue of climate change is not required to be regulated with a special law could also be defended. It is known that the international

agreements related to climate change to which Turkey is a party constitute the infrastructure for relevant regulations in the internal law and that there is reference and emphasis in the laws through very little. Laws related to protection of sink areas, namely forests, pasture lands and agricultural lands, do already exist. In the secondary regulations such as regulations and circulars in energy, building, agriculture and transportation sectors, detailed arrangements are made directly and indirectly towards preventing climate change (mitigation), reducing its impacts and adaptation. It could be said that the corporate structure and intervention capacity in disaster management is strong. It is of no doubt that significant distance will be taken in combatting with climate change if the existing regulations are implemented in full.

As an intermediate way, instead of a special law on climate change, definitions, principles and activities related to mitigation and adaptation to impacts in the climate change struggle could be included in the Environment Law and the struggle could be empowered with the existing regulations. In this case, the existing sanction power of the Environment Law should be subjected to preliminary evaluation.

In general, regulations in every field in the process of law making should be evaluated from the points of impact and adaptation towards climate change. Regulatory impact analysis, which is a tool for a better and quality regulation, makes this evaluation necessary. Regulation on Principles and Procedures for Preparation of Regulations (2006) requires to perform regulatory impact analysis, which it defines as a preliminary assessment prepared in order to demonstrate what the impacts of the draft regulation will be on the budget, regulations, social, economic and commercial life, environment and relevant sections, for any regulation drafts with annual possible total effect above thirty million Turkish Lira. Due to the fact that draft bills have been abolished in the presidential government system, it is important that the regulatory impact analysis should be applied for law proposals to be given by the MPs.

5. CENTRAL ADMINISTRATION BUDGET LAW AND CLIMATE CHANGE

Parliaments fulfill the function of inspection the executive body together with the function of making laws. A way of auditing the execution is the audition performed by means of public budget. By this way which is expressed also as the budget right of the Parliament, the MPs have the possibility to inquire the performance of the executive body over the budget law.

Resource transferred to public policy implementation areas is determined by means of budget law. In the struggle against climate change, the public resource to be allocated for activities related to greenhouse gas emission mitigation and adaptation to impacts are also included in the budget law.

The proposal for budget law of the next year is presented by the Presidency to TGNATGNA at least seventy-five days in advance of the end of the year. The budget proposal is discussed in the Planning and Budget Commission in November with a one-month discussion program, and in TGNA in December with a two-week discussion calendar. Information is provided about the activities of related ministry by the relevant ministers during the discussion of budgets of Ministries and public institutions and organizations and the MPs share their opinions and thoughts in relation to policy implementation of that ministry. Meanwhile, the final account law proposal of the previous year is discussed together with the budget law. During the budget discussions, the activity reports of the spending organizations are also distributed to the MPs.

5.1. Climate Change in Budget Technique

In Turkey, public budget is based on the principle of analytical budget. In analytical budget and functional classification, the public expenditures are grouped depending on the types of state activities. One of the

ten main functions is the “**environmental protection services**” function. The environment protection services function which has “05” first level functional code include collection, processing and disposal of wastes, sewage and waste water activities, atmosphere, air and climate protection, protection of earth and surface waters, reduction of noise, protection against radiation, and protection of natural environment and natural cover. The secondary level functional codes and titles of this function are as follows:

- 1-Waste Management Services
- 2-Waste Water Management Services
- 3-Pollution Mitigation Services
- 4-Protection of Natural Environment and Biodiversity
- 8-Research and Development Services Related to Environmental Protection
- 9-Environmental Protection Services Not Included in Classification

“Pollution Mitigation Services” group coded “0.5.3” includes protection of atmosphere, air and climate protection and protection of soil and surface waters, protection against radiation; and covers the measures towards controlling or preventing the pollutant emissions that affect air quality and gas emissions that create greenhouse effect.

5.2. Climate Change in 2019 Budget

In 2019 Central Administration Budget Law includes certain statements on climate change in the Grounds of the Budget. The Grounds of the Budget includes the following expression in the “Basic Policies Related to Budget Revenues”: “*Works for tax policies towards ensuring saving in energy consumption and in combatting climate change and environmental pollution shall be continued*”. Also in the Budget Grounds, the following evaluations are made in relation to climate change under the title of “Agricultural Policies” in “Expense Policy and Practices” part.

"Actions will be carried out towards increasing the efficiency of works related to determining the impacts of climate change on soil-water resources and natural disasters, guiding the decision makers in a correct way in relation to possible negative impacts and raising producer awareness on the issue of adaptation to climate change. Besides, priority will be given to works towards investments to be made for Agricultural Sector Carbon Management Strategy and sectoral capacity increase related to mitigation of carbon emission under the scope of United Nations Framework Convention on Climate Change and Research and Development studies will be made."

The same expressions with the ones given above are reflected in the Budget Grounds for year 2018.

Ministry of Environment and Urbanisation and Ministry of Agricultural and Forestry among the administrations with general budget, and General Directorate of State Hydraulic Works as organization with special budget, are being allocated allowance under environment protection services in 2019 budget.

Another issue which is to be highlighted in 2019 budget is that around 11% of tax revenues arise from the special consumption tax received over motor vehicles and oil and natural gas products.

It could be seen that the "List on Legal Basis of Tax Expenditures", which includes the legal basis of tax practices such as exemption, exception, low rate that are characterized as tax expenditures, includes references and explanations to laws related to exploration, extraction and transportation of oil within the scope of Value Added Tax (VAT) Law and Special Consumption Tax (OTV) Law and also the scope of Special Consumption Tax includes commodity deliveries to plans, namely natural gas as primary fuel and fuel oil as secondary fuel. Also this list includes the information that processes towards ensuring heat insulation and energy saving in buildings within the scope of Duties Law, as well as the papers which are regulated in relation to energy markets and emission

trade processes of EPIAS (Energy Markets Istanbul Inc.) are exempted from stamp duty within the scope of Electric Market Law .

In the Chart E titled "Principles Related to Utilization of Certain Allowances and Expenditures" annexed to the Budget Law, the projects and activities for which South East Anatolia Project, Konya Plain Project, East Anatolia Project and East Black Sea Project Regional Development Departments could allocate allowances to other public institutions and organizations include renewable energy and energy efficiency, rehabilitation and dissemination of irrigation systems, stockbreeding and vegetative production infrastructure, land consolidation, protection and development of natural resources, urban development and environment.

5.3. Climate Change in 2019 Budget Negotiations

In the budget negotiations in TGNATGNA, performances of ministries and public institutions and organizations that have responsibility in climate change policy in relation to climate change could be inquired. It could be a matter of discussion whether the budget resources allocated are sufficient from the point of actions towards combatting with climate change.

For example, in the discussions in Planning and Budget Commission on the Central Administration Budget Law Proposal for year 2019, the issue of climate change has been an issue of discussion in the negotiations on budgets of the Ministry of Environment and Urbanisation, Ministry of Energy and Natural Resources, Ministry of Culture and Tourism, Ministry of Transportation and Infrastructure.



6. INSTITUTIONAL STRUCTURE IN COMBATting CLIMATE CHANGE

In the state structure which was structured following the transition to presidential government system, the **Policy Boards**, which were created in addition to classical ministries and public institutions in the state management, are important. Head of Presidential Policy Boards regulated under the 1st Presidential Decree Law on the Presidential Organization is the President. Boards which comprise minimum three members work directly with the President and fulfill the instructions of the President. The following boards have been established within the body of Presidency and the boards were created by making assignments to memberships with the Presidential Decree Law published in the Official Gazette dated 09/10/2018.

- Science, Technology and Innovation Policies Board
- Training and Education Policies Board
- Economy Policies Board
- Security and Foreign Policies Board
- Law Policies Board
- Culture and Art Policies Board
- Health and Food Policies Board
- Social Policies Board
- Local Administration Policies Board

The tasks of the boards are as follows: Develop strategy, target and policy recommendations against sudden changes brought by global competition with decisions to be taken and policies to be determined by the President; provide opinions to public institutions and organizations; receive the opinions of ministries, public institutions and organizations, civil society and sector representatives, experts in relevant fields and other relevant bodies and monitor the policies implemented and the developments; monitor the practices municipalities and institutions and organizations in relation to compliance with the

President's program; perform and/or have performed demand, needs and impact analysis.

Taking into account the tasks of the boards specified below, it could be expected that they will handle climate change policies directly and/ or indirectly.

The task field of the Science, Technology and Innovation Policies Board include areas which will provide comparative superiority in regional and global competition, science and technology, technological transformation, information society, entrepreneurship culture, research and development policies, programs which will decrease import dependence and competitive power of our industry, industry products safety and inspection, free zones, industrial zones, and internet media use.

The task field of the Economy Policies Board include global and national economy and development, investments, and principles and procedures of state supports.

The task field of Safety and Foreign Policies Board include the issues of highway, railway and airway traffic security in cases of disaster and emergencies.

Among the issues mandated to Health and Food Policies Board are food safety and health, vegetative and animal product supply, efficient use of water resources, preventing water waste, improving production and consumption habits in relation to health and food, protecting our local gene resources in agriculture and stockbreeding, reclamation and diversification, support policies and biosafety.

The field of Local Governance Policies Board include urbanisation and local governance, migration and settlement, environment, forest, water and similar areas, urbanisation fed by cultural heritage, smart urbanisation, planning of public investments pursuant to Boğazici Zoning Implementation Programs, and effective environmental management issues.

The principle ministry authorized and assigned with the task of combatting climate change in Turkey is the **Ministry of Environment and Urbanisation**. The Ministry which carries out national coordination task on the issues of climate change, is the National Focal Point in charge of United Nations Framework Convention on Climate Change Secretariat. The basic strategy documents related to climate change, namely **“National Climate Change Strategy Document 2010-2023”** **“Republic of Turkey Climate Change Action Plan 2011-2023 (IDEF)”** and **“Turkey’s Climate Change Adaptation Strategy and Action Plan 2011-2023”** have been prepared under the coordination of the Ministry.

