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TÜRKİYE'S ENVIRONMENTAL MOBILIZATION IN THE 21ST CENTURY

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Contents

FOREWORD	9
President Recep Tayyip Erdoğan	
INTRODUCTION	11
GLOBAL SUPPORT FOR TÜRKİYE’S ENVIRONMENTAL MOBILIZATION	13
CHAPTER I	
INSTITUTIONAL FRAMEWORK PERTAINING TO THE ENVIRONMENT	21
CHAPTER II	
TÜRKİYE’S LEGISLATIVE ARRANGEMENTS PERTAINING TO THE ENVIRONMENT	47
CHAPTER III	
STRATEGY DOCUMENTS AND ACTION PLANS	75
CHAPTER IV	
INTERNATIONAL TREATIES AND CONVENTIONS	89
CHAPTER V	
ENVIRONMENTAL DIPLOMACY	115

CHAPTER VI
ZERO WASTE MOVEMENT
131

CHAPTER VII
GREEN DEAL ACTION PLAN
165

CHAPTER VIII
SUSTAINABLE DEVELOPMENT GOALS AND TÜRKİYE
177

CHAPTER IX
GREEN DEVELOPMENT
259

Green Economy	261
Green Energy.....	281
Green Business and Employment	291
Green Industry	299
Green Technology.....	317
Green Production	325
Green Water and Waste Management	333
Green Agriculture and Livestock	363
Green Transportation.....	379
Green Healthcare Services	403
Green Tourism	415



FOREWORD

Nature is one of the greatest blessings Allah has bestowed on humanity. It is our life source, shelter, common heritage, and future. Nature, a reflection of the Almighty's art, is sacred and "entrusted" to humankind; it can neither be destructed nor used in a way that compromises others' right to life.

Emphasising that Allah has created everything according to an order and with due balance and that people should not upset this balance, the Qu'ran reads, "As for the sky, Allah raised it high and set the balance of justice so that you do not defraud the scales" (Surah Ar-Rahman 55/7-8).

All religious faiths advocate for the preservation of the ecological balance in nature. Nevertheless, with the Industrial Revolution, the human being, who was first physically separated from nature to labour in factories, was as well drawn into a spiritual upheaval. The once harmonious relationship between humanity and nature has been disrupted and transformed into one of "dominance," and driven by the profit motive of capitalism, humans have nearly begun to "colonise" nature.

Owing to this paradigm shift, our planet is currently experiencing severe destruction, from industrialisation to excessive consumption habits and the damage caused by technological advancements. Environmental problems cannot be handled in isolation from social and international issues. Today's global environmental crisis, with its painful consequences, mirrors the injustices and distortions in politics, economics, and human rights that modern individualism and egocentrism have brought into our world.

We believe that a fairer and more equitable system is the only way to solve the environmental problem, along with all the other social, economic, and political crises confronting our world, in keeping with the motto "A fairer world is possible." Leaving a habitable environment for the future is, above all, a humanitarian and moral responsibility in a world where, on the one hand, the desire for unlimited consumption leads to an endless waste problem, and on the other hand, thousands of children die every year because they cannot even access clean water, the most basic right to life.

A more habitable and green world, which is the desire and shared concern of all humanity, can only be feasible if concrete, solution-focused policies are devised to address global environmental problems, and every nation takes responsibility and decisively implements these policies. All nations and all of humanity share a

collective responsibility and concern for protecting nature. International cooperation and solidarity are essential to ensure that future generations inherit an environment that is greener, more appealing, and more habitable and to fulfil the world's collective responsibility.

In light of this understanding, Türkiye has been actively promoting a more habitable world since 2002 and has taken the lead in numerous projects and initiatives that preserve the environment, prevent environmental pollution, and address the pressing problems of climate change and environmental pollution. We have put numerous regulations and practices into effect for the past 22 years. Even though we have historically contributed less than 1% of greenhouse gas emissions, we have taken and continue to take significant initiatives to address this issue using our own resources. By increasing the share of renewable energy in overall energy generation, we ranked among Europe's leading countries in terms of installed capacity. While combating desertification and erosion, we have also undertaken the largest afforestation projects in our Republic's history, advancing our path towards green development.

Launched in 2017 as a crucial step in addressing the climate crisis, the Zero Waste Movement, which has now become a global brand, has evolved into an environmental mobilization worldwide. Under the auspices of First Lady Emine Erdoğan, the Zero Waste Movement has marked a significant advancement in waste management, establishing us as a model country in promoting environmental awareness and setting an example. We have unwaveringly demonstrated our commitment to a cleaner, greener, and more habitable world by taking the lead as the first country to sign the Global Commitment to Zero Waste in 2022.

In the future, we will continue to take initiatives for a greener and cleaner Türkiye by addressing climate change and environmental pollution through multifaceted approaches. We will continue our struggle against global discrepancies, saying that "A Fairer World is Possible", and persist in our efforts to address the inequities brought by the climate crisis.

The book *Türkiye's Environmental Mobilization in the 21st Century*, compiled by the Presidency's Directorate of Communications, is a significant publication that highlights our steps, efforts, and exemplary projects towards creating a more habitable world. I offer my congratulations to everyone who has contributed to this book, which I am confident will effectively communicate our environmental policy to a global audience.

I would like to reiterate that it is essential for all of humanity to act collectively and immediately to create a more habitable world. I would like to express my gratitude to every country, society, and international organisation that has taken responsibility on this path on behalf of humanity and our future.



PRESIDENT OF THE REPUBLIC OF TÜRKİYE

RECEP TAYYİP ERDOĞAN

INTRODUCTION

Our world, which we strive to leave to future generations as a more habitable heritage, is currently confronted with a number of challenges, including global warming, climate crises, desertification, air, water, and soil pollution, greenhouse gas emissions, and waste management problems. While all of these problems, in conjunction with industrialisation, changes in consumption habits, and population growth, result in destruction and damage that have enduring effects on our planet, the problems associated with resource scarcity are also increasing. Furthermore, the injustice and inequality experienced in every field in the world are also present in climate change and the environment. In certain regions of the world, people lack access to even the most basic resources, whereas in other regions, resources are consumed excessively and rapidly, and nature is ruthlessly destroyed. The countries contributing the least to global warming are the most affected by the extreme heat, floods, storms, and devastation caused by climate change.

As Türkiye, which always stands on the side of the oppressed and the victims against injustice and inequality, our stance on climate change and the damages it causes is clear. As we are the voice of the oppressed against discrimination, colonialism, oppression, and injustice, we also declare in the face of the climate crisis and its consequences that a more habitable world is a common concern of all humanity and that everyone should take responsibility for sustainable development and the construction of a bright future.

In line with the objective of a greener and cleaner Türkiye under the leadership of our President Recep Tayyip Erdoğan, we are resolutely striving and developing projects to overcome the environmental pollution and climate crisis all over the world. Through our afforestation efforts, which we have undertaken in accordance with our vision of the Green Development Initiative, we have reached the most extensive forest presence in the Republic's history. The Zero Waste Movement, launched in 2017 in Türkiye under the auspices of First Lady Emine Erdoğan, has now become a global brand that serves as an example to the entire world. The Zero Waste Project, one of the most important environmental projects Türkiye has introduced to the world, pioneers the whole world in reducing waste, using resources efficiently, and preventing wastage. Our leading environmental projects and the Green Development Initiative, which we have implemented with a human-centred development vision, provide a road map for a sustainable environment and concretely reveal the steps that can be taken in this regard.

The book *Türkiye's Environmental Mobilization in the 21st Century* prepared by the Presidency's Directorate of Communications, demonstrates Türkiye's environmental awareness and determination to tackle the climate crisis in all its aspects. The book, which concretely indicates that the Republic of Türkiye's environmental policies are one of the most central elements of public administration, details the environmental legislation, action plans, international agreements, and conventions that have been implemented since 2002. In the book, which also discusses Türkiye's environmental institutional structure, the duties and responsibilities of the institutions and organisations that carry out environmental activities are covered in detail.

The book presents the international public with examples of environmental diplomacy activities carried out by Türkiye, which considers the climate crisis and environmental problems to be global issues and seeks to assume a leadership role in the global arena with its solution proposals and cooperation models.

The book, which was compiled by the Directorate of Communications following a thorough investigation, comprises nine chapters and encompasses research on the green economy as well as Türkiye's policies and practices on the environment and leading environmental projects.

For the book *Türkiye's Environmental Mobilization in the 21st Century* prepared by our Directorate, I would like to extend my heartfelt gratitude to Achim Steiner, Administrator of the United Nations Development Programme (UNDP); Inger Andersen, Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme (UNEP); Maimunah Mohd Sharif, Former United Nations Under-Secretary-General, Executive Director of UN-Habitat (2018-2024) and Mayor of Kuala Lumpur, and Babatunde Ahonsi, UN Resident Coordinator in Türkiye, for sharing their valuable insights on Türkiye's international environmental cooperation and our pioneering contributions to a sustainable world, such as the Zero Waste Project.

To build a more habitable world, we will continue to proclaim on all platforms that 'The World is Bigger Than Five' and 'A Fairer World is Possible', which our President Recep Tayyip Erdoğan emphasised against the injustices in the global governance system, and recount the facts in our pursuit of the truth.

PRESIDENCY'S HEAD OF COMMUNICATIONS OF THE REPUBLIC OF TÜRKİYE
PROF. FAHRETTİN ALTUN

GLOBAL SUPPORT FOR TÜRKİYE'S ENVIRONMENTAL MOBILIZATION



ACHIM STEINER

United Nations Development Programme (UNDP) Administrator

The Republic of Türkiye's ratification of the Paris Agreement and its target to reach net-zero by the year 2053 are unambiguous statements of its intent to intensify efforts toward decisive climate action and the protection of our natural world. A standout initiative is the Zero Waste Project led by First Lady H.E. Emine Erdoğan, which helped to inspire a 2022 United Nations General Assembly resolution designating March 30 as the International Day of Zero Waste. The campaign has brought critical global attention to waste reduction and the transition to a circular economy – profound shifts supported by the United Nations Development Programme (UNDP) in Türkiye and across the globe.



INGER ANDERSEN

Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme

As we move rapidly toward 2030, a year that marks critical deadlines for the Sustainable Development Goals and global climate targets, it is clear we are not yet on track. The triple planetary crisis of climate change, nature and biodiversity loss, and pollution and waste are accelerating, and the challenges are growing more complex with each passing day. Every country has a critical role to play as together we seek to overcome the triple planetary crisis and build the resilience of people everywhere.

Türkiye's efforts, in spearheading a zero-waste future, including the adoption of the 2022 United Nations General Assembly resolution establishing the International Day of Zero Waste, represent important progress. Türkiye's collaboration with the United Nations Environment Programme (UNEP) has significantly contributed to promoting sustainability and addressing key environmental issues. I encourage all countries, including Türkiye, to continue to work together toward a more sustainable future.

In this context, a more agile and inclusive multilateral system — one that embraces innovation and adapts quickly to emerging challenges — is vital. The multilateral system must be nimble, proactive, and interconnected, with a forward-thinking culture that is unafraid to change tack or experiment when necessary. UNEP is committed to supporting these efforts by providing scientific expertise and fostering greater collaboration across borders, in line with the vision outlined by the UN Secretary-General in our common agenda.

I welcome the leadership of Türkiye in this journey towards securing a just, equitable, and sustainable future for all. The clock is ticking, but with shared purpose and strengthened multilateralism, we can build a future that stands as a beacon of hope in a divided world.



MAIMUNAH MOHD SHARIF

Former Under-Secretary-General of the United Nations and Executive Director UN-Habitat (2018-2024), Mayor of Kuala Lumpur

Türkiye's Environmental & Sustainable Urbanisation Achievements

It gives me great pleasure to pen this message commemorating the achievements of the Government of Türkiye in advancing sustainable urbanisation and the environmental agenda.

Since hosting the second United Nations Habitat Conference in 1996, the Government of Türkiye has set a global example of translating policy into practice, achieving positive impact on the ground. It has done so by implementing the Urban Agenda that was the declaration from Habitat II conference that year.

Now, more than two decades later and 8 years into the implementation of the New Urban Agenda (Quito 2016), Türkiye is demonstrating for the world, how plan-led urbanisation leads to more equitable socio-economic progress. By ensuring the alignment between urban planning and the climate goals, it is also taking concrete steps to achieve the Paris Agreement on climate change.

Between 1996 and 2024, efforts by the Government of Türkiye to narrow the housing gap is remarkable. In the past decade, the Government's Zero Waste Policy also helped move the needle on its environmental targets. By greening urban growth, it is setting the foundations for a more sustainable future.

During my tenure as Under-Secretary-General and Executive Director of UN-Habitat, I have been privileged to witness first hand the good works of the Ministry of Environment, Climate Change and Urbanisation.

I was very encouraged by the leadership demonstrated by H.E. Emine Erdogan, the First Lady of Türkiye, and patron of the Zero Waste movement in the country. I myself, as Mayor of Penang in Malaysia, had initiated similar Zero Waste policies, which I expanded world wide through my role as Executive Director of UN-Habitat. I am glad to say that with the support of H.E. Emine Erdoğan, the United Nations General Assembly endorsed 30 March each year as International Zero Waste Day.

For those of us working at the city level, there is no doubt that solid waste management is a major challenge. By 2040 the total municipal waste generated will double from 2 billion tonnes to 4 billion tonnes. The environmental impact arising from our 'wasteful' practices is literally polluting the air we breathe and robbing future generations of a sustainable planet.

In my own experience, the opportunity cost arising from poor waste management is enormous. In one city where I was Mayor, some 60% of the city's revenue was devoted to waste management. Through the people's process, which is familiar to the 1,600 cities in 93 countries where UN-Habitat is active, we have been able to mobilise entire communities to reduce the production of waste. I am therefore grateful that under the patronage of H.E. Emine Erdogan, Türkiye established the Zero Waste Foundation with the aim of helping countries and cities adopt Zero Waste practices.

The example set by Türkiye is particularly impressive. I was able to attend the Ministry of Environment's commemoration of World Environment Day in July this year at Ankara where we saw the impressive targets set by the Ministry to ensure Türkiye meets its Paris Climate Goals. What Türkiye has done particularly well is mobilising entire cities and communities to help the country meet these ambitious targets. In Konya, for example, we have Kaylon's solar power plant, which is the largest in Europe. Here, Türkiye is showing the way forward when it comes to energy transition.

Finally, in my capacity as Advisor to the COP29 Presidency, and as a Member of the Global Women Leaders Voices (GWLTV), I would like to highlight the unique contributions by Türkiye's Il Bank, which is dedicated to providing financing to cities and local government partners especially with regards to climate adaptation projects. This is unique in the world where a financial institution is able to channel capital investments and help build capacity to manage finances at the city level.

Secondly, Türkiye is once again demonstrating that women do play a vital role when it comes to the implementation of green policies whether it is at the highest level as demonstrated by H.E. Emine Erdogan or at the working level as demonstrated by the many women academics, professionals and community leaders. By ensuring that more women are provided with opportunities to contribute, I am confident that Türkiye will soon have more women-led cities.

Thank you.



DR. BABATUNDE AHONSI

UN Resident Coordinator in Türkiye

Türkiye's Environment Policies After 2000

The United Nations (UN) stands at a critical juncture, tasked with fostering collective action in an era marked by fragmentation and competition. As the world navigates these challenges, the UN's vision for a renewed multilateralism is centred on building a more inclusive, peaceful, and sustainable future, where peace is not just a goal, but a reality. The success of this vision depends on the collective commitment of Member States to move beyond competition and towards a shared future of peace, prosperity, and sustainability.

In alignment with the UN's vision, Türkiye plays a crucial role in promoting regional stability and multilateral cooperation. As a bridge between continents, Türkiye is uniquely positioned to contribute to global peace efforts by leveraging its strategic location and diplomatic influence. By actively engaging in the UN initiatives and fostering partnerships across borders, Türkiye continues to support the principles of sovereignty, non-intervention, and the peaceful resolution of disputes.

The Black Sea Grain Initiative is a prime example of Türkiye's pivotal role in multilateral diplomacy and conflict resolution. As a key mediator, Türkiye demonstrated its ability to bring conflicting parties together for a common humanitarian goal, working alongside the UN to facilitate this landmark agreement. By hosting the Joint Coordination Centre in Istanbul and ensuring the safe passage of Ukrainian grain through the Black Sea, Türkiye underscored its strategic importance and commitment to global stability. This initiative not only helped to mitigate a looming global food crisis but also highlighted Türkiye's proactive and constructive approach to multilateralism, where diplomacy, dialogue, and cooperation are paramount.

UN 2.0 represents the United Nations' initiative to adapt and modernise in response to the complex challenges of the 21st century, including climate change, pandemics, and social inequalities. This reform agenda focuses on enhancing the UN's agility, effectiveness, and inclusivity by leveraging digital transformation, fostering strategic foresight, and strengthening partnerships across sectors. In the context of Türkiye, the country's strategic location and its involvement in key international initiatives demonstrate its commitment to the principles of cooperation and sustainability that are central to UN 2.0.

The damage being done to our planet is compromising our shared future, investing in multilateralism for climate action, which effects all areas of life, has become imperative. Thus, the decisions to be taken at the upcoming COP29 will determine the future of our planet and the well-being of generations to come. This conference, which is the world's only multilateral decision-making forum on climate change serves as an opportunity to engage stakeholders from all sectors of society, from academia, the private sector, the scientific community, civil society, and especially young people, to change mindsets and find common ground on issues that affect us all through inclusive, networked and effective multilateralism. Hence, by working together through international agreements like the Paris Agreement, countries can pool resources, share knowledge, and coordinate efforts to reduce greenhouse gas emissions and adapt to environmental impacts. Following the ratification of the Paris Agreement, Türkiye is very much committed to contributing to global actions addressing climate change.

Türkiye is highly vulnerable to the impacts of climate change, which is evident with the recent flooding, heatwaves, droughts, wildfires, landslides, and extreme windstorms that have affected the country with increasing frequency and intensity. Türkiye submitted its first Nationally Determined Contribution (NDC) to the UNFCCC Secretariat in April 2023. The first NDC was built on the same baseline as the Intended Nationally Determined Contribution (INDC) of Türkiye submitted in 2015. The 2053 net-zero target affirmed in the NDC is reiterated in the 12th National Development Plan, making it a central element of the development policies in the coming years.

Zero waste and circular economy are the key priorities of the Turkish government. In 2017, through the leadership of the First Lady H.E. Emine Erdoğan, the Government launched Zero Waste Campaign to support the achievement of the objectives of global climate action. The Government also launched "Water Efficiency Campaign" again, led by the First Lady in January 2023, aiming to prevent water wastage in homes, workplaces and industry, establish legal infrastructure, use modern irrigation methods in agriculture and raise public awareness in Türkiye. Covering the period of 2024-2028 and in support of localising the European Green Deal, Türkiye's first National Strategy and Action Plan for Circular Economy has also been prepared by the Ministry of Environment, Urbanisation and Climate Change in 2024. In support of the above-described na-

tional climate ambition, and in a significant step towards enhancing sustainability and advancing the 2030 Agenda for Sustainable Development, the United Nations Country Team in Türkiye and the Zero Waste Foundation of Türkiye recently signed a Joint Declaration of Intent. These actions align with The Climate Council in 2022 as well as the draft Climate Law prepared after the Council that put utmost importance on zero waste and circular economy.

In conclusion, the UN stands as the foremost multilateral platform dedicated to addressing global challenges through collective action and cooperation. Its role in fostering international dialogue, promoting peace, and advancing sustainable development is unparalleled. As a pivotal member state, Türkiye plays a crucial role in enhancing the effectiveness of multilateralism with its strategic position, robust diplomatic engagement, and commitment to sustainable development, to contribute significantly to the UN's efforts to address global issues and implement necessary reforms. By leveraging its unique strengths and supporting the UN's initiatives, Türkiye helps to drive forward a more inclusive, equitable, and sustainable international system.



Chapter I

INSTITUTIONAL FRAMEWORK PERTAINING TO THE ENVIRONMENT

Institutional Framework Pertaining to the Environment

The term “environmental management” has gained frequent use in recent years due to the increasing significance of both global and national environmental issues. The search for solutions to global environmental issues, particularly climate change, biodiversity loss, and air and water pollution, has demanded increased cooperation and coordination among countries. In this setting, several nations have begun to undertake an active role in the formulation and implementation of environmental policies and programmes, incorporating environmental management into the public administration framework. Furthermore, international agreements, protocols and organisations dealing with environmental management are among the key catalysts for this process. Likewise, Türkiye has become more actively engaged in environmental protection and has made significant strides in environmental management since the 1970s. It has begun to contribute to global environmental protection efforts, particularly by attending international conferences and meetings. Türkiye has consolidated its legal and institutional frameworks in the field of environmental protection during this period, increasing environmental awareness and compliance with environmental regulations. Meanwhile, Türkiye has taken substantial steps to ensure environmental sustainability by enacting various laws and regulations on environmental management at the national level.

In this context, Article 56 of the Constitution of the Republic of Türkiye stands as the primary clause concerning the environment. It reads, “Everyone has the right to live in a healthy and balanced environment. It is the duty of the State and citizens to improve the natural environment, protect environmental health and prevent environmental pollution.” The fact that environmental protection is governed by the Constitution, the supreme legal text, demonstrates the relevance that the Republic of Türkiye attributes to environmental policies and their centrality to public administration. In addition to the Constitution, environmental protection is also addressed by a number of secondary statutes. All areas have been regulated through laws, decree-laws, regulations, etc., ensuring that there are no loopholes in environmental protection. A multifaceted, integrated, and functioning institutional framework has been instituted to implement relevant legislation. The institutional framework in question has been consistently updated over time to align with current circumstances by introducing new legal arrangements and establishing new institutions.

In the Turkish public administration system, the most comprehensive duties and responsibilities in the field of environmental protection are undertaken at the ministerial level, with the Ministry of Environment, Urbanisation, and Climate Change in charge. Furthermore, several ministries also carry out various tasks within their purview, which pertain to shared domains of environmental protection. Moreover, as a democratic state of law, it also has effective non-governmental organisations in the field of environmental protection. These organisations engage in extensive collaboration with public institutions. Additionally, local administrations stand as key actors in the environmental institutional framework.

Ministries and Affiliated/Related Organisations



Ministry of Environment, Urbanisation, and Climate Change

The Ministry of Environment, Urbanisation, and Climate Change was established to formulate necessary legislation pertaining to settlement, environment, and construction, execute urban transformation projects, inspect conducted works, ensure enhanced vocational services, prevent environmental pollution, safeguard the environment and nature, and mitigate the effects of climate change. Throughout its history, it has operated under various names.

The Ministry's history dates back to the Tanzimat (Reorganisation) Era. The Council of Public Works (Umur-ı Nafia Meclisi) was established in 1838, followed by the Ministry of Public Works (Nafia Neza-

reti) in 1845, and the environment has always represented one of the central tenets of public administration. It conducted its operations under the names of the Ministry of Public Works, the Ministry of Construction and Settlement, the Ministry of Environment, and the Ministry of Environment and Forestry during the Republican period.

Following the adoption of the Paris Agreement by the Grand National Assembly of Türkiye, the institutional structure of the Ministry was consolidated to enhance its capacity to combat global climate change for the future of all humanity and the world. With Presidential Decree No. 85 published in the Official Gazette, dated October 29, 2021, and numbered 31643, the name of the Ministry was changed to the Ministry of Environment, Urbanisation, and Climate Change. The Ministry acts in line with the vision of a sustainable environment and cities that eternise our civilisation and carries out all services related to the protection of the natural environment and creation of sustainable cities and settlements, as well as planning, transformation, safe construction, real estate management, housing sector, and environment that revive the identity of cities and are based on horizontal architecture. With a focus on the Green Development Model, the Ministry aims to achieve a net zero emission target by 2053.

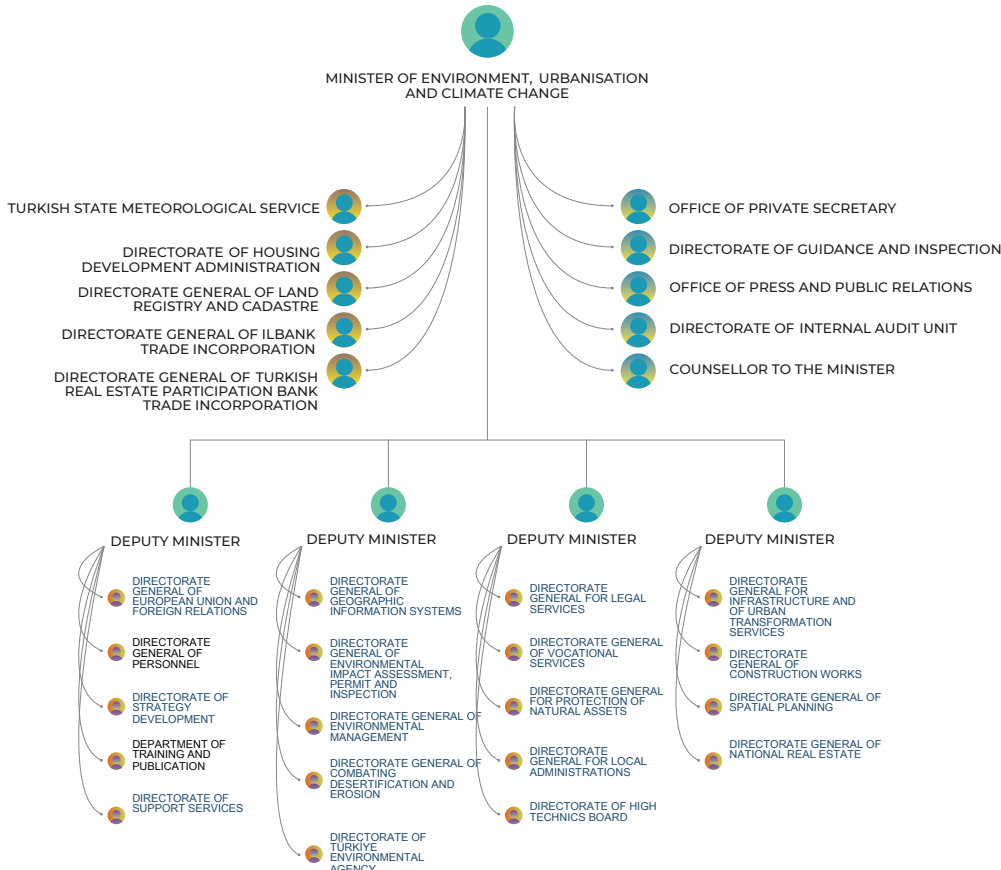


TABLE 1: ORGANISATIONAL CHART OF THE MINISTRY OF ENVIRONMENT, URBANISATION, AND CLIMATE CHANGE

Under Presidential Decree No. 1, the duties and powers of the Ministry of Environment, Urbanisation, and Climate Change are as follows:

- » Preparing zoning, environmental, building, and construction legislation on settlement, environment, and construction and monitoring and supervising their implementation; preparing, developing, and ensuring the implementation of the norms and standards of professional services related to the field of duty of the Ministry; and keeping the records of those concerned,
- » Carrying out necessary efforts aimed at protecting and improving the environment, combating desertification and erosion, and preventing environmental pollution while establishing principles and policies. This includes developing standards and criteria, preparing programmes, conducting education and research, and creating projects, action plans, and pollution maps. It also involves determining and monitoring the implementation procedures and managing tasks related to climate change.
- » Evaluating the environmental impacts of all kinds of facilities and activities that cause or are likely to cause pollution by releasing solid, liquid, and gaseous wastes into receiving environments as a result of their activities; carrying out measurement and monitoring studies related to receiving environments; monitoring, permitting, inspecting the aforementioned facilities and their activities, and ensuring the control of noise,
- » Determining the basic principles, strategies, and standards for physical plans of all types and scales and their implementation, and ensuring their implementation; ex officio conducting and approving surveys, maps, all types and scales of landscaping, master and implementation development plans, parcelling plans and their amendments regarding the areas authorised by the President of the Republic and public investments within the jurisdiction of the central administration; overseeing all kinds of buildings to be constructed on publicly owned lands and plots, facilities related to national security, military prohibited areas, general sheltering areas, special security zones, energy and telecommunication facilities; and issuing licences and occupancy permits ex officio if no licence is granted by the competent authorities within two months from the date of application.
- » Preparing spatial strategy plans in cooperation with relevant institutions and organisations and supervising the compliance of local administrations' plan decisions with these strategies,

- » Preparing the needs programs for buildings and facilities owned by public institutions and organisations upon request, except for specialised works granted construction authority by laws or Presidential decrees to the Ministry of National Defence's construction, national and NATO infrastructure services, and the directorates under the Ministry of Transport and Infrastructure; conducting or having conducted all types of studies, projects, and cost estimates; approving or ensuring the approval of these; carrying out, having carried out, and supervising construction, reinforcement, renovation, and major repairs.
- » Establishing the construction inspection system and performing the duties assigned to the Ministry by Law No. 4708 on Construction Inspection, carrying out or having carried out the inspection of buildings, including those built or commissioned by public institutions and organisations, in terms of safety of life and property and compliance with the legislation and technique, requesting and ensuring that the detected contradictions and deficiencies are eliminated, making arrangements to increase energy efficiency in buildings, managing and monitoring the activities related to this, carrying out works and procedures related to the inspection and conformity assessment of building materials,
- » Carrying out strategy development and programming works and procedures related to the housing sector, taking measures to ensure the development of building cooperatives, and performing the duties assigned to the Ministry pursuant to the Settlement Law,
- » Determining the procedures and principles to be followed by the administrations in the improvement, renovation and transformation implementations to be carried out in urban and rural areas and settlements, including slums, coastal areas and facilities, and areas excluded from forests and pastures due to deterioration of their quality; conducting, having conducted, approving all types and scales of surveys, maps, plans, parceling plans and building projects for special project areas determined by the Ministry such as finance and trade centres, fair and exhibition areas, entertainment centres, main entrance arrangements of the cities, which will contribute to the development of the city and increase the brand value of the cities, ensuring that expropriation, licencing and construction works are carried out, granting occupancy permits and to ensure the establishment of condominium ownership in these areas; pursuant

to the Law No. 2985 on Public Housing and the Law No. 775 on Slums, conducting, have conducted and approving surveys, maps, plans and parcelisation plans of all types and scales related to the implementations made by the Housing Development Administration, carrying out licencing works, granting occupancy permits and ensuring the establishment of condominium in these areas,

- » Preparing, having prepared and approving surveys, maps, environmental layout plans of all types and scales, master and implementation zoning plans, parcelling plans and their amendments prepared or commissioned by the relevant persons for the investments to be made by the public or private sector on immovable properties owned by the state or the treasury, public institutions or organisations or real persons or private law legal entities, which are not approved by the authorised administration within three months, upon the request of the relevant persons from the governorate and upon the proposal of the governorate to the Ministry; if not granted by the authorised administration within two months from the date of application, ex officio issuing the building licence and occupancy permit and the licence to open and operate a workplace in return for a fee,
- » Carrying out or having carried out transformation projects and practices for structures that are vulnerable to earthquakes, as well as for buildings and areas that do not comply with zoning regulations, plans, projects, and their annexes.
- » Carrying out and having carried out tasks and procedures related to the establishment, use, and development of the National Geographic Information System; supporting the establishment, use, and integration of urban information systems regarding the planning, mapping, infrastructure, and superstructure operations of local administrations with the National Geographic Information System,
- » Working for the improvement of the administrative and technical capacity of local administrations in matters falling within the mandate of the Ministry and to provide technical support to them,
- » Preparing and publishing specifications, standard contracts, annual market prices, unit prices, analyses, and tariffs of unit prices related to public works and settlement affairs,

- » Working for the determination of plans and policies for global climate change and taking necessary measures in this regard,
- » Carrying out the preparations made at the national level in cooperation with the relevant institutions to monitor and contribute to international efforts on matters falling within the mandate of the Ministry,
- » Making, having made, and approving surveys, maps, plans, parcelling plans, and building projects of all types and scales; and conducting expropriation, licencing procedures, and other related works in consultation with the Ministry of Culture and Tourism for improving, embellishing, renovating, and restoring the Atatürk Cultural Centre area, as provided in Article 3 of Law No. 2302, dated 23/9/1980, on the Celebration of the 100th Anniversary of Atatürk's Birth and the Establishment of the Atatürk Cultural Centre.
- » Regulating local administrations and their relations with the central administration,
- » Working to determine policies on public property; carrying out procedures regarding the acquisition, management, and disposal of immovable properties in the private ownership of the treasury and lands owned by the state; and determining the principles of registration and management regarding the immovable properties of public administrations.
- » Preparing, having prepared, and implementing plans and projects for combating desertification and erosion, which aim to control avalanches, landslides, and floods, and integrated basin reclamation plans and projects in order to protect the soil, develop natural resources, and combat climate change,
- » Preparing national and regional planning for the development of water basins in order to combat desertification and erosion and to carry out studies to devise policies and strategies,
- » Undertaking/having undertaken all necessary initiatives, including special afforestation outside of forest boundaries where necessary, in coordination with institutions responsible for afforestation and forest-related tasks as part of efforts to combat desertification, erosion, and climate change; establishing or having established nurseries for the production of tree or plant species used in outdoor spaces for this purpose; and supporting real or legal persons who will invest in line with these objectives.
- » Performing other duties assigned by laws and Presidential decrees.



Turkish State
Meteorological Service

Turkish State Meteorological Service

In Türkiye, efforts to carry out meteorological services from a single source and in a regular manner were first addressed in 1936. Consisting of 27 articles and 10 provisional articles, the Law on the Establishment of the General Directorate of State Meteorological Affairs was adopted on February 10, 1937, with the number 3127. The name of the Directorate established on this date was changed to Turkish State Meteorological Service with Decree-Law No. 657 published in the Official Gazette No. 28103 dated November 2, 2011.

The environmental duties of the Meteorological Service are as follows:

- » Carrying out meteorological studies regarding the environment and cooperating with relevant institutions and organisations,
- » Carrying out or having carried out research on environment and renewable energy,
- » Attending meetings on the investments subject to the Regulation on Environmental Impact Assessment and issuing opinions on behalf of the Meteorological Service regarding the reports prepared,
- » Attending meetings on organised industrial zone investments, issuing opinions on behalf of the Meteorological Service regarding the reports prepared,
- » Conducting laboratory and research studies within the scope of environmental activities,
- » Conducting meteorological studies for environmental activities, cooperating with relevant institutions and organisations and preparing meteorological assessments for Environmental Impact Assessment Reports.



Turkish Environmental Agency

As one of the actors in the institutional structure related to the environment in Türkiye, the Turkish Environment Agency was established by Law No. 7261 dated 24/12/2020 to prevent environmental pollution and ensure the protection, improvement, and development of green areas. It also carries out activities for the establishment, operation, monitoring, and supervision of a deposit management system at a national scale. The activities of the agency in line with the environmental strategies and policies determined by the Ministry of Environment, Urbanisation and Climate Change are as follows:

- » Establishing/having established, operating/having operated the deposit management system; ensuring that the relevant parties are included in the deposit management system; determining their obligations; and receiving and returning the deposit fee, charges and guarantees determined by the Ministry,
- » Implementing the necessary administrative regulations and measures, including authorization and approval procedures for the establishment, implementation and monitoring of the deposit management system infrastructure for the products that are compulsorily subjected to deposit application by the Ministry and carrying out the necessary checks,
- » Carrying out activities for the improvement of the environment,
- » d) Contributing to the establishment and implementation of a zero waste management system,
- » Contributing to the activities regarding the recovery of recyclable products to the national economy after their use and the management of recyclable wastes,
- » Preparing and publishing visual, auditory and written content, co-operating with the press and media outlets, carrying out activities such as campaigns, competitions and promotions in order to raise public awareness and sensitivity,
- » Organising training and certificate programmes, conducting scientific studies, establishing documentation, research and application centres, laboratories and museums,
- » Cooperating, developing joint projects and carrying out activities with local authorities, national or international institutions or organisations, universities, non-governmental organisations and real or legal persons in Türkiye or abroad; to provide financial and technical support to municipalities, special provincial administrations, educational institutions and other institutions and organisations if deemed appropriate,
- » (Annex: 10/6/2022-7410/30 article) Establishing and operating mooring and buoy systems, providing waste collection services to vessels, and ensuring the provision of these services in areas under state jurisdiction and ownership within the scope of the Coastal Law, which have been leased or granted for use by the Ministry to

the Agency, 2. (Annex: 10/6/2022-7410/30 article) If necessary, the Agency may carry out the activities listed in this article by establishing companies with private legal personality.



Ministry of Energy and Natural Resources

The Ministry of Energy and Natural Resources is responsible for the environmentally friendly management of natural resources (minerals, energy resources, etc.) and carries out its environmental affairs through the Department of Energy Efficiency and Environment. This Department was established as the Main Service Unit of the Ministry of Energy and Natural Resources by amending Article 168 of Presidential Decree No. 1 on the Organisation of the Presidency pursuant to Article 37 of Presidential Decree No. 27 on the Amendment of Certain Presidential Decrees published in the Official Gazette dated 10.01.2019 and numbered 30651. The duties of the Department of Energy and Environment are as follows:

- » Preparing draft legislation, strategies and action plans on energy efficiency, together with regulatory impact analyses, monitoring and evaluating their implementation and planning corrective measures,
- » Cooperating with national and international institutions and organisations, universities, private sector and non-governmental organisations to increase energy efficiency, carrying out or coordinating joint projects or activities,
- » Engaging in activities aimed at fostering the development of energy culture and awareness of energy efficiency across society and the promotion of energy efficiency practices throughout the society, considering potential collaborations with other institutions and organisations, monitoring and implementing policies and strategies related to energy efficiency and the environment-energy sectors, and either executing or coordinating efforts for their implementation,
- » Implementing, coordinating and monitoring activities of the national energy efficiency action plan,
- » Providing training, studies and consultancy services on the rational use of energy, offering support for laboratory use, conducting central exams for energy managers, carrying out authorization and certification studies,

- » Organising international energy efficiency training programmes and providing energy efficiency services to improve international cooperation,
- » Determining energy-saving potentials throughout the country and on a sectoral basis, conducting or having conducted energy audits, carrying out the necessary studies, including alternative fuels, regional heating and the establishment of a heat market,
- » Monitoring and supervising energy efficiency implementation projects and research & development projects, and processing support payments.
- » Monitoring and evaluating national and international actions and developments on energy efficiency, setting goals and priorities in accordance with the country's needs and conditions, and sharing the results of these actions with the public, including their economic analyses.
- » Establishing and operating a National Energy Efficiency Information Management System with the aim of ensuring all stakeholders in the field of energy efficiency have quick access to accurate and up-to-date information, creating and keeping up-to-date national energy efficiency inventory, and supporting the planning, projection, monitoring, and assessment.
- » Conducting harmonisation and impact assessments of existing and new legislation within the scope of the environment-energy relationship and managing the secretariat of the follow-up and monitoring commission for environmental legislation.
- » Following national and international developments and policies related to sustainability, environment and climate management, observing the impacts on energy policies, proposing activities in line with the ministry's strategies, planning and conducting those deemed appropriate,
- » Assuming tasks under the working groups of the Climate Change and Air Management Coordination Board within the scope of the electricity and heat generation sector,
- » Contributing to the preparation of climate-related national statements and reports, preparing the national greenhouse gas inventory report's chapter on the sector, participating in the meetings on

reviewing the secretariat of the United Nations Framework Convention on Climate Change,

- » Implementing, developing and improving existing support instruments for energy efficiency financing; simplifying application processes; proposing new support instruments and mechanisms, including domestic and foreign financing opportunities; developing, implementing and monitoring the efficiency of those deemed appropriate,
- » Providing consultancy and technical support for the realisation of energy efficiency investments, including energy performance agreements, carrying out or outsourcing other related services,
- » Executing necessary works for measuring, monitoring and auditing energy efficiency-related activities throughout the country and imposing administrative sanctions when needed,
- » Performing other duties assigned by the minister.



Ministry of Culture and Tourism

The Ministry of Culture and Tourism undertakes various activities to protect cultural assets and prevent potential adverse environmental impacts of tourism. Within the Directorate General of Investments and Enterprises of the Ministry, the Branch Office of Preventing Environmental Problems collaborates with relevant public institutions and organisations, the private sector, non-governmental organisations, national and international environmental organisations, and the general public to achieve the desired economic and social benefits of tourism while improving sustainable tourism. In this context;

- » Blue Flag,
- » Pest control,
- » Construction ban in tourist destinations,
- » Works with national and international environmental organisations,
- » Assessment of applications submitted to the Ministry by various entities, including public institutions, municipalities, the private sector, non-governmental organisations, and citizens, regarding environmental issues in tourist destinations,

are among the activities undertaken by the Ministry.

High Council for the Conservation of Cultural Property

The Council, originally established in 1922 as “Asar-ı Atika ve Müzeler” (Ancient Artefacts and Museums) for the preservation of cultural assets, has been reorganised through different regulations. The Council was renamed to the “Directorate General of Cultural Assets and Museums” by Law No. 4848, enacted on April 29, 2003. The High Council for the Conservation of Cultural Property also functions within the general directorate, aiming to “ensure that the tasks related to immovable domestic cultural properties that require conservation are performed in line with scientific principles.”

The duties of the High Council are as follows:

- » Establishing the principles to be implemented in works related to the conservation and restoration of immovable cultural and natural assets that require conservation,
- » Ensuring necessary coordination between regional conservation councils,
- » Helping the Ministry by providing opinions and assessing the general problems that arise in practice as a result of the decisions made by regional conservation councils.
- » Making decisions regarding the items submitted by ministries and included in the agenda for discussion at the High Council for Conservation.
- » Making decisions on issues that are submitted for discussion at the High Council of Conservation by local administrations and other public institutions and organisations through the ministries with which they are affiliated, related and associated.
- » Assessing and deciding on the complaints raised by public institutions, organisations, and individuals regarding the decisions made by regional conservation councils.

Historical caves, rock shelters, trees and tree populations with special characteristics, etc. are listed among the immovable cultural assets to be protected under the Law on the Conservation of Cultural and Natural Property.



REPUBLIC OF TÜRKİYE
MINISTRY OF NATIONAL
EDUCATION

Ministry of National Education

The Ministry of National Education, a key player in Türkiye's institutional structure related to the environment, is responsible for promoting environmental awareness in schools in the most general sense. The goal is to provide students with a strong environmental awareness through lessons and a range of activities on the environment integrated into the curriculum. In this regard;

- » Article 86 of the Regulation on Secondary Education Institutions, titled "Duties and Responsibilities of Teachers," reads as follows: "Teachers take the necessary measures to ensure that students acquire the habit of keeping the educational environment clean and organized in order to develop environmental awareness, life skills, and responsibilities."
- » Article 52, titled "Behaviours Expected of Students" of the Ministry of National Education Regulation on Preschool Education and Primary Education Institutions, states that "Students are expected to protect the natural and historical beauties of the environment, works of art and contribute to their development."
- » Article 90, titled "Playground" of the Ministry of National Education Regulation on Preschool Education and Primary Education Institutions, states that educational environments should be prepared to help children gain environmental awareness.



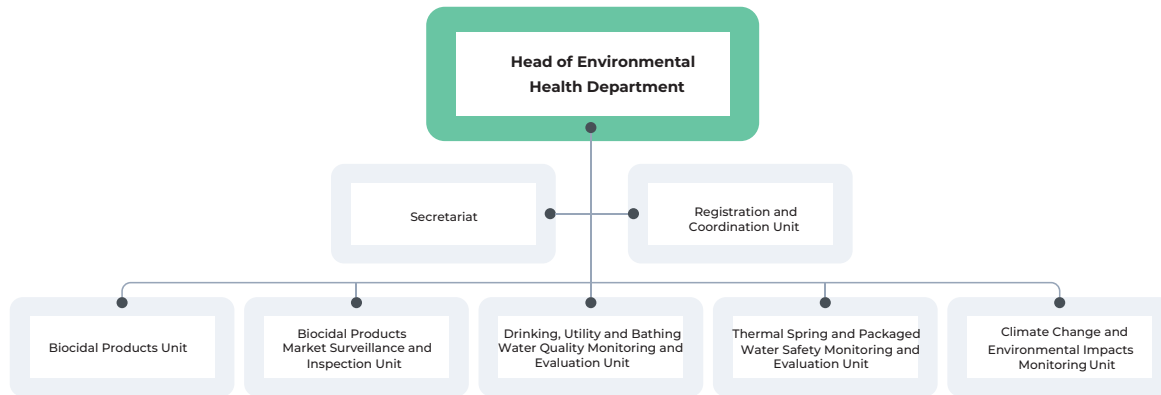
REPUBLIC OF TÜRKİYE
MINISTRY OF HEALTH

Ministry of Health

The Department of Environmental Health, which falls under the authority of the General Directorate of Public Health, handles the Ministry of Health's environmental affairs and procedures. Within this context, the responsibilities of the said Department are outlined below:

- » Undertaking label approvals and licencing procedures of biocidal products; regulating the rules for the safe application of biocidal products for the well-being of humans and the environment; and training the practitioners or facilitating their training,
- » Taking part in the necessary research and development activities for the supply of sufficient and healthy drinking and potable water to residential areas and ensuring that the necessary measures are taken and organised; and training practitioners or facilitating their training,

- » Undertaking works on spring, drinking, potable, natural mineral, pool, spa waters, and swimming areas; and setting the national standards,
- » Determining the indicators for spa waters and peloids used in spa facilities and approving natural mineral waters,
- » Taking or directing others to take the required measures on air pollution and climate change,
- » Ensuring that environmental health services are provided on the ground in a timely and effective manner during natural disasters,
- » Identifying, monitoring, and inspecting factors that threaten environmental health; and participating in environmental health impact assessment activities,
- » Conducting studies at the national or international level; designing programmes, plans and projects; and implementing them in cooperation with other institutions and organisations in order to improve and develop environmental health services,
- » Preparing training plans and materials, coordinating training activities, and conducting legislative development works related to its field of duty to disseminate legislative practices and other developments to the personnel responsible for providing field services,
- » Examining, evaluating, and coordinating the opinions and requests received from relevant institutions and organisations,
- » Conducting market surveillance and inspection activities related to the products within its field of duty,
- » Collecting data, evaluating incoming data, and preparing reports within the scope of its duties and responsibilities,
- » Organising trainings, symposiums, panels, workshops, seminars, etc. related to its fields of activity; and contributing to national and international events organised.