The multi-dimensional and multi-sectoral characteristics of climate change grant tasks and responsibilities to other municipalities and public institutions and organizations. Within this scope, the roles in climate change policy of the Ministry of Agriculture and Forestry, Ministry of Energy and Natural Resources, Ministry of Industry and Technology, Ministry of Transportation and Infrastructure and Energy Market Regulatory Authority, Disaster and Directorate of Emergency Management, General Directorate of State Hydraulic Works and Meteorological Service have been analyzed.

Meanwhile, since a separate title was not opened for the Ministry of Health, it is worth speaking about the importance of **“National Program and Action Plan for Mitigating Negative Impacts of Climate Change on Health”**, which was published by Turkish Public Health Institution in 2015. The objective of the plan is to protect our people from the negative health effects to be caused by climate change in our country and to take health precautions for disaster situations. Currently studies have been carried out on climate change and health relationship by the General Directorate of Public Health Environmental Health Department under the body of the Ministry of Health.

In this part of the study, the duties of relevant ministries, public institutions and organizations in

relation to fighting against climate change are demonstrated in relation to the Presidential Decree Law No.1 on the Presidential Organization and Presidential Decree Law No. 4 on Organization of Institutions and Bodies That Are Affiliate, Sub-organs and Related Organizations of Ministries and Other Institutions and Organizations. Evaluations on ministries and institutions that refer to climate change in their up to date strategic plans are also mentioned.

6.1. Ministry of Environment and Urbanisation

Article 97 of the Presidential Decree Law No.1 regulates the tasks of the Ministry of Environment and Urbanisation. Paragraph (b) states *“...to carry out works and processes related to climate change”* and paragraph (l) states *“...to determine plans and policies for global climate change and taking measures related to this.”* The following are shown among the tasks of the Ministry. Various tasks have also been granted to the Ministry:

- Prepare regulation related to settlement, environment and structuring, monitor and supervise the practices;
- Prevention, improvement of environment and prevention of environmental pollution;
- Evaluating the environmental impacts of facilities and activities which constitute or possibly constitute pollution in the recipient environment;
- Determine basic principles, strategies and standards in relation to physical plans and their implementation, ensure that these are implemented, prepare ex officio, or have prepared and approve environmental management, master and implementation zoning plans, parcellation plans and amendments;
- Prepare spatial strategy plans and inspect that plan decisions of local administrations comply with these strategies;

- Perform tasks given under Building Inspection Law, increase energy efficiency in the buildings and inspection of the building materials;
- Strategy development and programming in relation of housing sector;
- Determining the principles and procedures to be complied with by the administration in the improvement, renewal and transformation practices to be made in urban and rural areas and settlements, including those which are removed from the status of forests and pasture lands due to the distortion of characteristics, as well as coastal areas and facilities;
- Developing administrative and technical capacity of local administrations;
- Regulating the relationship between local administrations and the central administration.

Under Article 103 of the Presidential Decree Law, direct tasks have been assigned on the issue of climate change to the **General Directorate of Environmental Management**, which is one of the service units. Paragraph (m) which gives the task in question is read as follows: *“Ensuring coordination with other institutions and organizations in order to carry out works related to determine plans, policies and strategies directed towards taking measures in relation to global climate change and depletion of ozone layer”*.

Regulations towards clean energy are to be highlighted among the tasks of the General Directorate of Environmental Management:

“ç) Encouraging clean energy use, including the renewable energy resources, engaging in actions to determine targets and criteria so as to use fuels in a way not to cause air pollution”.

Another task of the General Directorate that is important in terms of climate change relates to the transportation sector, and is regulated under paragraph (g):

“g) Determining administrative, financial and technical principles and procedures for the control of exhaust emissions of motor land vehicles.”

Other task issues of the Environmental Management General Directorate could be summarized as follows:

- Prevention and control of environmental pollution;
- Protection of air quality, air pollution
- Clean production and integrated pollution prevention;
- Protection of underground and surface waters, seas and soil, prevention or disposal of pollution
- Management of wastes and chemicals;
- Protection of underground and surface waters, seas and soil, prevention or disposal of pollution

The General Directorate has the tasks of determining and planning policies, strategies, targets, criteria, standards, principles and procedures on the foregoing issues.

There are **Climate Change Department** and the newly establish **Climate Change Adaptation Department** under General Directorate of Environmental Management. Branch offices within the body of these units are as follows:

Climate Change Department Branch Directorates

1. Climate Change Policies Branch Directorate;
2. Climate Negotiations and International Policies Branch Directorate;
3. Greenhouse Gas Emissions Monitoring Branch Directorate
4. Ozone Layer Protection Branch Directorate

Climate Change Adaptation Department Branch Directorates

1. Climate Change Impacts and Vulnerability Branch Directorate
2. Adaptation Policies Branch Directorate
3. Local Adaptation Planning Branch Directorate
4. National Adaptation Policies Branch Directorate

Air Management Department is also present in the same General Directorate.

General Directorate of Environmental Impact Assessment, Permit and Inspection is to be highlighted among the main service units in relation to monitoring, inspection, taking measures on the basis of activity and facility. Among the duties of the General Directorate which were regulated under Article 104 are two separate paragraphs on emissions in general and in the transportation sector.

"c) Monitoring and evaluating the activities and facilities that cause environmental pollution with emission, discharge and wastes."

"e) Document, monitor and inspect the compliance of exhaust emissions of motor land vehicles with the standards set."

Other functions of the General Directorate include;

- Carry out environmental impact assessment;
- Monitor activities and facilities towards preventing environmental pollution and improving environmental quality;
- Monitor activities related to wastes, chemicals and air pollution which have negative impacts on environment, determine and inspect any type of activity that has negative impacts on underground and surface waters, seas and soil;
- Monitoring the recipient media.

Tasks of **General Directorate of Spatial Planning** are organized under Article 102. Among the tasks of this main service unit are;

- Settlement, building and land use;
- Spatial strategy plans, environmental management plans, zoning plans, sectoral plans
- Integrated coastal areas management and planning

The **2018-2022 Strategic Plan** of the Ministry of Environment and Urbanisation includes climate change objectives and their cost estimations. The first

axis in strategic purposes was determined as environment, and the first purpose was set as protecting the environment and the nature and struggling against climate change. Among the targets determined in this direction include prevention of air pollution and improving air quality, combatting climate change, taking measures for adaptation to the impacts of climate change, fulfilling the international obligations and protecting the ozone layer. Among the determinations towards this target (situation analysis findings), those which are directly related to climate change are as follows:

- *Our country has been fulfilling the obligations it has undertaken in struggling against global climate change and actions are being carried out towards protection of national interests in the international arena.*
- *Works are ongoing for plans, projects and regulations at national scale in relation to mitigation of greenhouse gas emissions and adaptation to climate change.*
- *OTIM consumption has been rapidly decreasing in our country within the scope of Montreal Protocol;*
- *Turkey Climate Change Adaptation Strategy and Action Plan (2011- 2023) has been published. In order to update the action plan in question within the framework of scientific data and the existing information, "Project for Strengthening Climate Change Adaptation Activities in Turkey" has been presented to European Union Instrument of Pre-Accession Assistance Program*

Among the requirements for reaching the objective is the *"need for international financing and technology for our country, which is in the condition of developing country, for struggling against global climate change"*.

Climate Change and Air Management Coordination Board (IDHYKK), coordination of which is undertaken by the Ministry of Environment and Urbanisation, has important tasks in climate

change. It was constituted under the name of Climate Change Coordination Board with the Prime Ministry Circular No. 2001/2 in order to make reporting under the scope of Kyoto Protocol. It was restructured with the Prime Ministry Circular No. 2103/ 11 in 2013, and renamed as “**Climate Change and Air Management Coordination Board**”. The members of the board include various ministries and Turkish Union of Chambers and Stock Exchanges (TOBB), Turkish Association of Industrialists and Businessmen (TUSIAD), Association of Independent Industrialists and Businessmen (MUSIAD), Disaster and Emergency Department (AFAD), and Turkish Statistical Institution (TUIK). Work Groups created under Climate Change and Air Management Coordination Board are as follows:

- Greenhouse Gas Emission Mitigation Work Group
- Climate Change Impacts and Adaptation Work Group
- Greenhouse Gas Emission Inventory Work Group
- Financing Work Group
- Technology Development and Transfer Work Group
- Education, Awareness Raising and Capacity Development Work Group
- Air Management Work Group.

6.2. Ministry of Agriculture and Forestry

Organization and task and duties of the Ministry of Agriculture and Forestry are regulated under Articles 410 to 440 of the Presidential Decree Law No.1

The Ministry of Agriculture and Forestry was established with the merger of the Ministry of Food, Agriculture and Stockbreeding and the Ministry of Forest and Water Affairs. The KHK dated 29/06/2011 No. 645 was annulled with the KHK dated 03/06/2011 No. 639, which regulated the organization of the ministries in question.

The issues included under the task field of the Ministry included the following, which were transferred from the Ministry of Food, Agriculture and Stockbreeding;

- Vegetative and animal production and production of water products;
- Developing the agricultural sector;
- Food production, safety and reliability;
- Rural development;
- Protection of soil, water resources and biodiversity;
- Regulation of agricultural markets.

Tasks transferred from the Ministry of Forestry and Water Affairs are as follows:

- Protection, development and operating of forests;
- Combatting deforestation and erosion, forestation, pasture land reclamation related to forests;
- Protection of nature, determination of the protected areas, national parks, natural parks, natural monuments, natural protection areas, wetland areas and biodiversity and protection, management and development of biodiversity and hunting and wild life,
- Protection and sustainable use of water resources;
- Monitoring of meteorological events.

Among the tasks of **General Directorate of Vegetative Production**, which is one of the service units, issues related to climate change could be summarized as follows:

- Coordination towards new production forms considering human health and ecologic balance and prevention of pollution that could arise
- Reclamation and protection of grasslands, pasture lands, summer pastures and winter pastures;

- Services related to activities and operation of agricultural basins.

Among the tasks of **General Directorate of Agricultural Reform**, issues related to climate change could be summarized as follows:

- Developing the environment and the land;
- Improving life quality on rural areas and development capacity at local rural;
- Efficiency in agricultural irrigation;
- Protecting soil resources;
- Services related to global climate changes, agricultural environment, drought, forestation, other agricultural disasters and agricultural insurance, assistance to farmers damaged from natural disasters
- Tasks granted by Soil Protection and Land Use Law

In the Law on Assistance to be Provided to Farmers Damaged by Natural Disasters dated 20.06.1977 No. 2090, it is foreseen that a Disasters Department would be established within the body of the Minister in order to carry out the tasks granted by this Law on the Ministry of Agriculture and Forestry. The Department in question is the Agricultural Insurances and Natural Disasters Department affiliated to the General Directorate of Agricultural Reform.

General Directorate of Combatting Deforestation and Erosion, General Directorate of Nature Protection and National Parks, and General Directorate of Water Management are the units which are highlighted in relation to climate change as of their tasks.

Among the tasks of **General Directorate of Combatting Deforestation and Erosion** are combatting deforestation and erosion, avalanche, land slide and flood control, integrated pool reclamation and works related to water basins, for the purposes of protecting the soil and developing natural resources.

Among the tasks of **General Directorate of Nature Conservation and National Parks** are determining national parks, nature parks, nature monuments, nature protection areas and wetland areas, protecting, developing, managing those of them which are registered by the Ministry of Environment and Urbanisation, works related to protecting and developing wild life and in-forest water resources, brooks, lakes, ponds and wetland areas and vulnerable regions, plant and animal species protected under international conventions, registration and announcement of forests and nature parks that are subject of forestry regime, nature monuments and natural protection areas.

Among the tasks of **General Directorate of Water Management** are setting policies related to protection, improvement and utilization of water resources, river basin management and flood management on the basis of basins in order to ensure the protection and development of ecological and chemical quality of water culture. This General Directorate also has a task that is directly related with the climate change: "*Carrying out actions in relation to impact of climate change on water resources.*" The Climate Change Adaptation Branch of Flood and Drought Management Department, which is under the body of the General Directorate, is mandated to carry out works in relation to impacts of climate change on water resources, floods, drought and the measures to be taken.

In the **2018-2022 Strategic Plan** of the Ministry of Food, Agriculture and Stockbreeding, climate change, decrease in water resources, soil and water pollution are considered as risks and threats and various measures are foreseen within the scope of adaptation to climate change.

In the **2017-2021 Strategic Plan** of the Ministry of Forestry and Water Affairs, increase of the tasks of the Ministry in the process of adaptation to climate change is considered as an opportunity. The threats include decrease in forest and water resources, uncontrolled wastes, polluters, deforestation -

drought etc., natural impacts, and narrowing of natural ecosystems and wild life areas. The question of "what to do" is responded by "correct forest and water policies (efficient use of water, preventing the distortion of land, increasing the protected areas etc.)".

6.3. Ministry of Industry and Technology

Organization and task and duties of the Ministry of Industry and Trade are regulated under Articles 389 to 409 of the Presidential Decree Law No.1

There remained only one article in the Decree Law on Covering Research and Development Projects of High Education Institutions dated 03/06/2011 No.

635, which regulated the previous organization of the Ministry.

General Directorate of Industry and Productivity, which is one of the service units of the Ministry, was given the task, which is directly related to climate change, of "following up the development on the issues of environment and climate change, evaluate the works conducted for the purposes of creating industry policy and assisting in taking the required measures". The same General Directorate was also granted the tasks on the issues of technical regulations of vehicles as well as industrial products.

In the **2018-2022 Strategic Plan** of the Ministry, an evaluation was given about Paris Agreement with a table under "Environmental Impacts".

Table 1: Results of Paris Summit (2015) (Within The Context of Commitments Brought and Commitments Made)

Opportunities	Threats
Paris Agreement includes elements that address the vision included in Turkey Industry Strategy, which is "shifting to high technology product production system in our country".	The possibility that the cost of conversion which is expected to occur in the industry if financial and technological support could not be received within the scope of the Agreement, could be high
Significant developments will be recorded in the industry if financial and technological support is received under the scope of Paris Agreement	In particular the increase in emissions depending on the growth of emission-intense cement sector
Research and Development works, which are among the priorities of our Ministry, being accelerated with creation of new and diverse policies after the strong message delivered by the Agreement on renewable energy and clean technology issues	Lack of due importance attached to the title of technology transfer, of which we are the coordinator under the scope of climate negotiations, compared to issues such as finance
Potential of increase in international partnerships and cooperation in the field of Research and Development and technology transfer	Works required for establishing systems such as carbon pricing included in the agreement (such as emission trade system etc.) requiring significant level of data and expertise
Preparation of new policy texts (sectoral strategies etc.) so as to include issues related to the environment	
Contribution of the developments under the scope of the Agreement and the national contribution commitment presented by Turkey to the UN (emission mitigation rate) to the awareness rising among private sector on the issue	

6.4. Ministry of Transportation and Infrastructure

Organization and task and duties of the Ministry of Transportation and Infrastructure are regulated under Articles 474 to 502 of the Presidential Decree Law No.1.

KHK on Some Regulations Related to the Field of Transportation and Infrastructure, dated 26/09/2011 No. 655, which regulates the previous organization of the Ministry, had few number of provisions left.

While regulating the organization and tasks of the Ministry, the **General Directorate of European Union and Foreign Relations** was given the task of *"monitoring and evaluating the works of national and international organizations, platforms, formations and similar structures on the issues of environment, energy, greenhouse gases and climate change"*.

While regulating the tasks of units according to the transportation types, it was emphasized that the activities of land, railway, maritime and inland water transportation should be carried out "so as to prevent, remove negative impacts on the environment and respect public benefit".

General Directorate of Aviation and Space Technologies was given the task of *"making use of space environment and technologies to carry out works, or have works carried out, for the protection of human health and environment, mitigating the damages by early determination of natural disasters, using natural resources and developing the country"*.

The common task in relation to the field of responsibility of Ministry service units was the task of "ensuring that the activities carried out are in harmony with environment and are developed accordingly".

Targets of the Ministry in **2017-2021 Strategic Plan** include increasing environmental sensitivity and energy efficiency in transportation. In line with this target; it is foreseen that the Project for Adaptation to Climate Change in Transportation Sector will be realized; the risk is shown to be the increase in the number of land vehicles which will lead to increase in greenhouse gases despite investments that contribute towards mitigation of greenhouse gases in transportation field (fast trains, subways, development of railway infrastructures etc.); it is indicated as a determination that any type of investment and project which will contribute in the development of public transportation with light rail systems and smart transportation systems in in-city transportation will shift our current highway-intense system to more environmentalist modes; the need is indicated to be the calculation of contribution of investment activities/ projects in national emission mitigation efforts; and the strategy is stated to be ensuring integration of adaptation to climate change to policies, programs and activities, and determining policies that increase energy efficiency.

"National Smart Transportation Systems Strategy Document (2014-2023)" prepared by the Ministry shows the mitigation of fuel consumption and emissions arising from highway transportation among the fundamental strategic objectives.

6.5. Ministry of Energy and Natural Resources

Organization and task and duties of the Ministry of Energy and Natural Resources are regulated under Articles 166 to 183 of the Presidential Decree Law No.1.

The Ministry has the tasks of determining and supplying the energy need; researching, operating, developing and evaluating energy and natural resources for the benefit of the country, technical

requirements and economic developments, and their control and protection.

The tasks of the Ministry also include evaluating the renewable energy resources, policies towards increasing energy efficiency and actions towards strategies.

General Directorate of Renewable Energy, which was included as main service unit in the annulled Organizational Law dated 19/02/1985 No. 3154, was abolished. This unit was established with the KHK dated 11/10/2011 No. 662 within the scope of restructuring with KHKs of ministries that took place in 2011. The tasks of **General Directorate of Renewable Energy** were transferred to General Directorate of Energy Affairs. Among the tasks of this General Directorate, the following are included:

- Encouraging and coordinating the works related to researching, developing, operating, using, controlling and protecting the energy resources;
- Perform measurements towards determination and evaluation of all energy resources with priority given to hydraulic, wind, geothermal, biomass and other renewable energy resources, prepare feasibility and sample application projects, collaborate with research institutions, local administrations NGOs and develop pilot systems, carry out presentation and consultancy activities;
- Develop projections and recommendations towards using and increasing renewable energy resources.

There is Renewable Energy Resources Project Development and Follow Up Department within the body of the General Directorate.

With the Presidential Decree Law dated 10/01/2019 No. 27, works in the field of energy efficiency were removed from the task area of the General Directorate and transferred to **Energy Efficiency**

and Environment Department, which was established as a new service unit. The Department has duties in relation to energy in the fields of sustainability, environment and climate management in addition to energy saving and efficiency. Among the tasks of the Department in relation to climate change include providing contribution to preparation of relevant notifications and reports related to climate, prepare part of national greenhouse gas inventory report related to the sector, participate in the meetings for the review of United Nations Framework Convention on Climate Change Secretariat, and take duty within the scope of electricity and heat production sector under Climate Change and Air Management Coordination Board work groups.

Among the duties and authorities regulated under Article 768 of the Presidential Decree Law No. 4 of **General Directorate of Mining and Oil Affairs**, which was established as an affiliate of the Ministry, are monitoring in collaboration with relevant institutions the execution of activities related to natural resources in a safe manner within the principle of environment and resource protection and taking required measures.

The Energy Efficiency Coordination Board, which was established with Article 4 of Energy Efficiency Law dated 18.04.2007 No. 5627, was abolished with the KHK No. 703. It was indicated that the tasks of the board would be carried out by the Ministry of Energy and Natural Resources in line the Presidential Circular No. 3.

In the **Strategic Plan 2015-2019** of the Ministry, the importance of carbon sequestering and storage technologies in energy and natural resources sectors, as well as combatting climate change and importance of global carbon markets are expressed.

As a strategy, rehabilitation of fossil fuel consumptions and / or carbon dioxide emissions of the buildings so as to reduce them as well as receipt

of ISO 50001 Energy Management Standard Document, were specified.