REPUBLIC OF TÜRKİYE
MINISTRY OF INDUSTRY
AND TECHNOLOGY

Ministry of Industry and Technology

The General Directorate of Industry, one of the main service units of the Ministry of Industry and Technology, is responsible for “following the developments in the fields of environment and climate change, assisting in taking measures for the industry to protect the environment, and conducting activities for industrial enterprises to prepare and implement clean production programs and projects.”



REPUBLIC OF TÜRKİYE
MINISTRY OF AGRICULTURE
AND FORESTRY

Ministry of Agriculture and Forestry

The Ministry of Agriculture and Forestry is responsible for ensuring that agricultural and animal husbandry activities are conducted in an environmentally friendly manner. The Ministry executes its operations within this scope through the Department of Protection of Agricultural Environment and Natural Resources under the General Directorate of Agricultural Reform. The duties of the relevant Department are as follows:

- » Taking measures against all kinds of factors that degrade and pollute the soil structure of agricultural lands,
- » Protecting soil and water resources against pollution due to agricultural activities, conducting monitoring studies to identify polluted areas and the results of the actions taken in these areas,
- » Identifying nitrate-sensitive areas and preparing agricultural action plans in accordance with the codes of good agricultural practices; running, commissioning, implementing and executing projects to prevent pollution caused by agricultural activities,

- » Supporting efforts for wastewater management in coordination with the relevant general directorates and encouraging the use of appropriate technologies to protect agricultural resources,
- » Working in coordination with the relevant institutions and organisations on the identification and implementation of the necessary precautions to protect soil, water, plant, animal assets and similar agricultural resources and to prevent the deterioration of the ecological balance in the agricultural environment,
- » Conducting works for the efficient utilisation of animal and agricultural residues in the field of energy using modern biomass methods,
- » Preparing, outsourcing, implementing, and supporting plans, programmes, and national and international projects on biodiversity, climate change, sustainable use of natural resources, environmentally and climate-friendly agricultural practices in agricultural ecosystems,
- » Conducting and facilitating works on agricultural drought and desertification caused by global climate change,
- » Calculating agricultural greenhouse gas emissions and greenhouse gas sinks and preparing the National Greenhouse Gas Inventory,
- » Making prospective projections regarding the activities causing agricultural greenhouse gas emissions and identifying the potential to reduce greenhouse gas emissions using models,
- » Preparing, facilitating, monitoring, and evaluating projects and international and national programmes for combating erosion and desertification in agricultural lands,
- » Taking part in international efforts and negotiations regarding the issues and agreements in line with its duties and working in coordination with the Directorate General for European Union and Foreign Relations,
- » Performing similar duties assigned by the Director General.



REPUBLIC OF TÜRKİYE MINISTRY
OF AGRICULTURE AND FORESTRY

General Directorate of Forestry

The General Directorate of Forestry is a public agency that operates under the Ministry of Agriculture and Forestry. It is a legal entity with a special budget and is responsible for:

- » Managing forest resources as part of the ecosystem with consideration to its ecological, economic, and socio-cultural benefits, including the existing flora and fauna; planning forest resources in a participatory and multi-purpose manner; protecting them against undue interventions, natural disasters, and fires; removing and outsourcing the removal of various pests; pursuing and improving forestry quarantine services; expanding forested areas and services related to forests; and zoning and reclaiming of the forests; providing silvicultural maintenance and revitalisation services for forests,
- » Engaging in processes and procedures related to the ownership of forests, cadastres, permissions, and easements,
- » Operating forests with regard to technical, socio-cultural, ecological, and economic considerations by ensuring the sustainability of forest products and services; pursuing or outsourcing the processes regarding the production, logistics, and storage of forest products; and marketing these products domestically and abroad,
- » Ensuring the allocation, protection, operation, and management of recreational areas, urban forests, research forests, arboretum areas, forest biodiversity conservatories, model forests, and conservation forests,
- » Pursuing afforestation, erosion control, forest-related pasture improvement, desertification prevention, flood and avalanche control activities on all kinds of lands within or outside forest boundaries; and designing and implementing integrated basin projects,
- » Producing, outsourcing the production seeds and saplings of trees, shrubs, and other plants in the forest ecosystem; grafting these plants; and establishing, operating, and, when necessary, terminating permanent or temporary plant nurseries,
- » Supporting real and legal persons to establish, operate and market private afforestation, amelioration, erosion control efforts and plant nurseries,
- » Establishing, operating, and, when necessary, terminating floating capital enterprises and other necessary units in order to ensure maximum utilisation of the products and services provided by forest ecosystems; purchasing or leasing, or, when necessary, exchanging all kinds of materials, plots, lands, buildings, facilities, installations; maintaining or outsourcing the maintenance and repair of them; providing the machines and service vehicles re-

quired for the services; performing the maintenance and revisions of these machines and vehicles; performing all kinds of infrastructure works in forests; conducting surveys for the roads required for forestry activities; and performing or outsourcing maintenance and repair,

- » Conducting and outsourcing all kinds of pre-service and in-service training; and establishing and operating institutes, directorates, research units, education centres, and social facilities that operate at a local or global level regarding the services that fall under the responsibility of the General Directorate,
- » Conducting or outsourcing all kinds of research and development, inventory, printing, publishing, and promotion works and projects regarding these; and marketing the outcomes of these in Türkiye and abroad,
- » Conducting activities to expand the use of forest products and services; collaborating with private sector actors, non-governmental organisations, and universities that produce, process, market, import, and export all kinds of forest products; providing consultation services and implementing projects in Türkiye and abroad; performing all kinds activities to raise public awareness about forests and forestry,
- » Expropriating immovable properties owned by real or legal persons to be incorporated into forestry zones to ensure the integrity of the forests; pursuing the transfer and, when necessary, the exchange processes of immovable properties owned by public institutions and organisations; supporting villagers residing within and adjacent to the state-owned forests with in-kind and in-cash aid; and improving forest-public relations and taking all kinds of measures in this regard,
- » Determining the technical and administrative principles on the subjects within its field of duty, establishing and having established laboratories related to its fields of activity, preparing job tariffs and conducting unit time analyses, and setting unit prices,
- » Setting the principles to be adhered to by other public institutions and organisations in relation to the duties, services, and activities of the General Directorate and ensuring coordination,
- » Undertaking other duties and services assigned by the legislation.



General Directorate of State Hydraulic Works (DSİ)

The General Directorate of State Hydraulic Works is an investment institution with a special budget that falls under the central government's budget and is responsible for the planning, management, development, and operation of all water resources in Türkiye.

In accordance with the Presidential Decree on the Organisation of Institutions and Organisations Affiliated, Related, Associated Institutions and Organisations, and Other Institutions and Organisations Affiliated to Ministries (Decree Number: 4) published in the Official Gazette dated July 15, 2018, numbered 30479, the General Directorate of State Hydraulic Works was established under the Ministry of Agriculture and Forestry, with a public legal entity and a special budget, headquartered in Ankara.

The General Directorate of State Hydraulic Works operates in compliance with Laws No. 6200, 167, and 1053. Below is a summary of these laws:

Law No. 6200, dated 28/02/1954, on the Organisation and Duties, provides provisions for

- » Drilling or commissioning the drilling of wells for groundwater exploration and research,
- » Allocating groundwater,
- » Protecting and registering groundwater,
- » Granting certificates of exploration, use, and reclamation-modification.

Law No. 1053, dated July 3, 1968, on the Supply of Drinking Water to Ankara, Istanbul, and Cities with a Population Larger than 100,000, specifies that the State Hydraulic Works is responsible for the construction of

- » Dams and transmission lines,
- » Water purification facilities, and
- » Water reservoirs.

Due to the amendment to Article 10 of Law No. 1053 by Law No. 5625, dated April 18, 2007, the population criterion has been removed. State Hydraulic Works now has the authority to build water facilities for all

residential areas under municipal organisations, including drinking, domestic, industrial, and wastewater facilities, if needed. As a result, the title of Law No. 1053 has been changed to ‘Law on the Supply of Drinking, Domestic, and Industrial Water to Residential Areas under Municipal Organisation’.



Turkish Water Institute (SUEN)

The Turkish Water Institute (SUEN) is a think tank that develops national policies as well as short and long-term strategies for improved water governance.

SUEN is a national think tank that contributes to the development of national and international water policies, provides consultancy to decision-makers, conducts scientific research, builds capacity, and develops strategic ideas.

SUEN works closely with national and international organisations on issues such as sustainable water management, water policy development, and capacity building to solve local and global water problems.

SUEN’s functions in Türkiye’s water management are as follows:

- » Conducting and supporting scientific research in order to develop national and international water policies;
- » Following the works, information generation and statistical activities of national and international organisations related to water and following other international developments;
- » Organising training programmes at national and international level;
- » Contributing to national and international forums, conferences, meetings, seminars, symposiums, and similar activities.



Ministry of Transport and Infrastructure

The Ministry of Transport and Infrastructure, which regulates the sectors related to environmental protection in its field of duty, works with a perspective that puts environmental awareness at the centre of its work and operations. In this context, among the Ministry’s duties is the provision that stipulates, “To ensure that transport, maritime, communication, and postal works and services are provided in a free, fair, and sustainable competitive environment in an economical, fast, convenient, safe, high-quality manner with the least adverse impact on the environment and in a manner to protect the public interest.” In

the same vein, the Ministry's respective service units have been tasked with the elimination of adverse environmental impacts.

Local Governments

Municipalities are one of the key players in Türkiye's institutional system regarding the environment. Municipalities are assigned significant environmental responsibilities and obligations by the laws that govern their duties and responsibilities.

In this context, metropolitan municipalities perform the following functions in the field of environment:

- » Constructing, commissioning, maintaining, and repairing the roads, squares, boulevards, avenues, and main roads connecting the neighbourhoods within the jurisdiction of the metropolitan municipality to the district centre; undertaking the cleaning and snow control works of these roads; setting obligations regarding the buildings fronting these places in accordance with the urban design projects; determining the places to display announcements and advertisements and their shape and size; naming and numbering squares, boulevards, avenues, roads, and streets and numbering the buildings on them.
- » Ensuring the protection of the environment, agricultural land, and water basins in line with the principles of sustainable development; carrying out afforestation projects; consolidating unsanitary workplaces, entertainment venues, and other businesses affecting public health and the environment into designated areas within the city; identifying locations for construction materials, scrap storage, and sales areas; designating sites for the storage of excavation soil, debris, sand, and gravel, as well as for the sale and storage of wood and coal, and taking measures to prevent environmental pollution during their transportation; drafting and implementing a metropolitan solid waste management plan; aside from collecting solid waste at the source and transporting it to transfer stations; overseeing services related to the recycling, storage, and disposal of solid waste and excavation debris; and establishing, commissioning, and operating or having others operate facilities for this purpose; managing services related to industrial and medical waste, and establishing, commissioning, and operating or having others operate the necessary facilities for this purpose; collecting, processing, and regulating the waste from marine vessels.

- » Ensuring the preservation of cultural and natural assets, as well as the historical character and functions of spaces that are significant for urban history; conducting maintenance and repairs for this purpose; and reconstructing those that cannot be preserved in their original form.
- » Managing water and sewage services; establishing and operating the necessary dams and other facilities; rehabilitating streams; and marketing spring water or water produced from treatment processes.
- » District municipalities in cities with metropolitan status fulfil the following duties:
 - » Collecting solid wastes and transporting them to the transfer station in accordance with the metropolitan solid waste management plan,
 - » Licensing and inspecting sanitary workplaces, 2nd and 3rd class unsanitary establishments, and public venues like recreation areas and entertainment spots.
- » Municipalities without metropolitan status are responsible for:
 - » Urban infrastructure services, such as zoning, water and sewage, transportation, geographical and urban information systems, environment and environmental health, sanitation and solid waste, urban traffic, afforestation, parks and green spaces, housing, and culture and arts services, either directly or through contracted parties.
 - » Ensuring the preservation of cultural and natural assets, as well as the historical character and functions of spaces that are significant for urban history; conducting maintenance and repairs for this purpose; and reconstructing those that cannot be preserved in their original form.
 - » Managing all services related to the collection, transportation, sorting, recycling, disposal, and storage of solid waste.
 - » Setting standards for advertising billboards and promotional signs.
 - » Consolidating unsanitary workplaces, entertainment venues, and other businesses affecting public health and the environment into designated areas within the city; identifying dumping sites for ex-

cavation soil and debris; designating storage areas for liquefied petroleum gas (LPG); identifying storage and sales areas for construction materials, wood, coal, and scrap; and taking the necessary precautions to prevent environmental pollution in these areas and during transportation.

Universities

Within the institutional framework, universities play an essential role in addressing environmental issues. Primarily, their role in training professionals (such as environmental engineers) who will work in environmental fields underscores the significance of their position within the system. In addition, universities play a leading role in environmental initiatives through their field research, academic studies, symposiums, panels, and other meetings.

Non-Governmental Organisations

In Türkiye, civil society organisations actively participate in decision-making processes related to environmental issues, as in many other areas. Numerous civil society organisations dedicated to environmental issues are active, especially in environmental protection.



Chapter II

TÜRKİYE'S LEGISLATIVE ARRANGEMENTS PERTAINING TO THE ENVIRONMENT



Legislative Arrangements Pertaining to Environment

Climate change, ozone depletion, pollution, and biodiversity loss all pose threats to sustainable development, jeopardising human health, food security, and wildlife populations. Since the 1960s, societies have become more aware of the gravity of environmental issues and have launched a variety of measures to address them.

Environmental policies seek to leave a livable world for future generations by limiting the negative effects of human activity on the environment and guaranteeing the sustainable use of natural resources. However, the complexity of environmental issues such as global warming, habitat loss, and pollution complicates the implementation of environmental policies. As a result, international cooperation, scientific research, and public awareness campaigns are critical for formulating and implementing effective environmental policy.

Considering all of these factors, Türkiye, which is one of the countries with the highest exposure to climate change due to its geographical location and natural resources, has continued to make the necessary legislative arrangements over the years by being sensitive to environmental problems, and has begun an environmental mobilization by increasing the importance it attaches to this field in the twenty-first century.

The legal arrangements for the environment in Türkiye began with Municipal Law No. 1580 and Public Hygiene Law No. 1593, which went

into effect in 1930, and the first regulations on environmental and human health protection, as well as waste collection and storage, were enacted under these laws. Article 56 of the 1982 Constitution, which serves as the foundation for Turkish environmental rules, stipulates that “Everyone has the right to live in a healthy and balanced environment. It is the duty of the State and citizens to improve the natural environment, to protect the environmental health and to prevent environmental pollution.” Based on this article, Environment Law No. 2872 was released in 1983, and it established the principles and rules, as well as the authorised and responsible agencies and entities involved in environmental protection.

Legislative provisions for environmental mobilization have continued to grow, and laws in this field have increased and accelerated, particularly after Türkiye became a signatory to international agreements such as the Kyoto Protocol and the Paris Agreement. In this framework, the desire to transition to a low-carbon economy was articulated through the “2053 net zero emission” aim, and a Green Deal Action Plan was created in compliance with European Union criteria. Since then, the government’s development plans and strategy documents have incorporated concepts such as Sustainable/Green Finance, Green Transformation, and Zero Waste. As a result of the state’s environmental mobilization, legislative arrangements were made in a variety of domains, including education, health, the economy, and finance, in order to implement an integrated policy by the state.

Legislative works on environmental issues in Türkiye are listed by date of regulation.

Municipal Law No. 1580 / Public Hygiene Law No. 1593 (1930)

The first regulations on environmental and human health protection, as well as waste collection and storage, were enacted under these laws.

The Constitution of the Republic of Türkiye, Article 56 (1982)

“Article 56: Everyone has the right to live in a healthy and balanced environment. It is the duty of the State and citizens to improve the natural environment, to protect the environmental health and to prevent environmental pollution.” The Article is significant because it asserts that the right to life can only be achieved in a healthy and balanced environment, imposes a duty of protection in this regard, and incorporates the subject of a clean environment into constitutional guarantees.

Environment Law No. 2872 (1983)

It established the principles and rules, as well as the authorised and responsible agencies and entities involved in environmental protection.

“Article 3/a; Everyone, particularly the administration, professional chambers, unions, and non-governmental organisations, is responsible for environmental protection and pollution prevention, and is required to follow the measures to be taken and the principles established in this regard.”

“Article 3/h. In order to protect the environment, prevent and eliminate environmental pollution, promote zero waste, implement circular economy principles and combat climate change; compulsory standards and market-based mechanisms and economic instruments and incentives such as taxes, fees, contribution shares, promotion of renewable energy sources and clean technologies, promotion of non-motorised or electric vehicles, promotion of waste recovery and reuse of treated wastewater, recycling contribution share, reduction in the use of plastic bags or packaging and disposable materials, deposit application, emission fee, pollution fee and pollution prevention guarantee and carbon trading for monitoring greenhouse gas emissions are used.

When a possibility for pollution exists, those involved are expected to prevent it; when pollution occurs, the polluter is obligated to take the necessary efforts to stop, eliminate, or minimise its consequences.”

Regulation on Solid Waste Control (1991)

The purpose of the Regulation is to prohibit the direct or indirect discharge, storage, transport, removal and similar activities of all kinds of wastes and residues into the receiving environment in a way that may harm the environment; to prevent the pollutants that have a permanent effect in air, water and soil from disrupting animal and plant generations, natural riches and ecological balance by disciplining the management of consumer goods that may adversely affect the environment; and to determine, implement and develop principles, policies and programmes for this aim.

National Agenda 21 (1991)

At the Rio Earth Summit (1992), “Sustainable Development” was adopted as the common goal of all humanity in the twenty-first century, and the UN member states adopted the Action Plan titled “Agenda

21,” which sets out the principles and areas of action for dealing with environmental and development problems and achieving the goal of sustainable development in the twenty-first century, as the Summit's main output.

Regulation on Control of Medical Wastes (1993)

The purpose of this Regulation is to establish and ensure the implementation of administrative, technical, and legal principles, policies, and programmes for the separate collection, temporary storage, recovery, transportation, and final disposal of medical waste from healthcare institutions without endangering public health or the environment.



Regulation on Environmental Impact Assessment (1993)

The purpose of this Regulation is to establish administrative and technical procedures and principles for the Environmental Impact Assessment (EIA) process. The Regulation covers;

- » which types of projects will require the Environmental Impact Assessment Application File, Environmental Impact Assessment Report, and Project Introduction File, as well as the issues they will address,
- » administrative and technical procedures and principles to be followed in the Environmental Impact Assessment process,
- » monitoring, control, and inspection of projects under Environmental Impact Assessment during application, pre-construction, construction, operation, and post-operation,

- » training activities to ensure the effective and widespread implementation of the Environmental Impact Assessment system in environmental management, as well as the strengthening of its institutional structure.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes (1994)

The Convention, which was adopted in 1989 and came into force in 1992, is designed to remove the dangers associated with the transboundary movement, disposal, and recycling of hazardous and other wastes. The most important aspect of the Convention is the transport of waste from industrialised countries to developing countries.

Regulation on Control of Hazardous Wastes (1994)

The purpose of this Regulation, is to set out the legal and technical principles for the determination of principles, policies and programmes of hazardous waste, from its generation to its final disposal for;

- » the prevention of its direct or indirect discharge into the receiving environment in a way that could harm human health or the environment,
- » the provision of control of its production and transportation,
- » the prohibition of its import and the control of its export,
- » the provision of the necessary technical and administrative standards in its management,
- » the minimisation of its generation at the source,
- » the disposal of the waste at the closest location to the place of its generation, in cases where its generation is unavoidable,
- » the establishment of adequate disposal facilities and the environmentally sound control of these facilities,
- » the provision of its environmentally friendly management.

Local Agenda 21 (1997)

In chapter 28 of the National Agenda 21, adopted in 1992, a global call was made to local governments in all countries around the world to initiate a participatory process and reach a consensus on Local Agenda 21 for their cities.

As part of Local Agenda 21 practices in Türkiye, the “Promotion and Development of Local Agenda 21s in Türkiye” project was implemented with the assistance of UNDP, as per the Council of Ministers’ decision, at the end of 1997 and was completed in 2003.

National Environmental Strategy and Action Plan (UÇEP) (1998)

UÇEP, developed by the State Planning Organisation and the Ministry of Environment, is a comprehensive document that addresses Türkiye’s environmental realities, objectives, and means of implementation. The plan’s first part examines the environmental impacts of the country’s geographical, social, and economic conditions, while the second part delves deeply into environmental policies, laws, and the management system. The third chapter discusses Türkiye’s environmental issues, including urban areas, natural resources, marine and coastal resources, cultural and natural heritage, and environmental hazards. In the final section, in light of these analyses, what needs to be done in Türkiye to achieve a sustainable environment is outlined.

Metropolitan Municipalities Law No. 5216 (2004)

According to Article 7 of the Law; “In accordance with the principle of sustainable development, the duties and responsibilities of metropolitan and district municipalities include: ensuring the protection of the environment, agricultural land and water basins; planting trees; drawing up or causing to draw up the metropolitan area’s solid waste management plan; providing services concerning industrial and medical waste, establishing or causing to establish and operating or causing to operate facilities for the purpose; collecting or causing to collect waste from maritime vessels, treating such waste and making the necessary arrangements in this regard.”

Regulation on Control of Waste Batteries and Accumulators (2004)

The Regulation establishes the technical and legal principles that must be followed from battery and accumulator production to disposal. According to the Regulation, rechargeable and long-lasting batteries and accumulators are preferred, and recovery after use is critical. Producers and importers are required not to manufacture or import batteries and accumulators containing hazardous substances.



Turkish Criminal Code No. 5237 (2004)

Article 181 - Intentional pollution of environment

- » Any person who intentionally discharges waste or refuse material into the earth, water or air, contrary to the technical procedures as defined in the relevant laws and in such a way as to cause damage to the environment, shall be sentenced to a penalty of imprisonment for a term of six months to two years.
- » Any person who brings waste or refuse material into the country without permission shall be sentenced to a penalty of imprisonment for a term of one to three years.

Article 182 - Pollution of environment by negligence

Any person who discharges waste or refuse material into the earth, water or air through his negligence, such as to cause environmental damage, shall be sentenced to a penalty of a judicial fine. Where waste or refuse material has the propensity to remain in the earth, water, or air, the penalty shall be imprisonment for a term of two months to one year.

Any person who causes, by his negligence, the discharge of waste or refuse material which has a characteristic which may cause the alteration of the natural characteristics of plants or animals, enhance or create infertility, or cause an incurable illness in humans and animals, the offender shall be sentenced to a penalty of imprisonment for a term of one to five years.

Regulation on Water Pollution Control (2004)

The Regulation's purpose is to establish the legal and technical principles required to prevent water pollution in accordance with sustainable development goals, protecting the country's ground and surface water resource potential and ensuring their optimal use. This Regulation covers principles and prohibitions regarding the protection of water quality, principles of wastewater discharge and discharge permits, principles regarding wastewater infrastructure facilities, and procedures and principles of monitoring and inspection to prevent water pollution.

Regulation on Control of Heating-Related Air Pollution (2005)

The Regulation's purpose is to reduce and control the adverse effects on air quality of pollutants discharged into the outside air in the form of soot, smoke, dust, gas, vapour, and aerosol from combustion plants

used for heating purposes in housing, collective housing, cooperatives, housing estates, schools, universities, hospitals, public offices, workplaces, social recreation facilities, industry, and similar places. This Regulation covers the characteristics and operating principles of combustion plants used for heating, the quality criteria of solid, liquid, and gaseous fuels used in combustion plants, and the emission limits to be complied with.

Misdemeanours Law No. 5236 (2005)

Article 41- Pollution of the environment

- » Any person who disposes of household waste and residue outside the places for their collection or storage shall be imposed an administrative fine of twenty Turkish Liras. The provisions of this paragraph shall also apply to the disposal of individual waste and residue.
- » In cases where the act is committed in cooking and serving places, the natural or legal person who owns the establishment shall be imposed an administrative fine ranging from five hundred Turkish Liras to five thousand Turkish Liras.
- » Any person who slaughters animals outside the places allocated for animal slaughter or leaves the waste of slaughtered animals on the street or other public area shall be imposed an administrative fine of fifty Turkish Liras.
- » The person who disposes of construction waste and residue outside the places for their collection or storage shall be imposed an administrative fine ranging from one hundred Turkish Liras to three thousand Turkish Liras. If the construction activity is carried out on behalf of a legal entity, the upper limit of the administrative fine to be imposed on this legal entity is five thousand Turkish Liras. The cost of removing this waste and residue is also charged to the aforementioned person.
- » Any person who leaves unusable or surplus household goods on the street or other public place outside the day designated for their collection shall be imposed an administrative fine of fifty Turkish Liras.
- » Any person who leaves unusable motorised land or sea transportation vehicles or their integral parts on the street or other public place shall be imposed an administrative fine of two hundred and fifty Turkish Liras. The cost of their removal is also charged to the aforementioned person.

Law No. 5346 on Utilisation of Renewable Energy Resources for Electricity Generation (2005)

This Law's purpose is to expand the use of renewable energy resources for the generation of electrical energy, to bring these resources into the economy in a reliable, economical, and high-quality manner, increasing source variety, reducing greenhouse gas emissions, utilising waste, protecting the environment, and developing the manufacturing sector needed to realise these objectives. The Law covers the procedures and principles regarding the protection of renewable energy resource areas, the certification of electrical energy obtained from these resources, and the use of these resources.



Municipal Law No. 5393 (2005)

The law specifies that municipalities are responsible for services related to the environment and environmental health, sanitation, and solid waste management. The law also defines that municipalities are responsible for taking necessary measures to prevent environmental pollution in urban planning.



Hazardous Waste Control Regulation (2005)

A detailed definition of hazardous waste is given in the aforementioned regulation. In this context, if the waste does not exhibit any of the characteristics such as hazardous, toxic, flammable, corrosive, or explosive, it is managed in accordance with the Solid Waste Control Regulation that was enacted in 1991. The Hazardous Waste Regulation classifies waste according to its possible sources, components, and types of components and explains disposal methods. The Regulation covers the legal and technical principles regarding the collection, on-site temporary storage, interim storage, transportation, recovery, final disposal, import, and export of hazardous waste.

Regulation on the Control of End-of-Life Vehicles (2006)

This Regulation's purpose is to prevent the generation of waste from vehicles for the protection of the environment and human health, reduce the amount of disposed waste generated by end-of-life vehicles and their parts through the processes of reuse, recycling, and recovery, and determine the standards and obligations that economic operators and temporary storage areas will be subject to.

Law Amending the Environment Law No. 5491 (2006)

The basic principles of the environment law were added to this Law and our environmental law was strengthened by regulating development goals and environmental protection goals in line with the principle of sustainable development. Thus, it clearly defined the concept of the environment and brought together development and environmental protection objectives. Concepts such as “sustainable develop-

ment” and “sustainable environment,” “protection and improvement of the environment,” “conservation-use balance,” “biodiversity,” and “right to participation” are included.

Waste Framework Directive 2008/98/EC on Establishing the Framework of EU Waste Legislation (2008)

The Waste Framework Directive 2008/98/EC establishes a waste management hierarchy to reduce the negative impact of waste on the environment and human health. According to this hierarchy, the primary focus is to prevent waste generation at its source with waste management strategies. In cases where waste generation cannot be completely prevented, waste should be reused. If it cannot be reused, it is intended to be recycled into raw materials for new products. If recycling is not an option, the waste should be recovered for other purposes, such as energy generation, and if none of these options are available, the waste should be disposed of in safe disposal facilities in the most environmentally friendly manner possible.

Regulation on Control of Waste Oils (2008)

The purpose of the regulation is to determine the procedures and principles for ensuring the protection of the environment and human health, as well as the efficient use of natural resources, by determining technical and administrative principles regarding the temporary storage, collection, transportation, refining, energy recovery and disposal of waste oils.

Regulation on General Principles of Waste Management (2008)

The purpose of the regulation is to determine the general principles for ensuring the management of wastes from their generation to their disposal without harming the environment or human health.

Regulation on Reduction of Sulphur Rates in Certain Fuel Types (2009)

The regulation's purpose is to determine the procedures and principles for reducing sulphur dioxide emissions resulting from the combustion of certain types of fuel, protecting individuals and the environment from hazardous impacts. This regulation includes limiting the sulphur content of certain fuel types or reducing sulphur dioxide emissions, as well as inspecting, sampling, and reporting certain fuel types within the soils, maritime zones, or designated pollution control areas of the Republic of Türkiye.

Law No. 5386 on the Approval of the Accession to the Kyoto Protocol for the United Nations Framework Convention on Climate Change (2009)

Following the adoption of the law by the Grand National Assembly of Türkiye and the Council of Ministers' Decision No. 2009/14979 dated May 13, 2009, Türkiye became a party to the Kyoto Protocol on August 26, 2009, by submitting its instrument of accession to the United Nations.

Regulation on Landfilling of Wastes (2010)

The purpose of the regulation is to determine the technical and administrative issues, along with general rules to be followed regarding;

- » The prevention of environmental pollution by minimising the adverse effects of possible leachate and landfill gases on the soil, air, groundwater and surface waters,
- » The preparation of technical designs of storage bases suitable for the type of waste as well as the construction of landfill facilities,
- » The procedures of waste acceptance to landfills,
- » The operation, closure, post-closure control and maintenance processes of landfills,
- » The prevention of adversities that may pose risks to the environment and human health, including the greenhouse effect during the operation, closure and post-closure maintenance processes,
- » The amelioration, closure and post-closure maintenance processes of the existing landfills; in the process of waste disposal by the landfilling method.

Establishment of the Directorate General for Combating Desertification and Erosion (2011)

With the aim of “determining policies and strategies relevant to soil protection, refinement of natural resources, combating desertification and erosion, avalanche, landslide and flood control activities, ensuring cooperation and coordination among relevant institutions and organisations,” the Directorate General for Combating Desertification and Erosion was established as a central service unit of the Ministry of Forestry and Water Affairs in 2011.

Regulation on Fluorinated Greenhouse Gases (2011)

The purpose of the regulation is to lay out the procedures and principles regarding the management of fluorinated greenhouse gases and other fluorinated substances in order to bring under control the fluorinated greenhouse gases that fall under the Montreal Protocol on Substances That Deplete the Ozone Layer, to which Türkiye is a party. The Regulation includes the principles regarding the labelling, data collection, leakage controls, reporting, placing on the market, import, export and usage and quota assignment of fluorinated greenhouse gases and other fluorinated substances, including those within products and equipment, along with the recovery and disposal of fluorinated greenhouse gases; issues and arrangements regarding the training and documentation of natural and legal persons who interfere in equipment that contains fluorinated greenhouse gases, or the operation of which depends on the aforementioned gases.

Circular on Raising Environmental Awareness (2012)

The purpose of this circular is to raise awareness among schoolchildren to recognise and protect the environment in which they live with its natural riches and to ensure their voluntary participation in activities in this field. Cooperation with the Environmental Organisations Solidarity Association (ÇEKUD), which carries out activities in this context, as well as supporting and giving schools the opportunity to carry out various activities related to the subject, are envisaged.

Regulation on the Management of Waste Electrical and Electronic Equipment (2012)

The purpose of this regulation is to lay out the legal and technical principles regarding reusing, recycling, recovering methods and goals for limiting the use of certain hazardous substances in electrical and electronic equipment with the aim of protecting the environment and human health from the production of electrical and electronic equipment to their ultimate disposal, determining the practices to be exempted from the aforementioned limitation, bringing under control the import of electrical and electronic equipment, reducing the generation of waste electrical and electronic equipment and reducing the amount of waste to be disposed of.

Waste Collection Center Communiqué (2014)

The purpose of this communiqué is to lay out the procedures and principles regarding the waste collection centres established with a view to ensuring that recoverable wastes are collected separately at their sources without mixing with other wastes and that they are left for recovery and/or disposal.

This communiqué includes the technical principles regarding the waste collection centres to which domestic wastes, along with similar commercial or institutional wastes listed in Annex-1 of this communiqué, are left to ensure they are collected separately without mixing with other wastes in an attempt to ensure a sustainable waste management system.

Regulation on the Monitoring of Greenhouse Gas Emissions (2014)

The purpose of the regulation is to lay out the procedures and principles regarding the monitoring, reporting and verification of greenhouse gas emissions resulting from various industrial activities. The regulation covers the procedures and principles regarding the monitoring, reporting and verification works and procedures of greenhouse gas emissions resulting from the aforementioned activities, along with determining the obligations of verification organisations and enterprises.

Waste Management Regulation (2015)

With this regulation, the general procedures and principles are laid out regarding the following;

- » Ensuring the management of wastes from generation to disposal without harming the environment or human health,
- » Reducing waste generation, reducing the use of natural resources through reuse, recycling and recovery of waste and ensuring waste management,
- » The production, market surveillance and inspection of products covered by this Regulation, which have certain criteria, basic conditions and characteristics in terms of environmental and human health.

Regulation on the Management of Waste Vegetable Oils (2015)

According to the Regulation, after the use of vegetable-based oils in residences, public or private institutions and catering establishments, they can be collected by authorised persons or institutions and con-

verted into biodiesel and biogas in accordance with the standards set by the Board of Energy Market Regulation after the necessary technical procedures are carried out in recovery facilities.

It is prohibited for unauthorised persons to collect or discharge waste oils into sewers that cannot be used for secondary purposes in any other way, and vegetable oil producers, waste oil producers, municipalities and recycling facilities are jointly responsible for this process.

Regulation on Mine Tailings (2015)

The purpose of the regulation is to regulate the procedures and principles regarding the management of wastes resulting from the exploration, extraction, preparation/enrichment or storage of minerals in a way that does not harm the environment or human health from production to final disposal.

It covers the processes required for the management of wastes resulting from the exploration, extraction, preparation/enrichment or storage of minerals.

The Paris Agreement (2015)

The Paris Climate Summit (COP 21) resulted in the Paris Agreement being adopted by 195 countries. The Agreement aims to limit the increase in global temperature caused by human-induced greenhouse gas emissions to below 2 degrees Celsius in the long term compared to the pre-industrial period, and it emphasises the importance of reaching 1.5 degrees Celsius. Türkiye signed the Paris Agreement on April 22, 2016, at the High-Level Signing Ceremony in New York, together with 175 country representatives. The Paris Agreement was ratified by the Presidential Decree on October 7, 2021, and the ratification within domestic law was completed. The instrument of ratification of the Agreement, together with our national declaration, was deposited with the UN Secretariat on October 11, 2021. Türkiye's net zero emission target for 2053 was announced by our President Recep Tayyip Erdoğan.

Regulation on Renewable Energy Resource Areas (2016)

The purpose of the Regulation is to ensure the effective and efficient use of renewable energy resources by creating large-scale renewable energy resource areas (YEKA) on public and treasury immovable properties and privately owned immovable properties, rapid realisation of investments by allocating these areas to investors, domestic production or domestic procurement of high-tech components used

in electric power generation facilities based on renewable energy resources, and to contribute to the transfer of technology.

Regulation on the Management of Medical Waste (2017)

The purpose of this Regulation is to regulate the guidelines, policies and programmes and the procedures and principles regarding;

- » The prevention of waste's direct or indirect discharge into the receiving environment in a way that could harm human health or the environment,
- » the determination and implementation of legal, administrative and technical aspects for the separate collection at source, transportation within the health institution, temporary storage, transportation to the medical waste processing facility and disposal without harming the environment or human health from generation to disposal of medical waste.

Zero Waste Project (2017)

In Türkiye, the Zero Waste Project was first announced in 2017 and introduced under the auspices of the Presidency and the leadership of the Ministry of Environment and Urbanisation. The first application of the project in the public sector was realised in the Presidential Complex and the Ministry of Environment and Urbanisation.

Regulation on Substances that Deplete the Ozone Layer (2017)

The purpose of the Regulation is to determine the procedures and principles regarding the use and termination of substances controlled by the Montreal Protocol on Substances that Deplete the Ozone Layer, to which Türkiye is a party. The Regulation includes the production, foreign trade, use, market placement, recovery, recycling, reclamation and disposal of controlled substances, new substances, products and equipment containing or working with these substances, as well as the reporting of all information and informing the public. This Regulation has been prepared within the framework of harmonisation with European Union legislation by taking into account Regulation (EC) No. 1005/2009 of the European Parliament and of the Council of 16/9/2009 on Substances that Deplete the Ozone Layer.

Regulation on Exhaust Gas Emission Control (2017)

The purpose of the Regulation is to protect living beings and the environment from the effects of air pollution caused by exhaust gases from

motor vehicles in traffic, to ensure the reduction of exhaust gas pollutants, to control them by taking measurements and to determine the procedures and principles regarding their implementation. This Regulation covers the procedures and principles regarding the measurement stations belonging to real or legal persons who will carry out exhaust gas emission measurements of motor vehicles operating on gasoline, diesel and gas fuel (LPG, CNG, LNG and similar) and their opening, operation, authorisation, and the management, operation and inspection of devices, tools/equipment, personnel and their qualifications.

Amendment to the Ministry of National Education Secondary Education Institutions Regulation (2018)

With the amendment made to the article titled “Duties and Responsibilities of Teachers” of the Regulation, raising environmental awareness has been added to the duties and responsibilities of teachers.



Regulation on Control of Volatile Organic Compound Emissions from the Storage and Distribution of Gasoline and Naphtha (2018)

The purpose of the Regulation is to combat air pollution by reducing volatile organic compounds emitted from the processes, facilities and tankers used during the storage, filling and transportation of gasoline and naphtha from one terminal to another, or from one terminal to a fuel station and the fuelling of motor vehicles at fuel stations. This Regulation covers all kinds of devices used for the storage and filling of gasoline and naphtha at terminals or fuel stations, as well as tankers used for the transportation of gasoline and naphtha between terminals or from a terminal to a fuel station, and the requirements for the installation and operation of fuel stations.

Zero Waste Information System (2018)

The Ministry established the Zero Waste Information System in 2018 as an online application to register, record, and monitor the locations that will implement the zero waste management system and to ensure the traceability of the waste managed under the system.

Law on Amendments to the Environment Law No. 7153 and Certain Laws (2018)

In the second paragraph of Article 29 of the Law, the provision “The Ministry shall provide incentives to municipalities, special provincial administrations, institutions, organisations, and enterprises that establish and implement a zero waste management system for the purpose of separate collection and collection of waste at source” was added with the aim of expanding the implementation of zero waste by public institutions and organisations.

This Law introduced the collection of recovery participation fees from consumers and those who market the products specified by the Law. As a result of this amendment, plastic bags began to be given to users or consumers for a fee at points of sale as of January 1, 2019.

Environmental Labelling Regulation (2018)

The Regulation establishes a voluntary, scientifically-based “Environmental Labelling System” to promote products with reduced environmental impact to consumers and includes the procedures and principles regarding the implementation of the system. It is a system that demonstrates the environmental sensitivity and friendliness of products or services that are produced, distributed, exported, or imported in Türkiye.

Eleventh Development Plan (2019-2023), (2019)

In the Eleventh Development Plan, under the title “Protection of the Environment,” the main objectives include “protecting the environment and natural resources, improving their quality, ensuring their effective, integrated, and sustainable management, realising environment and climate-friendly practices in all areas, and increasing environmental awareness and sensitivity of all segments of society.” The policies and measures to be implemented in this context are also listed under the same chapter.

Zero Waste Regulation (2019)

The purpose of the Regulation is to determine the general principles and principles regarding the establishment, dissemination, develop-

ment, monitoring, financing, registration, and certification of the zero waste management system, which aims to protect the environment and human health in waste management processes in line with the principles of efficient management of raw materials, natural resources, and sustainable development.

In this regulation, which aims to adopt, implement, and disseminate the zero waste vision throughout the country, the authorities and obligations of the relevant institutions and organisations are listed, and the Principles for the Establishment of the Zero Waste Management System and Collection System and the Principles for the Zero Waste Certificate are determined.

Zero Waste Management System Implementation Guidelines (2019)

In accordance with the Zero Waste Regulation, eleven “Zero Waste Management System Implementation Guidelines” were prepared to guide the target groups that need to establish the Zero Waste Management System.

Regulation on Recycling Contribution Fee (2019)

The purposes of the Regulation are as follows:

- » Determining, declaring, collecting and monitoring the recycling contribution fees to be collected from the points of sale for the bags among the products listed in Annex-1 of Environment Law No. 2872 dated 9/8/1983 and from the marketers/importers of other products,
- » Determining the administrative and technical procedures and principles regarding the provisions to be complied with by the points of sale for plastic bags and by the marketers/importers for other products among the products listed in Annex-1 of the Law.

Law No. 7261 on Amendments to the Establishment of the Türkiye Environmental Agency and Certain Laws (2020)

The Türkiye Environmental Agency was established to prevent environmental pollution, contribute to the protection, improvement, and development of green areas, increase resource efficiency in line with the circular economy and zero waste approach, and undertake activities for the establishment, operation, monitoring, and supervision of a national deposit management system.

This amendment to the Environmental Law introduced the concept of circular economy, provisions for the effective management of waste lubricants, provisions supporting zero waste and separate collection

at source practices, regulations regarding the compulsory use of waste and materials obtained from waste in production, and a reduction in the use of disposable materials and plastic bags.

Regulation on Control of Packaging Waste (2021)

The Regulation covers the ways and methods to be followed in the process of preventing post-use waste and, if prevention is not possible, reuse, recycling, or recovery methods and disposal.

Regulation on General Principles of Waste Pretreatment and Recovery Facilities (2021)

The Regulation sets out the procedures and principles regarding the technical criteria of waste pre-treatment and recovery facilities operating for the processing of waste and the minimum requirements for these facilities.

Türkiye Green Deal Action Plan (2021)

A roadmap for Türkiye's adaptation to the European Green Deal was identified, and an action plan was developed with the contributions of relevant institutions. In this context, Presidential Circular No. 2021/15 on the Green Deal Working Group (YMÇG) and the Green Deal Action Plan (YMEP) was published in the Official Gazette dated July 16, 2021.

The action plan covers 81 actions to be implemented to achieve the designated targets under the following headlines in accordance with the EU's policy priorities:

- » Carbon Border Adjustments,
- » A Green and Circular Economy,
- » Green Financing,
- » Clean, Economic, and Secure Energy Supply,
- » Sustainable Agriculture,
- » Sustainable Intelligent Transportation,
- » Combating Climate Change,
- » Diplomacy,
- » Information and Awareness-Raising Activities

The Procedures and Principles for the Establishment and Operation of Waste Collection Centres and Zero Waste Practices (2021)

The purpose of the procedures and principles is to determine the administrative and technical aspects regarding the storage and collection of recoverable waste separately from other waste at its source through zero waste management system practices and the waste collection centres established for the recovery and/or disposal of the recoverable waste.

Law on Amendments to Environment Law No. 7410 and Certain Laws (2021)

This amendment allows more involvement from the private sector in the waste management process by enabling public and private cooperation in the management of the mandatory deposit-refund system through the Türkiye Environmental Agency and introduces provisions to impose administrative fines on establishments that generate low amounts of medical waste, such as medical clinics, if they take actions contrary to the provisions of the relevant legislation.

Establishment of the Directorate of Climate Change (2021)

The Directorate is responsible for determining the national and international policies, strategies, and actions that are integral to Türkiye's endeavours to combat and adapt to climate change, pursuing negotiation processes, and ensuring coordination with institutions and organisations. In line with Türkiye's 2053 net zero emission and green development targets, the Directorate is tasked with conducting all kinds of work necessary for adaptation to climate change and carbon emission reduction, as well as raising awareness of climate change in all segments of society with a human and nature-friendly approach.

Sustainable Finance Framework Document (2021)

The framework document is designed for utilisation in borrowing transactions, such as green, social, or sustainable bond or lease certificates, which can be executed by the Ministry of Treasury and Finance in international capital markets. The document covers a variety of topics, including Türkiye's climate change commitments and the Green Deal Action Plan. Furthermore, the framework for green, social, and sustainable financing is outlined.

Regulation on the Management of Waste Electrical and Electronic Goods (2022)

The purpose of the regulation is to regulate the strategies and policies, administrative, legal and technical procedures and principles on the following matters to ensure the sustainable protection of the environment:

- » Prevention of the generation of waste electrical and electronic goods based on the principles of circular economy and efficient use of resources; in cases where prevention is not possible, collection of waste electrical and electronic goods separately and determination of the methods and targets for reuse, recycling, and recovery in order to reduce the amount of waste electrical and electronic equipment designated for disposal,
- » Management of waste electrical and electronic goods within a specific management system, including the zero waste management system, in a manner that causes no harm to the environment and human health,
- » Determination of the framework for the implementation of extended producer responsibility for electrical and electronic goods manufacturers.