As a target, it is expressed that it will be ensured to increase the share of renewable energy resources in primary energy and electric energy supply.

6.6. Energy Market Regulatory Authority (EPDK)

Law dated 20/02/2001 No. 4628 regulates the organization and tasks of Energy Market Regulatory Institution. The Ministry which the Institution is related to is the Ministry of Energy and Natural Resources. The Institution shall enforce its rights while fulfilling its tasks through Energy Market Regulatory Authority. The representative and decision body of the Agency is the Board.

The following tasks are important among the duties of Energy Market Regulatory Authority:

"Take relevant measures in order to encourage the use of renewable energy sources and domestic energy resources due to environmental impacts in the production of electricity energy, and engage in required initiatives before institutions and organizations for incentives."

Among the authorities of the Board, the authority to take precautions and carry out inspections in relation to protection of hydraulic resources and ecosystem during the construction and operation of production, transmission and distribution facilities, is important.

For people who will engage in activities within the scope laws regulating energy markets according to resource types, conditions were imposed in relation to engaging in activities in accordance with environment and environmental regulations. In this scope, EPDK has the sanctioning authority to impose administrative fine and stopping the activities.

6.7. Disaster and Emergency Management Presidency (AFAD)

AFAD, which is an affiliate of the Ministry of Interior, was established in order to carry out services related to disaster and emergencies.

The objective of AFAD includes taking relevant measures for fulfilling services related to civil defense, emergencies and disasters in an effective way, preparation and risk mitigation before the occurrence of events, ensuring coordination between institutions and organizations that carry out remedial works during and after the intervention to events, and to carry out humanitarian operations.

The organization, tasks and authorities of AFAD are regulated under Articles 30 and 56 of the Presidential Decree Law No. 4. There are few number of provisions in the Law No, 29.05.2009 No. 5902 on Some Regulations Related to Disaster and Emergency Management Presidency. With this Law, institutions operating in the field of disaster were collected under a single roof and AFAD was established.

During the discussion on the Law in the Turkish Grand National Assembly TGNA, it was indicated that Turkey frequently suffered natural disasters due to its geographical location and climate characteristics, that the climate change caused by greenhouse gases increased these disasters both in terms of magnitude and number, and that there was a need for a structure that will manage the struggle against disasters from a single hand and in an efficient manner.

Extreme weather conditions, floods, landslides, hurricanes, tornadoes, frequent droughts, hot air waves, forest fires have been experienced at an increased rate depending on climate change. Another important issue that needs to be handled for adaptation to the impacts of climate change within

the scope of these risks is the measures to be taken against climate disasters.

2014-2023 Roadmap Document for Climate Change and Related Disasters, which was prepared by AFAD with an integrated disaster management system approach and which aims at effective management of climate change and related disasters in our country, is an important document within the scope of adaptation to climate change.

The document indicates that AFAD contributes in climate change adaptation works and actions towards mitigating and managing the damages of disasters caused by climate change; and emphasizes the importance of ensuring coordination between public institutions and organizations and NGOs at country level and Provincial Disasters and Emergency Directorates at the local level in order to increase awareness on climate change and the disasters caused by climate change and to create a society that is resistant against disasters, and integrating the innovations brought by technology into our disaster management system.

6.8. Meteorological Service

Meteorological Service, which is an affiliated body of the Ministry of Agriculture and Forestry, was established for opening and operating meteorology stations, perform and evaluate air observations, make weather forecasts for various sectors and provide meteorological information support.

The organization, tasks and authorities of the Service are regulated under Articles 261 to 282 of the Presidential Decree Law No. 4. The old organizational law, namely Law on Meteorology Services dated 08/01/1986 No. 3254, has very few provisions remained.

Among the tasks of the Service is *"to conduct works and inspections in order to determine the climate*

characteristics of Turkey and archive and publish the information obtained".

The General Directorate has undertaken a direct task on the issue of climate change with the Research Department, which was established as a main service unit with Article 9/B added to the Law with KHK No. 657 in 2011 and is a service unit in the current structure. Research Department is mandated to carry out research and development activities in relation to natural disasters with meteorological character, hydrometeorology, sea and agricultural meteorology, climate, climate change and other issues related to meteorology, and to carry out meteorological works towards environmental activities. The works of units included within the body of the Department are directly related to adaptation to climate change. Tasks of Climatology Branch among these units are as follows:

- Perform or have performed monitoring, research and model works on the issues of climate and climate change;
- Perform analysis of climate parameters and Turkey climate classification;
- Create climate projections using models, support adaptation and damage mitigation works against negative impacts of climate change;
- Perform analysis and research on the issues of ozone and ultraviolet radiation

The publication of Climatology Branch titled **"Impacts of Climate Change on Health"** dated 2012 could be shown as an indicator. Among the tasks of the Environmental Branch Directorate, which is another unit are the research activities on the issues of environment and renewable energy, participation in meetings related to investments that are subject to Environmental Impact Assessment Regulation and to provide opinion for the reports prepared in the name of the Institution.

Meteorological Disaster Branch is mandated to perform analysis, research and development in relation to disasters in addition to contribution in estimation and early alerts towards mitigating the damages of disasters, disaster preparedness and emergency management. The Assessment Report Related to Disasters of Meteorological Character, which is published on annual basis, is being prepared by this unit.

The tasks of Agricultural Meteorology Branch Directorate include drought analysis and works for plant climate demands models.

Among the tasks of Hydrometeorology Branch Directorate are the works on the issues of sudden flood and early warning.

In the 2017-2021 Strategic Plan of the General Directorate, it is indicated that research activities that constitute a significant part of the activities are related to environment, climate, atmosphere, renewable energy sources; that the research and analysis works included climate change and scenarios, drought monitoring and analysis, ozone and ultraviolet radiation monitoring and assessment, renewable energy works (wind and solar energy measurement result report approval), environmental impact assessment works, air pollution and acid rain works, meteorological disasters, forest fires and sudden flood early warning systems, dust transportation estimation and assessment works.

Whereas the Strategic Plan included the strength, weaknesses, opportunities and threats of the General Directorate, the interest increasing towards meteorological researches and in particular to the issues of environment, climate change and renewable energy issues is considered as an opportunity.

Among the targets indicated in the Strategic Plan is the target of "performing works for monitoring climate change at national and regional scale". In the

explanation related to the target, it is indicated that there is a need for works such as climate projections in order to perform and use current and long term climate assessments at national and regional scale.

6.9. General Directorate of State Hydraulic Works (DSI)

The organization and tasks and authorities of DSI, which is affiliated to the Ministry of Agriculture and Forestry are regulated under Articles 119 to 126 of the Presidential Decree Law No. 4.

DSI has the tasks of establishing irrigation facilities, facilities towards floods and overflows, and recycling the used waters, reclaim wetland areas and rivers, carry out land consolidation and in-field development services, and monitor the quality of underground and surface waters. DSI also has the tasks and authorities on the issues of erosion and sedimentation control, waters exceeding and creating borders, drinking water and sewage system projects, water allocations, hydroelectric energy production.

The emphasis on climate change in DSI's **2017-2021 Strategic Plan** is to be highlighted. In the Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis in the document, the drought and extreme precipitation experienced after global climate change are shown as threats.

It is indicated that the importance of scarce clean water resources increased with the increasing demand in sectors dependent on water, including the drinking water at the top, due to such factors and fast population increase, industrialization, global heating and climate change, and the strategic objectives included protection, development, efficient use and ensuring sustainability of water resources.

In line with the objective of protecting, improving and monitoring the quality, and amount of water; the impacts of climate change on water resources,

methods in combatting and adaptation methods were indicated in the Strategic Plan, where it is shown that works would be conducted on the basis of pilot pools.

Among the objectives is the controlling of the damages of flood, erosion and sedimentation that will be created by water at the residential areas, facilities and agricultural lands. It is explained that together with the irregularity that occurs in the precipitation change with the impact of climate change, the hydrological balance in the basins was distorted and the floods were experienced with more magnitude and frequency.

The target is put as establishing reclamation and flood control facilities in rivers as well as ensuring continuity of the existing facilities. It is explained that, as a result of climate change in the world, severe drought conditions were prevailing in some regions while floods that occur due to heavy rain in some regions caused loss of lives and property, and this differentiation in precipitation also constituted a high risk for our country.

The climate change is mentioned while explaining the increase of hydraulic energy supply, which is among the targets, and it is indicated that HPP (Hydro Power Plant) facilities should be operated in harmony with the environment.



7. LOCAL AUTHORITIES AND CLIMATE CHANGE

The multi-dimensional structure of climate change as well as the broadness of mandates and responsibilities of local authorities made it necessary for the local governances to be included in the climate change policies.

There is a need to look at how the laws that regulate the incorporation and tasks of local authorities determined an area for local governances in the direction of struggling against climate change. This title will deal with the legal position of climate change among the tasks of municipalities according to the administrative levels (metropolitan municipalities, province and district municipalities) and the role of local governances in struggling against climate change.

7.1. Metropolitan Municipalities

Metropolitan Municipalities Law dated 10/07/2004 No. 5216 regulates the legal status and administration of metropolitan municipalities and the carrying out of services. Among the local authorities, metropolitan municipalities are important in terms of the population they host, their surface areas and budget sizes. With the comprehensive regulations made in the Metropolitan Municipality Law with the Law dated 12/11/2012 No. 6360, the authority and responsibility field of metropolitan municipalities was expanded to the provincial administrative borders.

With the Article 7 of the Law, which regulates the tasks and is quite long, the metropolitan municipalities were granted with the task and authority to plan, regulate, approve, implement and inspect in various areas such as zoning, transportation and public transportation, water and sewage, brook reclamation, cultural and natural assets, natural disasters, regional parks. It could be seen that tasks

related to the issue of environment are tried to be collected in a single paragraph under the Article. In this scope, in line with the principle of sustainable development, the tasks include protection of environment, agricultural areas and water basins; forestation; collecting the workplaces that have impact on public health and environment at certain parts of the city; determine storage areas and sales places for certain materials, solid waste management; carrying out services related to industrial and medical wastes. Besides, the metropolitan municipalities were given the task to establish central heating systems.

The tasks and authorities of district municipalities are mentioned generally; and it is indicated that they could perform the tasks other than the tasks granted exclusively to metropolitan municipalities under laws and that they can use such authorities. Despite this, tasks on some issues such as solid waste collection, licensing and inspection of certain workplaces, construction of parks, cultural and natural assets and protection of the historical tissue are clearly indicated.

The Law has provided the metropolitan municipalities and the district municipalities within their bodies to carry out any type of activity and service in order to support agriculture and stock breeding. The authority in question is an important authority of the local administrations on pasture lands and agricultural areas and constitutes the legal foundation for the responsibilities which they could undertake within the scope of adaptation to the impacts of climate change.

At the top of the field of task and authority of metropolitan municipalities in terms of climate change is the issue of zoning. The performance of metropolitan cities is very important in the zoning plans and practices which need to be prepared in accordance with the environmental plan. In urban land planning, residence and commercial area-intense preferences, precedent increases, vertical structuring, insufficient green areas affect life quality

in cities in negative direction, and the widespread concrete and asphalts support struggling against climate change. Results that may occur include the sequestration of temperature, prevention of air circulation, non-absorption of rains, air pollution increase, occurrence of in-city floods, increasing negative impact of snow on daily life, AC use becoming widespread leading to increase of energy consumption. It seems beneficial that the Ministry of Environment and Urbanisation intervenes in the rehabilitation of zoning planning and practices in cities.

Also it does not seem possible to speak about a positive scene in terms of climate change in metropolitans in terms of in-city transportation. The widespread use of individual motor vehicles increases greenhouse gas emissions from vehicles in addition to the traffic jam. The support of the central administrations required in addition to metropolitan and district municipalities on taking such measures as increasing the share of rail system in the in-city transportation, encouraging the use of mass transportation vehicles, and making widespread in a safe manner the use of bicycles, which was one taken to the government program.

7.2. Municipalities

The **Municipalities Law** dated 03/07/2005 No. 5393, regulates the incorporation, tasks and authorities of the municipalities.

The Law lists the tasks and responsibilities of the municipalities as urban infrastructure such as zoning, water and sewage, transportation; environment and environmental health, cleaning and solid waste; water collection; removal of waste water and rain water; fire department, emergency, rescue; in-city traffic and public transportation; forestation, parks and green areas; cultural and natural assets; house; development of economy and trade.

According to the Law, the municipalities have the authority and concession to engage in any type of activities and initiatives in order to cover the common local needs of the city dwellers.

Within the scope of land and house production, the municipalities have the authority to ensure regular urbanisation, produce lands with zoning permit and infrastructure, excluding the agricultural areas that need to be protected, in order to cover the needs of residential, industrial and commercial areas; and to construct houses.

The municipalities could implement projects in the fields of urban transformation and development for the purposes of creating houses, industrial and commercial areas, technology parks, public service areas, recreational areas and any type of social areas, restructure and restore parts of the city that become worn, protect the historical and cultural patterns of the city or to take measures against the earthquake risk. The Law regulates urban transformation and development in a detailed manner. It is known that urban transformation projects are subject to various criticism due to integration with the city as a whole and the increase of intensity.

The **City Council**, which was established with the Law, works towards developing the city vision and awareness of city fellowship in the city life, protection of rights and legalities of the city, sustainable development, sensitivity towards environment, social assistance and solidarity, transparency, accountability, participation and on site governance. Opinions identified in the City Council which is tried to be created with wide participation, are discussed and evaluated in the first meeting of the city assembly. It is foreseen that the municipality implements programs towards providing solidarity and participation in the city for fulfilling certain services, and engage in programs for participation of volunteers in order to increase efficiency, saving and effectiveness in the services. It could be seen that in some cities such as Bursa, Çanakkale, Denizli, İzmir,

city councils handle the issue of climate change from various dimensions.

The law indicates the places which are under the control of the municipality as the sightseeing areas, threshing floors, coppice forests, recreational areas, squares, swamps, landfill areas, ruined caste and tower lands, debris and similar places. The preference of the municipalities in many places to open these areas, which are limited and at a low number, for construction could lead to negative consequences.

The provision that the areas, which are acquired by Municipalities by filling out the seas, rivers and lakes, are left to the disposal of the municipalities with the condition to be used in accordance with Coastal Law and relevant regulations, is a provision which involves risk in terms of struggling against climate change.

Another task of the municipality which should be emphasized within the scope of adaptation to the impacts of climate change is to make disaster and emergency plans and prepare equipment and hardware taking into account the characteristics of the site in order to protect against natural disasters or mitigate their damages.

7.3. Provincial Special Administrations

Organization, tasks and responsibilities of provincial special administrations are regulated under Provincial Special Administration Law dated 22/02/2005 No. 5302. The importance of provincial special administration has decreased due to the fact that this has been abolished in provinces that are metropolitan municipalities, which are around 30 and where the majority of the population live.

Provincial special administration has the tasks and authorities to provide agriculture, industry, trade; province environmental order plan, public works and settlement, soil protection, erosion prevention,

tourism related services; zoning, road, water, sewage system, solid waste, environment, emergency and rescue services outside the municipality limits, supporting forest villagers, forestation, and performing services related to park and garden allocation.

Taking into account the broad field of activity towards the rural section that is left outside the borders of municipality services, provincial special administrations could take significant roles in the climate change.

Administration of villages, which are the smallest local administration units, and the works to be carried out in the village, are regulated in the Village Law dated 18/03/1924 No. 442. It is known that many investments are performed by the provincial special administrations due to lack of budget and other capacities in the villages. It is important that the villagers, who mostly deal with agriculture and stock breeding, are informed on climate resistance agriculture and stock breeding within the scope of rural development and that close support is provided to them in practice.

7.4. Supporting the Role of Local Authorities to Combat Climate Change

Development Agencies are structures which could support activities of local authorities to prevent climate change impacts and serve adaptation. In the Presidential Decree Law No. 1 on the Organization of Sub-Organs, Related, Affiliated Institutions of Ministries and Other Institutions and Organizations, the development agencies to be established according to the regions are regulated for the purposes of accelerating regional development, ensuring sustainability and reducing differences of development between and among regions by developing cooperation between public and private sector and NGOs, using resources appropriately and effectively and mobilizing the local potential.

Ministry of Industry and Technology is responsible from the coordination of agencies at national level. General Directorate of Development Agencies is among the service units of the Ministry. The Ministry takes measures to mitigate differences of development between and within regions; provides guidance, counselling, implementation monitoring and evaluation in planning, programming and project design. The agencies provide technical support to the planning works of local governances; support activities and projects to provide for the implementation of regional plans and programs, monitor and evaluate the implementation process and notify the results to the Ministry, and contributes in the economic and social development of the region as well as development of capacity related to rural and local development. In consideration of these tasks, it is expected that the Development Agencies act in line with a climate-friendly understanding and approach in the activities of local governances.

Meanwhile, there are special development projects developed for certain regions, such as **South East Anatolian Project, East Anatolian Project, East Black Sea Project and Konya Plain Project**, and the regulations related to departments of these affiliated to the Ministry of Industry and Technology.

- **Decree Law (KHK) on Incorporation and Tasks of South East Anatolia Project Regional Development Administration** dated 27/10/1989 No. 388.
- **Decree Law (KHK) on Incorporation and Tasks of East Anatolia Project, East Black Sea Project and Konya Plain Project Regional Development Administrations** dated 03/06/2011 No. 642.

Among the regional development projects, Southeastern Anatolia Project (GAP) is to be highlighted with its potential to change the climate of the region in positive and negative direction in terms of the impacts on water and soil use and the changes

it caused on the surface characteristics of the area covered. Also Konya Plain Project (KOP) is an important regional development project for Konya Closed Basin where there are risks of withdrawal of underground waters, drought and deforestation.

It is considered beneficial to evaluate the projects in question together with the local administrations for the purposes of preventing and adaptation to climate change at regional and local level.

In the "**Regional Development National Strategy 2014-2023**" prepared by the Ministry of Development, while evaluating the structure and trends of the regions, it is indicated under the "Natural Structure, Environment and Climate Change" that *"with the measures taken in the direction of emission control, increasing renewable energy use and energy efficiency, making effective the waste management, dissemination of services such as drinking water and sewage system and increasing the quality, improving struggle against deforestation and erosion, widening the areas protected including the forest and sea protection areas, and protecting the biodiversity, the environmental indicators of Turkey have improved"*.

It is considered beneficial to evaluate the projects in question together with the local administrations for the purposes of preventing and adaptation to climate change at regional and local level.

The **İller Bank (İLBANK)**, which functions as a development and investment bank within the framework of Law No 6107 dated 26/01/2011, is important for the local governances with the tasks of developing projects related to local services for provincial special administrations and municipalities, providing consultancy services to these administrations and assisting the performance of infrastructure and superstructure works with urban projects that have technical character, and supporting urban transformation practices and zoning plan development works. İLBANK, which

received the authority to carry out renewable energy, city planning, architecture, engineering and consultancy services, infrastructure and superstructure applications with the Law dated 17/01/2019 No. 7161, could provide technical and financial contribution in climate change prevention and adaptation supporting projects of local authorities.

In the building sector part of the document “**Republic of Turkey Climate Change Action Plan (2011-2023)/IDEP**” the objectives include “limitation of greenhouse gas emissions arising from settlements”. In line with this objective, the action area was determined as “developing policy and legal regulations for energy efficiency and climate sensitive settlement/ construction and implementing pilot projects”. The actions include;

- Preparation by local administrations of zoning plans in the form of climate-sensitive settlement plans;
- Determining principles and procedures towards energy-efficient, climate-sensitive, sustainable urban settlement planning and transferring the outputs to the zoning regulations in order to implement sustainable city plans using the results of the pilot project;
- Developing and implementing urban settlement plans covering the sustainability elements such as land use, ecology, transportation, water management, gray water, green/ white roofs using life cycle cost assessment methods within the framework of pilot projects;
- Developing energy efficient and climate sensitive planning and settlement principles for different climate regions, preparing a guide for efficient implementation of urban settlement plans;
- Creating databases in related sectors towards

increasing energy efficiency in buildings in pilot cities/ regions to be selected, conducting analysis for determining the integrated impacts.