Medium-Term Programme for 2022-2024 (2022)

The Medium-Term Programme for 2022–2024 aims for growth that embraces green transformation. It is indicated that the objectives and actions outlined in the Green Deal Action Plan will also influence processes regarding the integration with global value chains and the attraction of international investment to the country during the program's duration. The policies and measures to be implemented in this context are included in the programme.

Circular on Waste Pickers (2022)

The objective of the circular is to authorise and regulate the job system for independent waste pickers, also known as “paper pickers” by the public, through registration with the “zero waste information system.”

According to the circular, local administrators are responsible for ensuring coordination regarding the implementation, while municipalities are tasked with conducting field practices and organising and taking precautions on the ground in accordance with the legislation.

Global Commitment to Zero Waste (2022)

First Lady Emine Erdoğan had a meeting with UN Secretary-General Guterres while accompanying President Recep Tayyip Erdoğan to attend the 77th Session of the UN General Assembly in New York, USA. The two signed the “Global Commitment to Zero Waste” at the UN Headquarters as part of combating the climate crisis. On this occasion, First Lady Emine Erdoğan was informed that she is recognised as a global leader in the zero-waste initiative, working under the UN umbrella.

March 30 International Zero Waste Day (2022)

The United Nations (UN) General Assembly approved the “Zero Waste” resolution that Türkiye had submitted as part of its efforts to combat climate change and promote sustainable development. Therefore, the resolution passed by the UN General Assembly showed support for the “Zero-Waste Project,” which was implemented with the guidance of First Lady Emine Erdoğan. As a result of this resolution, the General Assembly has declared March 30 to be International Zero Waste Day.

Regulation on the Restrictions on the Use of Hazardous Substances in Electrical and Electronic Goods (2022)

The purpose of the regulation is to establish the principles and procedures regarding the use of hazardous substances in electrical and electronic goods in order to contribute to the protection of human health and the environment, including methods to ensure environmentally friendly recovery and disposal of waste electrical and electronic goods.

Regulation on Environmental Management of Shipyards, Drydocks, and Slipways (2022)

The purpose of the regulation is to establish the principles and procedures regarding the environmental management of pollutants that cause marine pollution and ecosystem destruction in the long term by accumulating on the seabed and are generated as a result of construction, modification, and/or maintenance and repair activities in shipyards, drydocks, and slipways operating in the coastal areas of Türkiye. The regulation covers the improvement of processes at shipyards, drydocks, and slipways with respect to the environment, the dissemination of cleaner manufacturing techniques, the monitoring of the effects of processes on the marine environment, the establishment of ballast sediment collection facilities, and the required reports.

BIST Sustainability Index (2022)

The BIST Sustainability Index and BIST Sustainability 25 Index were created based on the companies traded on Borsa İstanbul and those that scored high on corporate sustainability performance in order to raise awareness, knowledge, and practices on sustainability among Borsa İstanbul companies. The BIST Sustainability 25 Index was created to index large, liquid companies with high sustainability performance. The Index reveals companies' approaches to sustainability issues that are significant for Türkiye and the world, such as global warming, depletion of natural resources and water, health, security, and employment, and provides an independent insight into their activities and decisions.

Regulation on Combined Transportation (2022)

This regulation aims to establish principles and conditions regarding combined transportation and green logistics, to create an integrated, balanced, and environmentally friendly transportation system, and to support and incentivise its dissemination.

Sustainable Banking Strategic Plan for 2022-2025 (BDDK) (2022)

The main focus of the Sustainable Banking Strategic Plan is to establish a banking infrastructure that promotes sustainability. It outlines the principles and procedures that banks will follow to ensure their sustainability activities align with international standards and practices. The Strategic Plan sets out basic principles for digitalising, measuring, and analysing "climate-related financial risks." The policies set out in the Strategic Plan aim to facilitate the development of sustainable banking activities while ensuring the sector's financial solidity. Within this context, the planned steps are also expected to contribute to obtaining cost-effective resources from international markets for the green transformation of the real sector.

The sustainable finance mission of the Banking Regulatory and Supervision Agency (BDDK) is to minimise impacts on the banking sector, or, in other words, the environmental and social risks that may threaten financial stability, and to play a guiding, facilitating, encouraging, and educating role for the banking sector in financing the transition to a low-carbon economy.

Zero Waste Advisory Board (2023)

The resolution for promoting zero waste approaches under the 2030 Agenda for Sustainable Development was adopted by the 77th Session

of the UN General Assembly on December 14, 2022. On 12 April 2023, there was a discussion and decision made regarding the establishment of an advisory board. The purpose of this board is to spread best practices and success stories related to zero-waste and raise awareness on a global scale. The Zero-Waste Advisory Board, which was established within this scope, is chaired by First Lady Emine Erdoğan, the spouse of President Recep Tayyip Erdoğan.

Regulation on Export and Import of Certain Hazardous Chemicals (2023)

The purpose of the regulation is to regulate the procedures and principles regarding the implementation of The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; the promotion of efforts based on shared responsibility and cooperation to protect human health and the environment from potential harm during the international transportation of hazardous chemicals; the use of hazardous chemicals in an environmentally compatible manner; the facilitation of information sharing on the characteristics of hazardous chemicals; and the proper distribution of national precautionary decisions and final regulatory actions taken on hazardous chemicals to parties of the Convention to assist these countries and other countries to complete their national decision-making processes regarding imports and exports.

Regulation on Wastewater Treatment Plant Energy Incentive (2023)

The regulation's purpose is to establish the procedures and principles for the Ministry's partial or full reimbursement of the costs of electricity used in wastewater treatment plants to those who meet the legislative requirements at their established or operated wastewater treatment facilities that discharge and/or reuse treated wastewater for improving water quality and protecting natural resources.

Amendment to Regulation on Preschool Education and Primary School Education Institutions of the Ministry of National Education(2023)

The article "Expected Behaviours from Students" was amended to include provisions emphasising students' contribution to environmental protection as a behavioural objective.

Amendment to Regulation on Preschool Education and Primary School Education Institutions of the Ministry of National Education(2023)

The amendment to the “Playground” article of the Regulation now requires the establishment of educational environments that will assist children in expanding their environmental awareness.

Türkiye Sustainability Reporting Standards (TSRS) (2024)

The Regulation, which mandates sustainability reporting for companies within its jurisdiction, seeks to disclose the sustainability performance of companies in a transparent manner. These reports help companies prepare for a more sustainable future by identifying risks and new business opportunities that may arise, particularly with respect to global challenges such as climate change. The TSRS can be interpreted as both an opportunity and a stimulus for companies in Türkiye to comply with the EU’S CSRD and CSDDD directives.

Twelfth Development Plan (2024-2028) (2024)

The Eleventh Development Plan, under the chapter “Protection of the Environment,” incorporates the following fundamental goals: “In accordance with the Sustainable Development Goals, transitioning to a low-carbon economy that is resilient to the impacts of climate change; protecting and managing environmental and natural resources with an understanding of social justice; and raising public awareness and sensitivity towards the environment.” The policies and measures to be implemented in this context are also listed under the same chapter.

Medium-Term Programme (2024-2026) (2024)

Throughout the programme period, in alignment with the goal of achieving net zero emissions by 2053 and the country’s development priorities, the programme will be tailored to aid in reducing greenhouse gas emissions, enhancing resilience to climate change, prioritising competitiveness and efficiency, and ensuring a fair transition period. It also aims to expedite its green transformation process by improving national incentive mechanisms that make the most of global financing sources. It is anticipated that the preparation of fundamental legislation that comprehensively addresses climate change-related practices will be concluded within the scope of policies and measures to be implemented in this context.

Chapter III

STRATEGY DOCUMENTS AND ACTION PLANS

Strategy Documents and Action Plans

Türkiye's Climate Change Strategy (2010-2023) and Action Plans (2011-2023)

The Climate Change Action Plan (IDEP), which includes strategic principles and goals for the years 2011–2023 within the framework of greenhouse gas emission control and adaptation to climate change, was prepared and put into implementation in July 2011 in order to carry out the National Climate Change Strategy, which was developed under the coordination of the Ministry of Environment, Urbanisation, and Climate Change and approved by the Prime Ministry High Planning Council on May 3, 2010.

IDEP aims to combat climate change by identifying actions to reduce greenhouse gas (GHG) emissions, enhance resilience to climate impacts, and promote climate change mitigation and adaptation efforts in Türkiye. The IDEP, which addresses GHG emission control and adaptation measures to be implemented in priority sectors within the framework of particular conditions in Türkiye, focuses especially on institutional structuring, long-term cooperation, technology development, and financing.

As part of IDEP, 541 actions have been identified under the sub-headings of Energy, Buildings, Transport, Industry, Waste, Agriculture, Land Use and Forestry, and Cross-Sectoral Shared Issues.

In 2011, another significant action plan on climate change, the Strategy and Action Plan for Adaptation to Climate Change (IDUSEP) was published. IDUSEP includes chapters on Water Resources Management, Agriculture Sector and Food Security, Ecosystem Services, Biodiversity and Forestry, Natural Disaster Risk Management, Human Health, and Cross-Sectoral Shared Issues.

The work on updating these action plans with medium and long-term targets for 2030 and 2053 is being carried out under the coordination of the Ministry of Environment, Urbanisation, and Climate Change.

Regional Climate Change Action Plans

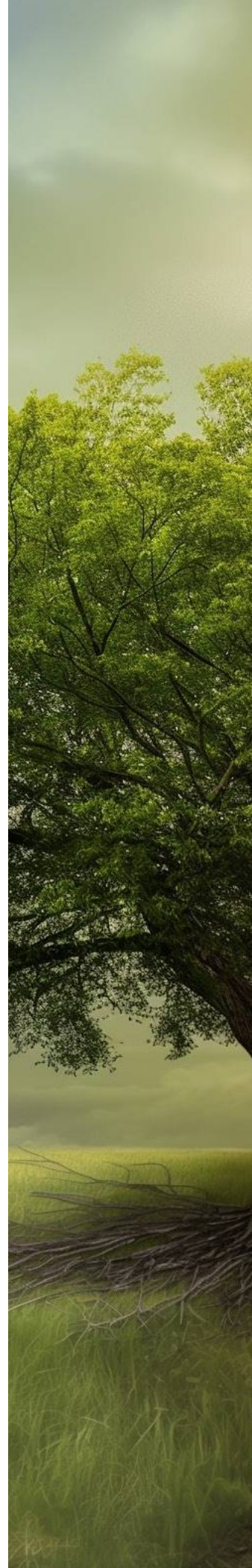
Türkiye is divided into seven geographical regions with different conditions. Despite the climatic differences between these regions, they all share the common challenge of climate change. In developing actions for these seven regions, it's crucial to thoroughly analyse the social, economic, and physical conditions of each region and city. Accordingly, the Ministry of Environment, Urbanisation and Climate Change analysed the regions separately and prepared Regional Climate Change Action Plans (BIDEP).

In BIDEP, areas such as water resources, disasters, air quality, agriculture, animal husbandry, forestry, ecosystems and biodiversity, economy, health, tourism, energy, coastal areas, and urban infrastructure have been analysed, and measures to be taken against the impacts of climate change and recommendations on adaptation have been determined in the areas of Water Management, Cities and Infrastructure, Air Quality, Energy, Coastal Areas, Health, Disasters, Transport, Tourism, Agriculture and Animal Husbandry, Ecosystems and Biodiversity, Forestry, Economy, Sociocultural Structure.

Circular Economy Action Plan

The action plan developed to promote the transition to a circular economy that contributes to more efficient resource and waste management across Türkiye and to strengthen Türkiye's institutional and technical capacity in the transition to a circular economy in line with the EU Circular Economy Model has begun to be executed as of February 7, 2022.

The target groups of the project are the Ministry of Environment, Urbanisation and Climate Change, public institutions and organisations, sector representatives and organisations, municipalities, and non-governmental organisations.



The objectives of the project are to analyse Türkiye's potential for transition to a circular economy based on the European Union Circular Economy Model, to develop a National Strategy and Action Plan for waste and resource management in line with the European Union Circular Economy Package, and to improve the management capacity of national and local administrations in terms of integrated waste management.

Türkiye's Spatial Strategy Plan 2053

The 2009 Urbanisation Council decision, which stated that “the country's spatial strategy plan should be developed and the existing planning hierarchy should be updated accordingly,” has shaped the development process of Türkiye's Spatial Strategy Plan (MSP) over the past ten years. In this process, the spatial strategy plan was included in the planning legislation for the first time in 2011, and the Ministry of Environment and Urbanisation was assigned the task of developing spatial strategy plans in cooperation with relevant institutions and organisations.

In 2019, with the protocol signed between Istanbul Technical University (ITU) and the Ministry of Environment and Urbanisation, efforts on the “Development of Türkiye's Spatial Strategy Plan Project Phase 1” were exerted. Within the scope of the project, efforts were focused on the themes of settlement system and urbanisation, economy and special specialisation regions, transportation and logistics, energy infrastructure, natural structure and climate change and policies (social, cultural, environmental) and innovation and technology, competitiveness and attractiveness, human development and social policy, accessibility/mobility, and environmental sustainability.

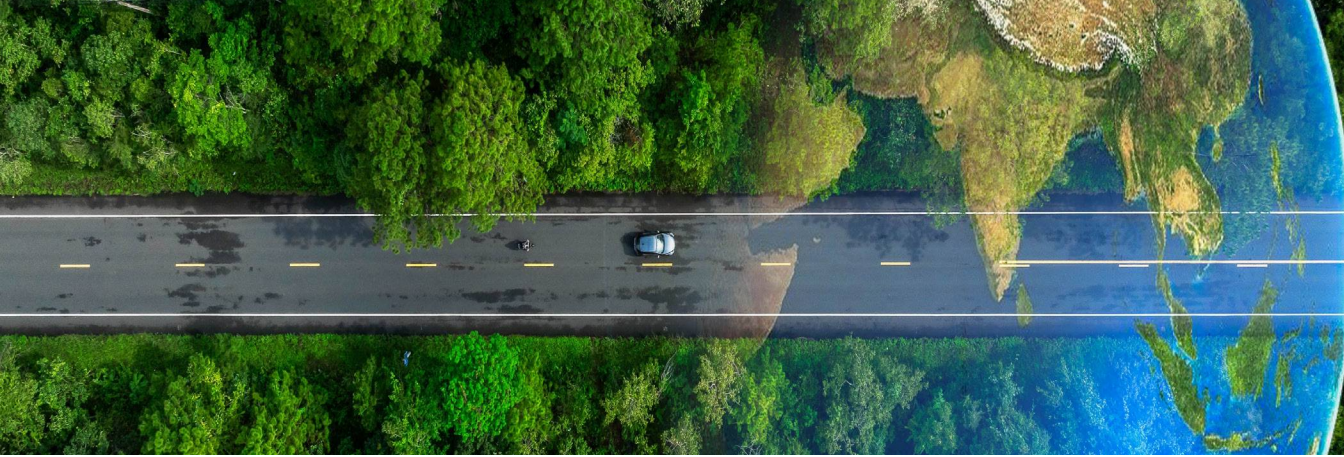
Türkiye's Spatial Strategy Plan's vision consists of six primary focus areas: “Livable Settlements, Accessibility, and Mobility,” “Sustainability in Natural Structure, Natural Disasters, and Ecosystem Services,” “Combating Climate Change,” “Competitiveness and Attractiveness,” “Innovation and Technology,” and “Population Dynamics and Human Development.” There are 28 priorities under 6 focus areas.

Sustainable and Smart Mobility Strategy

Mobility provides numerous benefits to its participants, but it is very costly for our society. Furthermore, greenhouse gas emissions, air pollution, sound and noise pollution, water pollution, accidents, traffic congestion, and biodiversity loss all have an impact on our health and welfare. Past studies and policy measures have not adequately



addressed these costs. Greenhouse gas emissions from the transport sector have risen over time, now accounting for nearly a quarter of total EU emissions.



This strategy lays out a road map for a sustainable future, with the goal of fundamentally changing our current approach to ensure that our transport system is resilient to potential crises. Accordingly, 10 strategic areas are defined in the action plan. They are listed below:

- » Increasing the supply of zero-emission vehicles, renewable low-carbon fuels, and infrastructure,
- » Building zero-emission airports and ports,
- » Making intercity and urban mobility more sustainable,
- » Greener freight transportation,
- » Carbon pricing and better incentives,
- » Introducing connected and autonomous multimodal mobility,
- » Increasing the use of innovation, data, and AI for smarter mobility,
- » Strengthening the single market,
- » Making mobility fair and accessible for all,
- » Improving transportation safety and security.

Energy Efficiency Strategy Paper (2012-2023)

The Energy Efficiency Strategy Paper, published on February 25, 2012, and covering the years 2012-2023, aims to reduce energy intensity by at least 20% by 2023 compared to 2011 figures while also preventing

energy losses. Türkiye's Energy Efficiency Strategy Paper aims to reduce energy intensity and losses in the industrial and service sectors, lower building energy demand, and promote sustainable buildings. Additionally, it aims to increase market penetration of energy-efficient products, improve efficiency in electricity generation, transmission, and distribution processes, reduce fossil fuel consumption in motor vehicles, and increase the share of public transportation in transportation modes. The Strategy Paper emphasises the effective and efficient use of energy in the public sector, as well as the strengthening of institutional structures, capacities, and cooperation, the increased use of advanced technology, and awareness-raising activities.

Ministry of Energy and Natural Resources Strategic Plan (2019-2023)

The Ministry of Energy and Natural Resources aims to increase efficiency in all processes from energy production to consumption in line with its mission of “providing the highest contribution to national welfare by utilising energy and natural resources in the most efficient and environmentally conscious manner” and vision of “a reliable future in energy and natural resources.” The Ministry's Strategic Plan is a document that highlights the growing importance of energy efficiency at both the national and international levels. In the Plan, prioritising and increasing energy efficiency has been identified as one of the strategic objectives, and in this context, four strategic goals have been established to continue the efforts to increase energy efficiency, develop market infrastructure, carry out activities to raise public awareness of energy efficiency, and plan the energy system for electric vehicles.

National Energy Efficiency Action Plan (2017-2023) (I. NEEAP)

Within the scope of the First NEEAP, published as the High Planning Council Decision numbered 2017/50 in the Official Gazette dated January 2, 2018 and numbered 30289, covering the years 2017-2023, it is aimed to reduce primary energy consumption by 14% in 2023 with 55 actions under the headings of buildings and services, energy, transportation, industry and technology, agriculture, and horizontal topics. NEEAP's ability to be routinely monitored via an online platform, the NEEAP Data Collection Software, and to disseminate findings based on actions, is one of its key characteristics. The coordination of all public institutions and other relevant stakeholders is ensured by the NEEAP Monitoring and Direction Board in order to ensure the successful

implementation of energy efficiency-related activities throughout the country, and the follow-up and effective implementation of the actions specified in the Plan. The realisation rate of the actions according to the annual work programme, the completion rate and the ongoing endeavours related to the action are evaluated in the annual NEEAP Progress Reports and shared with the public.

Energy Efficiency 2030 Strategy and Second National Energy Efficiency Action Plan (2024-2030)

The goals of the Energy Efficiency 2030 Strategy and the Second National Energy Efficiency Action Plan (2024–2030), which was created to cover the years 2024–2030 after the first NEEAP was completed in 2023, are to achieve a total primary energy savings of 37.1 MTEP during the 2024–2030 period and to reduce the amount and intensity of energy consumed per gross domestic product of Türkiye by 15% compared to the 2023 value.

To accomplish the aforementioned goals, strategic objectives are established that span several sectors and can be accomplished through joint endeavours involving all pertinent components. Every strategic goal included in this paper embodies the essential policies required for Türkiye to transition into a nation that uses energy as efficiently as possible while adhering to sustainable development principles. There are 10 targets in this framework, and the plan specifies 23 actions that fall under each of these targets.



12th Development Plan

In the 12th Development Plan approved on October 31, 2023, which covers the years 2024-2028, in accordance with the Sustainable Development Goals (SDGs), with the aim of ensuring the transition to a low-carbon economy that is resilient to the impacts of climate change, conservation and management of the environment and natural resources with an understanding of social justice, sensitising the public towards the environment and raising awareness, along with general policies and measures, specific policies and measures were specified under the sub-topics of *Urban Infrastructure, Regional Development and Rural Development*.



Climate Change Adaptation Strategy and Action Plan (CCASAP) (2024-2030)

The preparatory work of the Climate Change Adaptation Strategy and Action Plan, which covers the years 2024-2030, was conducted as part of the “Enhancing Climate Change Adaptation Action in Türkiye Project,” carried out through the Ministry of Environment, Urbanisation and Climate Change and the United Nations Development Programme (UNDP) and financed by the European Union and the Republic of Türkiye.

In addition to the sectors included in the previous plan, Urban, Energy, Tourism and Cultural Heritage, Industry, Transport and Communication, Social Development sectors were included in the Climate Change Adaptation Strategy and Action Plan (2024-2030). Thus, for the years 2024-2030, adaptation strategy and action plan works were

carried out in a total of 12 sectors involving the subjects of agriculture and food safety, ecosystem services and biodiversity, management of water sources, tourism and cultural heritage, industry, urban, social development, public health, transportation and communication, energy, disaster risk reduction and cross-cutting issues.

The Climate Change Adaptation Strategy and Action Plan, which has the characteristics of a reference document that briefly presents the strategic framework and priorities related to climate change adaptation until 2030, emphasises the priority areas for action. The strategy is completed with an action plan that sets goals and priorities for increasing adaptation capacity, sets forth climate change adaptation measures for each sector, designates a timeline for the implementation of these measures, and refers to the necessary resources as well as responsible institutions.

The goal is to ensure that nature, superstructure and infrastructure, health and emergency services, along with key economic sectors, are both resilient to risks and able to seize opportunities at the highest level.

Medium-Term Programme

The 19th Medium-Term Programme, prepared in 2023, covers the years 2024-2026; the subject is addressed under the topics of Green Transformation and Digital Transformation. Under the heading of Green Transformation, the widespread destructive effects of climate change on environmental, social and economic areas on a global scale and the changes in production and consumption patterns with the Covid-19 pandemic, the disruption of the energy supply-demand balance by the Russia-Ukraine war, and the increasing need for sustainability-oriented policies, measures and practices have been discussed. In this sense, renewable resources, energy efficiency and circular economy policies have become priorities in all sectors, particularly in the energy, industry, transportation and agriculture sectors.

Türkiye which is among the countries that are most exposed to climate change with its geographical location and natural resources, is also significantly affected by international policies and developments on combating climate change. In this framework, by being a party to the Paris Agreement, the determination to transition to a low-carbon economy was expressed through the 2053 net zero emission target, and a Green Deal Action Plan was developed within the scope of European Union harmonisation endeavours. In line with the 2053 net zero emission target and national development priorities, the programme

aims to speed up Türkiye's green transformation by promoting the reduction of greenhouse gas emissions, building up its ability to adapt to climate change, making the country more competitive and efficient, considering a fair transition, and creating national incentive systems. Thirty-one policy and measure items were identified as part of this.



Another sub-heading in the Plan, “Digital Transformation”, deals with the increasing prominence of digital technologies in the positioning of international production and the competitiveness of countries, and the acceleration of the impact of these technologies on sectors with the Covid-19 pandemic. However, due to the increasing use of data, privacy and functionality-orientated data sharing and cybersecurity issues are gaining importance.

Accelerating digital transformation within the program's parameters includes bolstering electronic communication infrastructures, modernising and expanding network infrastructures, creating qualified R&D studies in priority sectors and areas, enhancing expertise in digital transformation technologies, bolstering the capacity and capabilities of SMEs and other businesses in using digital technology, establishing efficient financing mechanisms, fortifying cyber security with more cohesive national policies, maximising efficiency through the use of digital technologies in citizen-oriented public services, and utilising digital technologies at the highest level in the development of public services. In line with these objectives, it is aimed to increase innovation in the use of digital technologies in the public sector and to expand the use of cloud computing and open source software to

generate value from data, to establish an effective data governance mechanism covering the entire public sector, to improve the project management competencies of public institutions related to information technologies, and to make necessary improvements in the public employment approach to facilitate and encourage the employment of qualified IT personnel in the public sector. Thirty two policy and measure items were identified in this framework.

Climate Change Mitigation Strategy and Action Plan (CCMSAP) (2024-2030)

The action plan addresses 7 main sectors: Energy, Industry, Buildings, Transportation, Waste, Agriculture and LULUCF. Electricity generation is covered under the energy sector, while energy use in other areas is evaluated under the relevant sectors. In order to ensure integrity in the Action Plan, issues such as incentives, financing, technology, capacity building and training activities for the sector are included under the strategies and actions of the relevant sectors.

The Action Plan includes 49 strategies in 9 chapters and 260 actions under these strategies. The strategies set forth what needs to be done in different areas such as legislation, infrastructure, technology, finance, capacity building, education and public awareness on a sectoral scale. Various indicators and responsible institutions and organisations have also been identified for each action within the scope of these strategies. There are 47 responsible institutions and organisations under the Action Plan.



Water Efficiency Strategy Document and Action Plan in the Framework of Adaptation to a Changing Climate (2023-2033)

It is essential that existing water resources are utilised in terms of quantity and quality and in consideration of ecosystem sensitivity and environmental needs, in other words, by showing sensitivity to the right to water of all living beings rather than being solely human-orientated. In this perspective, the study's major goal is to identify the essential solutions for rational, shared, effective, efficient, and fair use of water in all purposes, notably in urban, agricultural, and industrial areas, while taking into account all sectoral, institutional, and individual stakeholders.

4 objectives and a total of 18 strategies under these objectives have been identified in the Plan to ensure water efficiency in all sectors.



5 HAZİRAN DÜNYA ÇEVRE GÜ TOPLU AÇILIŞ TÖRENİ

5 HAZİRAN 2021

Medeniyetimizi Yaratmış, Çevreye Saygılı



JUNE 5TH WORLD ENVIRONMENT
DAY MASS OPENING CEREMONY

Chapter IV

INTERNATIONAL TREATIES AND CONVENTIONS

International Treaties and Conventions

Societies, particularly in the mid-twentieth century, recognised that their relationships with the environment were problematic. The recognition that the earth's resources are finite, that the relationship of dominance between nature and humans should be redefined, and that this world, which is the trust of future generations, should be protected, has begun to be expressed through national and international initiatives. The rise in environmental problems and their nature demonstrated that tackling these issues cannot be achieved solely through individual or national efforts and that finding solutions requires global awareness and solidarity. The first global steps in this struggle were taken in declarations and international agreements prepared at environmental conferences led by the United Nations (UN), as well as national strategies of countries.

Stockholm Conference

The United Nations Conference on the Human Environment, also known as the Stockholm Conference, the first of its kind in terms of drawing international attention to global environmental issues, was held in Stockholm in June 5-16, 1972, with the participation of 113 countries, including Türkiye. The said conference focused on the negative

impacts of human activities on the environment, challenges facing the countries' economic growth, improvement of living conditions, and emphasised international cooperation and solidarity by highlighting the relevant international organisations and laws. Furthermore, at the conclusion of the conference, June 5 was designated as "World Environment Day" with the adoption of the first international environmental declaration, the "Stockholm Declaration." Following this declaration, the "United Nations Environment Programme" (UNEP) was founded in 1972 to directly handle environmental concerns within a United Nations body helping in environmental issues.

UNEP was the first international organisation founded exclusively for environmental purposes, and it is regarded as one of the Stockholm Conference's most significant achievements. The structure of UNEP was defined in 1972 as "to promote international cooperation in environmental matters, to make necessary recommendations on environmental policies, and to provide guidance and cooperation on environmental issues within the UN."

Environmental understanding, which began with the Stockholm Conference, where many countries with different socioeconomic structures and levels of development met for the first time to discuss the "environment," has gradually grown in importance in Türkiye and around the world, becoming a more comprehensive issue. The environmental movement in Türkiye, which commenced with the aforementioned conference, was characterised by the initial establishment of the right to the environment in the 1982 Constitution and the integration of the "Regulation on the Control of Hazardous Wastes" into national legislation as a consequence of the Basel Convention (1987). Thus, Türkiye started to take steps to protect the environment.

In 1983, the United Nations General Assembly established the World Commission on Environment and Development and tasked Gro Harlem Brundtland with developing a global agenda for change. The resulting report, also known as the Brundtland Report, *Our Common Future*, was written in 1987 and introduced the concept of sustainable development for the first time, which remains regarded as the most effective tool for addressing environmental issues. The report also addressed issues such as channelling environmental concerns, ensuring cooperation among countries at various economic levels, establishing common goals by addressing the human-resource relationship in the

context of environmental development, and developing long-term environmental strategies. Furthermore, the report emphasises the importance of planning for the future and taking steps to protect future generations' interests. At the same time, the report recognises the finite nature of resources and proposes a new concept of development as balanced and sustainable, marking a departure from the existing approach.

Rio Conference

Unlike the Stockholm Conference of 1972, the UN Conference on Environment and Development (Rio Conference), held in Brazil from June 3-14, 1992, aimed to evaluate the past twenty years and formulate future policies, with extensive participation from local governments, the business world, non-governmental organisations, the scientific community, the press, and central governments. Emphasising the importance of international cooperation for the efficient use of the world's resources, 179 countries, including 108 heads of state, attended the Rio Conference, where governments signed three important agreements aimed at changing the conventional understanding of development:



- » Agenda 21: An action plan covering all stages of sustainable development (a decision that emphasises the participation of local governments in sustainable development problem and solution processes).
- » Rio Declaration: A set of principles setting out the rights and obligations of states.
- » Forest Principles: A set of principles aimed at the sustainable management of forests worldwide.

In addition to these, there were also additional legally binding conventions:

- » UN Framework Convention on Climate Change,
- » UN Convention on Biological Diversity.

At the Conference, where Türkiye was represented by its Prime Minister, the concrete global Action Plan titled “Agenda 21” was adopted, as well as the “National Environmental Strategy and Action Plan” (UÇEP), a comprehensive document that serves as the foundation for Turkish environmental policies.

Local Agenda 21 practices in Türkiye gained momentum at the end of 1997 with the “Promotion and Development of Local Agenda 21s in Türkiye” project. The project, which was coordinated by the Turkish-based Eastern Mediterranean and Middle East Regional Organisation of the International Union of Local Authorities and funded by the UN Development Programme, initially included only nine cities. The project was reviewed, and the number of cities was increased to 23 following successful results at the end of the first year.

The Ministry of Internal Affairs supported this movement, which was recognised as a new way of thinking about governance. On March 19, 1998, the Ministry of Interior sent a circular to all governorates to get public officials to support the Local Agenda 21 movement, thus creating a positive environment for the work of the project partners. This support plays an important role in overcoming initial difficulties at the local level.

In the Turkish program, special care was given to prioritise the “governance” approach based on participation and partnerships within the framework of the “global partnership” approach that underpins Agenda 21. In this context, it is aimed at taking long-lasting steps towards the development and establishment of a democratic and participatory

governance approach that is supported by the “facilitating” and “enabling” roles of local governments and depends on the power of local people, encouraging cooperation and equal partnerships with related local groups. Within this framework, efforts were made to keep the programme open to local partners such as associations and foundations, civil society organisations such as professional chambers and trade unions, private sector organisations, academic institutions, media outlets, neighbourhood administrations, citizen initiatives, and in general all members of the local community. Special attention is paid to policies and practices that aim to increase women’s effective participation in urban life and ensure that gender is addressed in local planning and decision-making processes, that recognise young people as “not only future managers but also partners of the present,” and that aim to create more and equal opportunities for the elderly, children and persons with disabilities.

Türkiye’s Local Agenda 21 Programme was selected by the UN Development Programme as one of the most successful implementations in the world, and the UN formally applied to the Prime Minister of Türkiye and informed him that the programme would be presented as a “best practice” example at the World Summit on Sustainable Development in Johannesburg, August 26-September 4, 2002.

UN Millennium Declaration

In 2000, representatives of 189 nations, including 147 heads of state and government, gathered at a UN-led summit to adopt the Millennium Declaration and Millennium Development Goals for 2015. The Millennium Development Goals, which are based on the Millennium Declaration aiming to end extreme poverty and hunger in the 21st century and for developing countries to work in cooperation with developed countries for a common future, include the alignment of sustainable development principles with national policies and programmes, reversing the loss of environmental resources, reducing the loss of biodiversity, and halving the rate of lack of sustainable access to safe drinking water within the scope of ensuring environmental sustainability.

The World Summit on Sustainable Development, held in Johannesburg from August 26 to September 4, 2002, aimed to follow up on the results of the Rio Conference and to align the efforts of countries and relevant stakeholders towards achieving the Millennium Development Goals.

As a continuation of these efforts, 20 years after the 1992 Rio Conference, the UN Conference on Sustainable Development (Rio+20) was held in Rio de Janeiro on June 20-22, 2012. As a result of the Rio+20 Summit, an outcome document called “The Future We Want” was adopted as a roadmap for development. Additionally, the green economy model was addressed as an important agenda item at this conference. The green economy model is presented as the economic model that will enable the realisation of sustainable development.

Agenda 2030: UN Sustainable Development Goals was adopted in New York on September 27, 2015. The UN Sustainable Development Goals, which are a continuation of the Millennium Development Goals, consist of 17 goals and 169 sub-goals. Ending extreme poverty, combating inequality and injustice, and addressing climate change have been recognised as the three main frameworks of these 21 goals. With the 2030 Sustainable Development Goals, a new global development framework was drawn and environmental issues such as sustainable cities, climate change, combating drought and protecting biodiversity were included in the sustainable development agenda.

Vienna Convention and Montreal Protocol

The first international initiative in the context of global warming is the “Vienna Convention for the Protection of the Ozone Layer.” The Convention on the reduction of ozone-depleting substances was drafted and adopted in 1985. Following the Convention, the “Montreal Protocol on Substances that Deplete the Ozone Layer” was adopted in 1987 to control the use and production of ozone-depleting substances. The mitigation commitments envisaged in the Protocol have been taken further over time (1990, 1992, 1997, 1999 and 2016). These updates include the control of new substances and the inclusion of additional measures. With 196 countries party to the Montreal Protocol, it is recognised as the most successful multilateral agreement on the environment. In 1990, the Multilateral Fund for the Implementation of the Montreal Protocol (MLF) was also established in London with contributions from developed countries. The 28th International Convention on the Environment was held in Kigali from October 10 to 15, 2016. At the Meeting of the Parties (MOP 28) and MOP 29 held between 20-24 November 2017, new decisions were taken and some amendments were made to the convention. Following ratification by 65 parties to the Montreal Protocol, the amendment entered into force on January 1, 2019. Türkiye, which became a party to the Montreal Protocol on December 19, 1991, and accepted all amendments to the text, is among the successful countries in the implementation of the Protocol.

This model for the ozone layer has set a precedent for the climate change regime. In this context, the Montreal Protocol constitutes a turning point in the establishment of the UN Framework Convention on Climate Change (UNFCCC). In 1988 and 1989, the United Nations General Assembly, noting that climate change is an issue of concern to all humanity, called on governments, international organisations and non-governmental organisations to cooperate to prepare a framework convention on climate change. The draft Framework Convention on Climate Change, produced following the studies, was presented at the Rio Earth Summit in June 1992. The United Nations Framework Convention on Climate Change (UNFCCC) was enacted in 1992 as the foundation for a global response to the threat of climate change. The Convention came into force on March 21, 1994. With 196 parties, the Convention has nearly attained universal participation. The Convention's ultimate goal is to limit greenhouse gas accumulations in the atmosphere to a level that prevents hazardous anthropogenic effects on the climate system. As a framework convention, the UNFCCC establishes general norms, principles, and obligations. The Convention recognises that the climate system is a shared asset whose integrity can be jeopardised by carbon dioxide and other greenhouse gas emissions, particularly those from industry and other sectors.

The 34th Meeting of the Parties to the Montreal Protocol (MOP 34) was held in Montreal, Canada, between October 31 and November 4, 2022. The meeting passed 24 resolutions, including ones on illicit imports of refrigerators, air conditioners, and heat pumps, as well as data collection to estimate the potential impact of the COVID-19 pandemic on hydrofluorocarbon consumption in developing nations.

Kyoto Protocol

The Kyoto Protocol was adopted at the 3rd Conference of the Parties to the UNFCCC held in Kyoto in December 1997. The Protocol shares the goals and institutions of the UNFCCC. However, the most significant difference between the two accords is the legal nature of the obligations they regulate. While the Convention defined a non-binding obligation for industrialised countries to stabilise their greenhouse gas emissions, the Protocol imposed binding greenhouse gas emission limitation and reduction obligations on industrialised country parties. The specific implementation procedures required to prepare the Protocol for ratification and implementation by governments were adopted during the 7th Conference of the Parties in Marrakesh in 2001.

These rules, called the 'Marrakesh Accords,' were approved at the 1st Meeting of the Parties to the Protocol in 2005. As of May 2010, 191 countries and the European Union were parties to the Kyoto Protocol, which entered into force on February 16, 2005. The Protocol, which followed the Convention's separation of obligations between the parties in accordance with the "concept of common but differentiated responsibilities," put enforceable emission reduction commitments on developed countries and burdened them more.

The Bali Road Map, formed as a result of the 13th Conference of the Parties held in Bali in 2007, was a significant milestone in determining climate policies in the post-Kyoto phase. Subsequently, the parties, who were unable to agree on the second commitment period at the 15th Conference of the Parties in Copenhagen in 2009, reached an agreement at the 18th Conference of the Parties in Doha in 2012 and resolved to extend the Protocol through 2020. Thus, the second commitment period was set as 2013-2020.

With the "Doha Amendment," which constitutes the second commitment period of the Protocol, it was agreed that the parties listed in Annex B would reduce their emissions by at least 18% in 2020 compared to 1990, unlike the first commitment period. As of December 10, 2019, the Doha Amendment to the Kyoto Protocol, which requires 144 signatory countries to enter into force, had been adopted by 135 countries so had not yet entered into force. The United States, Japan, Russia and New Zealand did not take part in the second commitment period. In this setting, the fight against climate change has been limited to the EU's and few small developed countries' efforts to reduce emissions.

Türkiye's becoming a party to the Kyoto Protocol

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Türkiye became a party to the Kyoto Protocol on August 26, 2009 following the adoption of Law No. 5386 on the Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change by the Grand National Assembly of Türkiye on February 5, 2009. Türkiye was not a party to the UNFCCC at the time the Protocol was established, hence, it was not included in the Protocol’s Annex B list, which establishes Annex I states’ quantifiable emission limitation or reduction obligations. As a result, Türkiye does not have any quantifiable emission limitation or reduction obligations under the Protocol’s first commitment period, which runs from 2008 to 2012.

Paris Agreement

The Paris Agreement, which sets the framework for the post-2020 climate change regime, was adopted at the 21st Conference of the Parties to the UNFCCC held in Paris in 2015. The Agreement entered into force on November 4, 2016, having met the condition that at least 55 parties, accounting for 55% of global greenhouse gas emissions, ratify the agreement by October 5, 2016.

The Paris Agreement stands apart from the UNFCCC in that it envisions a system based on all countries’ contributions. The Agreement is founded on the developed/developing nation classification and the concept that all countries have responsibility for tackling climate change under the principle of “common but differentiated obligations and respective capabilities.” No criteria have been set for the classification of developed/developing countries, and no differentiation has been made.

The Paris Agreement aims to strengthen global socioeconomic resilience against the climate change threat in the period following 2020. The long-term goal of the Paris Agreement is to keep the global temperature rise under 2°C as far as possible compared to the pre-industrial period. This goal requires a gradual reduction in the use of fossil fuels (oil, coal) and a shift towards renewable energy. In the context of combating climate change, the Agreement established a framework to determine the implementation procedures for national contributions, mitigation, adaptation, loss/damage, financing, technology development and transfer, capacity building, transparency, and status evaluation.

The Agreement envisions that developed countries will primarily provide developing countries in need, particularly least developed countries and small island states, with financing, technology transfer and capacity building opportunities with the aim of increasing the adaptation and resilience capacities of countries exposed to the adverse effects of climate change along with increasing their greenhouse gas reduction capacities.

The UNFCCC COP22 held in Marrakesh between November 7-18, 2016, being the first conference of the parties after the entry into force of the Paris Agreement, was named the “Conference of Action.” As an outcome of the meeting, the implementation parameters of the Paris Agreement were expected to be finalised in 2018 at the latest. For the 2017-2020 period, the “Marrakesh Partnership for Global Climate Action” was launched and the “Marrakesh Action Proclamation for our Climate and Sustainable Development” was endorsed.

UNFCCC COP23 was held in Bonn on behalf of the Office of the President of Fiji between November 6-17, 2017, and COP24 was held in Katowice between December 2-15, 2018. At COP24, the “Rule Book,” which includes the guidelines on how to implement the Paris Agreement, was adopted. COP25 was held in Madrid under the chairmanship of Chile between December 2-15, 2019.

With the European Green Deal announced towards the end of 2019, the European Union (EU) announced that it will adopt a new growth strategy that requires the transformation of its industry and reshape all its policies around climate change, while setting the goal of becoming the first climate-neutral continent in 2050.

The European Union (EU), which is known for showing diligence to environmental and social sustainability topics such as combating climate change, reduction of greenhouse gas emissions, and use of renewable energy since the 1990s, furthered this diligence a step forward in November 2019 by presenting the European Green Deal, which is a package of initiatives that is a commitment that the Union will take rigid and assertive steps on the subjects of environment and sustainability.

Türkiye's Paris Agreement Process

The Paris Agreement is deemed a more realistic agreement that envisages a system based on the contributions of all countries within the framework of the efforts to keep the global warming level at 1.5°C or

below 2°C, which failed to be realised with prior conventions and protocols. The Paris Agreement aims to foster the implementation of UNFCCC in the context of sustainable development and poverty eradication.

It should be emphasised that Türkiye has been a follower of these crucial goals from the very beginning, has contributed to the process along with being the party that has taken a positive approach at all times and continued negotiations, especially within the scope of the Paris Climate Agreement on the subject of climate change. Türkiye signed the Paris Agreement on April 22, 2016, at the High-Level Signing Ceremony in New York, together with 175 country representatives. However, due to Türkiye's objections to the unfairness of the obligations part, the ratification process of the agreement in the Grand National Assembly of Türkiye could not be initiated. The Law on the Approval of the Paris Agreement was adopted by the General Assembly of the Grand National Assembly of Türkiye and entered into force after being published in the Official Gazette dated October 7, 2021 and numbered 31621.

In these years that the Paris Agreement remained unapproved, Türkiye took important steps to lay the foundations of transforming into an environment-friendly country. As a result of these steps, total greenhouse gas emissions amounted to the equivalent of 506.1 Mt CO₂ in 2019.

At the Ministerial Session held on November 15-16, 2022 within the scope of COP 27, Murat Kurum, Minister of Environment, Urbanisation and Climate Change of the Republic of Türkiye, announced that the previous mitigation target (Nationally Determined Contribution/NDC) of up to 21% by 2030, declared by Türkiye, is updated and increased to 41%; thus, approximately 500 million tonnes of emission reductions will be achieved by 2030 and peak emissions will be reached in 2038 at the latest.

Türkiye's Process of the UN Framework Convention on Climate Change

The COP is the United Nations' annual conference on climate change. The COP, which stands for Conference of the Parties, is a meeting held by United Nations member states to assess progress in combating climate change and plan for climate action within the guidelines of the UNFCCC. The official name of the meetings is the Conference of the Parties of the UN Framework Convention on Climate Change, or the United Nations Climate Change Conference.

The UN Conference on Environment and Development (Rio Conference), held in Rio de Janeiro between June 3-14, 1992, was an important step towards the adoption of a set of principles for nations to adopt forms of governance sensitive to the environment. The UN Framework Convention on Climate Change was opened for signature at this conference. The United Nations Framework Convention on Climate Change (UNFCCC), which is recognised as the first and most important step taken on the international stage regarding climate change, is an agreement that entered into force in 1994 and to which 197 countries are parties at present. It would be fair to say that this structure underpins both the Kyoto Protocol and the Paris Agreement.

The UNFCCC encourages signatory countries to reduce greenhouse gas emissions, cooperate on research and technology, and preserve greenhouse gas sinks (e.g. forests, oceans, lakes). The Convention is based on the principle of “common but differentiated responsibilities and respective capabilities” by taking into account countries’ respective development priorities and special circumstances, in order to reduce greenhouse gas emissions.

The Convention rests on the fact that some countries need to take more responsibility in reducing greenhouse gas emissions since they have been emitting more greenhouse gases that cause climate change than others since the Industrial Revolution. The principle of “common but differentiated responsibilities and respective capabilities” envisages countries contributing to this global effort in accordance with their socio-economic circumstances. In this regard, the Convention divides countries into three categories based on their respective obligations. In basic terms, Annex-I countries are those that are obligated to take measures and have obligations, whereas Annex-II countries are those that are obliged to provide support to other countries in addition to the obligations they assume in the first category. Non-Annex Countries are those that are encouraged but not bound by a specific obligation.