In the document in question, the targets include “handling the water management of cities with a point of view of adaptation to climate change”. It is pointed out that in the metropolitan area management (big cities, metropolitan municipalities), the scale expansion should be planned taking the climate change into account.

In particular, the actions for struggling against climate change in particular at local level included under IDEP are important. Within this framework, the section of IDEP which foresees that the climate actions shall be disseminated overall the country, namely “In order for more efficient struggle against climate change at local level and strengthen adaptation capacity, it is highly important that the local authorities integrate this issue into their own strategic plans and programs and prepare Local Climate Action Plans” emphasized that local climate action plans are important capacity development tools for local administrations.

A movement has been launched in Turkey towards the preparation of local climate action plans, including at the top the metropolitan municipalities. Some municipalities have completed their greenhouse gas inventory and sustainable energy action plans; it is in the agenda to prepare climate change impacts adaptation action plans at the local level.²⁰

Although INDC of Turkey does not include concrete targets concerning adaptation to the impacts of climate change, in recent periods the political will demonstrates its willingness concerning climate change adaptation policies. Statements made by the Ministry of Environment and Urbanisation in relation

²⁰ Antalya, Bağcılar-İstanbul, Bornova-İzmir, Bursa, İzmir, Tepebaşı-Eskişehir, Kadıköy-İstanbul, Karşıyaka-İzmir, Nilüfer-Bursa, Maltepe-İstanbul, Şişli-İstanbul, Seferihisar-İzmir, Çankaya-Ankara

to the issue underlines the necessity to handle the issue of adaptation to the effect of climate change at the local level and in particular the measures to be taken for meteorological disasters experienced in rural areas and cities due to climate change. The circular titled “**Climate Change and Disaster Precautions**”, which was sent by the Municipality to all governorates and municipalities, is important from this aspect. This Circular dated 22 January 2019 indicated that there were increases in the number and magnitude of the disasters in recent years including floods and overflows depending on global climate change and it was asked from the local administrations, which have the ability and responsibility to intervene to the problem on site and with urgency, to put into life the precautions to be taken immediately.

Ministry of Environment and Urbanisation has the objective of issuing Local Climate Action Plan Regulation in the Strategic Plan (2018-2022). According to this, it is foreseen that 30 metropolitan municipalities will prepare Local Climate Action Plans at the first stage, and 51 provincial municipalities and other municipalities at the second stage.

The issue of climate change finds a very limited place in the agendas of local administrations. Together with this, there have been actions in recent years towards development of technical and administrative capacities in this field. Local Climate Action Plans are prepared in some metropolitans, provinces and districts.

According to the Spatial Plans Preparation Regulation published in 2014, urban technical infrastructure impact assessment report is required. This condition is important for the climate disasters experienced in the cities. The fact that the regulation includes provisions which foresee the abbreviation of transportation distances in the cities bring to the agenda the evaluation of the existing in-city transportation practices.

General Directorate of Local Administrations of the Ministry of Interior was transferred to the body of the Ministry of Environment and Urbanisation with the name of General Directorate of Local Administrations. General Directorate of Local Administrations is assigned with the task of supervising that the development of local administrations and investment and services are carried out in accordance with development plans and annual programs.

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8. EVALUATION NOTES ON LEGISLATION, INSTITUTIONAL RESPONSIBILITIES AND POLICIES RELATED TO CLIMATE CHANGE IN TURKEY

- In accordance with international agreements/conventions related to climate change which Turkey is a party, it has been taking into account the combat in this area in its social, economic and environmental policies. Its innovations in legal and corporate structure at the national level for struggling against climate change and the fact that it has implemented/being implemented projects of remarkable scale make Turkey an important and indispensable player at global climate actions.
- Official policy documents, including at the top the development plans, strategic plans and action plans, are the resources where the responsibilities undertaken at international and national level could be traced, beyond the reflection of awareness on climate change.
- It could be seen that adjustments were made in the regulations in line with the provisions of researches related to climate, strategy documents were prepared, action plans were put into implementation and reporting was completed.
- International undertakings towards climate change should be supported with national climate regulations. National regulations related with climate change should be in compliance with energy, industry, agriculture, transportation and settlement strategies. In this way, a climate change combat program that is integrated at national level will be prepared
- Whereas laws and secondary regulations could be used for preventing climate change, these could also make it harder to ensure adaptation to impact of climate change, decrease sink areas

and increase emissions of greenhouse gases. It is important that the regulation is climate friendly and implemented with this understanding.

- It is to be highlighted that in the laws, regulations towards preventing climate change directly are insufficient. In particular, it is considered beneficial to concentrate the support and incentive instruments on climate friendly investments in the financial regulations and sector arrangements.
- It is well known that regulations towards protecting sink areas such as forests, pasture lands, agricultural lands and wetlands have been existing since old times. However, it is important that these areas have been the subject of practices within the scope of integrated land use management and for practices in line with the approach of protection and development against climate change. Whereas the reflections of urbanisation in particular and also the needs of transportation, energy, mining and industrial sectors to regulations could be seen, the abrasive pressure on sink areas could be felt. Re-regulation of the exceptional provisions in the regulations that affect the sink areas in a sensitive manner within the framework of relevant laws, is also a requirement of the sustainable development of a country.
- Within the scope of adaptation to the impacts of climate change, first there is a need to develop regulations towards remedial of the sufferings arising from meteorological disasters caused by climate change.
- The justification that creates the background of the laws is that when the TGNA commission reports, commission and General Assembly minutes are examined, the perception of climate change that occurs as a result of human activities is less reflected from the point of cause-effect relationship and its impacts. It could be said that in order to establish relationship between climate change and

policies in a draft bill discussed in the TGNA, there is a need to increase parliamentary awareness on the issues of formation of climate change, its impacts; emission mitigation and adaptation to impacts.

- Whereas the countries could prefer to regulate the objectives and targets for struggling against climate change and the relevant activities under a single law as part of their legal arrangements, the sensitivities of climate change could also be reflected as a determining element in laws that regulate different sectors and areas. Whether established with a single code law or regulated under various laws, the climate regulation will be meaningful to the extent it includes concrete gargets and identified processes, defined tasks and responsibilities, applicable, flexible mechanisms, beyond solely being a basic policy.
- There is no separate and special information and evaluation in the Central Administrative Budget Law and budget documents towards environmental impacts of budget allowances and measures and compliance with climate change targets and strategies. It will be beneficial to demonstrate the budget dimensions related to climate change exclusively in the budget documents, to make explanations and analysis and evaluate the effectiveness.
- It could be said that the Tenth Development Plan, implementation process of which has been completed (2014-2018), generally focused on economic development and growth. The Plan has frequent emphasis on the concept of sustainable development both in macro terms and in evaluations made on the basis of sectors. It could be seen that the concepts such as green growth, clean production also have a reflection in the Plan. Climate change appears before us as a development taken into account in the Plan with measures towards adaptation together with issues related to prevention. It could be evaluated that in the Plan, the climate change

was considered as an environmental problem in general sense, that the impacts of climate change were not take into account in the development strategies for every field or sector despite the emphasis made on sustainability, that the adaptation policies were more handled on the basis of disaster management and agricultural sector.

- Eleventh Development Plan (2019-2023) was prepared taking into account the UN Sustainable Development Goals which are planned to be put into life by the year 2030. Considering that the policies towards struggling against climate change will constitute an important bridge between Paris Agreement and SDGs, it is expected that his issue will be taken into account in the objectives of the Plan.
- Making separate evaluations on negative contribution of policies related to the sectors on climate change and the impacts of climate change on sectors in the development plans, which are expected to be binding for the public and encouraging and guiding for the private sector, is a necessity of the understanding of sustainable development.
- Since the policy boards established within the body of Presidential government system will undertake a significant role in the determination of policies to be followed by municipalities and public institutions, they could be defined at a leading, encouraging and supervising position in the adoption and implementation of sustainable development understanding integrally with climate-friendly content, in a stable and harmonized way.
- When the duties of ministries and public institutions and organizations are examined, it could be understood that, since the issue of climate change is multi-dimensional, is related to and affects many areas and sectors, no responsibility could be put on a single institution in this field. It is important that each public institution at central and local level should first evaluate its field of authority and responsibility

and activities it has been carrying out from the point of combatting climate change, particularly including the service buildings and public vehicles used. In this scope, it seems appropriate for all institutions to include climate change assessments in the strategic plans which they will prepare and implement.

- It is important that local administrations are included in zoning plan processes and the element of climate change is included in the building sector investments. Urban transformation policies could turn into opportunities in struggling against climate change. In this framework, it seems possible to make investments and practices in the construction sector sensitive towards climate. It is necessary to construct infrastructure systems that are resistant against climate change in order to ensure sustainable development in cities. For that reason, the fact that settlement areas should be prepared against climate disasters, is among the foregoing issues.
- It is necessary to make regulatory arrangements for climate friendly local investments and to highlight the issue of combatting climate change in in-city transportation planning (shift to electric vehicles, bicycle paths etc.)
- Actions with a collective understanding by local administrations, universities, businesses and NGOs will provide contribution to an effective climate management overall the country within the scope of meeting the requirements of international agreements, laws and secondary regulation as well as documents such as strategy and action plan.
- Responsibilities of and measures to be taken by organizations which are mandated for combatting climate change or which cause climate change with their activities, have been regulated in various regulations. It is important that the complete regulations related to climate change are well understood and implemented at central and local level with a climate-friendly understanding.