Türkiye occupies a unique position in the UNFCCC negotiations. Türkiye, as an OECD member, was included in the Annex-I and Annex-II lists of the Convention, along with developed countries, when the UNFCCC was adopted in 1992. With the Decision 26/CP.7 adopted at the Seventh session of the Conference of the Parties (COP7) in Marrakesh in 2001, Türkiye’s distinct status among other Annex-I Parties was recognised, and its name was removed from the Annex-II list of the

UNFCCC but remained on the Annex-I list. Considering its historical responsibility, level of economic development, technological accumulation, human development index, vulnerable country status, and similar indicators, Marrakesh Decision No. 26/CP.7, which places

Türkiye in a different position from other Annex-I countries due to its special circumstances, is of great importance. The decision to remove Türkiye from the UNFCCC's Annex-II list was adopted during the 7th session of the Conference of the Parties (COP7) in Marrakesh (2001). Furthermore, the decision calls for Türkiye to remain on the Annex-I list and other parties to recognise Türkiye's special circumstances, emphasising that Türkiye is in a situation different from other Annex-I parties. Türkiye became the 189th party to the UNFCCC on May 24, 2004. Türkiye is the only country in Annex-I that is not a transition economy and whose "special circumstances" have been recognised by the decisions of the Conference of the Parties.



Historical Process of the Conference of the Parties

Conference Name	Conference Date and Location	Relevance / Brief Description
COP 1	March 28-April 7, 1995 Berlin, Germany	At the Conference, signatory countries agreed to meet regularly every year to closely monitor global warming and the need to reduce emissions of harmful gases.
COP 2	July 8-19, 1996 Geneva	On July 18, 1996, the Ministerial Declaration was drafted but not adopted by the ministers attending the Conference.
COP 3	December 1997 Kyoto, Japan	The Kyoto Protocol was adopted.
COP 4	November 1998 Buenos Aires, Argentina	A 2-year "Action Plan" was adopted to address global warming.
COP 5	October 5-November 5, 1999 Bonn, Germany	The conference was a technical meeting and did not yield any concrete outputs or results.
COP 6 / COP6bis	November 13-25, 2000 The Hague, Netherlands July 17-27, 2001 Bonn, Germany	COP 6 kicked off in The Hague and was interrupted as political discussions on key issues such as carbon reductions, financial aid, and commitments escalated into negotiations. COP 6bis, a continuation of the interrupted COP 6, was held in Bonn the following year. Before COP 6bis, President W. Bush of the US rejected the Kyoto Protocol, and following the observer status of the US, an agreement was reached on many issues such as carbon reductions, financing and harmonisation.
COP 7	October 29-November 10, 2001 Marrakesh, Morocco	At COP 7, participants laid the groundwork for countries to ratify the Kyoto Protocol by completing their work on the Action Plan prepared in Buenos Aires and finalising most of the operational details. This package of decisions is known as the Marrakesh Accords. The US delegation refused to actively participate in these negotiations and maintained its observer role.
COP 8	October 23-November 1, 2002 New Delhi, India	The Delhi Ministerial Declaration was adopted. The New Delhi work programme was adopted with regard to Article 6 of the Convention. Russia's reservations regarding the Kyoto Protocol and its demand for an extended period of time affected this conference.
COP 9	December 1-12, 2003 Milan, Italy.	At this conference, it was determined that the Adaptation Fund, established in 2001, should be used primarily to assist developing countries in more effectively adapting to climate change and that the fund should also be used for capacity building through technology transfer.
COP 10	December 6-17, 2004 Buenos Aires, Argentina	At COP 10, the progress and future challenges of the first Conference of the Parties were discussed. The Buenos Aires Plan of Action was adopted to enable developing countries to better adapt to climate change.
COP 11	November 28-December 9, 2005 Montreal, Canada	It was the most attended intergovernmental climate conference since the Kyoto Protocol was adopted in 1997. The Montreal Action Plan was adopted and recognised as a roadmap for the coming years.

COP 12	November 6-17, 2006 Nairobi, Kenya	The Nairobi Conference was centred on moving forward with adaptation, increasing the equity and accessibility of the Clean Development Mechanism (CDM), reviewing the mandate of the Expert Group on Technology Transfer (EGTT), and maintaining the momentum gained in discussions on the post-2012 climate regime.
COP 13	December 3-17, 2007 Bali, Indonesia	At this conference, the Bali Roadmap was developed. This study sets out a timetable for negotiations to establish a new international agreement covering all countries and intended to replace the Kyoto Protocol.
COP 14	December 1 - 12, 2008 Poznan, Poland	Delegates attending the conference agreed on the funding and principles of a fund to help poor countries overcome the impacts of climate change. It is also noted that negotiations on the post-Kyoto Protocol are underway.
COP 15	December 7-18, 2009 Copenhagen, Denmark	At this conference, the goal of keeping global warming below 2°C was approved, and a commitment was made from developed countries to finance developing countries in the long term.
COP 16	November 28 - December 10, 2010 Cancún, Mexico	At this conference, the Cancún Agreements (Decision: 1/CP.16) were adopted (UNFCCC, 2010). At the international level, the agreement aims to limit the global temperature rise to 2°C and, in particular, to measurably reduce greenhouse gas emissions through national plans prepared under common but differentiated responsibilities and capacities. In addition, the "Green Climate Fund" was established to support climate action in developing countries.
COP 17	November 28 - December 9, 2011 Durban, South Africa	At this conference, the USA and Brazil, as well as developing countries such as China, India, and South Africa, agreed to start reducing emissions across the board. In addition, it was also at this conference that it was decided to negotiate a global agreement to enter into force in 2020.
COP 18	November 26 - December 7, 2012 Doha, Qatar	The "Doha Climate Gateway" was concluded at this conference. The amendments to the Kyoto Protocol for the 2nd commitment period and the entry into force of the new commitment period covering the years 2013-2020, the transfer of allocated units to the new commitment period and the determination of the terms of use, and the conclusion of the Long-Term Cooperation Negotiation Line (AWG-LCA), which opened in Bali in 2007, were all carried out at this meeting. It was also at this conference that expressions related to loss and damage were formalised for the first time in conference documents.
COP 19	November 11-23, 2013 Warsaw, Poland	It can be said that the negotiations organised within the framework of this conference focused on the implementation of the agreements reached at previous meetings. The parties also agreed to establish the Warsaw International Mechanism (WIM) on loss and damage.
COP 20	December 1-12, 2014 Lima, Peru	For the first time, all countries agreed to develop and share their commitments to reduce greenhouse gas emissions at this conference.

COP 21	November 30 – December 12, 2015 Paris, France	The Paris Agreement, which sets the framework for the post-2020 climate change regime, was adopted. The agreement entered into force on November 4, 2016, having met the condition that at least 55 parties, accounting for 55% of global greenhouse gas emissions, ratify the agreement by October 5, 2016.
COP 22	November 7-18, 2016 Marrakesh, Morocco	The Conference successfully demonstrated to the world that the implementation of the Paris Agreement is underway and that the constructive spirit of multilateral cooperation on climate change continues. The importance of inter-country dialogue and cooperation in the fight against climate change has been demonstrated. It is also called the “Conference of Action” as it is the first conference held after the entry into force of the Paris Agreement.
COP 23	November 6-17, 2017 Bonn, Germany	This conference discussed in detail how the Paris Agreement would work in practice. In addition, communication channels were established for countries to share their experiences and good practices in order to achieve the goals set in the Paris Agreement.
COP 24	December 3-14, 2018 Katowice, Poland	The conference was guided by a report published by the IPCC just before the conference began, outlining the impacts of a 1.5°C increase in global temperature. While the conference addressed the urgency of reducing pollutant emissions, it did not include an action plan in the agreed texts.
COP 25	December 2-13, 2019 Madrid, Spain	At COP 25, the ongoing blockade was lifted by recognising that developing countries need support to overcome the losses and damages caused by the climate crisis. In this framework, the first step was to include loss and damage items under the UNFCCC financial structure. A “Gender Action Plan” and a work plan for the “Local Communities and Indigenous Peoples Platform” were approved.
COP 26	October 1 – November 13, 2021 Glasgow, Scotland	Important objectives such as reducing the use of fossil fuels, reducing carbon emissions towards net zero, and ending deforestation were agreed on.
COP 27	November 6-18, 2022 Sharm el-Sheikh, Egypt	While the agenda of COP 27 was intense, much emphasis was placed on the issue of ‘financing loss and damage’ and strengthening ‘Nationally Determined Contributions (NDCs).’
COP 28	November 30 – December 12, 2023 Dubai, The United Arab Emirates	In the framework of COP 28, the latest Global Stocktake requested countries to triple their renewable energy capacity, double energy efficiency, phase out coal power, and reduce fossil fuel subsidies by 2030. Also, among the other goals of the conference was raising the financial aid for poor countries to combat the climate crisis by 2030.
COP 29		COP 29 is planned to be held in Baku between November 11-22, 2024. COP29 is envisaged to be a platform for taking important steps in the energy transition.

Major Environmental Agreements to which Türkiye is a Party

No	Abbreviations	Name	Date	Location	Entry into Force Date	Date of Türkiye Signing
1	Vienna Convention	Vienna Convention for the Protection of the Ozone Layer	1985	Vienna	1988	1991
2	The Montreal Protocol on	Vienna Convention for the Protection of the Ozone Layer	1987	Montreal	1989	1991
3	UNFCC	UN Framework Convention on Climate Change	1992	Rio de Janeiro	1994	2004
4	KP	Kyoto Protocol to the United Nations Framework Convention on Climate Change	1997	Kyoto	2005	2009
5	CBD	Convention on Biological Diversity	1992	Rio de Janeiro	1993	1996
6	Cartagena Protocol	Cartagena Protocol on Biosafety to the Convention on Biological Diversity	2000	Cartagena	2003	2004
7	UNCCD	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa	1994	Paris	1996	1998
8	CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	1973	Washington	2007	1996
9	Ramsar	Convention on Wetlands of International Importance Especially as Waterfowl Habitat	1971	Ramsar	1975	1994
10	Barcelona Convention	Convention for the Protection of the Mediterranean Sea Against Pollution	1971	Barcelona	2004	2002
11	Dumping Protocol	Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea	Ramsar	Barcelona	Yet to go into effect.	The protocol was ratified by Türkiye in 2002.
12	Hazardous Wastes Protocol	Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal	1975	İzmir	2008	2004
13	LBS Protocol	Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities	1994	Madrid	2008	2002
14	Prevention and Emergency Protocol	Protocol Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency	1996	Malta	2004	2003
15	SPA/BD Protocol	Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean	2002	Barcelona	1999	2002
16	Bucharest Convention	Convention on the Protection of the Black Sea Against Pollution	1995	Bucharest	1994	1994
17	LBS Protocol	Protocol on the Protection of the Black Sea Marine Environment against Pollution from Land-Based Sources	1992	Bucharest	1994	1994
18	Emergency Protocol	Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and other Harmful Substances in Emergency Situations	1992	Bucharest	1994	1994
19	Dumping Protocol	Protocol on The Protection of the Black Sea Marine Environment Against Pollution by Dumping	1992	Bucharest	1994	1994
20	Biodiversity and Landscape Conservation Protocol	The Black Sea Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea against Pollution	2002	Sofia	2004	2004

21	Basel Convention	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	1989	Basel	1992	1994
22	The BAN Amendment	Amendment to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	1995	Geneva	Yet to go into effect.	The protocol was ratified by our country in 2003.
23	Stockholm Convention	The Stockholm Convention on Persistent Organic Pollutants	2001	Stockholm	2004	2009
24	CLRTAP	Convention on Long-Range Transboundary Air Pollution	1979		1983	1983
25	The EMEP Protocol	Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Long-Term Financing of Co-operative Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe (EMEP)	1984	Geneva	1988	1985
26	Bern Convention	Convention on the Conservation of European Wildlife and Natural Habitats	1979	Bern	1982	1984
27	ICCAT	International Convention for the Conservation of Atlantic Tunas	1966	Rio de Janeiro	1969	2003
28		The European Landscape Convention	2000	Florence	2004	2003
29		The Antarctic Treaty	1959	Washington	1961	1996
30	Madrid Protocol	Protocol on Environmental Protection to the Antarctic Treaty	1991	Madrid	1998	2017

Environment-Related International Agreements and Conventions to which Türkiye is a Party

- » Antarctic Treaty
- » Agreement concerning Türkiye's participation in the European Environment Agency and the European Environment Information and Observation Network
- » Barcelona Convention
- » Basel Convention
- » United Nations Convention to Combat Desertification
- » Bucharest Convention
- » United Nations Framework Convention on Climate Change (UNFCCC)
- » Kyoto Protocol
- » Minamata Convention
- » Paris Agreement
- » Rotterdam Convention
- » Stockholm Convention

Antarctic Treaty

The Antarctic Treaty, which was signed in 1959 and ratified by Türkiye in 1995, designated Antarctica as a natural reserve, devoted to peace and science. In this vein, Antarctica is the sole land and marine area devoted to the greater good of humanity. 53 countries are currently signatories to the Treaty.

Agreement concerning Türkiye's participation in the European Environment Agency and the European Environment Information and Observation Network

The EEA was officially established in 1990 and operations began in 1994, with Copenhagen serving as its official headquarters. The EEA is the inaugural European agency founded by candidate and member countries to be available for membership. The EEA is a European Union (EU) agency tasked with providing sound, independent information on the environment. It serves as a critical source of information

for the public and professionals involved in the formulation, adoption, implementation, and evaluation of environmental policies.

Türkiye became a member of the European Environment Agency (EEA) on 1 May 2003 with the “Agreement on the Participation of the Republic of Türkiye in the European Environment Agency and the European Information and Observation Network.”

Barcelona Convention

Historically, protection of the Mediterranean as one of the priority targets was included in the “Regional Seas Program” established by the UN Environment Programme (UNEP) in 1974, with the participation of the riparian countries of the Mediterranean Sea and the EU, which was followed by the creation of the Mediterranean Action Plan (MAP) in 1975. The “Convention on the Protection of the Mediterranean Sea Against Pollution” (Barcelona Convention) was adopted in Barcelona in 1976 and entered into force in 1978.

In accordance with the decisions taken at the UN Environment and Development Summit (1992), the Barcelona Convention was revised to include coastal areas as well as the marine environment, while sustainable development, increased public participation, and environmental impact assessment were also integrated. The revised Convention was renamed “The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean” which entered into force in 2004. Türkiye became a party to the Convention in 2002, in addition to 21 countries and the EU.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, which was adopted in 1989 and entered into force in 1992, is designed to remove the dangers associated with the transboundary movement, disposal, and recycling of hazardous and other wastes. The Convention places a strong emphasis on the movement of waste from industrialised nations to developing nations.

The Basel Convention mandates a prior notice before the transfer of waste between the nations that are parties to the convention. According to the Basel Conventions, for a transboundary movement to be legal, the exporting state is required to obtain written consent regarding the transportation from the importing state. In this framework, state

parties to this convention reserve the right to ban the export and import of hazardous or other types of waste.

There are 53 signatories and 183 nations party to the Convention to date. Türkiye signed the Convention on May 22, 1989, and became a party on June 22, 1994.

United Nations Convention to Combat Desertification

The UN Convention to Combat Desertification was adopted in Paris on June 17, 1994. The Convention was signed by 115 countries and entered into force on December 26, 1996. As of 2018, 197 countries and the European Union are parties to the Convention.

Türkiye became a party to the Convention on February 11, 1998. The Convention, which consists of 40 articles, envisions a joint action to identify and find solutions for the issue of desertification, especially with reference to the desertification seen in African countries, and categorises countries in 5 different Annexes.

Since joining the Convention, Türkiye has been actively involved in the work on Annex IV of the Convention, titled “Regional Implementation Annex for the Northern Mediterranean” (Türkiye, Croatia, Cyprus, Greece, Hungary, Israel, Malta, Portugal, and Slovenia).

Bucharest Convention

The (Bucharest) Convention for the Protection of the Black Sea Against Pollution was signed on April 21, 1992, by all six legislative assemblies of the Black Sea countries (Bulgaria, Georgia, Romania, Russia, Ukraine, and Türkiye) to prevent the pollution from land, marine vessels, and atmosphere-based sources in the Black Sea. The Convention is implemented by the Black Sea Commission, an executive body with high-level representatives (commissioners) of the Contracting Parties, and coordination between the countries is carried out by the Black Sea Permanent Secretariat in Istanbul.

The “Black Sea Strategic Action Plan (BSSAP) on the Rehabilitation and the Protection of the Black Sea” was ratified at the Conference of the Ministers held in Istanbul on October 30-31, 1996, following this Convention. With the ratification, countries are obliged to fulfil the activities specified under the BSSAP programme. The Black Sea Strategic Action Plan is a crucial plan for the improvement and protection of the Black Sea and was adopted by the six Black Sea littoral countries

at the Conference of the Ministers of the Environment held in Istanbul on October 30-31, 1996. The date that this crucial plan was signed by the six Black Sea countries, October 31, was recognised as the International Black Sea Day.

United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC, opened for signature at the UN Conference on Environment and Development held in Rio de Janeiro in 1992, is the first and most significant step taken in the international arena against the impacts of global warming on the climate caused by human-related activities that was set forward in 1988 by the Intergovernmental Panel on Climate Change (IPCC), jointly organised by the UN Environment Programme (UNEP) and the World Meteorological Organisation (WMO). 196 countries, including Türkiye, as well as the European Union (EU), are parties to the Convention, which entered into force on March 21, 1994. Türkiye acceded to the Convention on May 24, 2004.

The Convention rests on the fact that some countries need to take more responsibility in reducing greenhouse gas emissions since they have been emitting more greenhouse gases that cause climate change than others since the Industrial Revolution. The principle of “common but differentiated responsibilities and respective capabilities” envisages countries contributing to this global effort in accordance with their socio-economic circumstances.

As a result of the negotiations held at the COP17 in Durban in 2011, a decision was made to continue talks on Türkiye's special conditions regarding the reduction in emissions, climate change adaptation, technological development and transfer, capacity building, and determining the modalities of support to be provided to Türkiye in terms of financing.

Minamata Convention

Mercury poisoning incidents in Minamata, Japan, in the mid-twentieth century caused mercury and mercury compounds, and its related waste became a prominent issue on the global agenda. Thus, the “Minamata Convention on Mercury” was developed under the leadership of the UN Environment Programme (UNEP) to contribute to efforts to prevent mercury-related environmental pollution on a global scale.

The Convention was open for signatures in Kumamoto, Japan, from October 10 to 11, 2013, and then at the UN Headquarters in New York until October 9, 2014. The Minamata Convention was signed by Türkiye on September 24, 2014, during the “High-Level Event” hosted by Japan, Switzerland, the United States, and Uruguay as a part of the commencement of the general negotiations of the 69th United Nations General Assembly.

Rotterdam Convention (on the Prior Informed Consent Procedure in International Trade in Certain Hazardous Chemicals and Pesticides)

“Rotterdam Convention on the Prior Informed Consent Procedure in International Trade in Certain Hazardous Chemicals and Pesticides” obligates to send a notice to the importing country regarding the export of dangerous substances or groups of substances prohibited or limited for the protection of the environment and human health, within the framework of certain rules governing the export of the aforementioned substances, and to establish a system where these notices will be transferred.

The Convention was signed by Türkiye on September 11, 1998, and officially entered into force on December 20, 2017 for Türkiye.



Chapter V

ENVIRONMENTAL DIPLOMACY

Environmental Diplomacy

The necessity for states to make joint decisions on environmental and climate issues has given rise to environmental diplomacy. This field, which examines environmental problems and seeks their resolution, is a high-risk area of work with potentially critical outcomes. As civilisation has advanced over the years, production has seen an enormous increase in speed, quality, variety, and volume. Consequently, excessive consumption habits have grown year by year. The realisation that the global rise in production and consumption could endanger future generations in the long run has led states, societies, and individuals to seek ways to mitigate this problem. In this context, the concept of sustainable development, which expresses development in harmony with nature, has emerged. Sustainable development is a concept that emerged in the third quarter of the 20th century as a result of efforts to mitigate the negative impacts of rising living standards while promoting progress. This concept is closely linked to economic, ecological, and social elements. Problems such as climate change, global warming, the degradation of natural life, and the disruption of biological balance affect not just a single country but entire societies and nations worldwide. Therefore, solving these kinds of problems requires the cooperation of all countries. Environmental diplomacy, carried out as part of this collaboration, refers to the international contacts aimed at putting the theoretical framework of sustainable development into practice at the governmental level. Environmental diplomacy enables states to take and regulate measures on environmental and climate

issues and to impose sanctions on states that fail to fulfil their responsibilities. These efforts encompass all types of environmental policies, from multilateral agreements to conflict resolution on environmental matters. States that may be reluctant to cooperate on security and political issues often prefer to engage in diplomacy on subjects such as the environment, which can positively influence the public opinion of other countries. Furthermore, even two countries alone may organise conferences and workshops to address their environmental concerns and sign agreements. This makes environmental diplomacy one of the best options for countries seeking to strengthen diplomatic ties.

Initially, the term referred only to the diplomatic efforts of nation-states related to environmental concerns, but today, due to the complexity of climate and environmental issues and the involvement of different actors, it has become more comprehensive. Not only states but also non-governmental organisations participate in this field, which facilitates states' prioritisation of environmental policies. These organisations also act as diplomatic tools.

Globally, the rise in environmental awareness during the 1960s culminated in the first major international initiative, the 1972 Stockholm Conference, known as the "United Nations Conference on the Human Environment." Environmental issues, which have become one of the key topics on the global agenda, are now addressed through environmental diplomacy in a much broader scope than mere protection, pollution prevention, and rehabilitation efforts, which characterised the early stages. The current objectives include promoting environmentally friendly policies, enforcing environmental standards, ensuring the sustainable management of natural resources, and achieving environmental justice.

Environmental Diplomacy in Türkiye

Türkiye is a signatory to international agreements aimed at solving global issues like the climate crisis and calls for a collective struggle by all nations to address these challenges. While closely monitoring international treaties and processes, Türkiye is working to implement its own vision in areas such as the green economy, sustainable development, and renewable energy. The country has adopted a sustainable, inclusive, balanced, and eco-friendly development approach, which it believes will reduce regional and social inequalities in national income.

One aspect of environmental diplomacy is raising national awareness of environmental issues. Increasing the intellectual capacity of the country on these matters can provide a sound vision for the diplomatic process on the international stage. In this context, initiatives aimed at protecting the environment, promoting sustainable economic development, reducing the harmful impacts of production and consumption chains, and enriching society's perspective on social issues are seen as catalysts for successful environmental diplomacy. Although the number is limited, Türkiye has notable examples of successful projects serving the goal of sustainability. For nearly 30 years, various government-supported programs and private initiatives have been organizing activities with both regional and national targets. Additionally, there are initiatives focused on society's culture and the environment.

Environmental diplomacy, while seeking solutions to global and regional problems, may at times conflict with domestic priorities and face obstacles due to pressure from interest groups. However, Türkiye has successfully balanced its internal priorities with the demands of various interest groups. Sustainable development is a crucial part of Türkiye's long-term vision, and the country is taking strong steps toward achieving these goals. Collaborations with the industrial sector and the business world have contributed to reducing carbon emissions, supporting the government's determination in this area. Additionally, Türkiye aims to take on a leadership role in the global arena by developing new solutions and cooperation models for more effective international environmental diplomacy.

Despite the challenges of environmental diplomacy, Türkiye sees great potential for public diplomacy in this field. Efforts to prioritise the environment over other issues present an opportunity to create a positive international image. Türkiye is taking significant steps toward becoming a leading country in environmental diplomacy by expanding its global diplomatic network and finding solutions to major environmental problems. The key point here is not to be a perfect example in environmental and climate matters but rather to be a country that makes the greatest efforts and contributes to reducing environmental concerns.

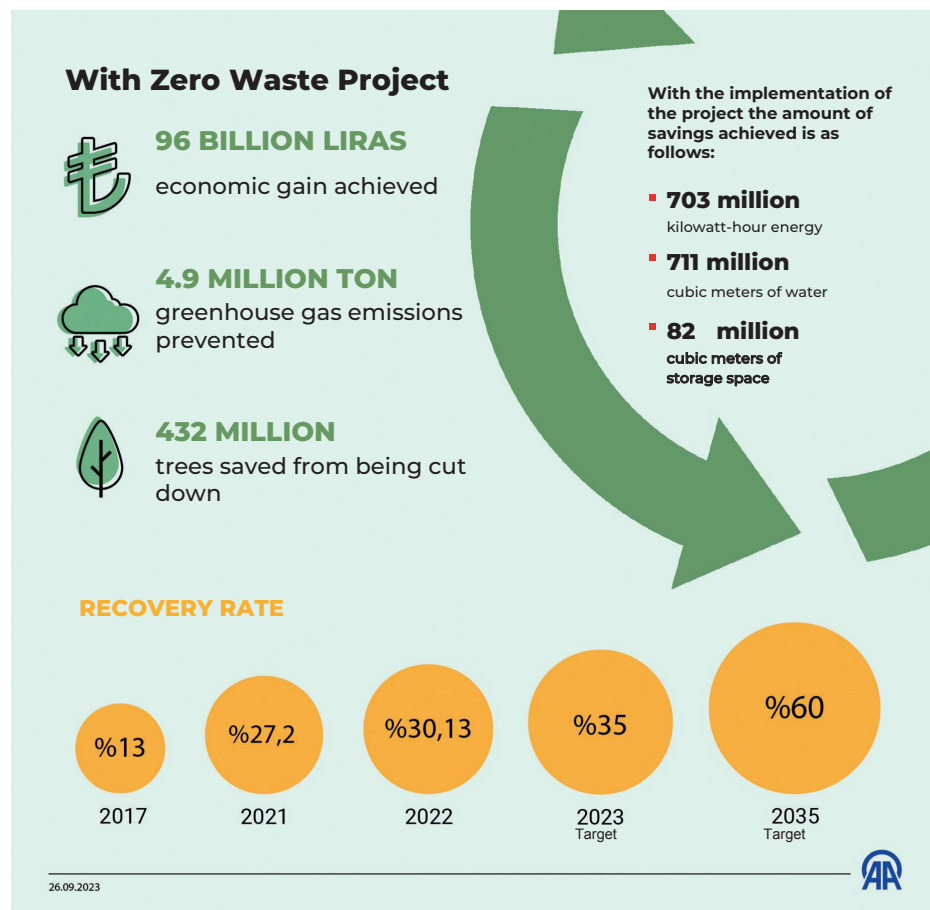
Environmental issues inherently require scientific expertise. In this regard, on May 29, 2021, the Turkish Marine Research Foundation (TÜDAV), in cooperation with the United Nations Development Programme (UNDP), the Global Environment Facility (GEF), and the

Small Grants Programme (SGP) of Türkiye, held an online workshop on Environmental Diplomacy and Türkiye. The workshop, which attracted great interest and featured prominent experts from various environmental themes, discussed topics ranging from climate change to marine biodiversity. It also addressed Türkiye's participation in international cooperation mechanisms on these issues and increasing public awareness of environmental concerns.

Established in 1973, the United Nations Environment Programme (UNEP) is regarded as a cornerstone of environmental diplomacy and serves as an organising body for efforts related to the environment. Following UNEP's founding, global contact on these issues intensified. Türkiye's ambassador in Nairobi also serves as the Permanent Representative to UNEP, representing Türkiye on UNEP's Committee of Permanent Representatives. The Ministry of Environment, Urbanization, and Climate Change coordinates the issues outlined in UNEP's mission at the national level. Türkiye provides regular financial support to UNEP's Environment Fund, which operates on a voluntary basis. Türkiye contributed USD 125.000 in 2007, USD 250.000 in 2008 and 2009 and USD 300.000 in 2010 to the UNEP Environment Fund. Türkiye participates in UNEP's activities by following the multilateral environmental conventions to which UNEP provides Secretariat services, such as the Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution, the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Convention on Biological Diversity, and the Cartagena Protocol on Biosafety. In line with its commitments under these agreements, Türkiye prepares sectoral action plans and strategies. Periodically, delegations chaired by the Ministry of Environment, Urbanization, and Climate Change participate in UNEP's governing council sessions, where key decisions that shape international environmental policy and law are made. Türkiye's representation in these meetings is crucial to influencing these processes.

Türkiye has not spearheaded any particular initiative or event at UNEP. However, it has occasionally participated in UNEP's activities and become one of the top three countries in tree planting as part of UNEP's "The Billion Tree Campaign."

While following up on international agreements and procedures, Türkiye is striving to create and implement its vision in areas such as the green economy, sustainable development, and renewable energy. The country adopts a sustainable, inclusive, balanced, and eco-friendly development approach, believing that this will reduce regional and social inequalities in national income. One of the most significant projects in this regard is the Zero Waste Project, which was launched on July 12, 2017, and has raised significant awareness among all stakeholders in waste management. The Zero Waste initiatives, led by First Lady Emine Erdoğan, have paved the way for substantial steps in Türkiye's green transition. This project has made significant progress in conserving natural resources and advancing the transition to a circular economy. Public institutions have taken a leading role in this transformation, making structural changes and providing training on zero waste. Public awareness campaigns have also been conducted through public service announcements and other communication channels to help society adapt to this transformation. Türkiye's Radio and Television Corporation (TRT) supports the Zero Waste Project by broadcasting news and programs aimed at reaching a wider audience.





3. ZERO WASTE SUMMIT, ISTANBUL

The Ministry of Agriculture and Forestry launched the first Water Council in 2021 as part of Türkiye's environmental diplomacy efforts. The Council aimed to develop short-, medium-, and long-term strategies for water management. The Council, comprising 11 working groups, sought to determine water management policies through collaboration with all stakeholders. Approximately 130 academics from 56 universities, along with representatives from relevant government institutions, non-governmental organisations, municipalities, and water users, participated. The final declaration of the Council, which involved contributions from 1,631 participants over seven months, is regarded as an important document addressing issues such as civilisation, agriculture, food, and clean energy.

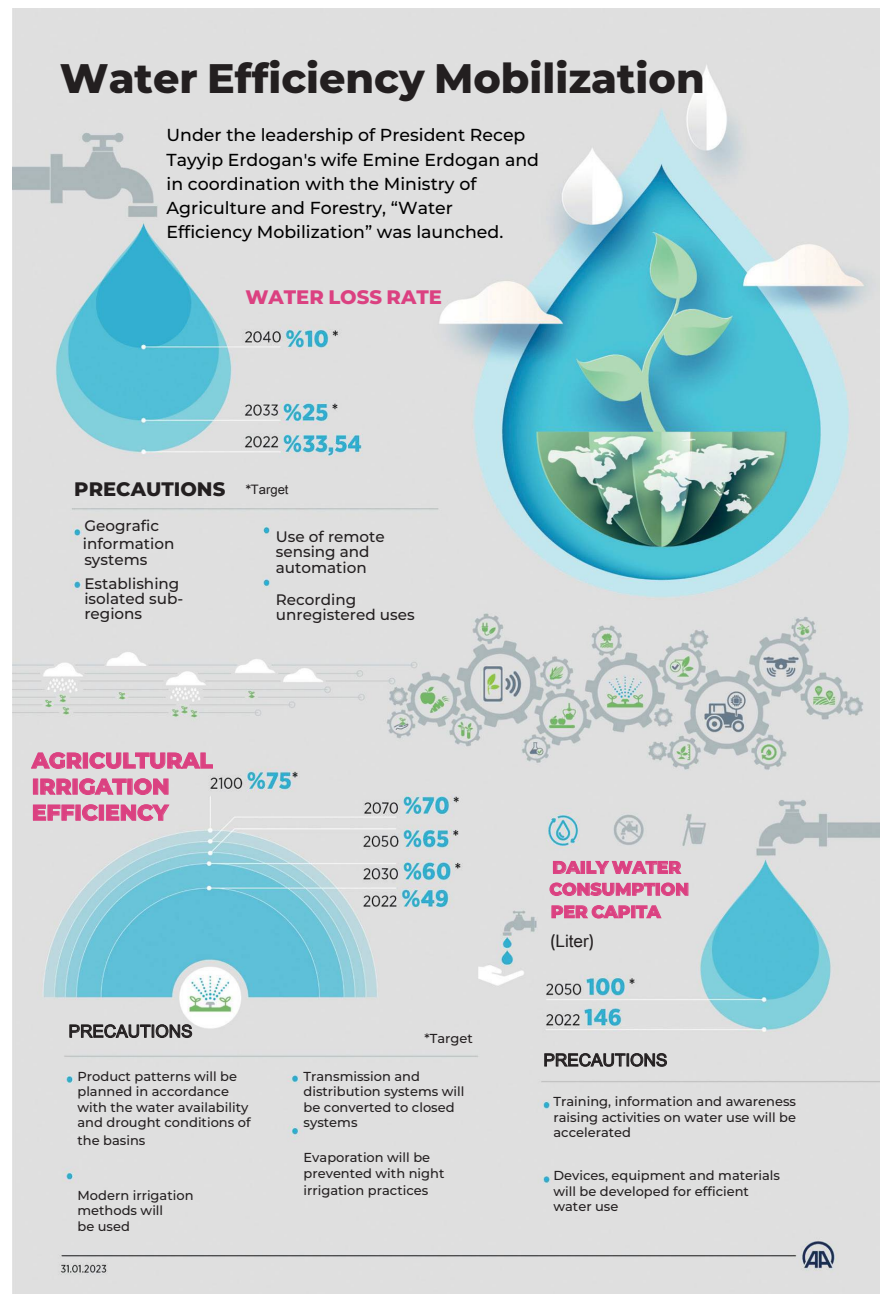
In 2022, a book titled "The World, Our Common Home", spearheaded by First Lady Emine Erdoğan, was published to raise awareness of environmental issues. It provided a platform where the First Lady Emine Erdoğan shared her personal environmental story for the first time.



The “Environmental Editorial Unit,” established by Anadolu Agency, produces special reports on environmental and climate change issues to raise public awareness. The unit, named “Greenline,” continues its activities to contribute to the struggle for a more liveable world through interviews with experts on the subject.



Another initiative launched in Türkiye to encourage the efficient and sustainable use of water resources is the “Water Efficiency Campaign.” This initiative, which was launched on January 31, 2023, under the auspices of First Lady Emine Erdoğan and in coordination with the Ministry of Agriculture and Forestry’s Directorate General of Water Management, aims to promote water efficiency, increase knowledge and technology, implement action plans, and establish the necessary legal infrastructure.



In 2022, a presidential decree established “Türkiye Environment Week”, to be celebrated annually around June 5th, World Environment Day. Various events are held across the country during this week. Highlights include environmental clean-up campaigns, cycling tours, stands displaying zero-waste and clean production technologies, traditional dance performances, presentations on climate change, and award ceremonies. Additionally, activities such as environmental education, awareness campaigns in mosques, tree-planting events,

and exhibitions targeting all segments of society are organised. These events actively involve government institutions, non-governmental organisations, academics, and volunteers.



UNDERWATER CLEAN-UP BY DIVERS AS PART OF 'PROTECT THE SEAS FOR THE FUTURE' CAMPAIGN DURING TÜRKİYE ENVIRONMENT WEEK IN SAMSUN:



ENVIRONMENTAL WALK AND UNDERWATER CLEAN-UP DURING TÜRKİYE ENVIRONMENT WEEK IN ORDU:

In line with President Recep Tayyip Erdoğan's "2053 Net Zero Emission and Green Transformation" goals, the Ministry of Environment, Urbanization, and Climate Change organised the "Environmental Festival" under the slogan "Everyone Has a World" at Ankara Nation's Garden from June 6-9, 2024. The event featured activities to raise environmental awareness among children, booths showcasing zero-waste and clean production technologies, successful environmental projects, talks by famous figures, climate tunnels, a book fair, workshops, and exhibitions.

International Awards for Türkiye's Environmental Policies

Türkiye's Zero Waste Movement has received numerous international awards and made a significant impact globally. These awards include:

- » The "Zero Waste, Zero Hunger Award" from the United Nations Food and Agriculture Organization (UNFAO) in 2018,
- » The "Sustainable Development Goals Action Award" from the United Nations Development Programme (UNDP) in 2021,
- » The "Waste Wise Cities Global Champion" award from the United Nations Human Settlements Programme (Habitat) in 2021,
- » The "Parliamentary Assembly of the Mediterranean Award" (PAW Awards) in 2022, and
- » The "Climate and Development Leadership Award" from the World Bank in 2022.

Additionally, in 2022, Türkiye signed the Global Commitment to Zero Waste with the United Nations to promote the global expansion of the Zero Waste Project, further increasing Türkiye's global influence in this area. At a ceremony in Portugal in 2024, Minister of Environment, Urbanisation, and Climate Change Mehmet Özhasseki received the Mediterranean Parliamentary Assembly Award and presented it to First Lady Emine Erdoğan at the Presidential Complex.

These international recognitions and awards highlight the global success of Türkiye's environmental policies and the international impact of the Zero Waste Movement.

Environmental Diplomacy Activities of the Presidency's Directorate of Communications

The Presidency's Directorate of Communications undertakes various activities within the framework of sustainable development aimed at achieving Türkiye's simultaneous economic, social, and environmental progress. These activities include publishing books on environmental protection, which are translated into multiple languages. Some of these publications include:

- » “Türkiye's Green Development Initiative”
- » “Türkiye's Zero Waste Journey for a Habitable World”
- » “Canal Istanbul in 50 Questions”



The Directorate of Communications also organises international events on environmental protection. For example, on September 10, 2023, a roundtable discussion titled “Zero Waste: Building and Implementing a Green Future” was held during the G20 Leaders’ Summit in India.



In addition, in November 2021, during the 26th Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change in Glasgow, Scotland, the Directorate organised a panel titled “Türkiye’s Green Development Strategy: An Inclusive, Sustainable, and Humanitarian Vision.” The panel addressed issues such as climate change, green development, sustainable development, zero waste, and environmental protection.



Another notable event focused on raising awareness of environmental and climate change issues is the International Strategic Communication Summit (Stratcom Summit), which has been held annually since 2021. This summit draws significant figures from international organisations, think tanks, universities, the media, and policymakers to engage in discussions on topics such as climate and environmental change, climate refugees, and disaster journalism.

In December 2023, the Turkish Pavilion hosted various events coordinated by the Ministry of Environment, Urbanization, and Climate Change during the 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change. During the same period, the Directorate of Communications set up a stand at Dubai Expo City to showcase Türkiye's environmental policies, waste management, renewable energy initiatives, and the Zero Waste Movement led by First Lady Emine Erdoğan. These events provided important platforms to promote Türkiye's international efforts and achievements in the environmental field.





Chapter VI

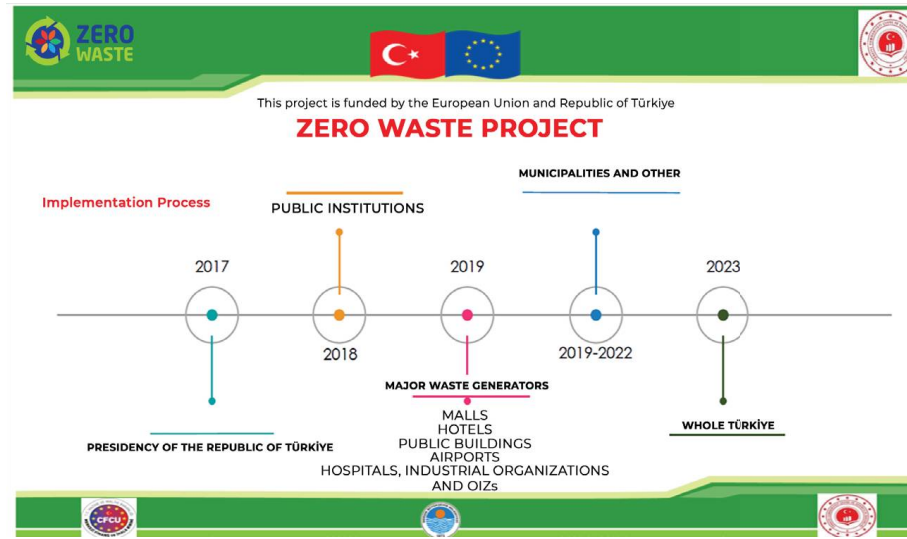
ZERO WASTE MOVEMENT

Zero Waste Movement in Türkiye

The zero waste initiative, which has received numerous awards internationally, was first implemented as a project in the Ministry of Environment, Urbanisation, and Climate Change in 2017. Later, the project was implemented at the Presidential Complex and, later, in the Grand National Assembly of Türkiye, both under the auspices of First Lady Emine Erdoğan, who provided all kinds of support to the process and turned the project into a movement.

Then, an action plan was developed, along with a timetable, to spread the success of these implementations across the country. Simultaneously, the necessary legislative arrangements have been made for the system to become operational. In this context, three major revisions to the Environmental Law have been made, while many sub-regulations have been made to provide a legal foundation for the system.

Implementation Process of the Zero Waste Project



Many elements have been put in place to promote the movement, which is valued in Türkiye almost as a vision. Incentives have been provided by allowing institutions, buildings, or local administrations to transition to the system as well, and zero waste certificates have been issued to those who have transitioned to the system according to their category.

Zero Waste Advisory Board Established

To promote local and national zero waste initiatives by sharing best practices and success stories, it was discussed and decided on April 12, 2023, to establish an advisory board within the scope of the powers and duties of the UN Environment Programme (UNEP) and the UN Human Settlements Programme (UN-Habitat), consisting of eminent persons, based on voluntary contributions as well as knowledge and experience, taking gender balance and equitable geographical representation into account, in consultation with member countries, and for a period of three years.

Zero Waste Advisory Board



The Zero Waste Advisory Board will be chaired by First Lady Emine Erdoğan, spouse of President Recep Tayyip Erdoğan. The other members of the Advisory Board are as follows:

- » UN Under-Secretary-General for Policy Guy Bernard Ryder,
- » First Lady Melissa Santokhi-Seenacherry, lawyer and spouse of the President of Suriname,
- » First Lady Fatima Maada Bio, spouse of the President of Sierra Leone, known for tackling the health problems of African children and youth,
- » José Manuel Moller, Algramo's Chief Executive Officer and Founder, has been appointed as Vice President and is working to expand reusable packaging systems globally,
- » Prof. Muhammad Yunus (Bangladesh), who received the Nobel Peace Prize in 2006 for his social and economic development studies,
- » Carlos Silva Filho (Brazil), President of the International Solid Waste Association (ISWA),
- » Laura Reyes (Colombia), Executive Director of CEMPRE (Circular Economy),

- » Lara van Druten (Netherlands), Chief Executive Officer of the Waste Transformers,
- » Professor Saleem Ali (USA), Professor of Energy and Environment at the University of Delaware,
- » Hakima el Haité (Morocco), Founder of Eau Globe,
- » Gino Van Begin (Belgium), Secretary General at the Local Governments for Sustainability,
- » Professor Vijay Jagannathan (India), Secretary General at CityNet, an association of more than 140 urban partners committed to sustainable development

Information about the System

The main purpose of the recycling process, which was initiated primarily by the Presidency, the Grand National Assembly of Türkiye, and the Ministry of Environment, Urbanisation and Climate Change, is to collect separately all kinds of waste (organic, food waste, plastic, paper, metal, glass, batteries, vegetable waste oil, mineral oil, electrical and electronic waste, etc.) generated in offices, cafeterias and other areas within the institutions to be valued in their own category, to create a temporary collection area for this purpose, and to deliver it to licenced companies authorised in the field to reintroduce them into the economy.) To this end, in-house training activities were organised.

Separation units were placed in sufficient numbers and according to waste type in common areas throughout the organization, such as dining halls and corridors. The waste buckets were removed, a waste officer was assigned to each floor to monitor progress, and a chart was created to show the type and amount of waste generated each day.

In addition, instead of disposable packaged water consumption or disposable cups, dispensers were placed, particularly in the cafeteria sections, and multi-use bottles were distributed to the staff to accelerate the adoption of new habits.

Examples of Water Bottles and Water Dispensers in Cafeterias
and Collection Equipment Used in In-House Common Points



While the dry wastes that are separated according to their types are collected in the temporary storage areas and delivered to licenced re- cycling companies operating in the relevant field, different management methods have been developed for kitchen wastes such as vegetables and fruits, green wastes such as garden wastes, and food wastes, which are categorised as wet waste.

Accordingly, park-garden waste and vegetable-fruit waste were utilised in the production of compost, a soil-improving material, and food waste was processed and delivered to animal care centres to be offered to our animal friends. Similarly, composting equipment was provided to process organic waste generated in the complexes, and some of the compost material produced was used in the green areas of the complexes, while others were given as gifts to visitors.

Temporary Waste Landfill and Compost Application



In general, the Zero Waste System provides a seven-step roadmap outlining the steps that companies, institutions, or organizations must implement to become zero waste. The stages of establishing the Zero Waste System are as follows:

- » **Determination of Focal Points:** The people who will be responsible for the establishment, effective and efficient implementation, monitoring, information flow and reporting of the zero waste man-

agement system in the organization are determined. These are the people who will lead the team to ensure zero waste management.

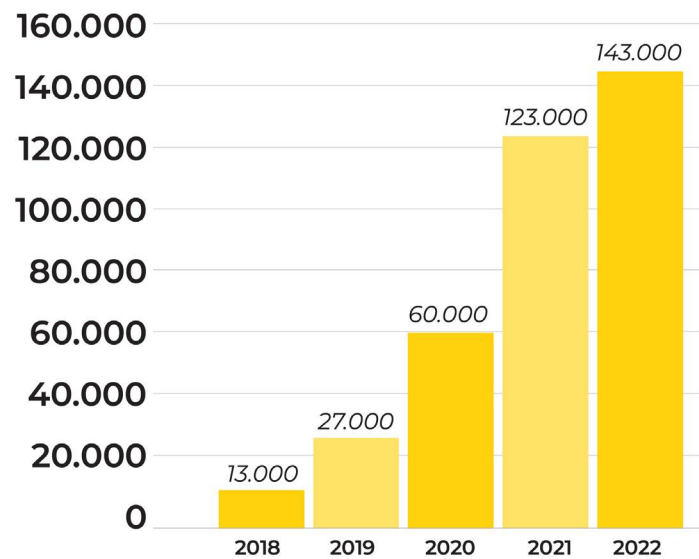
- » **Determination of Current Situation:** When applying the Zero Waste Management System in your organization, it will be easier for you to determine how you are in the waste management and analyze your current situation.
- » **Planning:** During this phase, an institution-specific deadline plan is developed based on the current situation.
- » **Identification of Needs & Supply:** When implementing the Zero Waste System in the institution, all equipment that will be needed is identified, listed, and provided before implementation, taking into account each unit in the institution (offices, refectory, infirmary, etc.).
- » **Training & Raising Awareness:** After the supply of the equipment is completed, practical training and information studies are conducted for the target audiences before the application.
- » **Application:** The supplied collection equipment is placed at convenient points within easy reach of personnel. Information banners designed for the equipments are hung on the equipments that they can be easily seen. Attention should be paid to the color scale of the collection equipments and promotional materials.
- » **Reporting:** At this stage, monitoring is carried out by the working team to evaluate the effectiveness of the implementation, and if any failing aspects, deficiencies, or elements to be improved are identified, measures are taken.

The Zero Waste Information System was established and the recycling participation fee was introduced in 2018. In the same year, amendments were made to the Environmental Law regarding the charging of plastic bags, the implementation of recycling contribution fees, the dissemination of zero waste management systems, and the deposit-refund system.

Crucial regulations have been introduced for the zero waste approach to become a policy. First of all, the Zero Waste Regulation entered into force after being published in the Official Gazette dated July 12, 2019 and numbered 30829. As part of the Zero Waste Regulation, transition schedules for local administrations, buildings, and campuses to zero waste management systems have been set. The Regulation sets out

guidelines on establishing and implementing a zero waste management system, the requirements for monitoring the system, the conditions for obtaining a zero waste certificate, and its criteria. As part of the Zero Waste Regulation, the Zero Waste Certification process has started as of January 12, 2020. Buildings, campuses, and local administrations that have adopted the Zero Waste Management System are given a Zero Waste Certificate.

Institutions and organizations implementing a zero waste management system (cumulative)



While 81 provincial governorships prepared “Provincial Zero Waste Management System Plans”, the number of buildings and campuses that switched to the Zero Waste Management System between June 2017 and the first half of 2022 was 150 thousand. The Ministry has prepared 11 implementation guides for practitioners in order to guide the establishment, operation, and monitoring of the Zero Waste Management System.

International Aspects of the Zero Waste Movement Implemented in Türkiye

The Zero Waste Movement in Türkiye has received international attention since its inception. Under this heading, the international activities related to the project are listed in order.

First Lady Emine Erdoğan, the wife of President Recep Tayyip Erdoğan, received the Dutch women farmers who are in Türkiye with the invitation of the Embassy of the Netherlands in March 2019, implementing recyclable agricultural policies, and successful women

entrepreneurs who carry out activities in the areas of agriculture and husbandry in Türkiye. Emphasising the importance of the Zero Waste Movement, Emine Erdoğan, in her speech at the reception of Dutch women farmers and Turkish women entrepreneurs, said, “We must implement eco-friendly policies in our agricultural activities. Improving performance in climate-friendly farming and reducing carbon footprint must be among our primary goals.”

First Lady Emine Erdoğan with Dutch Women Farmers and Turkish Women Entrepreneurs



Karolien Hupkes, a delegation member, stated that they were happy to meet with Turkish women farmers and said, “I have seen the following characteristics in my Turkish farmer sisters: they are very strong, they take ownership of their work, and they do it with love. The technologies used are very important for people to produce efficiently. During our visit to First Lady Emine Erdoğan, her remarks on recycled agriculture left a lasting impression on us.”

In April 2019, First Lady Emine Erdoğan attended the World Economic Forum on the Middle East and North Africa in Jordan. During her address at the meeting, First Lady Emine Erdoğan stated, “Our behaviour patterns constitute the basis for the formation of an environment-friendly economy. We believe that major transformations can be started through changes in individuals’ behaviours. In this regard, we should review our established consumption habits.”

First Lady Emine Erdoğan at World Economic Forum on the Middle East and North Africa in Jordan



Following her address at the World Economic Forum on the Middle East and North Africa, First Lady Emine Erdoğan met with President Børge Brende and Executive Chairman Klaus Schwab of the World Economic Forum. The issue of individual awareness as well as future steps to be taken in the international arena were discussed during the meeting. The President of the World Economic Forum, Brende, offered information about their new initiatives on environmental protection and expressed a desire to collaborate with Türkiye. In this light, both parties stressed the significance of Brende's visit to Türkiye on April 24 and 25 and cooperations with the Ministry of Environment and Ur-

banism of Türkiye. Additionally, the meeting focused on the significance of ocean cleanup in preventing environmental pollution and the measures that can be taken in this regard.

As part of the G20 Osaka Summit Partners' Programme held in Japan in June 2019, First Lady Emine Erdoğan attended a symposium titled "Oceans: A Precious Resource for Our Lives" along with the spouses of several heads of state and government. Among the topics discussed during the symposium, moderated by President Atsushi Sunami of the Ocean Policy Research Institute of the Sasakawa Peace Foundation (OPRI-SPF), were how G20 members and international organizations can promote the sustainability of resources in oceans and what they can do to protect oceans and seas.

First Lady Emine Erdoğan at the Symposium titled "Oceans: Precious Resources for Our Lives"



First Lady Emine Erdoğan stated that they have seen during the symposium what kind of threats the world is faced with and added, "We have limited time to construct a new scenario for the future. If the right steps are taken, there will be more fish than plastic in the oceans by 2050." Noting that the borders between countries should be lifted and countries should act with collective conscience when it comes to protecting nature, First Lady Emine Erdoğan went on to say, "When a country dispatches its trash to a landfill many kilometres away, it does not simply mean that it gets rid of it. That waste is served to us all in the form of a plate of fish full of microplastics." "We have a huge responsibility to build a livable future for the children of the world,"

First Lady Emine Erdoğan said, adding that the Zero Waste Project has been initiated in Türkiye in line with this responsibility. Underlining that multilateral efforts to promote a zero-waste culture and combat marine litter are carried out in Türkiye under the coordination of the Ministry of Environment and Urbanisation, First Lady Emine Erdoğan stated that their primary goal is to separate garbage at the source and use it for recycling. First Lady Emine Erdoğan explained that zero waste systems were implemented in public institutions, zero waste practises were initiated in schools and military facilities, children's awareness was raised, and charging for plastic bags resulted in a 70% reduction in the use of plastic bags. First Lady Emine Erdoğan stated that they held "from waste to art" exhibitions throughout Türkiye, citing the support they received from the media and non-governmental organizations, as well as the contribution of artists to the awareness-raising efforts.

Moreover, President Recep Tayyip Erdoğan has taken part in international events associated with the initiative. In September 2019, President Recep Tayyip Erdoğan attended the Climate Action Summit held on the sidelines of the 74th session of the United Nations General Assembly. Emphasising that climate issues are global issues that know no borders, President Erdoğan stated, "It is crucial to ensure international cooperation on this issue. The UN Secretary-General urged countries to take responsibility and action to combat climate change. Türkiye is now co-leading a track on Infrastructure, Cities, and Local Action (ICLA) alongside Kenya and UN Habitat. The remit of this working group constitutes an important area whose impacts regarding the fight against climate change would be visible in daily life. Türkiye is well aware of the fact that action needs to be taken first at the local level in order for the fight against climate change to be successful."

President Recep Tayyip Erdoğan at the “UN Climate Action Summit”



President Erdoğan continued his speech at the UN Climate Action Summit, saying, “We are one of the rare countries that have increased forest cover. We have planted more than 4 billion saplings in the last 10 years. On November 11, we are planting 11 million more saplings. One of our 2023 goals is to increase our forest cover to 30 percent of our total land area. In a bid to reduce greenhouse emissions and solve traffic congestion in our cities, we are building new subway lines. We aim to increase the share of railway lines in cargo capacity from 5% to 10% and passenger capacity from 1% to 4%. We plan to increase the length of our high-speed railway network to 5,600 kilometres and the length of our municipal rail system by approximately 50 per cent. We have completed landmark projects such as the Marmaray and Eurasia Tunnel. Türkiye has made significant progress in waste management, in the use of climate-friendly technology and energy resources, and in the improvement of the quality of air, water, and soil. The use of plastic bags across Türkiye has been decreased by three-quarters as a result of the relevant regulations implemented in the country.

The Zero Waste Project launched under the auspices of my spouse, First Lady Emine Erdoğan, has been rapidly adopted by all of our cities and institutions. We are spreading the Zero Waste Project across Türkiye. We will have transitioned to Zero Waste system in nearly 400 thousand residences by 2023. We will have increased the rate of waste recycling from 13% to 35%.”

Also in September 2019, First Lady Emine Erdoğan attended the panel “Problems and Solutions on Sustainable Waste and Resource Management: Why Do National Initiatives on Zero Waste Matter?” and shared her experience with the participants. In addition to First Lady Emine Erdoğan, the panel was also attended by Mrs Esra Albayrak, spouse of Minister of Treasury and Finance Berat Albayrak and daughter of President Erdoğan; the spouses of Minister of Foreign Affairs Mevlüt Çavuşoğlu and Minister of National Defense Hulusi Akar; First Ladies of the TRNC, Thailand, Iraq, Bulgaria, Somalia, Lithuania, Norway, Greece, and Morocco; as well as Princess Dina Mired of Jordan.

First Lady Emine Erdoğan at the panel “Problems and Solutions on Sustainable Waste and Resource Management: Why Do National Initiatives on Zero Waste Matter?”



During the panel, First Lady Emine Erdoğan stated that the first steps of the project were taken in public buildings such as the Presidency, the Grand National Assembly of Türkiye and ministry buildings, and that zero waste efforts have already begun to bear fruit, saying, “We are open to all sorts of cooperation to build a livable future for all children in the world. I believe all borders must be lifted between countries, and joint work must be conducted to overcome the environmental crisis. I hope the climate change summit as part of the 74th Session of the UNGA leads to significant decisions. I regard it urgent that a new international pact be drafted on marine litter and microplastics. Now is not the time to think about it, discuss it, or prepare reports; it is time to act.” Executive Director of UN-Habitat, Maimunah Mohd Sharif, and Director of the UN Sustainable Development Solutions Network and

Columbia University's Centre for Sustainable Development, Jeffrey D. Sachs, Assistant Secretary-General and Head of the New York Office of the UN Environment Programme, Satya S. Tripathi, and Director of the Public Health, Environment and Social Determinants of Health Department of the WHO, Dr Maria Neira, delivered speeches at the event. The speakers thanked First Lady Emine Erdoğan for her leadership, emphasising that it is extremely important for a First Lady to make a concrete contribution to an issue that the entire world is trying to solve.

Another international activity carried out by First Lady Emine Erdoğan regarding the project was her visit to the Turkish Embassy in Belgrade, the first foreign mission to implement the Zero Waste Project carried out under her auspices, in October 2019. During this visit, First Lady Emine Erdoğan stated that she believes that environmental issues are now part of the diplomatic mission and said, "I would like to express my gratitude to the Minister of Environmental Protection of Serbia Mr Trivan, and the Municipality of Belgrade for their support of the project. I wish this admirable unity to be an example for everyone in fulfilling our responsibilities towards nature."

First Lady Emine Erdoğan at the Turkish Embassy in Belgrade

During her visit, First Lady Emine Erdoğan emphasised that the environment is at a critical juncture and said, "We will either act as a global community with common sense or we will leave our children a future full of disasters. We need to realise that, as a whole world,



we are one family caring for nature. When it comes to tackling the environmental crisis, we must say “we” rather than “you” and “me”. Global warming is affecting the whole world, not just a certain region. Therefore, even if there are borders between countries, the environmental crisis drags each of us into the same disaster without recognising any borders.” Recalling that a great mobilization was launched in Türkiye in 2017 with the Zero Waste Project, First Lady Emine Erdoğan emphasised that they aim to make the zero waste movement 45 per cent widespread across the country in 2020 and 100 per cent widespread in 2023. First Lady Emine Erdoğan noted that as parents, their primary concern and effort is ensuring that their children have a decent future, and she went on to say: “A good future is no longer limited to a good education and job opportunities. We can only discuss a lovely future if we can leave behind a world with clean water, soil, air, and resources that have not been depleted. That is why we must work with all our might for the continuity of life. Just as we grew up cooling off in the shade of trees, eating the fish we caught without fear, and drinking water without fear, our grandchildren should be able to do the same.”

First Lady Emine Erdoğan also attended the “6th Social Good Summit” organised by the United Nations Development Programme (UNDP) and TBWA/FORGOOD in November 2019. Speaking during the programme, First Lady Emine Erdoğan stated that everyone attending the Summit shared the common objective of “finding the shortest path to goodness to make the world a better place.” First Lady Emine Erdoğan stated that because every action we take today shapes the next few thousand years, “not only 2030 but also 2050 and 2070 are actually now. Indeed, the current environmental crisis is the culmination of a long process. Therefore, scientists’ warnings about the near future should shape all our current behaviour.”

First Lady Emine Erdoğan at the 6th Social Good Summit



At the 6th Social Good Summit, noting that they attach great importance to the efforts exerted with non-governmental organizations, First Lady Emine Erdoğan said that in cooperation with the Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats (TEMA) and the Ministry of National Education, “zero waste education” was provided to 280 thousand children in 20 pilot schools in 3 months, the World Wildlife Fund launched a campaign to reduce the use of single-use plastic and paper packaging in restaurants, the Turkish Marine Environment Protection Association (TURMEPA) carried out coastal cleaning to solve the waste problem in the seas, the Mind Your Waste Foundation drew attention to the problem of cigarette butt, and the Ministry of Environment, Urbanisation and Climate Change carried out educational and awareness-raising activities reaching 2 million people.

First Lady Emine Erdoğan was awarded the first “Global Goals Action Award” of the United Nations Development Programme (UNDP) Türkiye at the ceremony held on March 25, 2021, for her contributions to the Zero Waste Project and other environmental activities carried out under her auspices.

Claudio Tomasi, Resident Representative of UNDP in Türkiye and First Lady Emine Erdoğan



Claudio Tomasi, the Resident Representative of UNDP in Türkiye, presented the Award at the ceremony held in Beştepe State Guesthouse for the considerable contributions of the Zero Waste Project to the achievement of the UN’s goal “Responsible Consumption and Produc-

tion”. Drawing attention to the campaign launched by Türkiye under the auspices of First Lady Emine Erdoğan and the gains achieved, especially in the economy, Tomasi said, “Thanks to you, Türkiye has experienced significant success with the Zero Waste initiative. Despite the fact that this initiative was launched in 2017, it has already yielded significant gains.”

The UN General Assembly declared March 30 as the “International Day of Zero Waste”. Thus, the Zero Waste Movement, which serves as the umbrella for all our environmental projects, has now been recognised as a global environmental movement by the decision of the UN General Assembly. In his speech at the event held at the UN General Assembly on the occasion of the International Day of Zero Waste celebrated for the first time on March 30, 2023, UN Secretary-General António Guterres invited countries to be inspired by examples such as Türkiye’s Zero Waste project led by First Lady Emine Erdoğan, who also chairs the newly established Advisory Board of Eminent Persons on Zero Waste.

UN Secretary General António Guterres and First Lady Emine Erdoğan



Guterres attracted the world’s attention when he expressed his gratitude to the First Lady of Türkiye, Emine Erdoğan, for the Zero Waste Project. “I want to recognise and salute the leadership of the government of Türkiye and First Lady, Her Excellency Emine Erdoğan on this vital issue,” Guterres said about the project, which was launched under the auspices of First Lady Emine Erdoğan to highlight the im-

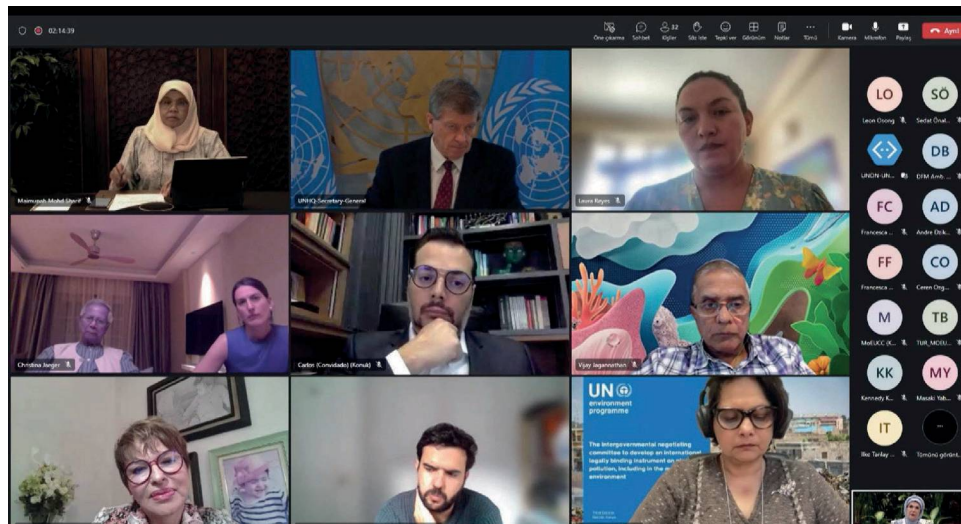
portance of eliminating waste in the fight against the climate crisis, thereby garnering global praise for the project.

First Lady Emine Erdoğan participated in the “The second session of the United Nations Habitat Assembly” held in June 2023 at the UN-Habitat Headquarters in Nairobi, Kenya, by sending a video message. He expressed his gratitude to Rachel Ruto, wife of the President of Kenya, for her invitation to the second session of the United Nations Habitat Assembly, the leading organization in building a more habitable world, and to the entire UN-Habitat family, especially Maimunah Mohd Sharif. Emphasising the importance of such a meeting in these days when the vast majority of the world’s population is condemned to live in settlements that have lost their bond with nature, First Lady Emine Erdoğan pointed out that urban waste has already reached dimensions that nature cannot dispose of and is gradually turning into a global threat. First Lady Emine Erdoğan stated that great strides had been made to save nature from waste that it could not process but that the road was long in an age where consumption had become the goal. On the other hand, First Lady Emine Erdoğan stated that she believed the most significant change would occur when we abandoned the “throw-away culture” and adopted a lifestyle that produced almost no waste. First Lady Emine Erdoğan stated that the spread of the “Global Zero Waste” movement indicates that the adoption of this lifestyle is imminent: “We owe the success we have achieved in the first place to the ownership of the project by our people and, of course, by our women. I believe that the accomplishments in our country and on a global scale have been made possible by ensuring women’s effective participation in all processes. As a woman, I spearhead the Zero Waste movement and serve as the Chair of the Zero Waste Advisory Board. I am delighted to walk this path with my dear friend, Ms. Maimunah, another woman whose environmental leadership has made her a global role model. One of my favourite proverbs in Turkish is “men make houses, women make homes”. Our ancestors used this proverb to highlight women’s inherent compassion and mercy, as well as their transformative power, resilience, perseverance, and ability to multiply good things. Our cities, like everything else, are becoming more liveable and sustainable as a result of women’s ability to shape the environment and communities. I sincerely believe that, under the leadership of the trailblazing women and all of the environmentally-conscious volunteers who have gathered for this meeting, solutions that will shed light on humanity’s problems will be introduced. These gatherings give us all hope for a

sustainable future in which we are once again friends with nature and live in harmony with the entire family of living creatures. First Lady Emine Erdoğan expressed her hope that the outcomes of the UN-Habitat Second Ordinary Assembly would benefit humanity, saying, “We wish to reach a cleaner and healthier world every day.”

First Lady Emine Erdoğan chaired the first meeting of the United Nations Zero Waste Advisory Board in July 2023. First Lady Emine Erdoğan called for a global Zero Waste Movement, saying, “We should focus on not polluting rather than cleaning, and we should spread a zero-waste lifestyle throughout the world.” The first meeting of the United Nations Zero Waste Advisory Board, chaired by First Lady Emine Erdoğan at the request of UN Secretary-General Antonio Guterres was held online. UN-Habitat Executive Director Maimunah Mohd Sharif moderated the meeting from Türkiye. In addition to First Lady Emine Erdoğan, UN Under-Secretary-General for Policy Guy Bernard Ryder also addressed the participants at the meeting. First Lady Emine Erdoğan, Chair of the UN Zero Waste Advisory Board, emphasized in her speech that the Board members were brought together by their love and sensitivity to nature. First Lady Emine Erdoğan stated that it was possible to repair existing damage with a collaborative effort and added that in Türkiye, with the “Zero Waste Project,” we saw that it was possible to achieve great results with consistent effort.

First Lady Emine Erdoğan at the First Meeting of the UN Zero Waste Advisory Board



First Lady Emine Erdoğan reminded the board members during the meeting that the world was our common home and that the climate crisis knew no national borders. First Lady Emine Erdoğan underlined that success could not be achieved without a joint struggle with the countries of the world and said that they took action to spread the “Zero Waste” practice internationally and to share the experiences gained in the project. The meeting was moderated by UN-Habitat Executive Director Maimunah Mohd Sharif, and attendees included UN Under-Secretary-General for Policy Guy Bernard Ryder, Suriname President Chan Santokhi’s wife First Lady Mellisa Santokhi-Seenacherry, Sierra Leone President Julius Maada Bio and his wife First Lady Fatima Maada Bio, Algramo CEO Jose Manuel Moller, Yunus Environment Hub Founder and Chairman Muhammed Yun Carlos Silva Filho, Cempre’s Chief Executive Officer The Waste Transformers’ CEO, Laura Reyes Lara van Druten, Saleem Ali, Hakima El Haite, ICLEI Local Government Secretary-General for Sustainability Gino Van Begin, and Vijay Jagannathan, Secretary-General of CityNet Asia Pacific. At the meeting, participants shared their experiences as well as their perspectives on the importance of zero waste and recycling. The Board members thanked First Lady Emine Erdoğan.

The hosting of the UN-Habitat Executive Director at the Ministry of Environment, Urbanisation, and Climate Change in July 2023 was the international activity realised within the scope of the project. During the visit of Ms. Maimunah Mohd Sharif, Executive Director of UN-Habitat, consultations were held on cooperation opportunities between UN-Habitat and the Ministry. A consensus was reached to open a United Nations Habitat Office in Istanbul. It was also stated that the Zero Waste movement, which is an example to the world under the leadership of First Lady Emine Erdoğan, would continue its pioneering role by producing stronger initiatives with the office to be opened in Istanbul.



First Lady Emine Erdoğan Un agenda: "women and environment"



EMİNE ERDOĞAN ATTENDED NUMEROUS EVENTS CONCERNING ENVIRONMENTAL AND WOMEN'S PROBLEMS AS PART OF HER VISIT

The First Ladies took part in a number of events and shared their perspectives, just as world leaders did when they gathered in New York for the 74th session of the United Nations General Assembly.



Participating in a panel held on the margins of the 74th UNGA titled "**Problems and Solutions on Sustainable Waste and Resource Management**," First Lady of the Republic of Türkiye Emine Erdoğan shared Türkiye's "**Zero Waste**" experience.



Met with women representatives of the US Muslim community in New York. The meeting placed a strong emphasis on **Muslim's responsibilities in the face of the problems that the Islamic world is currently facing.**



Underlined the significance of **environmental cooperation** in a meeting with Inger Andersen, the Executive Director of the United Nations Environment Programme.



Discussed the **importance of deploying green technologies** during a discussion with Svenja Schulze, Germany's Federal Minister for the Environment, Nature Conservation, and Nuclear Safety.



Garnered attention when she stated, "Child marriage is the greatest abuse and violation of human rights" during a panel discussion on "**Combating Child Marriage and Promoting Education of Girls in West Africa**" hosted by Fatima Maada Bio, the spouse of President Julius Maada Bio of Sierra Leone.



Attended events on "**Africa and Women**," and met with with African Union's Special Envoy on Women, Peace and Security, Bineta Diop, and members of the AU delegation.



Accompanied her spouse President Recep Tayyip Erdoğan to a dinner hosted by **President Donald Trump of US and and First Lady Melania Trump in honour of the United States' delegates** to the United Nations General Assembly.

- Attended the "**9th annual Fashion 4 Development**" fashion show, which seeks to **promote the fashion and textile industries** to support social development initiatives, and which was attended by the spouses of numerous world leaders.

International Awards for the Zero Waste Movement

The Zero Waste Movement, a major social and economic transformation movement, has evolved into a vision at the end of its sixth year. First Lady Emine Erdoğan is the advocate of the Zero Waste Movement, which opened the door to a great and rapid transformation by attracting attention both nationally and internationally. As a key figure striving for the environment globally, her efforts have earned recognition from the international community.



“Zero Waste, Zero Hunger Award” was presented by the United Nations Agriculture and Food Organization (FAO) in 2018 to the Zero Waste Movement; In 2021, the “Sustainable Development Goals Action Award” was presented by the United Nations Development Programme (UNDP), and the UN Human Settlements Programme (Habitat) presented the Waste Wise Cities Global Champion Award”; In 2022, the “Mediterranean Parliamentary Assembly Award (PAW Awards)” was presented, and in the same year, the “Climate and Development Leadership Award” was presented by the World Bank. In addition, in 2022, a declaration of good will was signed with the UN for spreading the “Zero Waste Project” across the globe.

Zero Waste Blue Movement

Türkiye is making significant efforts to reduce and prevent waste generation, sort waste at its source, save raw materials and energy through recycling, and create a liveable world. Throughout the period to date, targets have been met ahead of schedule, with achievements that go above and beyond these goals. By incorporating Zero Waste Blue into the Zero Waste Project, a new project was launched in 2019 to protect the seas and keep them clean.



Türkiye's Mediterranean, Aegean, Marmara and Black Sea coasts (excluding the coasts of our islands) are 8592 kilometres long. Our coastlines have a high biodiversity value. Approximately 5,000 plant and animal species have been identified in Türkiye's territorial waters. It is essential to protect our blue homeland to benefit from our seas and coasts in a multifaceted way. With this in mind, on June 10, 2019, under the leadership of First Lady Emine Erdoğan, the Zero Waste Blue Movement was launched as part of the Zero Waste Movement.

Our coasts may face significant environmental problems due to industrial facilities established for the opportunities offered by the sea and coastal areas, urbanisation, particularly in coastal areas, tourism

activities carried out on land and sea, maritime transportation, and domestic and industrial pollution coming from inland regions through surface waters. Marine litter, which is the main source of pollution in the seas, is the material produced or used by humans, dumped into the sea, rivers, or beaches, indirectly entered into the sea by rivers, wastewater, rainwater, or wind, and accidentally lost at sea (fishing gear, cargo) in bad weather conditions.

Major sources of marine litter include:

- » Marine litter can be of terrestrial or aquatic origin. It can be found on land or in the sea, as well as indirectly reaching the sea by being transported by rivers, wastewater, wind, rainwater and waves.
- » Eighty per cent of marine litter reaches the sea from terrestrial resources. Therefore, any garbage left ashore carries the risk of being sea litter.

Another threat to the seas is fishing gear called ghost nets. Before the introduction of plastic into our lives, materials like silk were used to make nets; however, because plastic is more affordable, fishing nets are now produced from materials derived from plastic. Up to 8 to 10 years of ghost fishing can be harmful to marine species and the ecosystem. Marine animals caught in ghost nets are in danger of losing their lives due to drowning, fatigue, or starvation for a long time. Similarly, if they become entangled in ship propellers, they can cause significant damage, and they can also become entangled in coral reefs, causing them to be uprooted and destroyed by currents. Therefore, in our country, with the support of the Ministry of Agriculture and Forestry and the Ministry of Environment, Urbanisation and Climate Change, aquatic environments are scanned and cleared of ghost nets as part of the Zero Waste Blue Movement.

180 thousand m³ of marine litter collected through "Zero Waste Blue" project

As part of the Zero Waste Project, the "Zero Waste Blue Project" was launched in June 2019 to prevent maritime pollution by protecting the sea and bodies of water, and leave natural beauty for future generations.



Efforts for the Project were carried out in 28 coastal provinces
Approximately 180 thousand m³ of marine litter was collected in 2019

PROVINCES WITH THE MOST MARINE LITTER COLLECTED



Plastics accounted for 80% (144 thousand m³) of the marine litter collected from the coasts.



Another one of the activities carried out as part of the Zero Waste Blue Movement is seabed cleaning activities. Lake Van, the largest lake in our country, the shores of Fethiye, where the world-famous Ölüdeniz (Dead Sea) is located, and Lake Beyşehir, the largest freshwater lake in our country, have been some of the areas where seabed cleaning has been carried out as part of the Zero Waste Blue Movement. As part of the Zero Waste Blue Movement, 1.2 million cubic metres of mud were removed during the underwater mud cleaning efforts in Lake Van. The sludge removed from the lake bottom is analysed and, if suitable, processed and used as a soil improver in parks and gardens.

In addition to this, another practice organised as part of the project was to increase the number of our Blue Flag beaches. The number of Blue Flag beaches increased to 519 in 2021, 531 in 2022 and 551 in 2023. In Türkiye, 551 beaches, 23 marinas, 14 tourism boats, and 10 individual yachts have been awarded the Blue Flag. In the Blue Flag ranking announced by the International Foundation for Environmental Education-FEE, headquartered in Copenhagen, Denmark, Türkiye ranked third in the world again this year with the number of beaches.

They Clean the Mediterranean by Collecting Plastics Caught in Nets



As part of Biodiversity Conservation Studies, 43 Thousand Square Meters of Ghost Nets Were Removed During Underwater Scans This Year in İzmit Bay



Recycling Rate Increases Every Year with Zero Waste

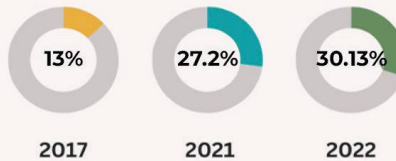
Within the scope of the Zero Waste Movement led by the Ministry of Environment, Urbanisation and Climate Change and under the auspices of First Lady Emine Erdoğan, the main goals include preventing, reducing, reusing, and recycling waste as well as avoiding waste production.

Water used by 2M households in one year saved with Zero-Waste Project

Zero-Waste Project aims to contain waste under sustainable development principles, curb pollution, and leave clean and developed Türkiye as well as livable world for future generations



Increase in Waste Recovery Rate by Years, Amount of Waste Recycled to the Economy and Number of Trained Individuals



**SINCE THE START OF THE
ZERO WASTE PROJECT**



25.4 million tonnes of
Paper-Cardboard



6.6 million tonnes of
Plastic



2.6 million tonnes of
Glass

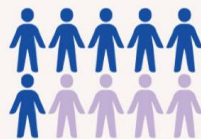


0.7 million tonnes of
Metal



10.2 million tonnes of
Organic and Other
Recyclable Waste

A TOTAL OF
45.5
MILLION
TONNES OF
WASTE WERE
RECYCLED AND
REINTRODUCED
INTO THE
ECONOMY



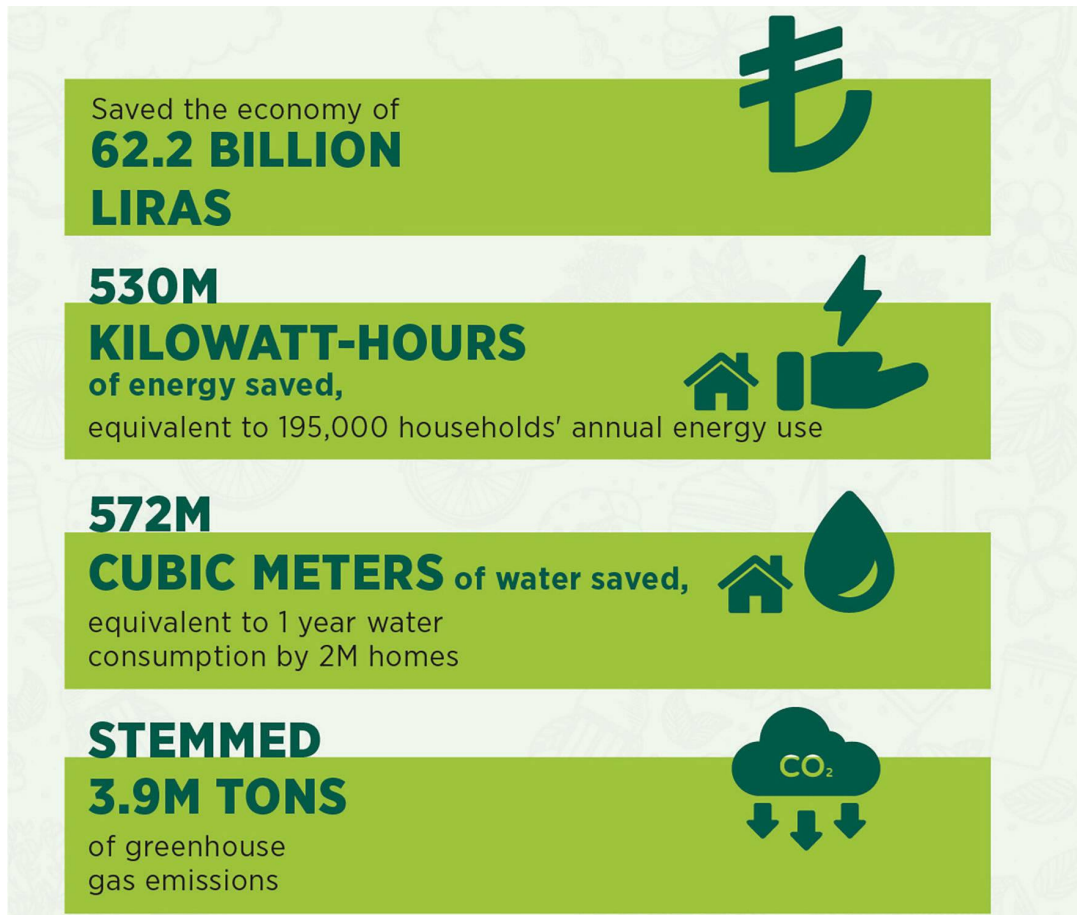
19 MILLION
people were
provided with
training on zero
waste

As part of the efforts carried out with the Zero Waste Movement, which promotes sustainable production and consumption habits, supports the efficient use of resources, and helps to achieve positive socio-economic results, including the development of social solidarity;



- » The number of buildings/campuses that have switched to zero waste management systems has reached approximately 166,000 since June 2017.
- » Approximately 17.5 million people were trained on zero waste from June 2017 until the first half of 2022. The number of people trained reached approximately 19.2 million in the first half of 2023.
- » Our waste recovery rate, which was 13% in 2017, increased to 27.2% in 2021 and 30.13% in 2022. As a result, both the reduction of the adverse effects of climate change and the protection and efficient use of raw material resources have been achieved.
- » It is aimed to increase our waste recovery rate to 35% in 2023 and 60% in 2035 and to significantly reduce the amount of stored waste.

- » Approximately 45.5 million tonnes of recyclable waste, including 25.4 million tonnes of paper-cardboard, 6.6 million tonnes of plastic, 2.6 million tonnes of glass, 0.7 million tonnes of metal and 10.2 million tonnes of organic and other recyclable wastes, have been processed and recycled into the economy by businesses licensed by the Ministry of Environment, Urbanisation and Climate Change since the start of the project.



- » The collected wastes resulted in an economic gain of 96 billion TL, 4.9 million tonnes of greenhouse gas emissions prevented, 703 million kWh of energy, 711 million m³ of water and 82 million m³ of landfill space, 432 million trees, and 108 million barrels of oil saved.

Zero Waste Project in Numbers (Between the years 2017 and 2022)

Recovery Rate2	7,2%
Economic Profit Made	£62,2 billion
Energy Saved5	30 million kwh
Water Saved	572 million m³
Spaces Saved for Storage	69 million m³
Greenhouse Gas Emissions Blocked	3,9 million tons
Trees Saved	347 million units
Barrels of Oil Saved	87 million units
Raw Materials Saved	650 million tonnes
Recovery Amount/Rate	
Plastic Bags5	50,000 tonnes
Paper/Cardboard2	0,4 million tonnes
Plastic	5,4 million tonnes
Glass2	,3 million tonnes
Metal0	,5 million tonnes
Organic material etc.5	,2 million tonnes
Wastewater Treatment Rate4	,2%



Chapter VII

GREEN DEAL ACTION PLAN

Green Deal Action Plan

The European Union, which has been more active in addressing the climate crisis than other global actors, has, for the first time, laid out a clear roadmap for a sustainable and effective transition through the European Green Deal. As a candidate country for EU membership and a Customs Union partner, Türkiye continues to pursue fundamental reforms that cover all aspects of the economy in accordance with the Green Deal and strives to respond quickly to expectations in order to meet the criteria established in this context. This development is expected to significantly impact Türkiye's trade with the European Union, its largest export market. As a result, it is important to continue working towards the harmonisation of technical regulations in Türkiye. Many concrete projects have been undertaken in the public and private sectors within this framework, and, in particular, there was a need to address the impact of the political changes intended to be implemented in the EU on energy, agriculture, industry, and transport policies related to Türkiye's foreign trade in a multidimensional manner, as well as to determine an extensive and coordinated route in this direction. To this end, the former Ministry of Industry and Trade formed a working group with the participation of relevant institutions, and in addition to technical meetings with member institutions, sector discussions were held with the participation of private sector representatives. During the discussions, the reform process required

by the objectives set for Türkiye was discussed comprehensively, taking into account the similarities between the Customs Union and the EU's established commercial and economic activities. It was intended to create an outline for adapting to the potential global impacts of climate change policies, and an Action Plan was developed with the working team's assistance in this regard. The progress made in Türkiye's sustainable transformation process within the public and private sectors and all relevant stakeholders is presented under 11 headings under the Green Deal Action Plan.

The Green Deal Action Plan is regarded as consistent with the reform policies that have been implemented in the global economy, as it promotes sustainable investments and incorporates international value mechanisms. In the recovery process following the global pandemic, societies have prioritised creating a sustainable economy, efforts to reduce greenhouse gas emissions have increased, climate change has been addressed in an interconnected dimension with areas such as economy, health, migration, and so on by societies aiming for global growth, and financial and trade policies have been shaped accordingly.

Carbon Border Adjustments

In accordance with the Green Deal Action Plan, first, the EU "Carbon Border Adjustment Mechanism" was modelled, and in 2022, the Ministry of Environment, Urbanisation, and Climate Change, with the support of the European Bank for Reconstruction and Development, carried out the "Potential Impact of the CBAM on the Turkish Economy" project, and the study's findings were shared with relevant sectors. The World Bank, on the other hand, published the "Türkiye Country Climate and Development Report" as an impact analysis study of the Carbon Border Adjustment's effects on the Turkish economy. The Medium Term Programme (2023-2025) incorporated Green Deal Action Plan (GDAP) policies to establish a suitable carbon pricing mechanism and a national Emissions Trading System (ETS) in Türkiye, while the Ministry of Environment, Urbanisation, and Climate Change initiated the Turkish Carbon Market Development Project under the World Bank's Partnership for Market Implementation.

Representatives of relevant chambers, unions, and organisations received general and special trainings in 2023, and the results of activities coordinated by the Ministry of Industry and Technology to reduce greenhouse gas emissions in manufacturing industry sectors

were shared with the public on March 18, 2024. Steel, Aluminium, and Cement specialised working groups established within the scope of GDAP proposed low-carbon roadmap projects for each sector under the coordination of the Ministry of Industry and Technology, and additionally, TÜBİTAK developed a Green Growth Technology Roadmap within this framework.

A Green and Circular Economy

The second theme within the GDAP framework, “Green and Circular Economy,” asserts that sustainable transformation should be approached more holistically and that circular economy policies will enable the enhancement of energy efficiency. In this context, the EU Strategy for Sustainable and Circular Textiles was established with the goal of ensuring that textile products supplied to the EU market by 2030 are durable and sustainable, while new regulations introduced carbon cap and recycled content requirements for electric vehicle batteries sold in the EU market. Similarly, the draft Packaging and Packaging Waste Regulation was prepared with the aim of allowing only recyclable packaging on the market by 2030; the draft Corporate Sustainability Due Diligence Directive (CSDDD) was established to require corporations to adopt programmes ensuring that their business practices and strategies align with the Paris Agreement; and the Directive on Empowering Consumers for the Green Transition was adopted to facilitate consumer access to accurate sustainability information and to prevent misinformation. On April 30, 2024, the Regulation on Waste Shipments was published in the Official Journal of the EU. On February 1, 2023, the European Commission announced the Green Deal Industrial Plan to increase the prevalence of Europe’s net zero technologies and further enhance the competitiveness of EU industry in this field. Raw materials that can be qualified as necessary, important and key in ensuring sustainability are specified in the Critical Raw Materials Act Draft. With the Regulation No. 2023/1115 on Prevention of Deforestation, which entered into force on June 9, 2023, an endeavour was made to ensure that the supply chains are programmed in a way to prevent deforestation. Accordingly, the Technical Assistance Project for the Assessment of Türkiye’s Potential for Transition to Circular Economy (DEEP) was launched for the IPA II Period. With a view to reducing hazardous chemicals, the EU Chemicals Strategy for Sustainability aims to decrease the use of hazardous chemicals. To the same end, the Circular on Cleaner Production Practices in the

Textile Sector was promulgated and entered into force on 31/12/2022. The Sustainable Consumption and Production National Action Plan (SCP-NAP), which includes SCP models for the food, fisheries and agriculture, housing and construction, consumer goods manufacturing and tourism sectors, was prepared. The wastewater reuse rate is targeted to increase to 15% by 2030. The dissemination of National Environmental Labelling System and informing businesses regarding the environment, green transition and waste management are of importance being the main goals of the plan.

Green Financing

The aim of “green financing” is to improve the environment-oriented system, establish the infrastructure of a sustainable economy and ensure the financial system is sustainable and in coherence with the ecological system. Within this scope, the Regulation on Green Bond Standards was adopted in November 2023. In addition, the EU Corporate Sustainability Reporting Directive entered into force in January 2023. Within the GDAP; green financing, which is critical for supporting the development of a sustainable and green economy, is built on three main components. These components are: improving the ecosystem that will facilitate the achievement of the green financing goal; managing the national incentive systems; and the efficient utilisation of international economic resources. In this context, ‘climate risks’ and ‘green financing’ topics have been included in the scope of the financial sector assessment for the first time. More advantageous conditions have been created for low-emission vehicles in the credit situations that consumers experience during the purchase of motor vehicles. Raising awareness within the context of available financing opportunities, cross-border cooperations with the aim of ensuring sustainable banking, and many other practices have been realised. Accordingly, the Sustainability Principles Compliance Framework was promulgated on October 2, 2020, and a technical assistance project was launched between the BRSA and the World Bank in 2023 to improve the analysis capacity on climate-related financial risks.

Clean, Economic, and Secure Energy Supply

The fourth theme, “Clean, Affordable, and Secure Energy Supply,” which is conveyed under the title of GDAP, underlines primarily the UN Climate Action Document and the practices carried out to address the main sources of greenhouse gas emissions and secure energy as the largest source of emissions. For this reason, countries that seek to

act on the basis of energy security are increasing their focus on policies in this direction. This framework aims to increase renewable hydro-
gen production and import volume over the next five years. Similarly, aligning with the same direction, the industry, a key sector in energy consumption, was incorporated into the scope of the EU Renewable Energy Directive, the Türkiye Hydrogen Technology Strategies and Road Map documentary was published, where solution mechanisms were assessed based on global practices and Türkiye's specific needs, and the outlined objectives and strategies were included. Within the framework of the European Green Deal Industrial Plan, the European Critical Raw Materials Act and the Net-Zero Industry Act aim to reduce the EU's import dependency on critical technologies to the lowest possible level. Aligned with these targets and in accordance with the National Energy and Mining Policy and the National Energy Plan, the share of renewable energy capacity in Türkiye's total energy capacity has seen a significant increase compared to previous periods. In this context, the Savings Target and Application Guide for Public Buildings for the period between 2024 and 2030 was published. Launched in 2020, the Green Tariff application continues to raise awareness with similar incentives, such as the Renewable Energy Resource Guarantee Certificate (YEK-G Certificate) for consumers aiming to obtain electricity through renewable energy sources. The Energy Efficiency 2030 Strategy aims to introduce low-carbon cooling and heating systems to achieve a comprehensive public-led retrofit programme with approaches to reduce carbon emissions in buildings.