REFERENCES

- TBMM Order No in relation to the Law dated 31/10/1980 No. 2328 On the Consent of Approval of Convention on Protection of Mediterranean Against Pollution and Two Protocols and Their Annexes Signed in Barcelona on 16 February 1976. Accessed at:
https://www.tbmm.gov.tr/tutanaklar/TUTANAK/MGK_d01/c001/mgk_01001013ss0029.pdf
- Decision of the Constitutional Court dated 7/5/2007 No E.2006/169 and K.2007/55 Accessed at :
<http://www.resmigazete.gov.tr/eskiler/2007/11/20071124-5.htm>.
- TBMM Order No in Relation to Law dated 14/2/2017 No. 6774 on the Approval of Our Participation in Antarctic Agreement Framework Protection Protocol. Accessed at:
<https://www.tbmm.gov.tr/sirasayi/donem24/yil01/ss698.pdf>
- Baybek, G. (2016). Turkey's Position in International Climate Change Negotiations. *EDAM*, September 2016.
- TBMM Order No in Relation to Law dated 5/2/2009 No. 5836 on the Approval of Our Participation in Kyoto Protocol Towards UN Framework Convention on Climate Change. Accessed at:
<https://www.tbmm.gov.tr/sirasayi/donem22/yil01/ss203m.htm>.
- TBMM Order No in Relation to Law dated 5/2/2009 No. 5836 on the Approval of Our Participation in Kyoto Protocol Towards UN Framework Convention on Climate Change. Accessed at:
<https://www.tbmm.gov.tr/sirasayi/donem23/yil01/ss268.pdf>
- Budget and Financial Control General Directorate (2018). Year 2019 Budget Justification. Accessed at:
http://www.bumko.gov.tr/Eklenti/11294,butce-gerekcesi2019pdf.pdf?0&_tag1=EFDDCDEAC342628405BFBF26F2F1388F7DADEDEC
- TBMM Order No. related to Law dated 08/03/2017 No. 6973 on the Ratification of Amendments Made in Kyoto Protocol in the Doha Conference Accessed at:
<https://www.tbmm.gov.tr/sirasayi/donem26/yil01/ss258.pdf>
- Fankhauser, S., Averchenkova, A. and Finnegan, J. (2018). 10 Years of the UK Climate Act. The Centre for Climate Change Economics and Policy (CCCEP), LSE. Accessed at : <http://www.lse.ac.uk/GranthamInstitute/publication/10-years-climate-change-act/>
- Gündoğan, A. C. (Şubat 13, 2018). Turkey Presented its 3rd Biannual Report to UN Framework Convention on Climate Change Secretariat, *İklimhaber*. Accessed at: <https://www.iklimhaber.org/turkiye-3-iki-yillik-raporunu-bm-iklim-degisikligi-cerceve-sozlesmesi-sekretaryasina-sundu/>
- Gündoğan, A. C. (15 December, 2017). Detailed Outlook on Grant Program for Developing Capacity in the Field of Climate Change in Turkey - Section 1 - *İklimhaber* Accessed at:
https://www.iklimhaber.org/turkiyede-iklim-degisikligi-alaninda-kapasitenin-gelistirilmesi-hibe-programina-ayrintili-bakis-1-bolum/?utm_content=buffer3d12d&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer
- South Marmara Development Agency (t.y.) *Turkey Climate Change Strategy (2010- 2023)*. Accessed at:
<https://www.gmka.gov.tr/dokumanlar/yayinlar/9-Tu%CC%88rkiye-İklim-Degisikligi-Stratejisi.pdf>
- The Most Comprehensive Climate Law Presented to Parliament in the Netherlands. (28 June 2018). *Hürriyet* Accessed at : <http://www.hurriyet.com.tr/hollandada-dunyanin-en-kapsamli-iklim-yasasi-m-40879887> .
- Prime Ministerial Circular No .2013/11 On Climate Change and Air Management Coordination Board. Accessed at:
<http://www.resmigazete.gov.tr/main.aspx?home=http://www.resmigazete.gov.tr/eskiler/2013/10/20131007.htm&main=http://www.resmigazete.gov.tr/eskiler/2013/10/20131007.htm>

- İklimHaber, (2 May 2008). New Report: There Is Increase in Climate Laws and Policies of Countries. Accessed at: <https://www.iklimhaber.org/yeni-rapor-ulkelerin-iklim-yasalarinda-ve-politikalarinda-artist-var/>.
- İklimhaber, (3 January 2018). Sweden Entered New Year with New Climate Law: "A Day to Be Told to Grandchildren". Accessed at: <https://www.iklimhaber.org/isvec-yeni-yila-yeni-iklim-yasasi-ile-girdi-torunlara-anlatilacak-bir-gun/>.
- TBMM Order No on Law dated 7/12/1993 No. 3937 on Consenting the Approval of Convention on Protection of Black Sea Against Pollution and Its Annex Protocols. Accessed at: <https://www.tbmm.gov.tr/tutanaklar/TUTANAK/TBMM/d19/c045/tbmm19045036ss0245.pdf> .
- Global Balance Association (2016). Role of TBMM in Climate Change Policy. Partners: Legislation Association, Consumer and Climate Protection Association, February 2016, Ankara. Accessed at: http://www.yasader.org/web/faaliyetler/29-02-2016/TBMM_ve_iklim_degisikligi_raporu.pdf.
- Ministère de la Transition Écologique et Solidaire, (2016). *Loi de Transition Énergétique Pour la Croissance Verte*. Accessed at: <https://www.ecologique-solidaire.gouv.fr/loi-transition-energetique-croissance-verte>.
- LSE, (2015). *Climate Change Act*. Accessed at : <http://www.lse.ac.uk/GranthamInstitute/law/climate-change-act/>
- LSE, (2018). *New Study Reveals All Countries That Have Signed or Ratified the Paris Agreement Have at Least One National Law or Policy on Climate Change*. Accessed at : <http://www.lse.ac.uk/GranthamInstitute/news/new-study-reveals-all-countries-that-have-signed-or-ratified-the-paris-agreement-have-at-least-one-national-law-or-policy-on-climate-change/>
- OECD, (2019). *OECD Environmental Performance Reviews: Turkey 2019*. Accessed at: <https://www.oecd.org/turkey/oecd-environmental-performance-reviews-turkey-2019-9789264309753-en.htm>
- TBMM Order No. In Relation to Law dated 06/06/1990 No. 3655 on Consenting the Ratification of our Participation in Convention of Wien on Protection of Ozone Layer. Accessed at: <https://www.tbmm.gov.tr/tutanaklar/TUTANAK/TBMM/d18/c046/tbmm18046123ss0387.pdf>.
- TBMM Order No. In Relation to Law dated 06/06/1990 No. 3656 on Consenting the Ratification of our Participation in Montreal Protocol on Substances Depleting Ozone Layer. Accessed at: <https://www.tbmm.gov.tr/tutanaklar/TUTANAK/TBMM/d18/c046/tbmm18046123ss0388.pdf> .
- TBMM Order No. on Law dated 11/02/1998 No. 4340 On Consenting the Ratification of UN Convention on Combatting Severe Drought Particularly in Africa and/or Countries Suffering Deforestation Accessed at:<https://www.tbmm.gov.tr/tutanaklar/TUTANAK/TBMM/d20/c045/tbmm20045053ss0258.pdf> .
- TBMM Order No. on Law dated 28/12/1993 No. 3958 on Consenting Our Participation in Convention on Wetlands with International Importance Particularly as Habitats for Water Birds. Accessed at: <https://www.tbmm.gov.tr/tutanaklar/TUTANAK/TBMM/d19/c050/tbmm19050057ss0331.pdf>.
- Reimer, S. C. (t.y.). Klimaschutzgesetz für 2019 geplant. *Das Parlament*. Accessed at: https://www.dasparlament.de/2018/13_14/wirtschaft_und_finanzen/-/548756
- Official Gazette, (2012). *Energy Efficiency Strategy Document (2012 - 2023)*. Accessed at : <http://www.resmigazete.gov.tr/eskiler/2012/02/20120225-7.htm>
- Official Gazette, (2017). *Energy Efficiency Action Plan (2017-2023)*. Accessed at : <http://www.resmigazete.gov.tr/eskiler/2018/01/20180102M1-1-1.pdf>
- Sverige Riksdagen, (2017). *Klimatlag*. Accessed at : http://www.riksdagen.se/sv/dokumentlagar/dokument/svenskforfattningssamling/klimatlag-2017720_sfs-2017-720.