Sustainable Agriculture

The sustainable food and agriculture approach of the UN Food and Agriculture Organisation (FAO) is based on five basic principles: efficiency in food systems, conservation and improvement of natural resources, improvement of livelihoods, enhancing resilience and governance. The objectives set by the EU to pursue sustainable agricultural policies, to reduce the ecological and climatological footprint of the EU food system, to prevent loss of diversity in the face of geopolitical, biological and climatic changes, and to pioneer a global flow of competitive sustainability from farm to fork are important within the framework of FAO principles. Increasing organic farming, improving animal living standards, preventing biodiversity loss and increasing diversity, reducing over-fertilisation and moving agriculture away from dependence on pesticides are the main areas of work in the relevant chapter of the European Green Deal. In this context, the Residue Control Plan was implemented between 2022 and 2024, aiming to prevent agricultural residue by raising producer awareness about protecting the balance of nature and farmer training programmes were conducted to support this initiative. As a result of the training programmes, a decrease in residue rates was observed compared to previous years with the widespread use of biological control techniques. To promote waste management in agricultural production, high-protein bars were made from fruit seeds, and training programmes were organised to prevent food waste. In this regard, the Türkiye Climate Smart and Competitive Agricultural Growth Project (TUCSAP) maintains a strong and inclusive framework to ensure the transition of agribusinesses and farmers to sustainable agriculture with environmentally friendly practices.

Sustainable Smart Transportation

The sustainable transformation of transportation systems aims to make social mobility of the present and future more convenient and harmless, with environmentally friendly support capabilities. On July 11, 2023, the European Commission proposed a package for a more efficient and sustainable transportation system in the EU. The package includes proposals such as improving railway infrastructure capacity and a preference for low-emission vehicles. In accordance with this approach, arrangements were made for the Trans-European transportation network, and an Action Plan to Boost Long Distance and Cross-Border Passenger Rail was developed, with the goal of in-

creasing railway transportation's share of the international network, and 6,375 kilometres of roads were renewed to support this goal. The Ministry of Transport and Infrastructure updated the Green Port Project, originally launched to support green transportation on waterways as well as railways and the Regulation on the Issuance of Green Port Certificates to Coastal Facilities was published on November 18, 2023. Accordingly, the Inspection Directive on Determination of Sulphur Content in Ship Fuels was published on June 14, 2022. In addition to these initiatives, the Ministry of Transport and Infrastructure has implemented numerous applications and updates to enhance the electrical vehicle charging infrastructure in line with our nation's sustainable and smart transportation improvement strategy.

Combating Climate Change

The main objective of the United Nations Framework Convention on Climate Change is to prevent the human-inflicted dangers to the climate system. For this purpose, countries prepare and present Nationally Determined Contributions (NDC) to expedite their adaptation to climate change. Türkiye's Updated Declaration of Nationally Determined Contribution was publicised at the Ministerial Summit of the 28th Conference of the Parties. In this regard, the Climate Club, which is being developed within the G7 and is open to participation from relevant countries, is intended to be a pioneer in the field of sustainable goals. In line with Türkiye's 2053 Net Zero Emission target, the Ministry of Environment, Urbanisation, and Climate Change prepared a draft Climate Law for the establishment of an Emissions Trading System. Additionally, environment-based projects have been prepared to prevent deforestation and desertification in coastal and wetland areas, as well as to take and implement measures to combat land degradation.

Just Transition Policies

This transformation process is expected to have significant impacts on the labour market and social welfare, with dimensions that may emerge during the transition to a social and circular economy. In this context, it is critical that groups such as the Specialised Working Group on Just Transition Policies, established under the Green Consensus Working Group in line with Türkiye's "Just Transition Policies" and coordinated by the Ministry of Labour and Social Security, analyse the occupational groups that may be affected by the green transformation process, take measures to mitigate these hazards, and position em-

ployment policies in line with the just transition. In this framework, a programme on Green Transformation, Jobs and Skills in Türkiye is being implemented through technical cooperation between the Ministry of Labour and Social Security and the World Bank.

Green Transformation in Education and Training



The education provided under the title “Green Transformation in Education and Training” within the scope of Green Deal Action Plan (YMEP) is of critical importance in building sustainable development in a holistic manner with its dimensions such as climate, energy, economy, agriculture, etc., adopting a sustainable lifestyle by the society, evolving this competence into a common understanding and ensuring its continuity. In this context, quality education is one of the sustainable development goals defined under the UN 2030 agenda. In Türkiye, with the aim of raising awareness on sustainable living, work is being carried out within the Green Transformation Specialised Working Group in Education and Training coordinated by the Ministry of National Education. In this respect, weekly curricula at primary and secondary education levels were updated and courses in the relevant field were added, an environmental literacy guide was prepared, workshops were organised to raise awareness, the Education for Sustainable Living Project was launched in April 2023, and activities were carried out within the scope of TÜBİTAK scholarship and support programmes.

Diplomacy

“Diplomacy” is critical to the successful execution and continuity of the sustainable transformation process, achieving social, ecological and economic goals, as well as elevating a nation’s position in the global value system. In this context, the proper design and implementation of the Green Deal initiative led by the EU, with which Türkiye has a strong trade partnership, is regarded as a critical step towards increasing the country’s financial power in the global system.

European Green Deal Informing and Awareness-Raising Activities

In relation to the European Green Deal, informative and awareness-raising activities were organised at the national level and meetings were held with relevant ministries, organisations, and specialised working groups. In this framework, diplomatic negotiations are being carried out between Türkiye and the European Union, and cooperation is being carried out to ensure regular contact with EU member states and to establish a strong relationship. With this action plan, it is aimed that social actors internalise sustainable development in all its dimensions and that these actors assume a more effective role and take steps in this direction with a higher level of awareness during and after the process.





ANKARA MİLLET BAĞÇESİ'NE KAVUŞUYOR



ANKARA
MİLLET BAĞÇESİ'NE
KAVUŞUYOR

28 EKİM 2021



ANKARA
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KAVUŞUYOR

28 EKİM 2021



Chapter VIII

SUSTAINABLE DEVELOPMENT GOALS AND TÜRKİYE

Sustainable Development Goals and Türkiye

The 2030 Agenda for Sustainable Development, which was agreed upon by world leaders at the United Nations (UN) Sustainable Development Summit in September 2015, was adopted with the signatures of 193 countries. As a continuation of the Millennium Development Goals (MDGs) that were eventualised in 2000 and as an agenda that furthers these goals, the 2030 Agenda acknowledges the eradication of poverty in all its dimensions as an essential component of sustainable development and aligns efforts to combat climate change with economic and social development issues.

The 2030 Agenda aims to involve all societies in the pursuit of reducing poverty and enhancing prosperity on a global scale, as well as to safeguard cultural and social values and prevent environmental damage. Social and environmental issues such as gender equality, addressing the needs of disadvantaged groups, reduction of food waste, combating desertification and drought, and the protection of biodiversity are all included in this new global development approach. In addition to these issues, economic issues such as economic growth, technological development, employment, and industrialisation have also been incorporated into the sustainable development agenda.

Within the 2030 Agenda, which aims to establish a more sustainable trajectory for global development, a total of 17 Sustainable Development Goals (SDGs) have been defined.

THE GLOBAL GOALS For Sustainable Development



The primary goal of the SDGs is to guarantee that no nation or individual is left behind in the development process, as encapsulated by the slogan “Leave no one behind” during the 2015-2030 period. The SDGs provide a comprehensive framework encompassing the economic, social, and environmental dimensions of sustainable development with a total of 169 objectives while also addressing the universal need for development.

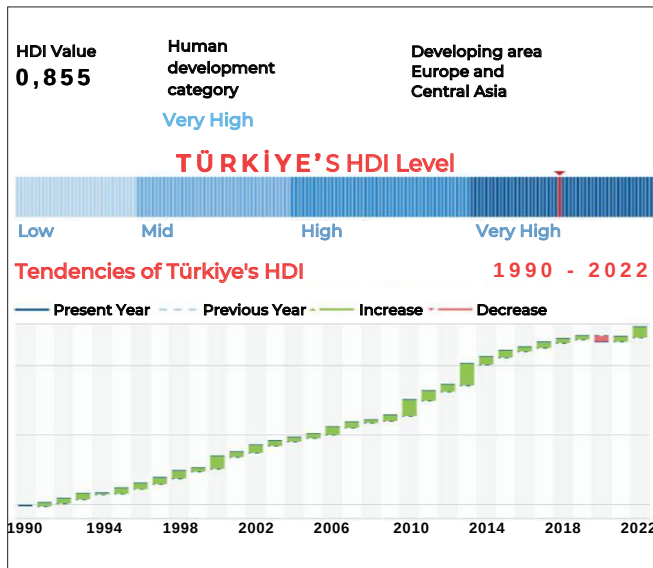
Additionally, the SDGs adopt the targets to eliminate inequalities, strengthen economic growth and employment, improve cities and other settlements, enable industrialisation, protect oceans and ecosystems, ensure sustainable production and consumption of energy, combat climate change, enhance sustainable production and consumption, and strengthen human rights.

Following the United Nations (UN) Conference on Environment and Development in Rio in 1992, Türkiye included the concept of sustainable development in its agenda in 1996 and, in the following years, reflected this concept in its development plans and numerous policy documents. In addition to development plans, sectoral and thematic national policy and strategy documents that incorporate the concept of sustainability have become critical components of Türkiye’s sustainable development agenda.

The Presidency of Strategy and Budget is the institution responsible for the preparation of development plans and the coordination of the implementation, monitoring, and reporting of SDGs throughout the country. In this context, the Presidency of Strategy and Budget ensures that the Development Plan is aligned and consistent with the SDGs. Responsibility for implementing the SDGs lies with all relevant ministries and institutions. This is an advantage for the operation of SDGs and their integration into all relevant strategy and policy documents at central and local levels.

The Turkish Statistical Institute (TURKSTAT) is responsible for monitoring the 2030 Agenda in terms of indicators. In order to monitor sustainable development, TURKSTAT has been producing national sustainable development indicators consisting of 132 indicators in 10 categories in cooperation with relevant institutions since 2000. SDG indicators have been integrated into the Official Statistics Programme covering 2017-2021.

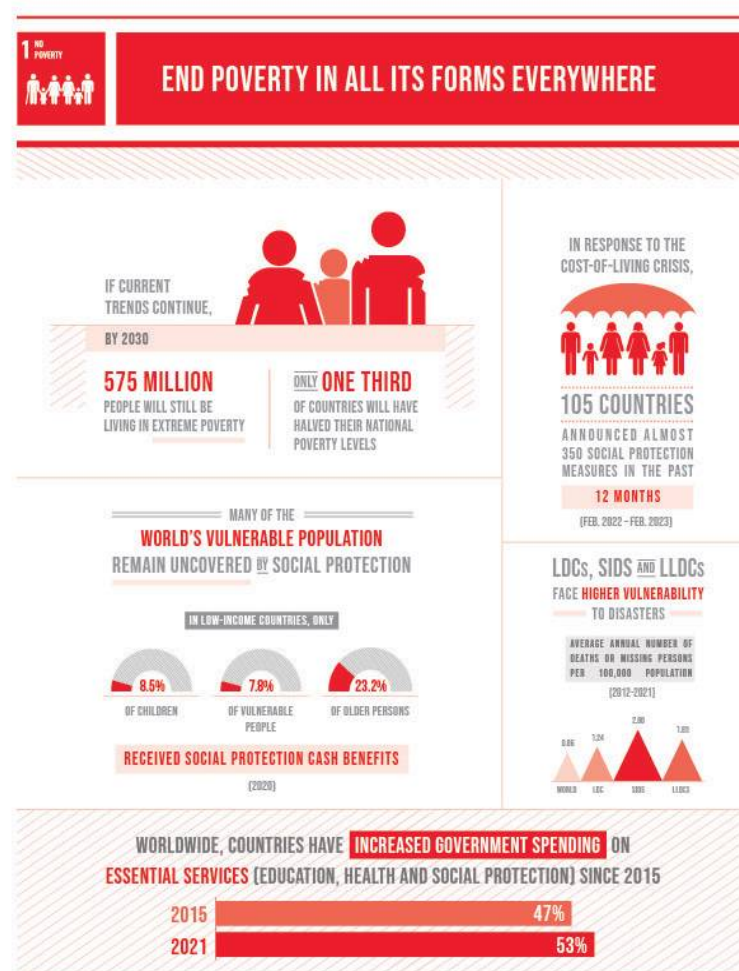
Human Development Index (HDI)



The HDI is a summary measure that assesses average achievement in the three main dimensions of human development: a long and healthy life, access to information and a decent standard of living. With an HDI value of 0.855 in 2022, Türkiye ranked 45th out of 193 countries and regions in the Very High Human Development category.

Türkiye's HDI increased by 43 per cent between 1990 and 2022, rising from 0.598 to 0.855. Between 1990 and 2022, life expectancy at birth in Türkiye changed by 10.8 years, expected years of schooling by 10.8 years, and average years of schooling by 4.4 years. Türkiye's GNP per capita changed by about 154.3 per cent between 1990 and 2022.

Türkiye aims to ensure effective coordination among all stakeholders in the implementation of the 2030 Agenda. The 2030 Agenda places responsibility not only on governments but also on the business world, NGOs and academia. For the planning, implementation and review of SDGs, Türkiye aims to provide a national environment that effectively incorporates the contributions of all stakeholders. For this purpose, it is important to increase the alignment of the SDGs with Türkiye's priorities, to monitor them and to improve the institutional framework.



SDG 1 (End Poverty): Türkiye is one of the countries that has made the most progress in poverty reduction in international comparisons. The main prerequisites of this SDG are: the expansion of the scope of assistance for disadvantaged groups, the increase in support for the improvement of the inclusion of employable individuals in the labour market, the enhancement of the effectiveness of social protection expenditures, the generation of additional data on poverty, and the development of distinctive policies based on this data.



1.1 billion out of 6.1 billion people in 110 countries live in poverty

According to UNDP's 2023 Global Multidimensional Poverty Index, 1.1 billion of the 6.1 billion people living in 110 countries struggle with poverty

Poverty rate in low-income countries increased between 2020-2023

5 OUT OF EVERY 6 POOR PEOPLE IN THE WORLD LIVE IN SUB-SAHARAN AFRICA OR SOUTH ASIA



● Number of poor people

● Poverty rate

East Asia and the Pacific 106 MILLION



South Asia 389 MILLION



Sub-Saharan Africa 534 MILLION



165 million more people living on less than \$3.65 a day in the last 3 years

Outside South Asia and Sub-Saharan Africa, 65% of those struggling with poverty are in China, Indonesia, Myanmar, Sudan and Yemen

16.10.2023 Kaynak: UNDP



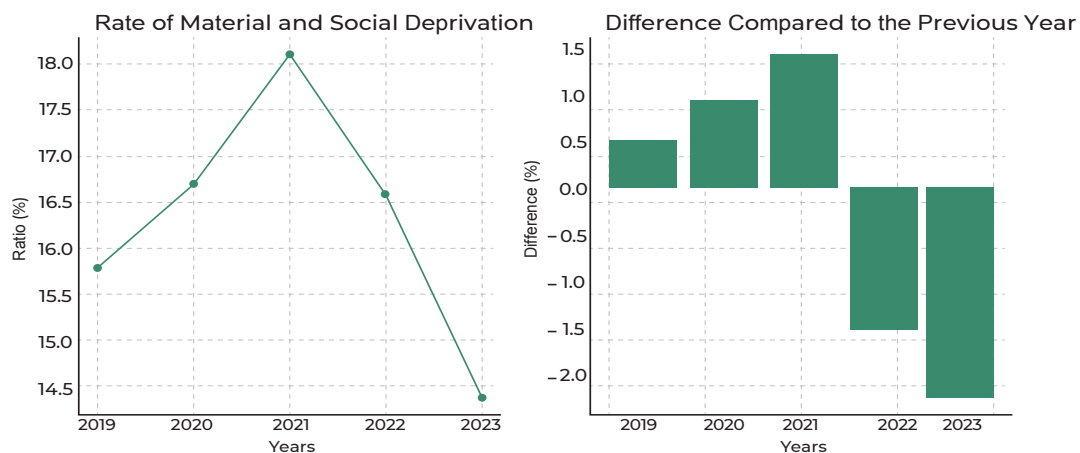
In terms of relative poverty, individuals with incomes that are below a specific threshold in comparison to the general level of society are regarded as such. Türkiye's poverty rate decreased by 0.5 percentage points to 13.9% in 2023, as indicated by the poverty threshold that is contingent upon 50% of median household disposable income. The poverty rate, which is calculated by the poverty threshold at 60% of median income, increased by 0.1 percentage points to 21.7% in the previous year.

Equivalent household disposable income-based poverty rate (%), 2014-2023

Survey Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Income Reference Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40% of Median Income	8.7	8.7	8.4	7.4	7.9	8.3	8.9	8.5	7.6	7.4
50% of Median Income	15.0	14.7	14.3	13.5	13.9	14.4	15.0	14.4	14.4	13.9
60% of Median Income	21.8	21.9	21.2	20.1	21.2	21.3	21.9	21.1	21.3	21.7
70% of Median Income	29.4	29.5	28.7	28.1	28.5	28.5	29.0	28.7	29.3	29.7

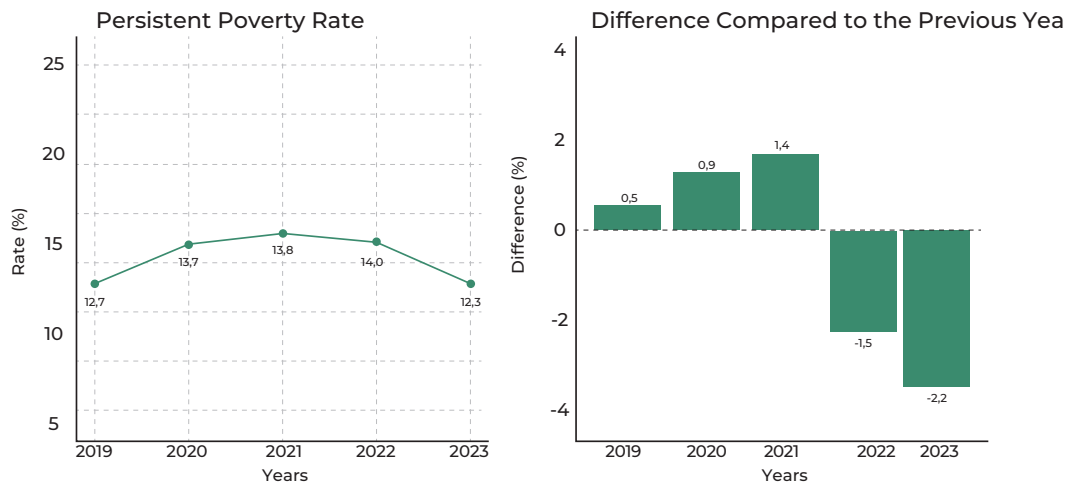
The household-level variables that are assessed in the calculation of the material and social deprivation rate include car ownership, the capacity to make economically unexpected expenditures, the ability to pay for a one-week vacation away from home, the capacity to pay rent, mortgage loans, and interest-bearing debts, the capacity to consume a meal that includes meat, poultry, and fish every other day, the capacity to meet the heating needs of the house, and the capacity to replace furniture as it ages. The variables collected at the individual level for this ratio are: the ability to replace old clothes with new ones, the possession of two pairs of decent shoes, the ability to meet with acquaintances at least once a month, the ability to participate in paid leisure time activities, the ability to spend some money to feel good about oneself, and the accessibility of the internet for personal use. The rate of material and social deprivation, which is defined as the percentage of individuals who are unable to meet at least seven of these criteria, was 16.6% in 2022 and is projected to decrease to 14.4% in 2023 survey results, a 2.2-point decrease.

Material and Social Deprivation Rate and Difference Compared to the Previous Year, 2019-2023



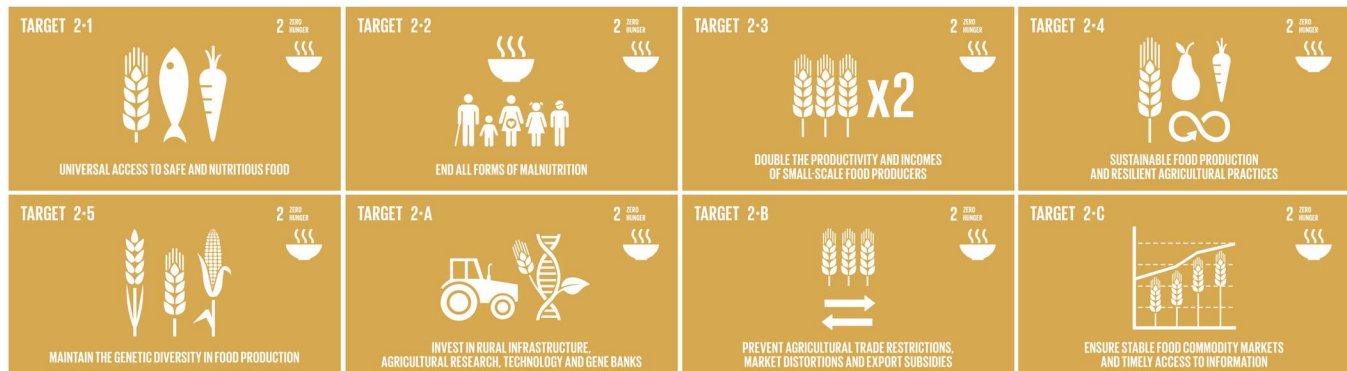
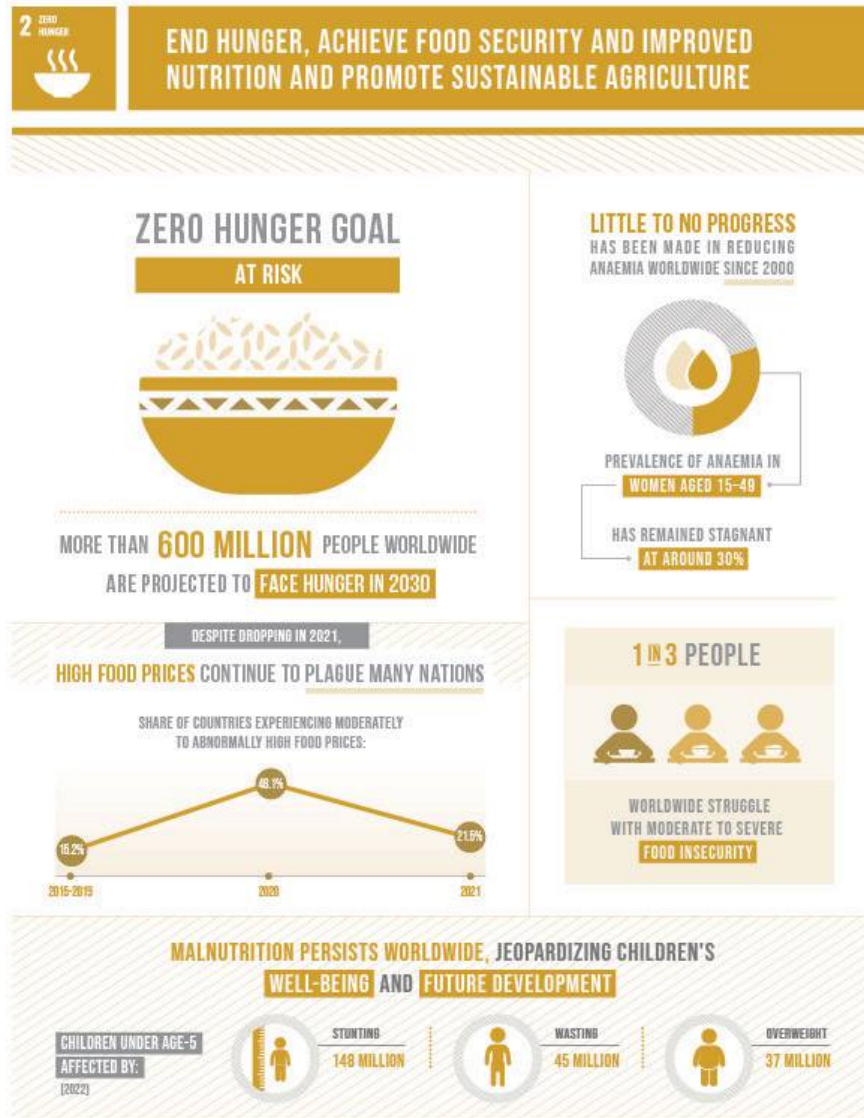
The persistent poverty rate, which is determined by four-year panel data, encompasses individuals who were impoverished at 60% of the median household disposable income in the previous year and in at least two of the previous three corresponding years. The persistent poverty rate is 12.3%, a 1.7-point decrease from the previous year, as indicated by the 2023 survey results.

Persistent Poverty Rate and Difference Compared to the Previous Year, 2019-2023

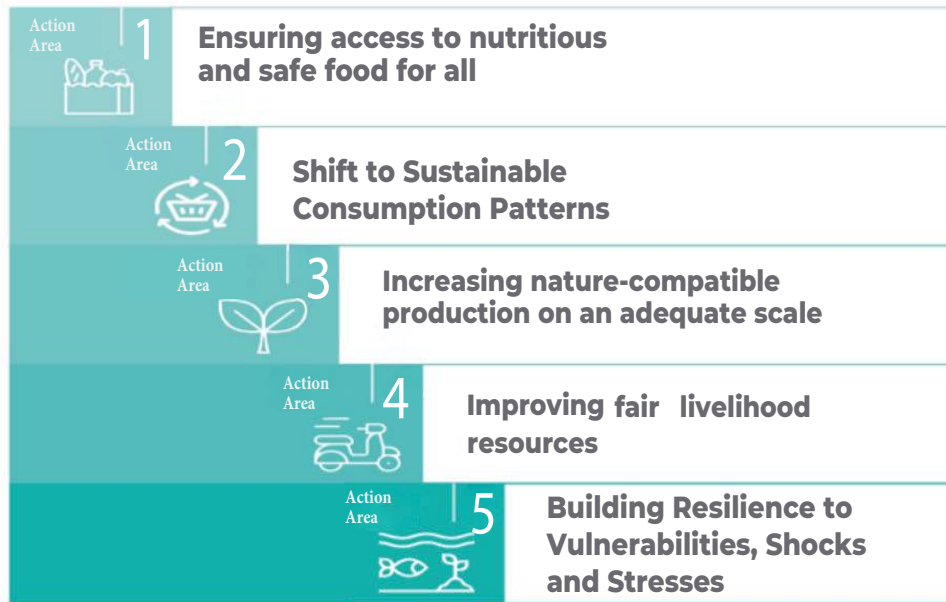


Türkiye has made substantial progress regarding implementation when the achievements are evaluated by taking serious steps in the areas of policy, legislation, and project development during the 2000-2024 period in order to reduce poverty for vulnerable groups by half, ensure that social protection systems and measures significantly cover poor and vulnerable groups, and increase the access of the impoverished to economic resources and basic services according to national definitions. In this regard, Türkiye is among the nations that have made the most rapid advancement at the international level during this period. Nevertheless, it is imperative to persist in the pursuit of the 2030 goals.

SDG 2 (Zero Hunger): Türkiye is one of the top countries that have made progress in reducing hunger in international comparisons. However, needs such as relative poverty and meeting basic nutritional needs persist. It is crucial to sustain and reinforce progress. The main prerequisites of this SDG are: enhancing the quality of nutrition, ensuring the diversity of food necessary for a balanced and adequate diet through domestic production, increasing agricultural productivity, sustaining progress on resilient agricultural practices, minimising and controlling price fluctuations, reducing rural poverty, disseminating precision agricultural technologies, protecting genetic diversity, and taking measures against biological, biotechnological, and genetic attacks.



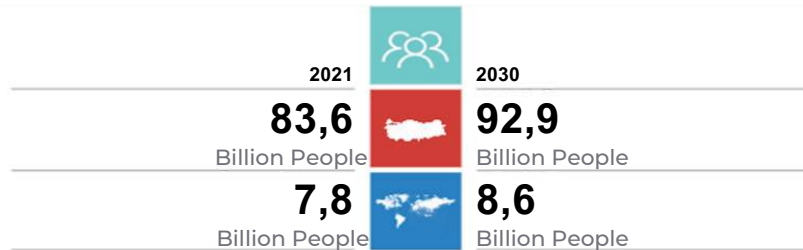
Within the context of sustainable development, five primary action plans were established as part of the framework of the UN Food Systems Summit, which was held in 2021 with the objective of eliminating starvation by 2030. Türkiye makes a global contribution to Action Areas 2 and 5 (“Shift to Sustainable Consumption Patterns” and “Building Resilience to Vulnerabilities, Shocks and Stresses”). Nevertheless, the national dialogue procedure was implemented for all five working groups.



Currently, the world is confronted with a variety of global challenges that cause food insecurity. In accordance with the SOFI 2020 Report published by the FAO (Food and Agriculture Organisation), approximately 690 million individuals were malnourished in 2019, prior to the COVID-19 pandemic. In 2019, around 750 million individuals worldwide, or one in every ten individuals, were experiencing acute food insecurity due to the pandemic. Furthermore, over two billion individuals worldwide lack regular access to secure, nutritious, and ample food.

If the upward trend persists, the number of famished individuals is anticipated to exceed 840 million by 2030, and Sustainable Development Goal No. 2 could fail to be attained. According to the UN’s data, the worldwide population is anticipated to increase from 7.8 billion in 2019 to 10 billion by 2050. Conversely, the quantity of agricultural land per capita is anticipated to decrease from 2.0 decares to 1.6 decares. Hence, by 2050, it will be essential to increase food production by 50%.

Food security is influenced by a variety of factors on a national and global scale, including fluctuations in food prices, increasing population and demand for food, changing consumption habits, conflicts and economic fluctuations worldwide, increases in agricultural input prices, climate change and its impacts on agricultural production, limitations of natural resources, agricultural production affected by land degradation, efficiency of natural resources, declining water resources, rapid urbanisation and migration from rural to urban areas, inadequate logistics infrastructure, and, most recently, the effects of COVID-19 on food supply. Consequently, in order to resolve contemporary issues and accomplish the Sustainable Development Goals of the United Nations (UN) 2030 Agenda, it is necessary to address food systems in a sustainable fashion through a comprehensive and organised strategy. Sustainable food systems can be a useful instrument for guaranteeing the economic, social, and environmental well-being of future generations, as well as ensuring adequate nutrition and food security for all.



Covid-19
Approximately 132 million people have been added to the number of people suffering from hunger. In 2020, 720 to 811 million people faced hunger.



931 million tons of food was wasted.
This means that 17% of global food production is wasted.



2% of children under 5 years of age are developmentally delayed.

Agricultural organisations, including cooperatives, producer and irrigation unions, farmer associations, and agricultural professional organisations, are a critical component of Türkiye's sustainable food systems. Türkiye is not only one of the most well-performing countries in agricultural production, but it is also a world leader in the production of numerous agricultural products.

100th Anniversary of Republic

Agriculture



Türkiye, an important agricultural country from past to future, is strengthening its position among the countries that have a say in the sector.



2002-2022 Period

Amount of incentives and grants for agriculture:

\$70 BILLION

The production value it generates:

\$1 TRILLION

AGRICULTURAL PRODUCTION

IN TÜRKİYE

IN EUROPE

1ST EUROPE

IN THE WORLD

TOP 10

TÜRKİYE'S AGRICULTURAL PRODUCTION (BILLION DOLLARS)

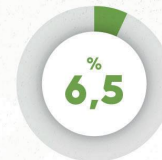


EXPORTS OF AGRICULTURAL PRODUCTS (BILLION DOLLARS)

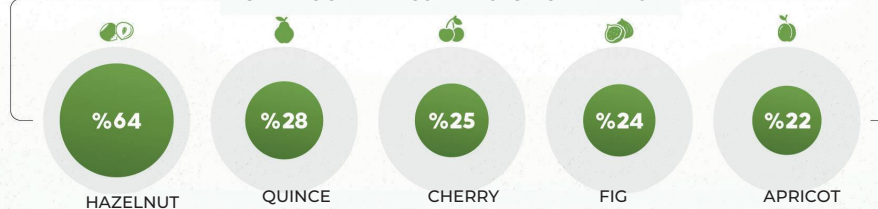


2022 SHARE OF AGRICULTURE IN GDP

(In the world 9th country with agricultural GDP)



TÜRKİYE'S SHARE IN SOME PRODUCTS IN THE WORLD

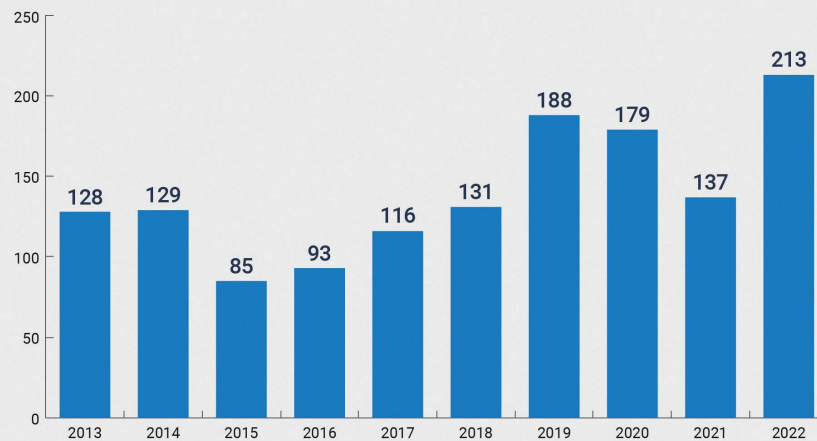


The number of agricultural development cooperatives established is at the peak of the last 10 years

In the last 10 years, 1399 agricultural development cooperatives were established in Türkiye. 2022 was the year with the highest number of cooperatives established in this period with 213 cooperatives.

NUMBER OF COOPERATIVES ESTABLISHED IN THE LAST 10 YEARS	IN ALL CATEGORIES	AGRICULTURAL DEVELOPMENT COOPERATIVES
	11.646	1.399

Number of agricultural development cooperatives (annual)



25.01.2023 Source: Union of Chambers and Commodity Exchanges of Türkiye (TOBB)

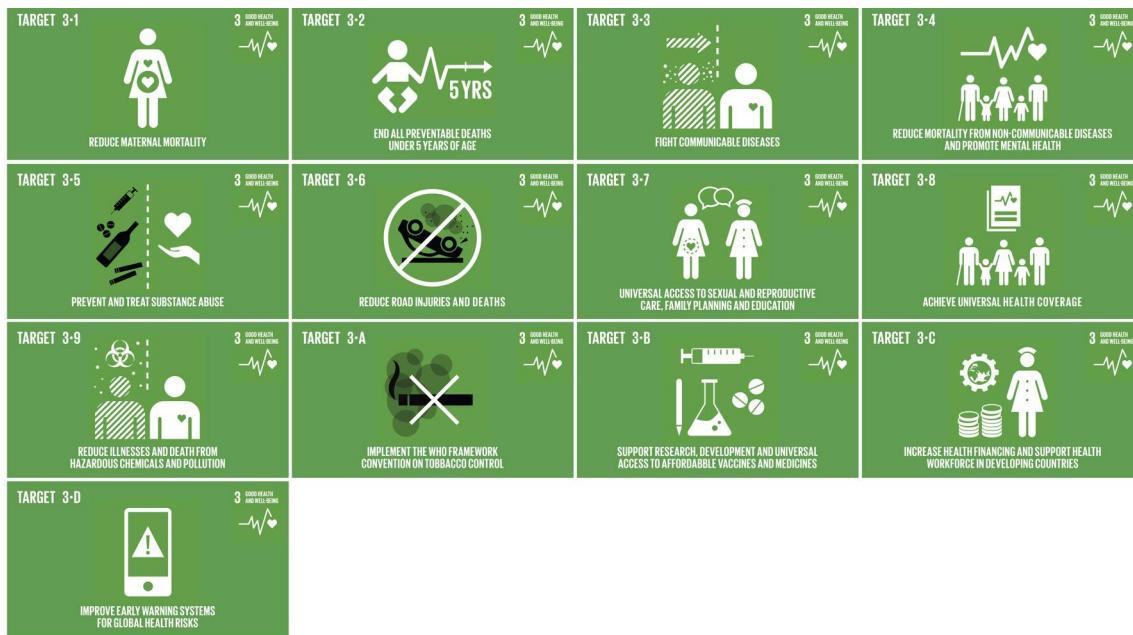


Türkiye is the world's leading producer of hazelnut, cherry, fig, apricot, and quince; the second largest producer of melon and carob; and the third largest producer of tangerine, apple, cucumber, and watermelon. Türkiye is also a global leader in the production of walnuts, olives, tomatoes, pistachios, strawberries, lemons, and beans. Türkiye is a net exporter of agricultural commodities. Processed vegetables and fruits, flour (ranked first in world flour exports), and pasta (ranked second in world pasta exports) continue to be significant exports despite the diversification of agricultural products in foreign trade.

SDG 3 (Good Health and Well-being): The main prerequisites of this SDG are to enhance the fight against non-communicable diseases, provide preventive health services, increase the number of health personnel per capita, develop environmental health policies to address the growing global risks, particularly climate change, and implement further measures to prevent food poisoning and foodborne diseases.

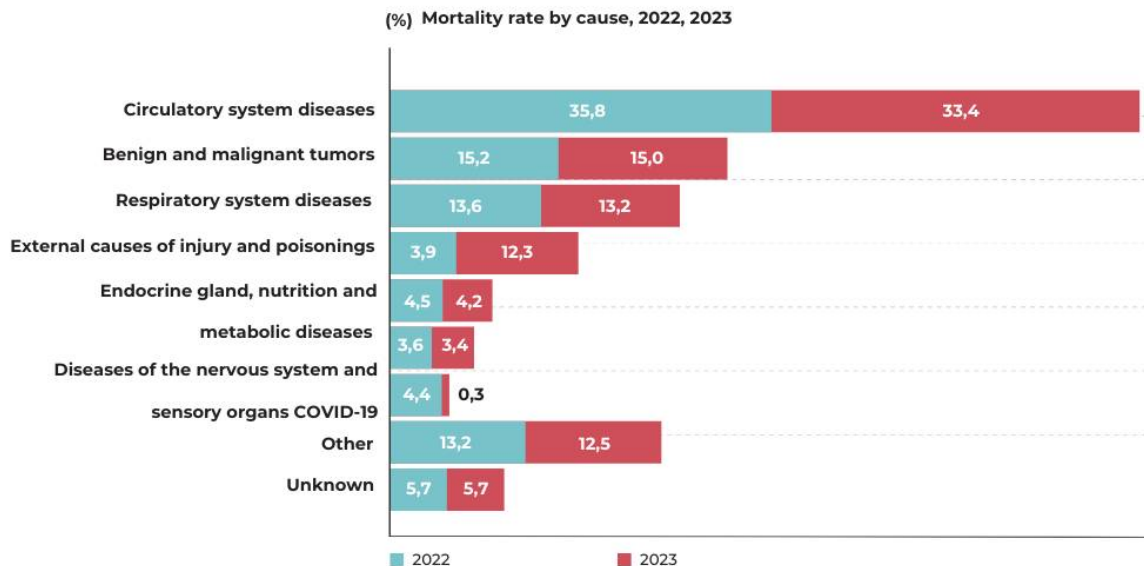


Türkiye is substantially far exceeding global targets and averages in numerous objectives, particularly in the prevention of infectious diseases and maternal and infant mortality. In particular, there has been an upward trend in numerous indicators over the past 15 years. Nevertheless, migration to Türkiye since 2011 has led to the resurgence of diseases such as measles, particularly among children, and the subsequent failure to achieve the desired results in vaccination campaigns.



When analysed by causes of death, in 2023, circulatory system diseases were the most prevalent cause of mortality in Türkiye, accounting for 33.4% of all fatalities. Following this cause of death were benign and malignant tumors with 15% and respiratory system diseases with 13.2%. The proportion of deaths due to external causes of injury and poisoning, including earthquake-related deaths, was 12.3%. 45,784 Turkish citizens died due to the Kahramanmaraş-centred earthquakes on February 6.

Mortality rate by cause, 2022, 2023



Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Health Expenditure (Million TL)	4985,0	8248,0	12396,0	18774,0	24279,0	30021,0	35359,0	44069,0	50904,0	57740,0	57911,0	61678,0	68607,0	74189,0	84390,0	94750,0	104568,0	119756,0	140647,0	165234,0	201031,0	249932,0	353941,0	606835,0
Health Expenditure per Capita (TL)	79,0	128,0	190,0	284,0	363,0	444,0	517,0	635,0	725,0	813,0	804,0	843,0	924,0	987,0	1108,0	1228,0	1337,0	1511,0	1751,0	2030,0	2434,0	2997,0	4206,0	7141,0
Total Health Expenditure to Gross National Product (%)	4,6	4,8	5,0	5,2	5,1	5,2	5,2	5,5	5,7	5,8	5,8	5,3	4,9	4,7	4,6	4,6	4,4	4,4	4,5	4,4	4,7	5,0	4,9	4,0
General Government Expenditure to Total Health Expenditure (%)	61,1	62,9	68,1	70,7	71,9	71,2	67,8	68,3	67,8	73,0	81,0	78,6	79,9	79,2	78,5	77,4	78,5	78,5	78,0	77,5	78,0	79,2	79,2	76,4
Private Sector Health Expenditure to Total Health Expenditure (%)	38,9	37,1	31,9	29,3	28,1	28,8	32,2	31,7	32,2	27,0	19,0	21,4	20,4	20,8	21,5	22,6	21,5	220,0	225,0	22,0	20,8	23,6	22,0	23,6

Total health expenditure increased by 71.5% in 2022 compared to the previous year, reaching 606 billion 835 million TRY. General government health expenditures increased by 65.4%, reaching 463 billion 516 million TRY. Private sector health expenditures were estimated at 143 billion 319 million TRY, an increase of 94.4%.

SDG 4 (Quality Education): The extension of compulsory education first to eight years and then to twelve years, as well as improvements in access to education, have enabled Türkiye to make substantial progress on the majority of the SDG 4 targets. Nevertheless, there is a continuing necessity to enhance the quality of education and ensure that it is in accordance with the demands of the labour market, to establish an examination system that is agreed upon by all segments of society, and to offer vocational training. Additionally, it is imperative to enhance the quality of teachers, train the workforce for future competitive jobs, prepare curricula to prepare students for the information society and the digital transformation of industry, and increase access to preschool education. Conversely, Türkiye's endeavours to integrate asylum applicants under temporary protection continue to be significant.



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

DESPITE SLOW PROGRESS,

THE WORLD IS FALLING FAR BEHIND IN ACHIEVING QUALITY EDUCATION

WITHOUT ADDITIONAL MEASURES, BY 2030:



84 MILLION
CHILDREN AND YOUTH
WILL BE OUT OF SCHOOL



300 MILLION
STUDENTS WILL LACK
BASIC NUMERACY/LITERACY
SKILLS



ONLY 1 IN 6
COUNTRIES WILL
ACHIEVE UNIVERSAL
SECONDARY SCHOOL
COMPLETION TARGET

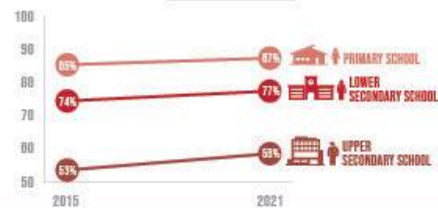


THE PANDEMIC

CAUSED
LEARNING
LOSSES
IN **4 IN 5** OF
104 COUNTRIES
STUDIED

PRIMARY AND SECONDARY SCHOOL COMPLETION RATES ARE RISING, BUT THE PACE IS SLOW AND UNEVEN

COMPLETION RATES

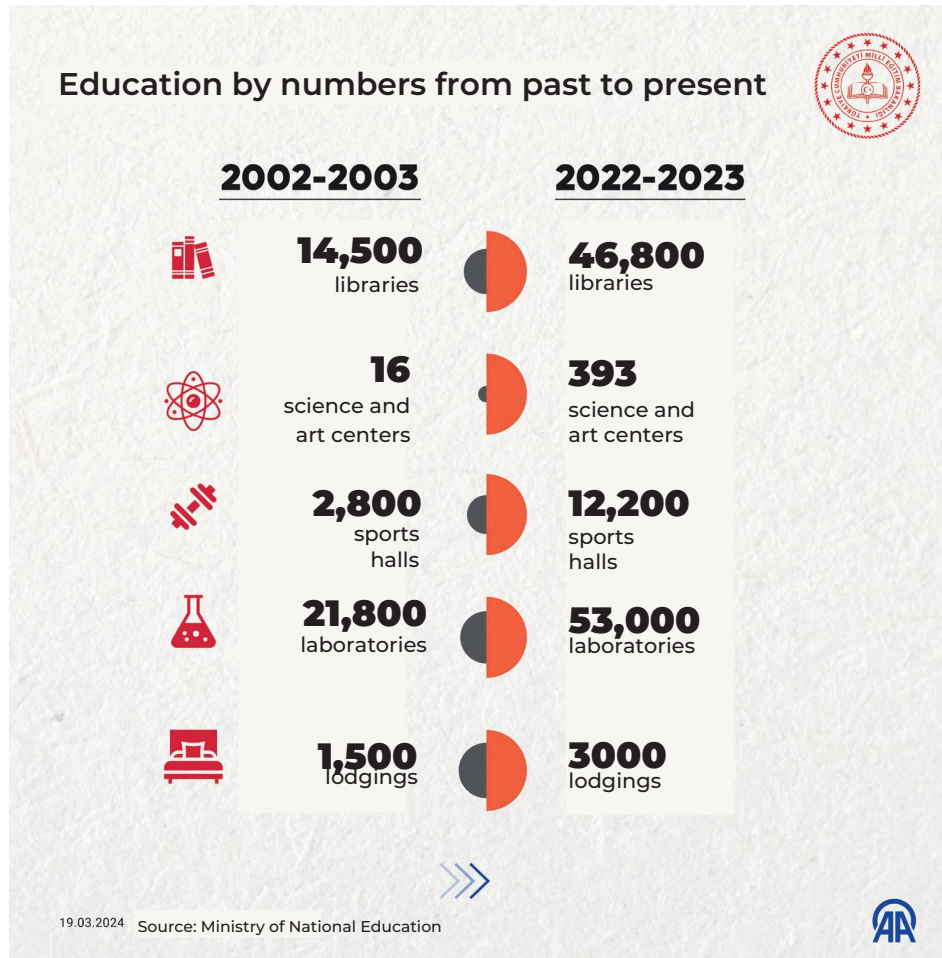


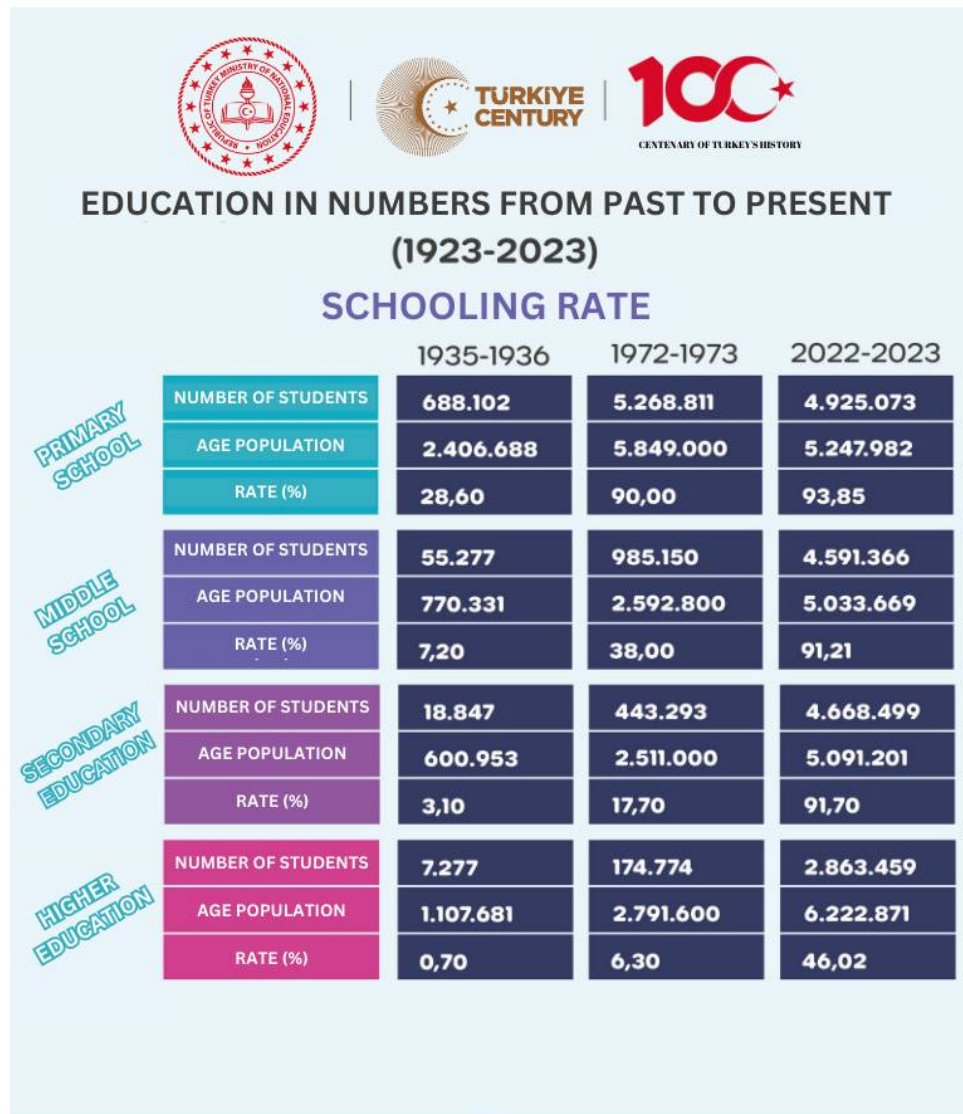
LOW- AND LOWER-
MIDDLE-INCOME COUNTRIES
FACE A NEARLY
\$100 BILLION
ANNUAL
FINANCING GAP
TO REACH THEIR
EDUCATION TARGETS

TARGET 4-1 FREE PRIMARY AND SECONDARY EDUCATION	TARGET 4-2 EQUAL ACCESS TO QUALITY PRE-PRIMARY EDUCATION	TARGET 4-3 EQUAL ACCESS TO AFFORDABLE TECHNICAL, VOCATIONAL AND HIGHER EDUCATION	TARGET 4-4 INCREASE THE NUMBER OF PEOPLE WITH RELEVANT SKILLS FOR FINANCIAL SUCCESS
TARGET 4-5 ELIMINATE ALL DISCRIMINATION IN EDUCATION	TARGET 4-6 UNIVERSAL LITERACY AND NUMERACY	TARGET 4-7 EDUCATION FOR SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP	TARGET 4-A BUILD AND UPGRADE INCLUSIVE AND SAFE SCHOOLS
TARGET 4-B EXPAND HIGHER EDUCATION SCHOLARSHIPS FOR DEVELOPING COUNTRIES	TARGET 4-C INCREASE THE SUPPLY OF QUALIFIED TEACHERS IN DEVELOPING COUNTRIES		

In Türkiye, the possible duration of the education life until the completion of the highest level of education of an individual at the age to start the primary school is 18.2 years as of 2022. The duration an individual of primary school age is likely to spend in education until the completion of secondary education is calculated to be 12.7 years.

In preschool education, the probable duration of education increased from 1.2 years in 2018 to 1.6 years in 2022. Thus, the probable duration of preschool education increased by 32.5% for 2018-2022.

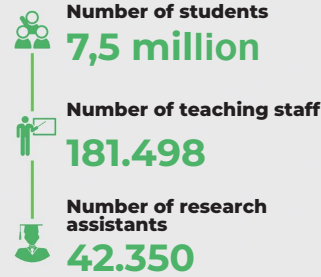
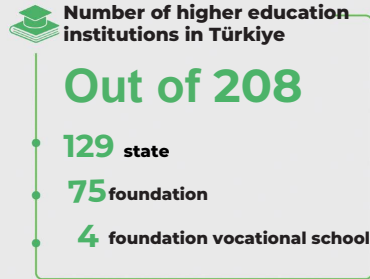




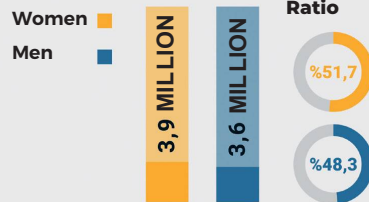
The net enrolment rate in higher education in Türkiye increased from 44.7% in the 2021/2022 academic year to 46% in the 2022/2023 academic year. When the net enrolment rate in higher education is analysed by gender, this rate increased from 40.3% to 41.1% for males and from 49.2% to 51.2% for females.

52 out of every 100 university students in Türkiye are female

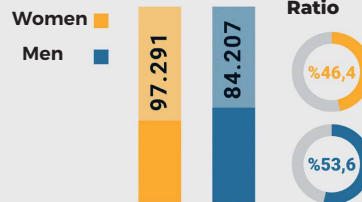
Of the 7.5 million students studying at universities in Türkiye, 3.9 million are female students.



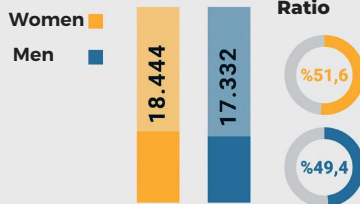
NUMBER OF STUDENTS



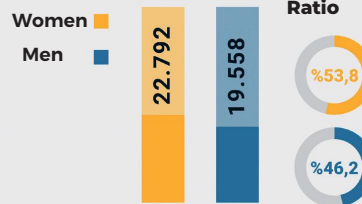
NUMBER OF ACADEMIC STAFF



NUMBER OF TEACHING STAFF



NUMBER OF RESEARCH ASSISTANTS



12.02.2024



SDG 5 (Gender Equality):

While there have been substantial improvements in preventing child marriage, access to education and employment, and reproductive and sexual health on a global scale in recent years, gender equality continues to be a critical concern for nearly all nations.

In an effort to eradicate gender inequality, Türkiye has taken important steps and made progress in terms of legislation and policies over the course of several years. Significant legal regulations have been established and are being implemented, particularly in the areas of women's health, education, and employment. Although these advancements

have been made, it is imperative to address the practical challenges that arise; it is crucial to prevent violence against women and reinforce all policies designed to eradicate gender inequality, which are prevalent in the following areas: political representation, economic activity, participation in the labour force, harmony between work and private life, vocational-technical training and use of technology.

5 GENDER EQUALITY

ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

THE WORLD IS
NOT ON TRACK TO ACHIEVE
GENDER EQUALITY BY 2030

OUT OF GOAL 5 INDICATORS:



■ "ON TRACK"
■ AT A MODERATE DISTANCE
■ FAR OR VERY FAR OFF TRACK

AT THE CURRENT RATE, IT WILL TAKE



300 YEARS
TO END CHILD
MARRIAGE



286 YEARS TO CLOSE GAPS
IN LEGAL PROTECTION AND
REMOVE DISCRIMINATORY LAWS



140 YEARS TO ACHIEVE
EQUAL REPRESENTATION IN
LEADERSHIP IN THE WORKPLACE

LEGISLATED GENDER QUOTAS
ARE **EFFECTIVE** TO ACHIEVE
EQUALITY IN POLITICS

WOMEN'S REPRESENTATION IN PARLIAMENT
(2022)



30.9%
COUNTRIES
APPLYING QUOTAS

21.2%
COUNTRIES
WITHOUT QUOTAS



NEARLY HALF OF MARRIED WOMEN
LACK DECISION-MAKING POWER
OVER THEIR SEXUAL AND
REPRODUCTIVE HEALTH AND RIGHTS

1 IN 5 YOUNG WOMEN

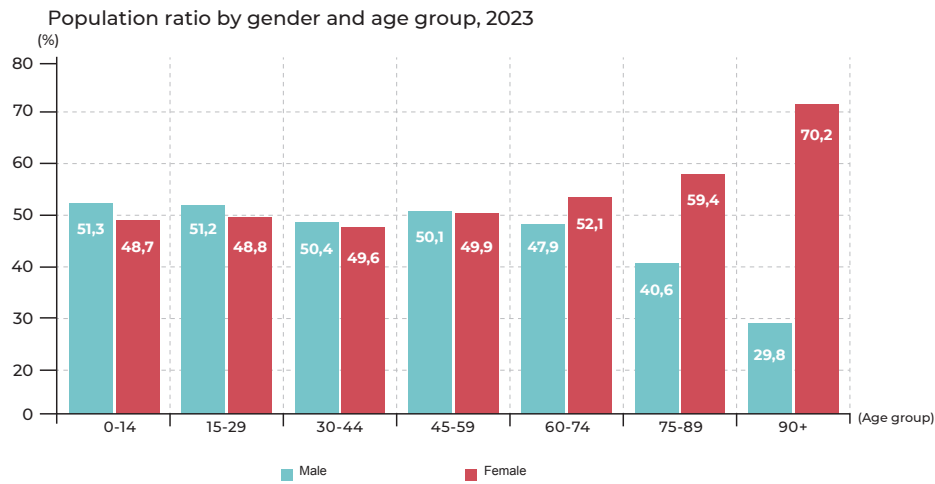
ARE MARRIED
BEFORE THEIR 18TH BIRTHDAY



TARGET 5-1 END DISCRIMINATION AGAINST WOMEN AND GIRLS	TARGET 5-2 END ALL VIOLENCE AGAINST AND EXPLOITATION OF WOMEN AND GIRLS	TARGET 5-3 ELIMINATE FORCED MARRIAGES AND GENITAL MUTILATION	TARGET 5-4 VALUE UNPAID CARE AND PROMOTE SHARED DOMESTIC RESPONSIBILITIES
TARGET 5-5 ENSURE FULL PARTICIPATION IN LEADERSHIP AND DECISION-MAKING	TARGET 5-6 UNIVERSAL ACCESS TO REPRODUCTIVE HEALTH AND RIGHTS	TARGET 5-A EQUAL RIGHTS TO ECONOMIC RESOURCES, PROPERTY OWNERSHIP AND FINANCIAL SERVICES	TARGET 5-B PROMOTE EMPOWERMENT OF WOMEN THROUGH TECHNOLOGY
TARGET 5-C ADOPT AND STRENGTHEN POLICIES AND ENFORCEABLE LEGISLATION FOR GENDER EQUALITY			

According to the results of the Address Based Population Registration System (ABPRS), as of December 31, 2023, the female population is 42 million 638 thousand 306 and the male population is 42 million 734 thousand 71. In other words, females constitute 49.9% of the total population, while males constitute 50.1% of it. This proportional balance between women and men changes in favour of women from the age group of 60 and above, due to the fact that women live longer. The proportion of the female population is 52.1% in the 60-74 age group and 70.2% in the 90 and over age group.

Population ratio by gender and age group, 2023



The gender equality index for MES at ISCED 1-8 level (primary school-higher education) was 1.01 in 2022. The index, which was 0.97 in 2018, has changed in favour of women with an increase of 0.04 points in the last five years.

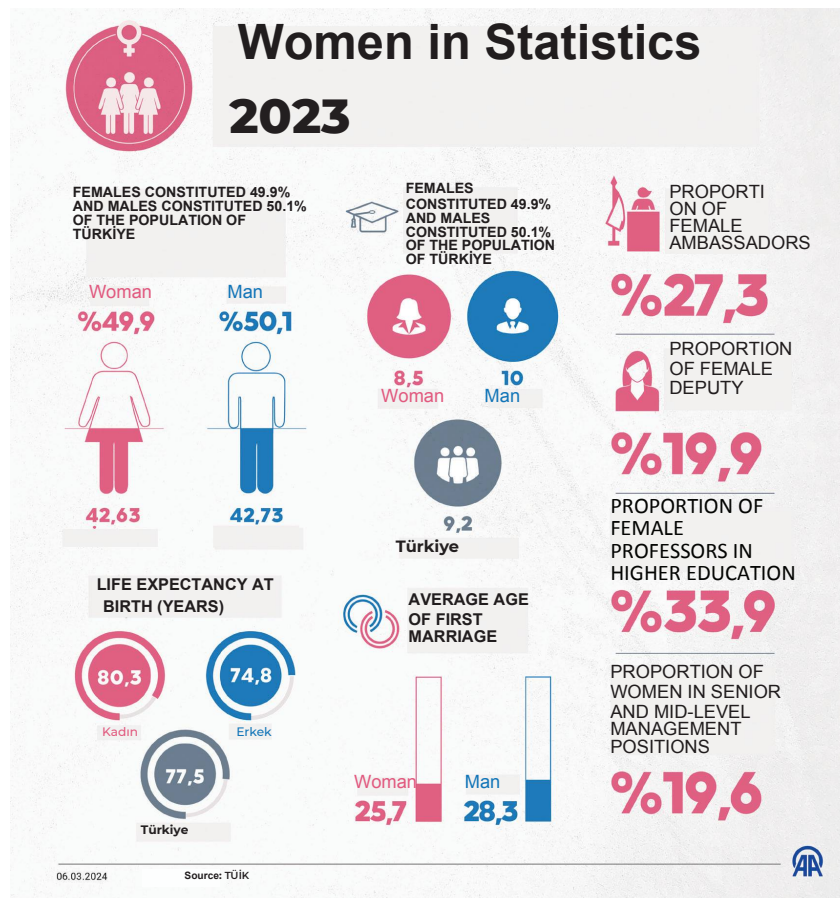
According to the National Education Statistics, the proportion of the population aged 25 and over who have graduated from colleges and faculties, master's degrees and doctorates in the total population increased from 9.1% in 2008 to 23.5% in 2022. When this rate is analysed by gender, while the proportion of women aged 25 and above who are higher education graduates was 7.1% for women and 11.2% for men in 2008, this rate became 21.6% for women and 25.5% for men in 2022.

According to the results of the Household Labour Force Survey, the labour force participation rate of the population aged 15 and over in 2022 is 53.1%. This rate is 35.1% for women and 71.4% for men.

When the labour force participation rates of women are analysed by educational status, it is observed that women participate in the labour force more as their educational level increases. These rates are 13.9% for illiterates, 27.1% for those with less than high school education, 36.1% for high school graduates, 43% for vocational or technical high school graduates, and 68.8% for higher education graduates.

According to the results of the Household Labour Force Survey, the share of part-time workers in employment was 9.8% in 2022. This rate is 16.1% for women and 6.7% for men. The employment rate of individuals in the 25-49 age group with children under the age of 3 in their household was 59.8% in 2014 and 60.5% in 2022. When this rate is analysed by gender, it is seen that in 2022, the employment rate of women in the 25-49 age group with children under the age of 3 in their households is 28%, while the employment rate of men is 90.5%.

According to data from the Grand National Assembly of Türkiye, as of the end of 2023, among 599 members of the parliament, the number of females was 119, while the number of males was 480. The proportion of women members of the parliament was 9.1% in 2007 and 19.9% in 2023.



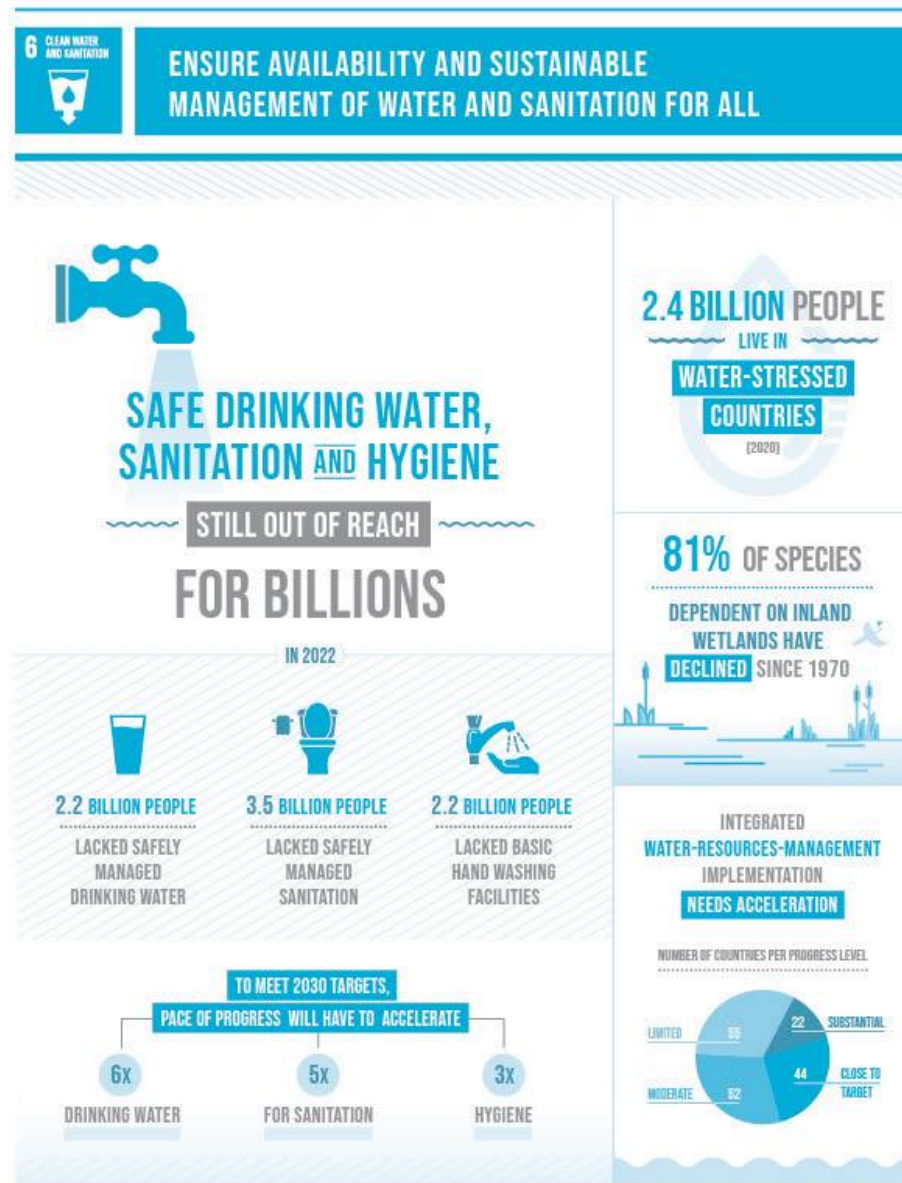
According to the results of the Household Labour Force Survey, the rate of women in top and middle management positions in companies was 14.4% in 2012 and 19.6% in 2022.

Full Time Equivalent (FTE), which is calculated by dividing the time spent on R&D activities by an individual or group in a given period (usually a calendar year) by the total hours worked in the same period, takes a value between 0 and 1 and is used in international R&D personnel comparisons. According to the results of the Research and Development Activities Survey, the number of female R&D personnel in terms of FTE constituted 34.1% of the total number of R&D personnel in 2022 with 93 thousand 41 people. On the basis of sectors, the proportion of female R&D personnel in terms of FTE is 47.5% in higher education, 31% in government, including non-profit organisations, and 27.3% in financial and non-financial corporations.

According to the Marriage Statistics, the average age of those who had their first official marriage in 2023 is 25.7 years for women and 28.3 years for men.

According to the results of the Household Information Technologies Usage Survey, the Internet usage rate of individuals in the 16-74 age group was 87.1% in 2023. This rate is 83.3% for women and 90.9% for men.

SDG 6 (Healthy Water and Sanitation): Türkiye has achieved continuous improvement in access to the mains water and sewage system. The number of treatment plants and the amount of water treated has also increased. However, in order to mitigate the adverse impacts of rapid urbanisation, economic activities and climate change on water resources, it is imperative to continue the work on integrated water resources management.



TARGET 6-1 SAFE AND AFFORDABLE DRINKING WATER	TARGET 6-2 END OPEN DEFECATION AND PROVIDE ACCESS TO SANITATION AND HYGIENE	TARGET 6-3 IMPROVE WATER QUALITY, WASTEWATER TREATMENT AND SAFE REUSE	TARGET 6-4 INCREASE WATER-USE EFFICIENCY AND ENSURE FRESHWATER SUPPLIES
TARGET 6-5 IMPLEMENT INTEGRATED WATER RESOURCE MANAGEMENT	TARGET 6-6 PROTECT AND RESTORE WATER-RELATED ECOSYSTEMS	TARGET 6-A EXPAND WATER AND SANITATION SUPPORT TO DEVELOPING COUNTRIES	TARGET 6-B SUPPORT LOCAL ENGAGEMENT IN WATER AND SANITATION MANAGEMENT

In line with the UN 2030 Sustainable Development Goal of “clean water and sanitation for all”, Türkiye is endeavouring to ensure that everyone has access to safe and accessible drinking water.

According to the reports of the Intergovernmental Panel on Climate Change, the efficient use of water resources is of paramount importance in the Mediterranean Region, which is one of the regions experiencing negative impacts of climate change on water resources the most.

Taking into account the importance of water usage within the framework of the relationship between “water-food-energy,” hydroelectric energy, food security and sustainable development, Türkiye, both a lower and upper riparian country, while advocating for fair and efficient use of transboundary water sources, sees the situation as a field of cooperation with its neighbours. Türkiye also continues to provide financial and technical assistance in the water sector to the Middle East, Asia and Africa as part of its humanitarian responsibilities.

According to the data of the General Directorate of State Hydraulic Works (DSİ), figures for sectoral water use in Türkiye for 2022 are as follows; 57 billion m3 in total, including 44 billion m3 (77%) for irrigation and 13 billion m3 (23%) for drinking, using and industry. Based on TURKSTAT data, a total of 18.2 billion m3 of water was drawn from water resources by municipalities, villages, manufacturing industry workplaces, thermal power plants, Organised Industrial Zones (OIZ), and mining enterprises in 2020 and 19.2 billion m3 in 2022. In 2022,

Amount of Water Drawn from Water Resources by Usage (billion m3/year)

Years	2008	2010	2012	2014	2016	2018	2020	2022
Municipalities	4,55	4,78	4,94	5,23	5,83	6,19	6,49	6,67
Villages	1,22	1,01	1,04	0,43	0,38	0,39	0,42	0,39
Manufacturing Industry Workplaces	1,31	1,56	1,79	2,20	2,12	2,68	2,60	2,80
Thermal Power Plants	4,54	4,27	6,40	6,53	8,61	7,87	8,28	8,88
Organised Industrial Zones	0,11	0,11	0,14	0,14	0,15	0,16	0,18	0,14
Mining Enterprises	-	0,05	0,11	0,21	0,23	0,24	0,27	0,18
Irrigation	33,77	38,15	41,55	35,85	43,06	43,95	44,0	44,0
Total		49,95	55,96	50,59	60,38	61,48	62,24	63,06

a total of 43.2% of the water drawn was supplied from freshwater resources, of which 56.8% was from the sea, 22.1% from groundwater, and 21.1% from surface water. 94% of the water provided from the sea was drawn for cooling purposes.

The average annual areal precipitation in Türkiye is approximately 574 mm, which corresponds to an average of 450 billion m³ of water per year. Within the framework of today's technical and economic conditions, the surface water potential that can be consumed for various purposes is 94 billion m³ per year on average. Together with Türkiye's groundwater potential, which is determined to be 18 billion m³, Türkiye's consumable surface and groundwater potential is 112 billion m³ per year on average, of which 57 billion m³ is used. The annual amount of water available per capita in Türkiye was 1652 m³ in 2000, 1,544 m³ in 2009, 1,323 m³ in 2021, and 1,322 m³ in 2022.

Water Use by Sector, (2010-2022)



The water exploitation index (WEI) is the average annual total amount of freshwater withdrawals divided by the average annual total renewable freshwater resources at the country level, expressed as a percentage.

According to TURKSTAT 2022 statistics, the average daily per capita amount of water drawn by municipalities to the drinking and domestic water network is 229 litres. The average amount of water drawn per capita per day in the three metropolitan cities is 190 litres for İstanbul, 242 litres for Ankara, and 210 litres for İzmir. The average daily per

Belediye su göstergeleri, 1994-2022													
Municipal water indicators, 1994-2022													
	2001	2002	2003	2004	2006	2008	2010	2012	2014	2016	2018	2020	2022
Municipal population served by water supply network													
İçme ve kullanma suyu şebekesi ile hizmet verilen nüfusun toplam belediye nüfusuna oranı (%)	95	97	97	99	98	99	99	98	97	98	99	99	99
Rate of population served by water supply network in total municipal population (%)													
İçme ve kullanma suyu şebekesi için çekilen toplam su miktarı (bin m ³ /yıl)	4 684 411	4 813 097	4 918 477	4 954 292	5 163 500	4 546 574	4 784 734	4 936 342	5 237 407	5 838 561	6 193 158	6 492 402	6 676 197
Water abstraction for municipal water supply network (thousand m ³ /year)													
Baraj - Dam	1 389 239	1 795 963	1 925 653	1 964 739	1 843 736	1 810 188	2 252 421	2 416 018	1 886 617	2 618 225	2 468 103	2 658 335	2 869 119
Kuyu - Well	1 588 065	1 455 114	1 547 717	1 375 738	1 401 815	1 275 691	1 273 822	1 395 957	1 423 751	1 563 154	1 740 116	1 903 511	1 943 865
Kaynak - Spring	1 062 992	1 294 660	1 206 396	1 363 360	1 380 057	1 060 963	1 015 865	948 133	984 869	1 000 205	1 138 388	1 013 074	1 103 111
Akarsu - River	131 754	131 295	141 194	143 062	305 271	173 928	159 472	78 282	652 370	552 624	560 356	658 985	516 160
Göl-göllet/deniz ⁽¹⁾ - Lake - artificial lake /sea ⁽¹⁾	461 562	136 065	97 517	87 392	232 621	225 805	83 154	97 953	289 800	104 354	206 196	260 497	243 941
İçme ve kullanma suyu şebekesi için çekilen yüzey suyu miktarı (bin m ³ /yıl)	1 962 555	2 063 323	2 164 364	2 215 193	2 381 628	2 209 921	2 495 047	2 592 253	2 828 787	3 275 202	3 314 654	3 575 817	3 629 220
Fresh surface water abstraction for municipal water supply network (thousand m ³ /year)													
İçme ve kullanma suyu şebekesi için çekilen yeraltı suyu miktarı (bin m ³ /yıl)	2 681 857	2 749 774	2 754 113	2 739 098	2 781 872	2 336 654	2 289 687	2 344 090	2 408 620	2 563 359	2 878 503	2 916 585	3 046 977
Fresh ground water abstraction for municipal water supply network (thousand m ³ /year)													
Kişi başı çekilen günlük su miktarı (litre/kişi-gün)	252	255	259	255	245	215	216	216	203	217	224	228	229
Water abstraction per capita in municipalities (liters/capita-day)													
İçme ve kullanma suyu şebekesi ile dağıtılan su miktarı (bin m ³ /yıl)	—	—	—	1 988 217	2 375 043	2 400 522	2 579 676	2 801 939	3 394 545	3 732 875	4 045 486	4 309 405	4 568 750
Water distribution by municipal water supply network (thousand m ³ /year)													
İçme ve kullanma suyu arıtma tesisi sayısı	113	123	131	140	139	170	206	250	381	519	629	714	784
Number of drinking water treatment plants													
Fiziksel - Physical	57	63	69	73	69	71	77	79	69	54	22	16	15
Konvansiyonel - Conventional	55	59	61	66	68	84	96	132	165	197	197	220	243
Gelişmiş - Advanced	1	1	1	1	2	15	33	47	147	268	410	478	526
İçme ve kullanma suyu arıtma tesisi kapasitesi (bin m ³ /yıl)	3 244 979	3 525 507	3 736 368	3 718 085	3 994 060	4 422 745	4 499 508	4 629 842	5 346 014 ⁽¹⁾	5 558 307 ⁽¹⁾	6 023 791	6 239 288	6 850 386
Total capacity of drinking water treatment plants (thousand m ³ /year)													
Fiziksel - Physical	131 585	149 328	269 669	273 931	163 128	136 743	156 490	132 800	148 052	115 489	31 000	21 501	11 597
Konvansiyonel - Conventional	3 112 889	3 375 674	3 468 194	3 443 649	3 829 791	4 166 692	4 172 571	4 291 360	4 955 564	4 989 372	5 437 331	5 668 930	6 073 387
Gelişmiş - Advanced	505	505	505	505	1 142	119 310	170 447	205 681	242 368 ⁽¹⁾	453 446 ⁽¹⁾	555 461	548 858	765 402
İçme ve kullanma suyu arıtma tesislerinde arıtılan su miktarı (bin m ³ /yıl)	1 867 032	1 709 727	1 892 348	2 079 116	2 426 639	2 120 561	2 520 085	2 729 430	2 995 001	3 350 389	3 574 058	3 900 478	4 061 607
Amount of drinking water treated (thousand m ³ /year)													
Fiziksel - Physical	34 368	43 520	102 689	100 224	63 528	54 425	54 615	43 314	47 875	33 653	3 677	9 160	1 018
Konvansiyonel - Conventional	1 632 665	1 666 207	1 789 659	1 978 891	2 362 437	2 019 619	2 401 093	2 602 102	2 860 041	3 113 183	3 292 165	3 631 079	3 669 764
Gelişmiş - Advanced	675	675	675	675	46 517	64 378	84 015	87 085	203 553	278 216	260 240	390 825	
İçme ve kullanma suyu arıtma tesisi ile hizmet verilen belediye sayısı	236	252	303	313	413	434	346	411	436	436	443	459	493
Number of municipalities served by drinking water treatment plants													
İçme ve kullanma suyu arıtma tesisi ile hizmet verilen belediye nüfusu	15 510 532	19 375 843	20 855 947	22 794 758	28 839 265	29 074 451	32 992 877	35 868 415	41 610 124	43 881 160	46 229 893	48 381 682	50 650 358
Municipal population served by drinking water treatment plants													
İçme ve kullanma suyu arıtma tesisi ile hizmet verilen nüfusun toplam belediye nüfusuna oranı (%)	35	36	39	42	49	50	54	56	58	59	60	61	63
Rate of population served by drinking water treatment plants in total municipal population (%)													
... Bilgi elde edilememiştir.													
... Data not available.													

capita amount of wastewater discharged by municipalities through the sewage network is calculated as 197 litres. The average amount of wastewater per capita per day in the three metropolitan cities is 256 litres for İstanbul, 211 litres for Ankara, and 181 litres for İzmir.

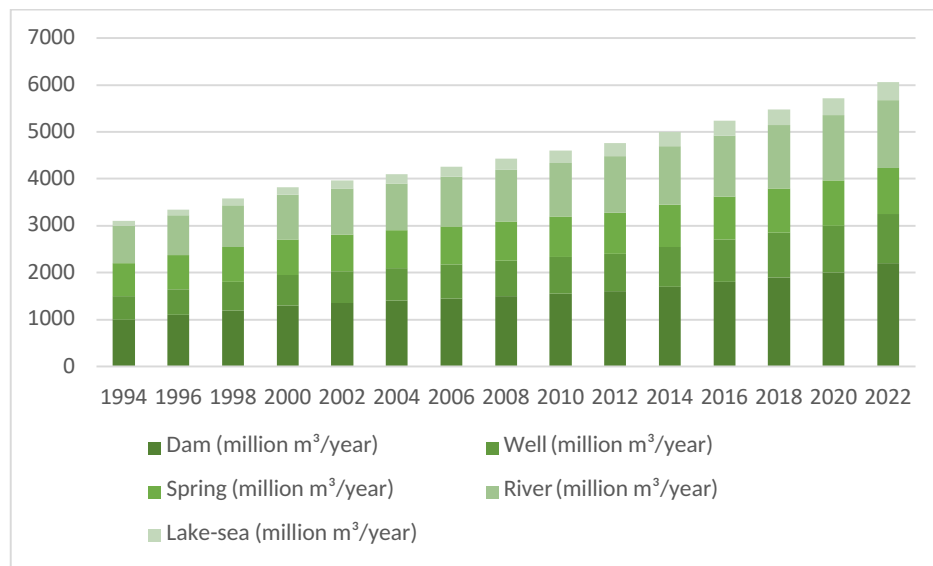
In Türkiye in 2022, 43% of the water drawn for drinking and domestic water networks was from dams, 29.1% from wells, 16.5% from springs, 7.7% from streams and 3.7% from lakes, ponds and seas.

In 2022, the ratio of municipal population served by drinking and domestic water networks to total municipal population is 98.8%, and the ratio of municipal population served by drinking and domestic water treatment plants to total municipal population is 63%.

While 3.24 billion m³ of water was drawn by municipalities for distribution through drinking and domestic water networks in 1994, this figure increased to 4.56 billion m³ in 2022.

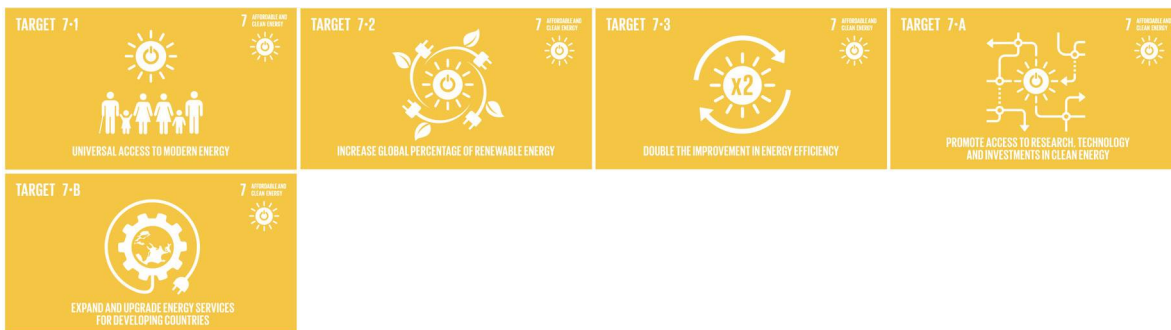
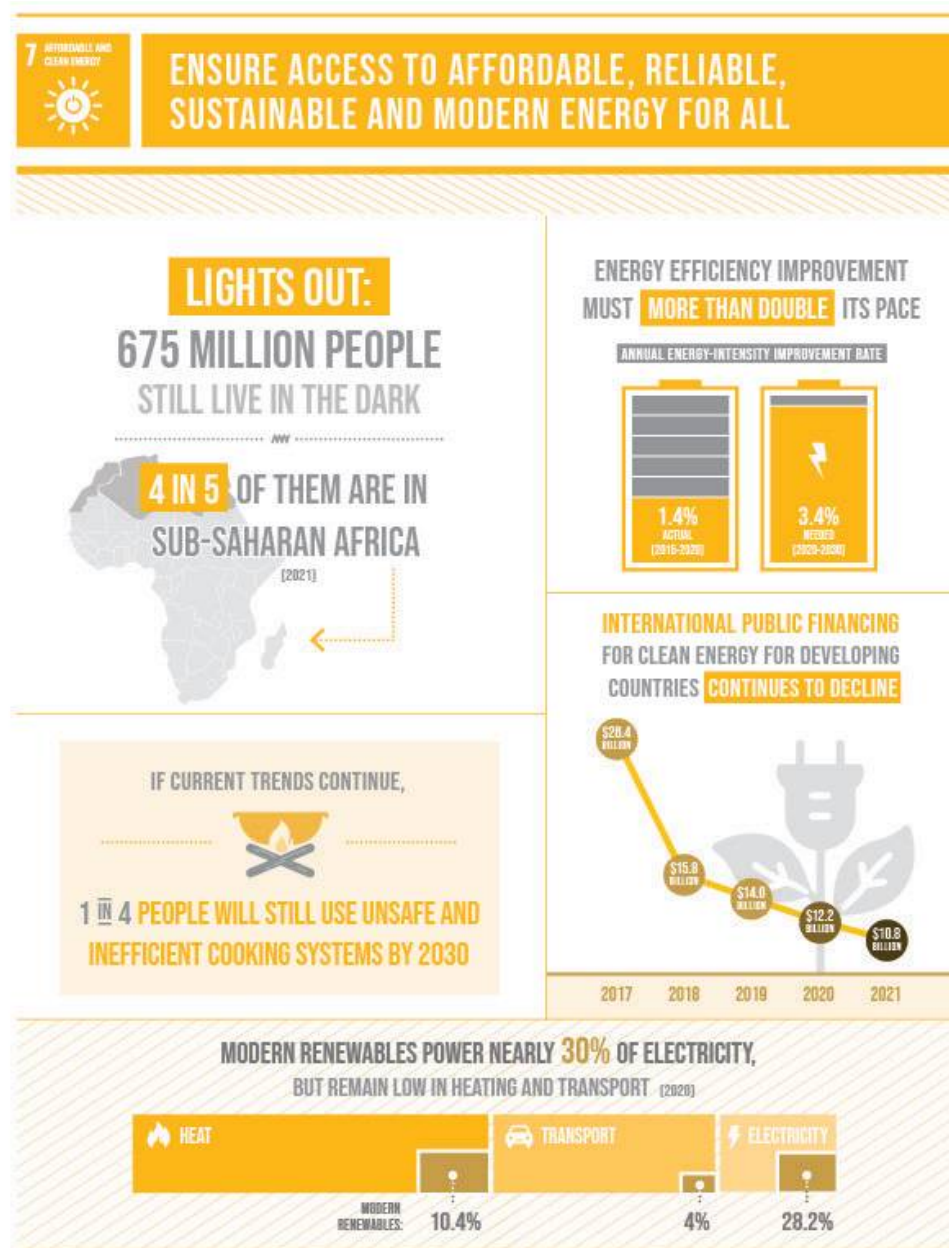
Of the total 6.7 billion m³ of water drawn to drinking and domestic water networks, 4.1 billion m³ was treated in drinking and domestic water treatment plants. Conventional treatment was applied to 90.4%, advanced treatment to 9.6%, and physical treatment to 0.03% of the treated water.

Distribution of Water Drawn for Municipal Drinking and Domestic Water Networks by Sources



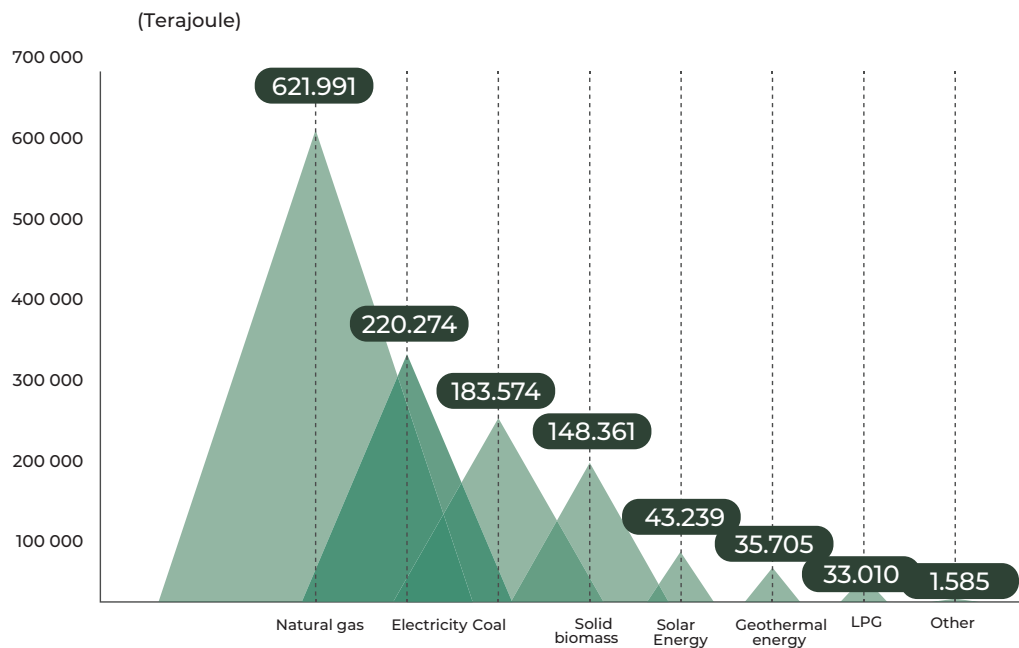
Population growth, urbanisation, industrialisation, economic growth and climate change create pressure on water resources. Within the scope of SDG 6, Türkiye has made progress in integrated water resources management and efficient use of water resources by adopting basin-based water management. River Basin Management Plans under preparation will also make a significant contribution to integrated water resources management.

SDG 7 (Accessible and Clean Energy): Türkiye has eliminated regional disparities in uninterrupted access to energy and strengthened resource diversification, ensuring security of supply to a large extent. As a result of the measures taken to increase the utilisation of renewable energy sources as well as to increase energy efficiency, Türkiye has made remarkable progress in access to energy. The main prerequisites of this goal are as follows: facilitating grid connection procedures of renewable energy plants, promoting the use of clean energy sources in fields such as heating and transportation, and carrying out programmes aimed at optimising energy consumption in industrial facilities and buildings.



According to the results of the Household Final Energy Consumption Survey; total final energy consumption of households in 2022 was 1 million 287 thousand 738 terajoules. According to the shares of energy sources consumed in households, natural gas with 48.3%, electricity with 17.1%, and coal with 14.3% rank high in final energy consumption.

Final Energy Consumption of Energy Sources, 2022



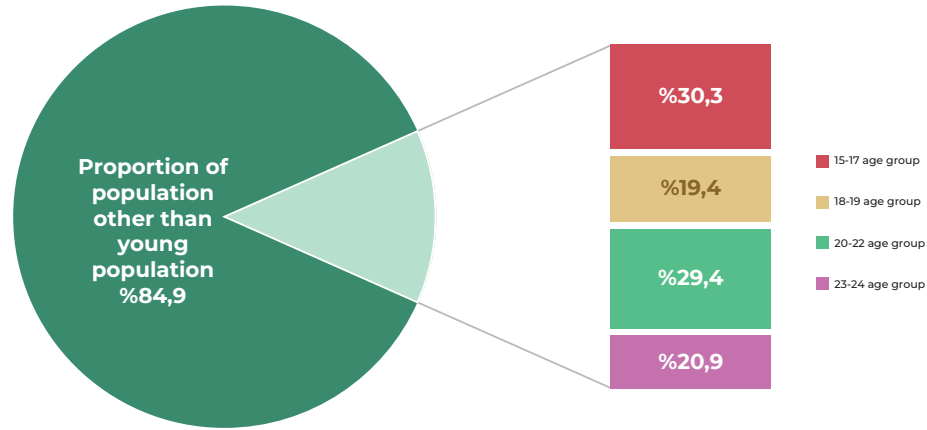
(1) Includes hard coal, lignite and asphaltite.

(2) Includes wood, sawdust, charcoal, cottonseed, bark, pomace, dung, and other vegetable wastes.

(3) Fuel oil, steam and ambient heat energy.

When the total final energy consumption of households is analysed by purpose of use, consumption for space heating accounted for 65.3% of total consumption in 2022. After space heating, the use of lighting and electrical appliances ranked second with 14.1%, and water heating ranked third with 11.9%. Cooking consumption accounted for 7.7% of total consumption, while space cooling and other consumptions accounted for 0.9%.