- TBMM, (t.y.). *TBMM Plan and Budget Commission Discussion Minutes*. Accessed at: https://www.tbmm.gov.tr/develop/owa/komisyon_tutanaklari.donem_listele?pKomKod=17.
- TBMM, (t.y.). *TBMM Plenary Discussion Minutes*. Accessed at: <https://www.tbmm.gov.tr/tutanak/tutanaklar.htm>.
- TBMM, (2013). *Prime Ministry Note On Presentation of Tenth Development Plan (2014 - 2018) to Turkish Grand National Assembly Presidency and Plan and Budget Commission Report (Report No.476)*. Accessed at: <https://www.tbmm.gov.tr/sirasayi/donem24/yil01/ss476.pdf>
- TBMM, (2013). *TBMM General Plenary Discussion Minutes of Tenth Development Plan*. Accessed at: <https://www.tbmm.gov.tr/tutanak/donem24/yil3/bas/b127m.htm>.
- Republic of Turkey, Prime Ministry (t.y.) Prime Ministry Circular on preparations for Eleventh Development Plan. Accessed at: http://www.basbakanlik.gov.tr/genelge_pdf/2017/2017-52038.pdf
- Republic of Turkey Prime Ministry Disaster and Emergency Management Department, (t.y) *2014 - 2023 Climate Change and Roadmap Document for Climate Change and Related Disasters*. Accessed at: <https://www.afad.gov.tr/upload/Node/3920/xfiles/iklim-son.pdf>.
- Ministry of Science, Industry and Technology (t.y.) *Strategic Plan 2018-2022*. Accessed at: <https://strateji.sanayi.gov.tr/Handlers/DokumanGetHandler.ashx?dokumanId=0281e410-aebd-42a5-8d81-08540b3f2776>.
- Republic of Turkey Ministry of Urbanization (t.y). *Republic of Turkey Climate Change Action Plan 2010-2023*. Accessed at: <http://webdosya.csb.gov.tr/db/iklim/banner/banner592.pdf>.
- Republic of Turkey Ministry of Urbanization (t.y). *Turkey Climate Change Strategy (2010- 2023)*. Accessed at: <http://webdosya.csb.gov.tr/db/iklim/banner/banner591.pdf>.
- Republic of Turkey Ministry of Urbanization (t.y). *Turkey Climate Change Adaptation Strategy and Action Plan (2011- 2023)*. Accessed at : http://webdosya.csb.gov.tr/db/iklim/editordosya/uyum_stratejisi_eylem_plani_TR.pdf.
- Republic of Turkey Ministry of Urbanization (t.y). *Climate Change First National Notification of the Republic of Turkey Within the Scope of UNFCCC*. Accessed at: <http://webdosya.csb.gov.tr/db/iklim/editordosya/bildirim1.pdf>.
- Republic of Turkey Ministry of Urbanization (t.y). *Turkey Climate Change 5th Notification*. Accessed at: <http://webdosya.csb.gov.tr/db/iklim/banner/banner595.pdf>.
- Republic of Turkey Ministry of Urbanization (t.y). *Turkey Climate Change 6th Notification*. Accessed at: https://webdosya.csb.gov.tr/db/destek/editordosya/Turkiye_Iklim_Degisikligi_Altinci_Ulusal_Bildirimi.pdf
- Republic of Turkey Ministry of Urbanization (t.y). *Climate Change*. <https://www.csb.gov.tr/sss/iklim-degisikligi>.
- Republic of Turkey Ministry of Urbanization (t.y). *Climate Change Adaptation Strategy and Action Plan (2011-2023)*. https://www.csb.gov.tr/db/iklim/editordosya/uyum_stratejisi_eylem_plani_TR.pdf
- Republic of Turkey, Ministry of Environment and Urbanization, 2012. *Republic of Turkey Climate Change Action Plan (2011- 2023)*. Accessed at: https://www.kuzka.gov.tr/dosya/iklim_degisikligi_eylem_plani_2011-2023.pdf .
- Republic of Turkey, Ministry of Environment and Urbanization, 2012. *Turkey National Climate Change Adaptation Strategy and Action Plan (2011- 2023)*. Accessed at: https://webdosya.csb.gov.tr/db/iklim/editordosya/uyum_stratejisi_eylem_plani_TR.pdf.
- Republic of Turkey, Ministry of Environment and Urbanization, 2015. *Republic of Turkey Intended*

- Nationally Determined Contribution Declaration*, 30 September 2015. Accessed at: https://www.csb.gov.tr/db/turkce/edotordosya/The_I_NDC_of_TURKEY_v_15_19_30-TR.pdf.
- Republic of Turkey, Ministry of Environment and Urbanization, 2017. *Strategic Plan 2018-2022*. Accessed at: <http://webdosya.csb.gov.tr/db/strateji/icerikler/strategik-plan-20180405140454.pdf>.
 - Republic of Turkey, Ministry of Foreign Affairs (t.y.) *Climate Change Combat Internet Page*. Accessed at: <http://www.mfa.gov.tr/sub.tr.mfa?6f41190c-6742-405a-9e5a-784385301607>.
 - Republic of Turkey, Ministry of Foreign Affairs (t.y.) *List of Main Environment Conventions to Which Our Country is a Party*. Accessed at: <http://www.mfa.gov.tr/data/DISPOLITIKA/Anlasmalar.pdf>.
 - Republic of Turkey; Ministry of Energy and Natural Resources (2014). Accessed at: http://www.eigm.gov.tr/File/?path=ROOT%2f4%2fDocuments%2fEnerji%20Politika%2fTurkiye_Ulusal_Yenilenilebilir_Enerji_Eylem_Planı.pdf.
 - Republic of Turkey; Ministry of Energy and Natural Resources (t.y.) *Strategic Plan 2015-2019*. Accessed at: <http://www.enerji.gov.tr/File/?path=ROOT%2f1%2fDocuments%2fStrategik%20Plan%2fETKB%202015-2019%20Strategik%20Planı.pdf>.
 - Republic of Turkey Ministry Agriculture and Stockbreeding (t.y.) *Strategic Plan 2018-2022*. Accessed at: <https://www.tarimorman.gov.tr/SGB/Belgeler/2013-2017/GTHB%2020182022%20STRATEGİK%20PLAN.PDF>.
 - Republic of Turkey, Ministry of Development (t.y.) *Tenth Development Plan*. Accessed at: http://www.kalkinma.gov.tr/Lists/Kalkinma%20Planlar/Attachments/12/Onuncu_Kalk%20Plan%20C4%20B1.pdf.
 - Republic of Turkey, Ministry of Development (t.y.) *Eleventh Development Plan (2019-2023) Specialty Commissions and Working Groups Manual*. Accessed at: <http://www.kalkinma.gov.tr/Lists/Yaynlar/Attachments/785/On%20Birinci%20Kalk%20Plan%20C4%20B1%20C3%2096zel%20C4%20B0htisas%20Komisyonlar%20C4%20B1%20El%20Kitab%20C4%20B1.pdf>.
 - Republic of Turkey, Ministry of Development (2014) *Regional Development National Strategy 2014-2023*. Accessed at: <https://abdigm.meb.gov.tr/projeler/ois/003.pdf>.
 - Republic of Turkey, Ministry of Development (2015) *Tenth Development Plan Energy Efficiency Development Program Action Plan*. Accessed at: http://odop.kalkinma.gov.tr/dokumanlar/14Enerji_Verimliliginin_Gelistirilmesi_Programi.pdf.
 - Republic of Turkey Ministry of Forestry and Water Affairs (t.y.) *UN Convention on Combatting Deforestation - 10 Yearly Strategic Plan*. Accessed at: http://www.cem.gov.tr/erozyon/Files/moduller/collesme/belgeler/10_yillik_strategik_plan.pdf.
 - Republic of Turkey Ministry of Forestry and Water Affairs (2005). *Turkey National Action Program for Combatting Deforestation*. Accessed at: http://www.surdurulebilirlikalkinma.gov.tr/wp-content/uploads/2016/06/Collesme_ile_Mucadele_Eylem_Planı.pdf.
 - Republic of Turkey Ministry of Forestry and Water Affairs (2008). *National Biodiversity Strategy and Action Plan, 2007*. Accessed at: <http://www.nuhungemisi.gov.tr/DosyaRaporSunum/Belgeler/bb951776-e874-40ce-842b-d90ae82b6381.pdf>.
 - Republic of Turkey Ministry of Forestry and Water Affairs (t.y.) *National Strategy Document for Combatting Deforestation (2013-2023)*. Accessed at: http://www.cem.gov.tr/erozyon/Files/moduller/collesme/belgeler/%C3%87%C3%96LLE%C5%9EME_16_X23.pdf.
 - Republic of Turkey Ministry of Forestry and Water Affairs (t.y.) *Turkey National Strategy and Action Plan for Combating with Deforestation (2015-2023)*.

Accessed at:

<http://www.cem.gov.tr/erozyon/Files/00000000ulusalstratejibelgesi2015-2023/CEM%20STJ%20EYLEM%20PLANI%202015xBASKISON.pdf>.

- Republic of Turkey Ministry of Forestry and Water Affairs (t.y.). *Strategic Plan 2017-2021*. Accessed at: <http://www.ormansu.gov.tr/docs/default-source/default-document-library/t%C4%B1klay%C4%B1n%C4%B1ze19292deda89642aade2ff000015211d.pdf?sfvrsn=0>.
- Republic of Turkey, Ministry of Forestry and Water Affairs, Meteorology General Directorate (t.y.). *Strategic Plan 2017-2021*. Accessed at: https://www.mgm.gov.tr/FILES/kurumsal/yatirimfaaliyet/MGM-SP_2017-2021.pdf.
- Republic of Turkey Ministry of Health Turkey Public Health Institution (2015). *National Program and Action Plan for Mitigating Negative Effects of Climate Change on Health*. Accessed at: https://hsgm.saglik.gov.tr/depo/birimler/cevresagligi/2-ced/iklim-degisikligi/iklim_Degisikligi_Eylem_Plani.pdf.
- Republic of Turkey Ministry of Health Turkey Public Health Institution (t.y.). *Environmental Health Department Climate Change Internet Page*. Accessed at: <https://hsgm.saglik.gov.tr/tr/cevresagligi-ced/ced-birimi/406-iklim-de%C4%9Fi%C5%9Fikli%C4%9Fi.html>.
- Republic of Turkey Ministry of Agriculture and Forestry, (t.y.) *National Drought Management Strategy Document and Action Plan 2017-2023*. Accessed at: http://suyonetimi.ormansu.gov.tr/Libraries/su/Ulusal_Kurakl%C4%B1k_Y%C3%B6netimi_Strateji_Belgesi_ve_Eylem_Plan%C4%B1.sflb.ashx.
- Republic of Turkey Ministry of Transportation, Maritime and Communication (ty) *Strategic Plan 2017-2021*. Accessed at: <http://www.udhb.gov.tr/images/hizlierisim/e0e8096be3b7b23.pdf>.
- Türkeş, M. (2002). *Climate Change: Turkey/ Climate Change Framework Convention Relationships and Climate Change Policies*. TÜBİTAK Vision 2023:

Science and Technology Strategies Technology Projection Project, Environment and Sustainable Development Panel, Vision and Projection Report.

Accessed at:

https://www.tubitak.gov.tr/tubitak_content_files/vizyon2023/csk/EK-7.pdf.

- UNEP, (2010). *Green Economy Developing Countries Success Stories*. Accessed at: https://www.minambiente.it/sites/default/files/archivio/allegati/rio_20/unep_developing_countries_success_stories_eng.pdf.
- UNEP & Geneva UNEP, (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Accessed at: <http://web.unep.org/greeneconomy/resources/green-economy-report>.
- Counselling Assembly Order No. On the Law No. 2667 dated 28/4/1982 on Consenting the Ratification of Convention on Long Range Transboundary Air Pollution. Accessed at: https://www.tbmm.gov.tr/tutanaklar/TUTANAK/DM_/d02/c001/dm_02001027ss0047.pdf.
- Wikiwand, (t.y.). *Klimaschutzgesetz*. Accessed at: <https://www.wikiwand.com/de/Klimaschutzgesetz>



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