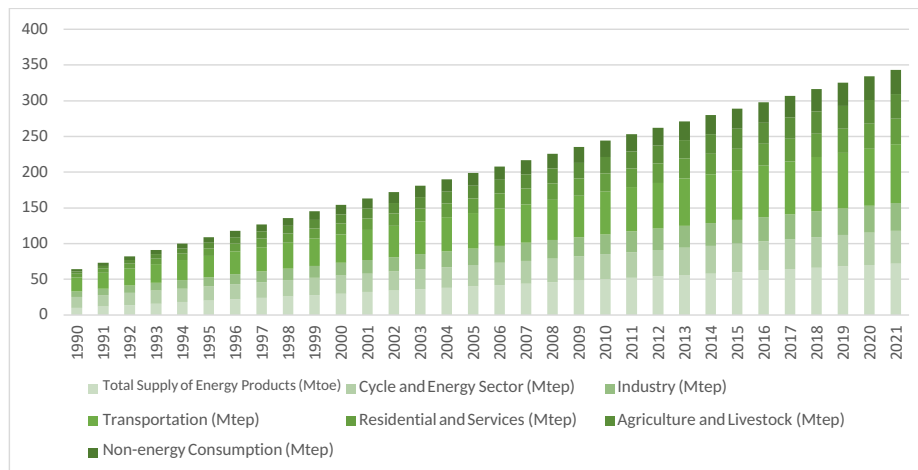
Total Final Energy Consumption by Purpose of Use, 2022



According to the data of the Ministry of Energy and Natural Resources, total energy consumption in Türkiye in 2021 was 159.43 Mtoe (million tonnes of oil equivalent). Türkiye's total energy consumption increased by 204% compared to 1990, 80% compared to 2005, and 8% compared to 2020. According to 2021 data, total energy consumption in EU-27 countries increased by 18% compared to the previous year.

When the distribution of total energy consumption in Türkiye in 2021 is examined, it is seen that the highest consumption was in the industrial sector with 26.1% and in the housing and services sector with 23.9%. This is followed by cycle and electricity with 22.3%, transportation with 19.2%, non-energy with 4.8%, and agriculture and animal husbandry with 3.2%.

Total Energy Consumption by Sector (Mtoe)

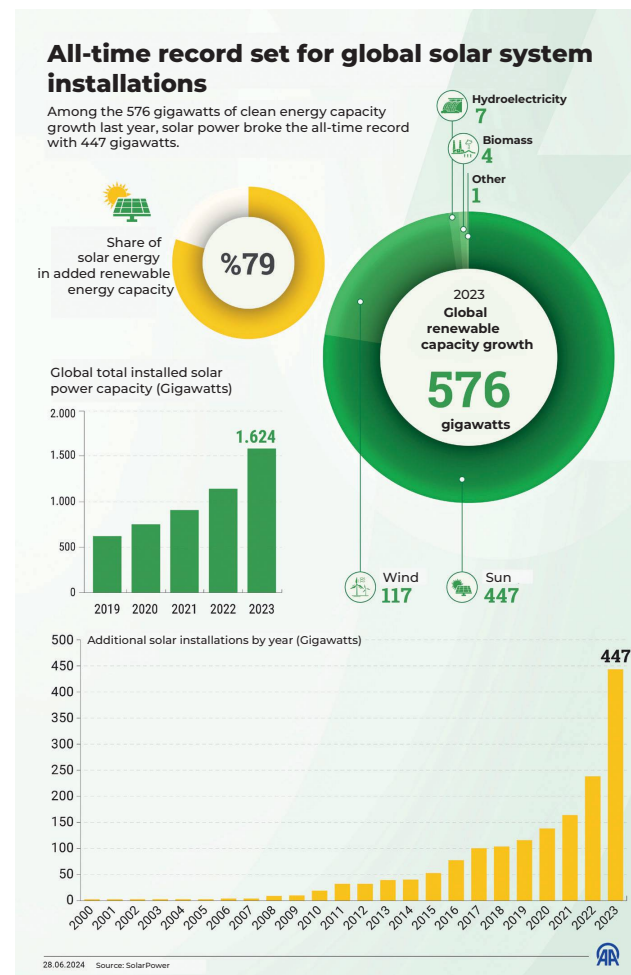


Non-Energy Consumption Table 30 - TOTAL ENERGY CONSUMPTION BY SECTOR (Thousand TEP)

Year	1990	1995	2000	2005	2010	2015	2016	2017	2018	2019
Energy Source	52,465	62,968	79,428	88,672	105,888	129,139	136,229	145,305	143,666	144,210
Transformation and Energy Sector	10,228	12,442	17,834	18,347	26,048	29,672	31,655	33,522	34,517	33,560
Industry	13,641	15,986	22,876	26,410	26,077	32,157	33,254	35,329	36,277	34,300
Transportation	8,723	11,077	12,007	13,849	16,314	24,936	26,812	28,425	28,452	27,690
Residential and Services	15,356	17,514	19,557	22,285	27,762	32,329	33,222	36,013	33,074	35,610
Agriculture/Forestry and Fisheries	1,956	2,556	3,073	3,359	3,736	3,932	4,056	4,273	4,381	4,710
Non-Energy Consumption	2,543	3,087	3,455	4,089	5,314	5,652	6,989	7,372	6,296	7,080

Total Energy Consumption by Sector (Thousand TOE)

In Türkiye, there has been a rapid improvement in access to electricity, incentive mechanisms have been used to increase the share of renewable energy in energy generation, and the scope of legal regulations in the field of energy efficiency has been expanded.



Türkiye's growing economy and rising population increase its energy demand. Reducing demand, particularly through improvements in energy efficiency, and using new and renewable energy sources in energy supply are deemed substantial developments.

The share of renewable energy in Türkiye's energy resource diversity is increasing

As the size of renewable energy investments in Türkiye exceeds 50 billion dollars, installed capacity varies by source and province.



Türkiye ranks 11th in the world in renewable energy

(as of June 12, 2024)

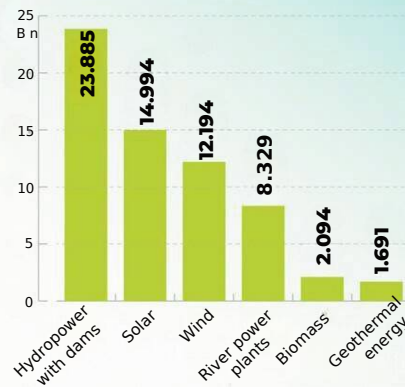
Türkiye's total installed electricity capacity

110.339
megawatt

Ratio of renewable energy to total installed capacity

%57,2

Distribution of renewable energy sources (Megawatt)



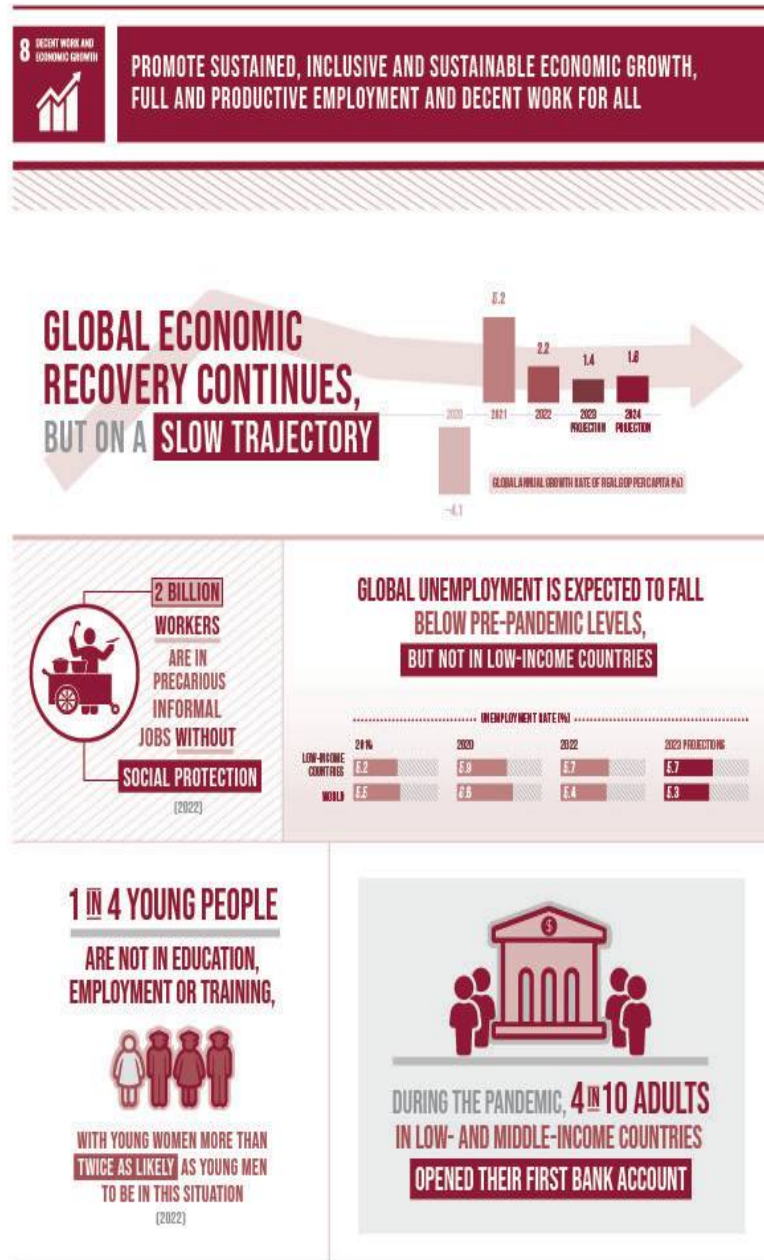
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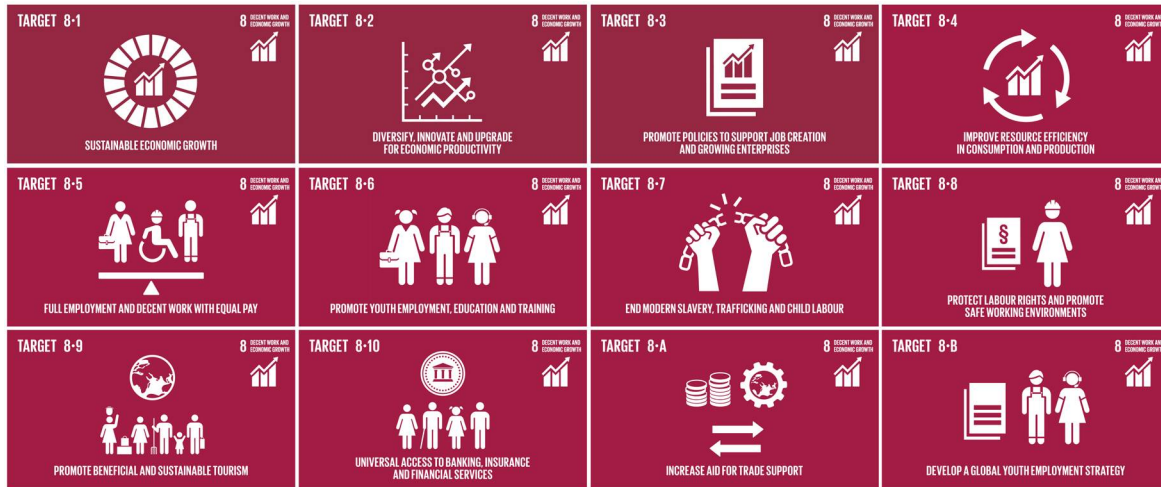


These developments are considered to have been achieved through development plans, annual programmes, strategy documents and the National Energy and Mining Policy in line with SDG targets. Increasing the share of renewable energy sources in Türkiye's energy supply will facilitate the achievement of all SDG targets in terms of ensuring resource diversity, reducing external dependence and reducing emissions.

SDG 8 (Decent Job and Economic Growth): As a result of the macroeconomic and structural policies implemented, Türkiye has achieved significant enhancement in the 2000-2016 period in fields such as GDP growth rate, non-agricultural employment growth, access to finance, decent job and inclusive employment. At this stage, technological transformation, productivity growth, qualified employment and environment-friendly growth have gained importance. In terms of employ-

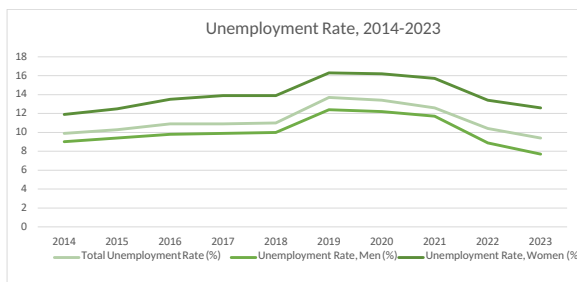
ment, progress is still needed on regional and sectoral distribution as well as women's participation in employment. The main prerequisites of this goal are as follows:; increasing total factor productivity, improving the efficiency of SMEs, ensuring source efficiency in production and consumption, increasing women and youth employment.





According to the Household Labour Force Survey in 2023, the number of unemployed people aged 15 and over has reached 3 million and 264 thousand, declining by 318 thousand compared to the previous year. Thus, the total unemployment rate decreased by 1 point to 9.4%. The unemployment rate was estimated at 7.7% for men and 12.6% for women. The province with the highest unemployment rate was Hakkari, with 23.3%, while the lowest was Sinop, with 4.8%.

The total number of employed people in Türkiye has reached 31 million and 632 thousand in 2023 compared to the previous year, with an increase of 880 thousand employed people, while the employment rate rose by 0.8 per cent to 48.3%. This rate is reflected as 65.7% for men and 31.3% for women.



The total labour force in Türkiye reached 34 million and 896 thousand people in 2023, with an increase of 562 thousand people, which is reflected in the rate of labour force participation as an increase of 0.2 per cent to 53.3%. The labour force participation ratio is 71.2% for men and 35.8% for women.

The youth unemployment rate among people aged 15 to 24 decreased by 2 percentage points in 2023 compared to the previous year, reaching 17.4%. In this age group, the unemployment rate was estimated at 14.3% for males and 23.2% for females.

Main labour force indicators, 15+, 2022, 2023

	2023			2022			Difference Compared to Previous Year		
	Toplam	Erkek	Kadın	Toplam	Erkek	Kadın	Toplam	Erkek	Kadın
(Thousand People)									
Population with Age 15 or Older	65,425	32,383	33,042	64,679	32,006	32,673	746	377	369
Labor Force	34,896	23,052	11,844	34,334	22,862	11,473	562	190	371
Employed	31,632	21,286	10,346	30,752	20,818	9,935	880	468	411
Unemployed	3,264	1,766	1,498	3,582	2,044	1,538	-318	-278	-40
Not in the Labor Force	30,528	9,330	21,198	30,345	9,144	21,200	183	186	-2
(%)									
Labor Force Participation (%)	53,3	71,2	35,8	53,1	71,4	35,1	0,2	-0,2	0,7
Employment Rate (%)	48,3	65,7	31,3	47,6	65,5	30,4	0,8	0,2	0,9
Unemployment Rate (%)	9,4	7,7	12,6	10,4	9,9	13,4	-1,0	-1,2	-0,8
Unemployment Rate In the Young Population, Aged 15-24 (%)	17,4	14,3	23,2	19,4	16,4	25,2	-2,0	-2,1	-2,0

According to the results from the Address Based Population Registration System (ABPRS), Türkiye's total population was 85,372,377 by the end of 2023, of which young people between ages 15 and 24 accounted for 12,872,039. The youth population accounted for 15.1% of the total population. Among the young population, 51.3% are male and 48.7% are female. According to United Nations data, the youth population aged 15-24 constituted 20.8% of the total population in 1950, but this rate decreased to 16.6% in 2013 and further to 15.1% in 2023.

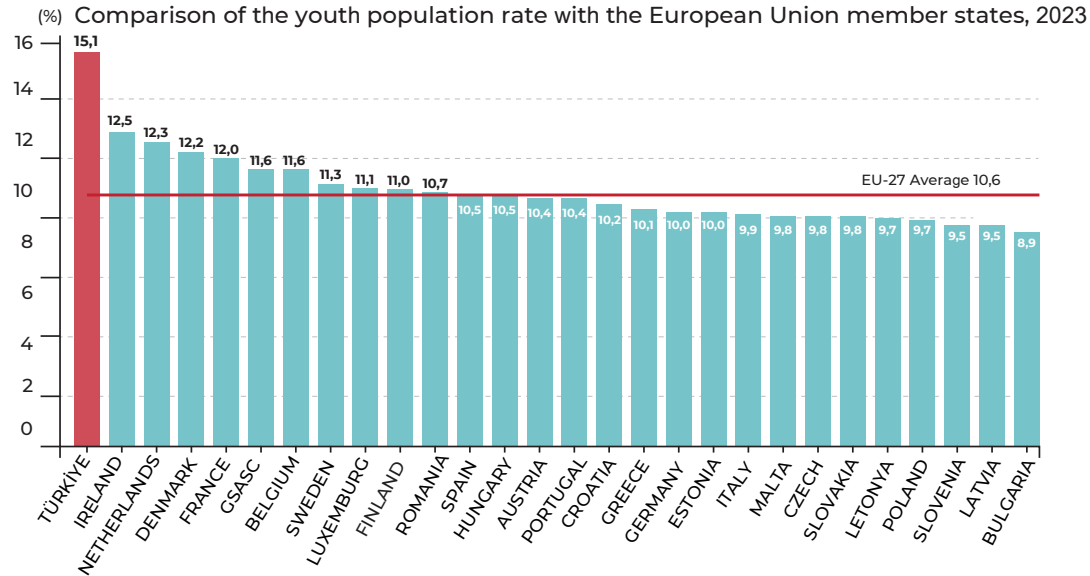
According to the population projections, the proportion of youth population in the total population is estimated to decline to 14% in 2030, 13.4% in 2040, 11.8% in 2060, and 11.1% in 2080.

Proportion of young population in total population, 1935-2080



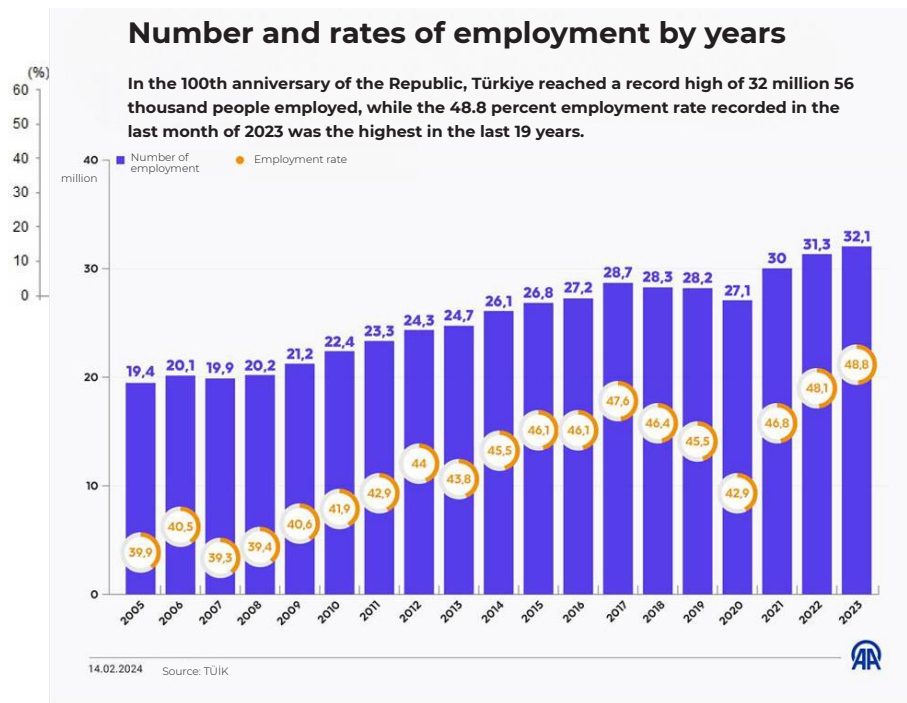
Türkiye's youth population rate of 15.1% exceeds the youth population rates of the 27 European Union (EU) member states. The average youth population ratio of the 27 EU member states was 10.6% in 2023. Ireland (12.5%), the Netherlands (12.3%), and Denmark (12.2%) have the highest youth population rates among EU member states. The countries with the lowest rate of young people are Bulgaria with 8.9%, Lithuania and Slovenia with 9.5%, and Poland and Latvia with 9.7%.

Comparison of youth population rate with European Union member states, 2023

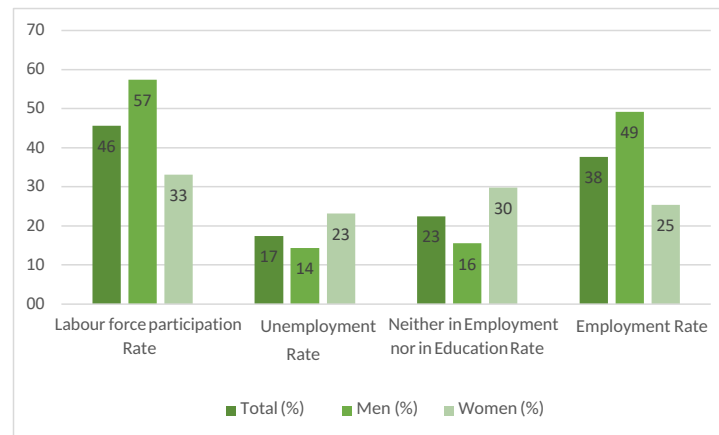


Source: European Union Statistics Office (Eurostat) Database, 2023
 TurkStat, Address Based Population Registration System, 2023
 GCASC: Greek Cypriot Administration of Southern Cyprus

According to the Household Labour Force Survey, young people's labour force participation rate was 43.8% in 2022 and 45.6% in 2023. Young men's labour force participation rate was 56.2% in 2022 and 57.4% in 2023, while this rate was 31% in 2022 and 33.1% in 2023 for young women.



Employment status of non-institutional young population, 2023



While the youth unemployment rate became 19.4% in 2022, this number reduced to 17.4% in 2023. The unemployment rate for young men decreased from 16.4% in 2022 to 14.3% in 2023, whereas the rate for young women decreased from 25.2% in 2022 to 23.2% in 2023.

Young people without jobs or school enrollment made up 24.2% of the population in 2022 and 22.5% in 2023. The percentage of young men who were not in education or employment was 16.4% in 2022 and 15.6%

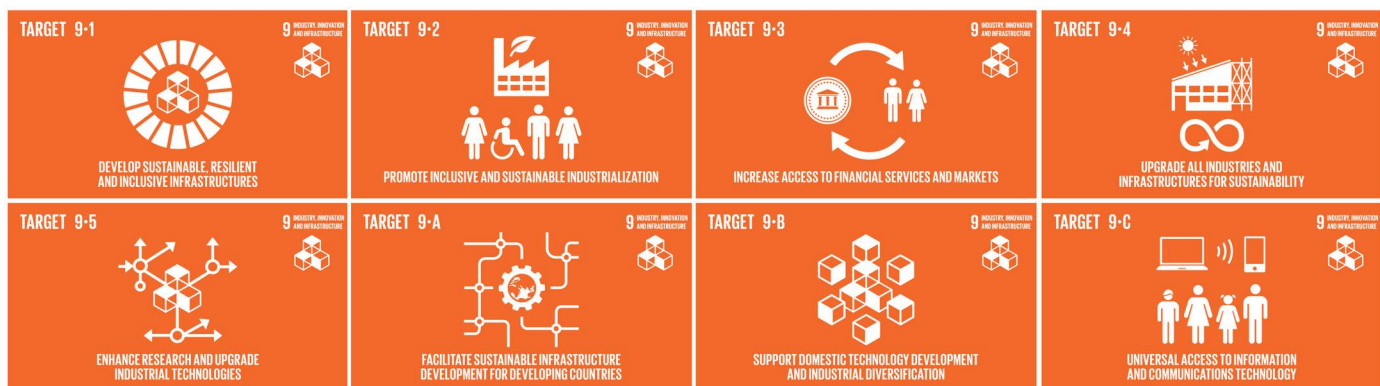
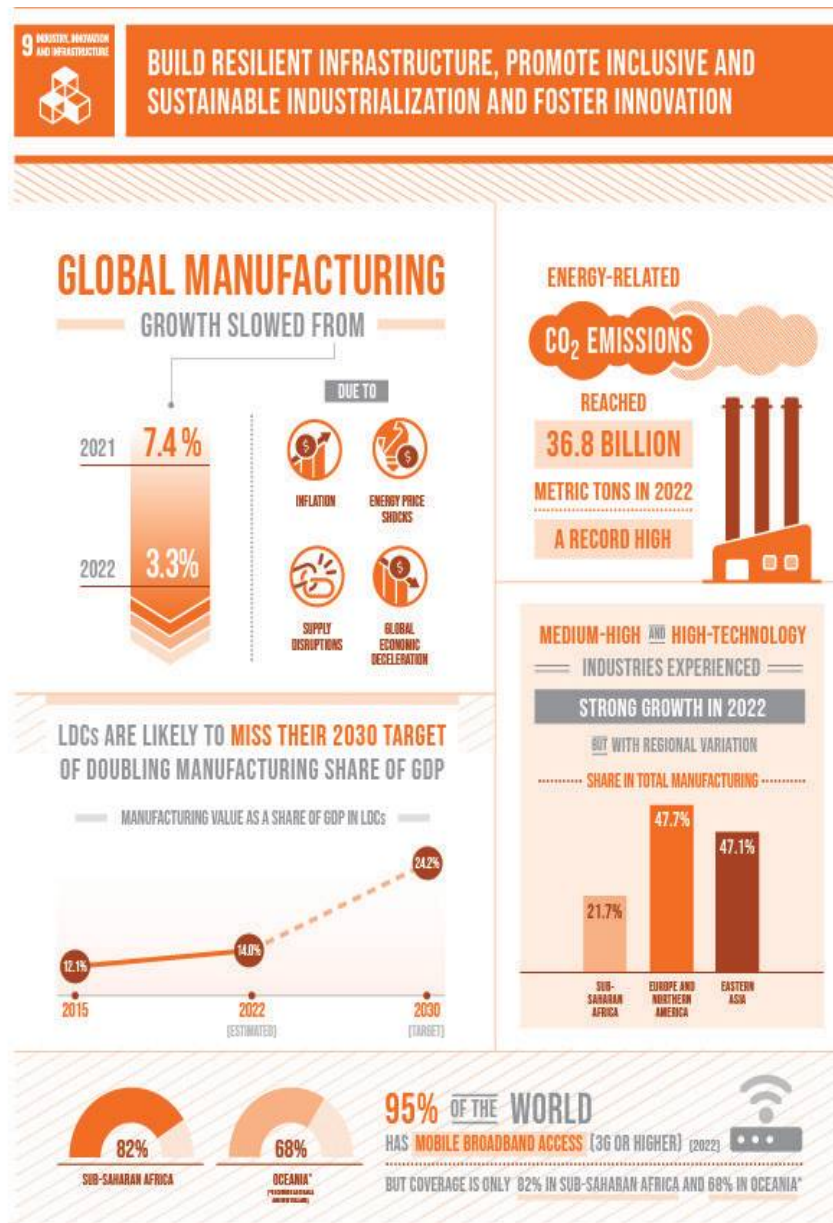
in 2023, while this rate for women was 32.3% in 2022 and 29.8% in 2023.

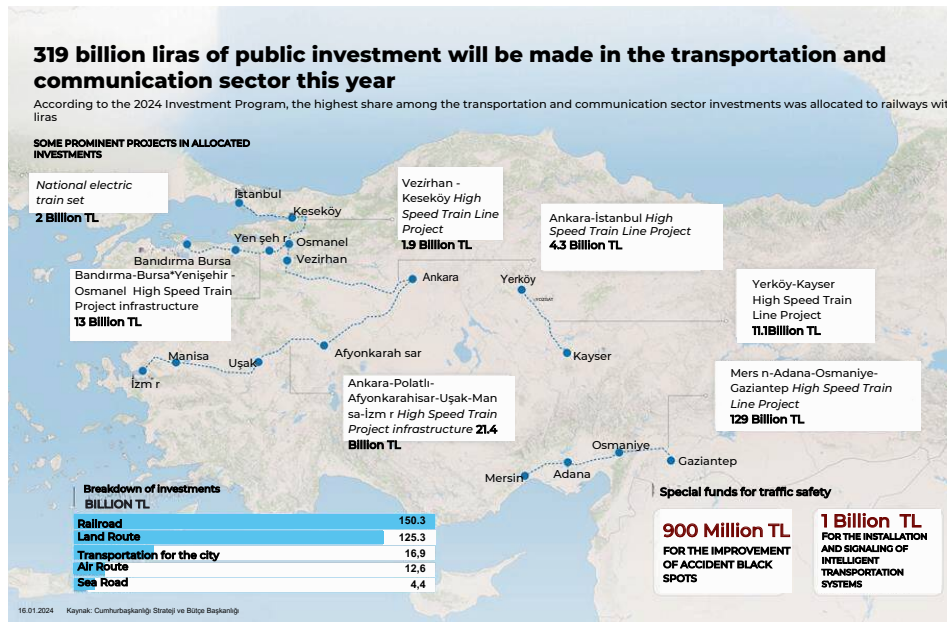
According to the Household Labour Force Survey, the employment rate of the young population increased from 35.3% in 2022 to 37.7% in 2023. Young men's employment rates were 46.9% in 2022 and 49.2% in 2023, while young women's rates were 23.2% in 2022 and 25.4% in 2023.

When analyzing the employment of young people by sector, it was found that in 2023, 13.6% were employed in the agricultural sector, 31.1% in the industrial sector, and 55.3% in the service sector. It is observed that 12.5 % of employed young men were in agriculture, 36.7 % in industry, and 50.8 % in services; 15.8 % of employed young women were in agriculture, 19.6 % in industry, and 64.6 % in services.

SDG 9 (Industry, Innovation, and Infrastructure):

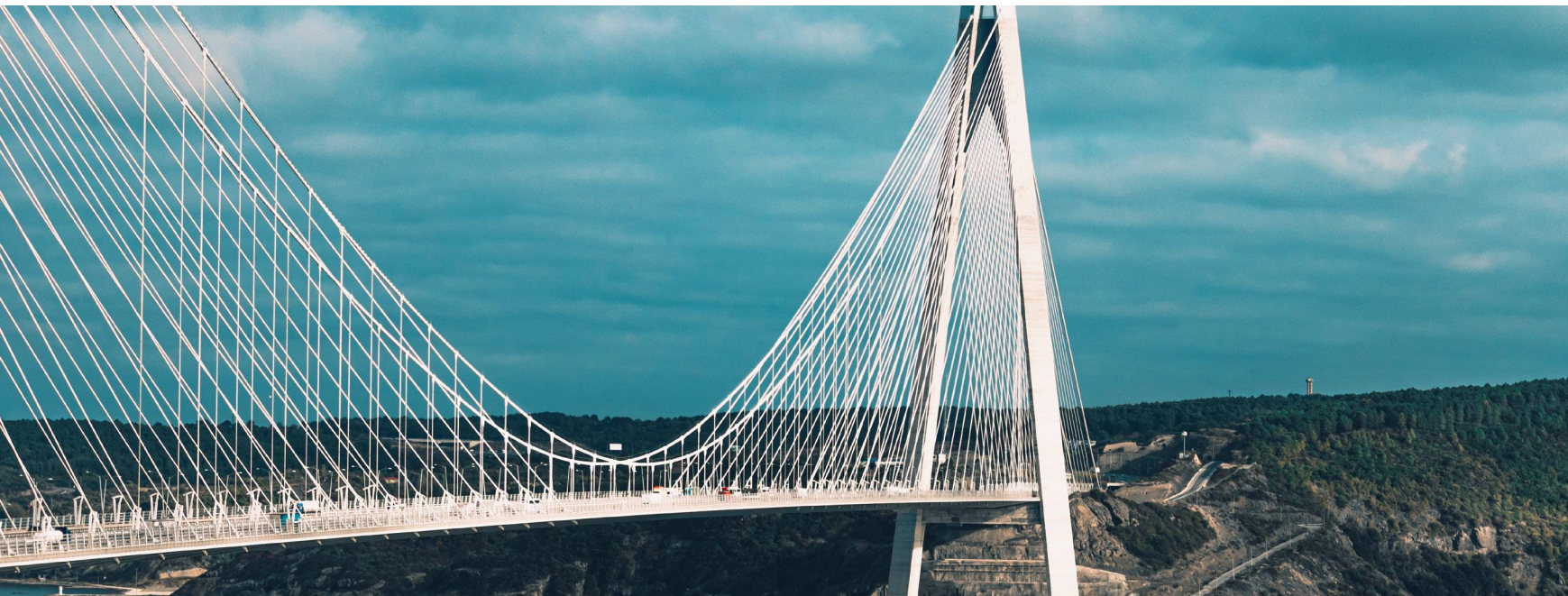
Reliable, sustainable, and resilient infrastructures are covered within this goal. Türkiye has set out policies to enhance road, rail, and maritime transportation and has progressed in these areas within the context of this goal. Achieving balance and integration among different modes of transport has been a priority. Since the 2000's, Türkiye has allocated a vast amount of resources for the enhancement of industrial and transportation infrastructure, focussing on investments and large-scale projects of road transportation, airports, sea ports, and railways in particular.





Since the 2000s, substantial enhancements have been made to the transportation networks, especially the land transportation networks, which have been expanded to cover the entirety of Türkiye. Freight and passenger transportation infrastructure spans the country's entire area and population. The road and air infrastructure for passenger transit is extensively developed, as is the road and sea infrastructure for freight transport.

The share of R&D expenditures in GDP grew, while access to information and communication technology rose substantially. The main prerequisites of this SDG are as follows: improving industrial production technology, encouraging practices and research for digital transformation in the industry, strengthening logistical infrastructure, and prioritising information and communication technology investments.



2016 WAS THE YEAR OF GIANT PROJECTS

April 1

4.5G

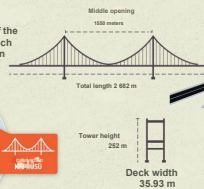
4.5G technology, which is 10 times faster than 3G, has begun to be used in mobile communication



June 30

OSMANGAZI BRIDGE

commissioned within the scope of the Gebze-Izmir Motorway Project, which reduces the transportation between Istanbul and Izmir to 3.5 hours

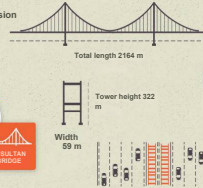


Thanks to the bridge, Izmit Gulf can be crossed in 4 minutes

August 26

YAVUZ SULTAN SELİM BRIDGE

The world's widest suspension bridge with a width of 59 meters



The world's longest suspension bridge with a rail system

There are a total of 10 lanes, 8 highways, 2 railway lanes

December 5

GÖKTÜRK-1 SATELLITE

It will meet the TAF's satellite imaging needs for target intelligence



It takes about 90 minutes to complete a trip around the world

It is expected to capture more than 60,000 images per year

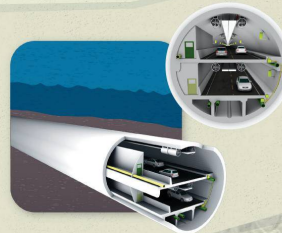


December 20

EURASIA TUNNEL

Reduced the distance between the two sides of Istanbul to 15 minutes

- Built 106 meters under the sea
- Total length is 14.6 kilometers
- 3.4 kilometers of the tunnel is under the sea



December 26

ILGAZ TUNNEL

The entrances and exits of the tunnel were designed in the shape of a "shark's mouth"



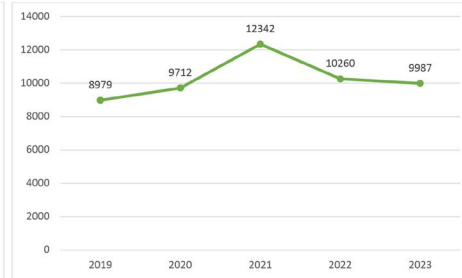
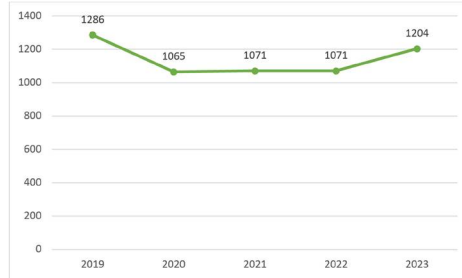
- Central Anatolia was connected to the Western Black Sea
- It consists of two tubes, one 5,370 meters long and the other 5,391 meters long
- The 16.8-kilometer Ilgaz Mountain road has been reduced to 11.4 kilometers
- Transportation on the Ilgaz Mountain road, which was crossed in 30 minutes, decreased to 8 minutes
- The tunnel's contribution to the economy is 28 million 200 thousand lira



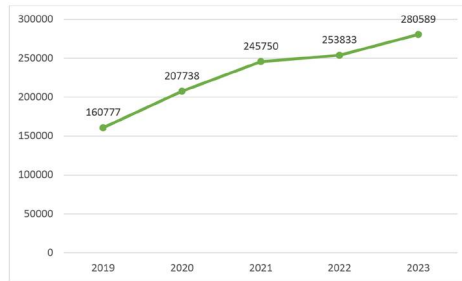
Production of Select Industrial Products, 2019-2023

In 2023, entrepreneurs' sales of their produced goods totalled 13 trillion, 325 billion, and 110 million TL. In 2022, this figure was 8 trillion 937 billion 773 million TL, and 4 trillion 214 billion 521 million TL in 2021.

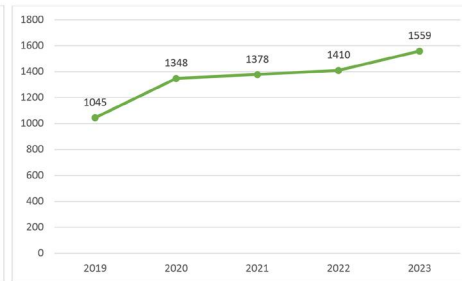
Automobile (Thousand Units), Medium-high Technology Household-Type Refrigerators and Freezers (Thousand Units) Medium-high Technology



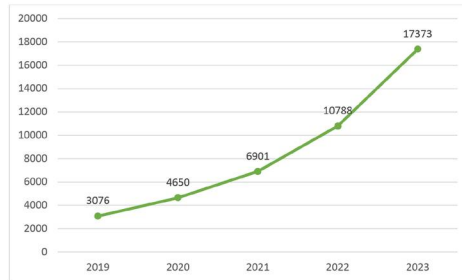
Ready-mixed Concrete (Thousand tons), Medium-low Technology



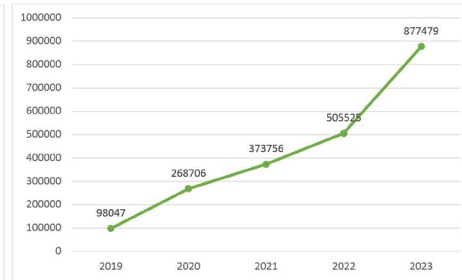
Combi Boiler (Hermetic) (Thousand units) Medium-low Technology



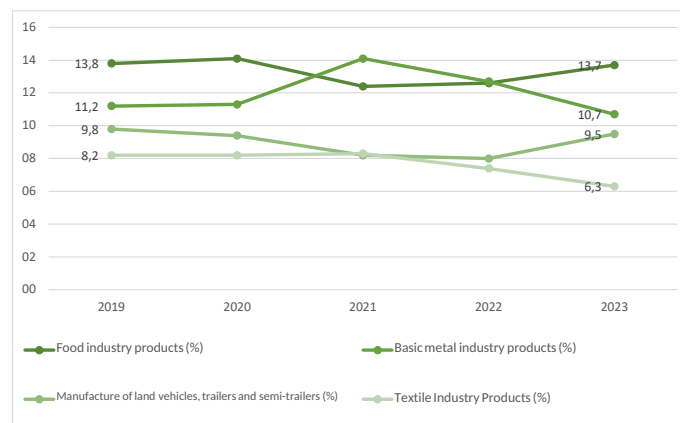
Solar Cell (Thousand units) High Technology



Motorcycle (Unit) Medium-High Technology



Top Four Industrial Sectors with the Highest Share of Sales Value, 2019-2023

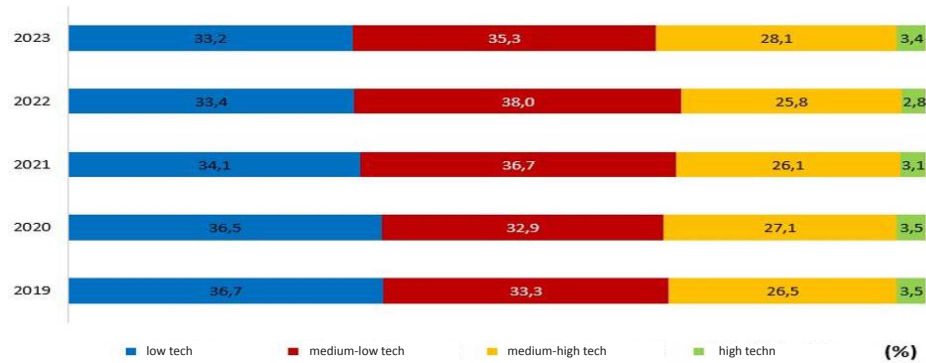


Top Ten Industrial Sectors with the Highest Share of Sales Value [NACE Rev.2], 2019-2023

Segment	Definition	2019	2020	2021	2022	2023	%
10	Food industry products	13,8	14,1	12,4	12,6	13,7	
24	Basic metal industry products	11,2	11,3	14,1	12,7	10,7	
29	Manufacture of land vehicles, trailers and semi-trailers	9,8	9,4	8,2	8	9,5	
13	Textile industry products	8,2	8,2	8,3	7,4	6,3	
25	Fabrikasyon metal ürünleri imalatı (except machinery and equipment)	5,5	6,1	6,4	5,9	6,2	
20	Manufacture of chemicals and chemical products	5,8	6,2	6,6	6,7	6,1	
23	Manufacture of other non-metallic mineral products	3,9	4,3	4	4,8	5,2	
28	Manufacture of machinery and equipment that are not elsewhere classified	4,3	4,7	4,7	4,6	5,1	
22	Electrical equipment manufacturing	4,6	5	4,9	4,7	5,1	
22	Manufacture of rubber and plastic products	5,3	5,5	5,3	5,1	5	

High-tech products accounted for 3.4% of total sales value in the manufacturing industry in 2023. The total share of low and medium-low technology segments was 68.5%. The share for the medium-high technology segment was 28.1%.

Proportional Distribution of Sales Value of Products by Technology Level, 2019-2023



Access to space enabled by critical technological investments in industry

While industry was one of the most important sectors where development steps were taken after the proclamation of the Republic, space technology has made significant progress, especially in recent years.



İMECE

Domestic and national observation satellite commissioned in April 2023



NATIONAL SPACE PROGRAM

Türkiye to launch first Turkish space traveler in 2024, preparing to send it into space



1927

National investments were supported with the Law on Incentive for Industry

1962

The first OIZ was established in Bursa

1985

Defense Industry Development and Support Administration (SaGeB) was established

2023

Number of OIZs increased to 389

RECORD INDUSTRIAL EXPORTS

2022

254 BILLION DOLLARS

NATIONAL TECHNOLOGY MOVE

In the last 20 years, the vision of "National Technology Move" has been put forward

DOMESTIC AND NATIONAL AUTOMOBILE

Togg



BREAKTHROUGHS IN THE DEFENSE INDUSTRY



DEFENSE AND AVIATION EXPORTS

2002

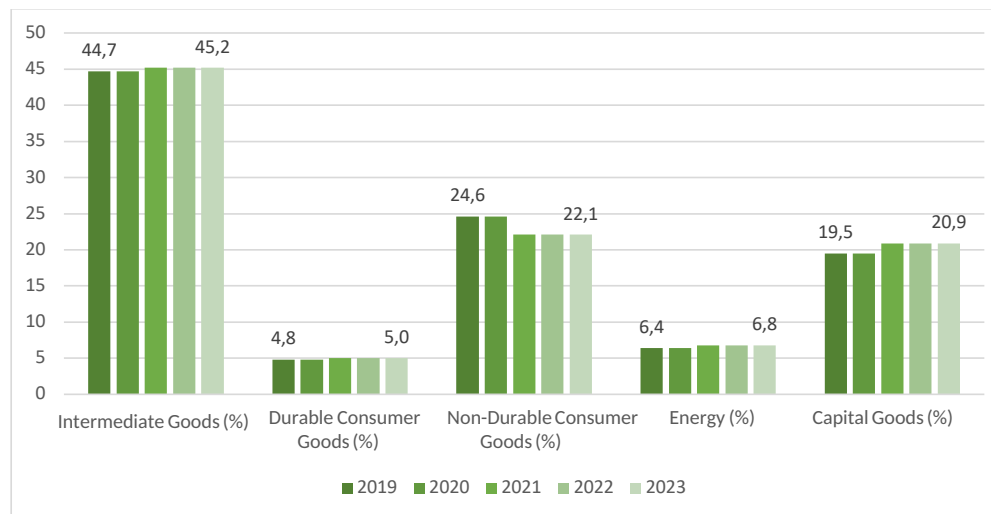
248 MILLION DOLLARS

2022

4.5 BILLION DOLLARS

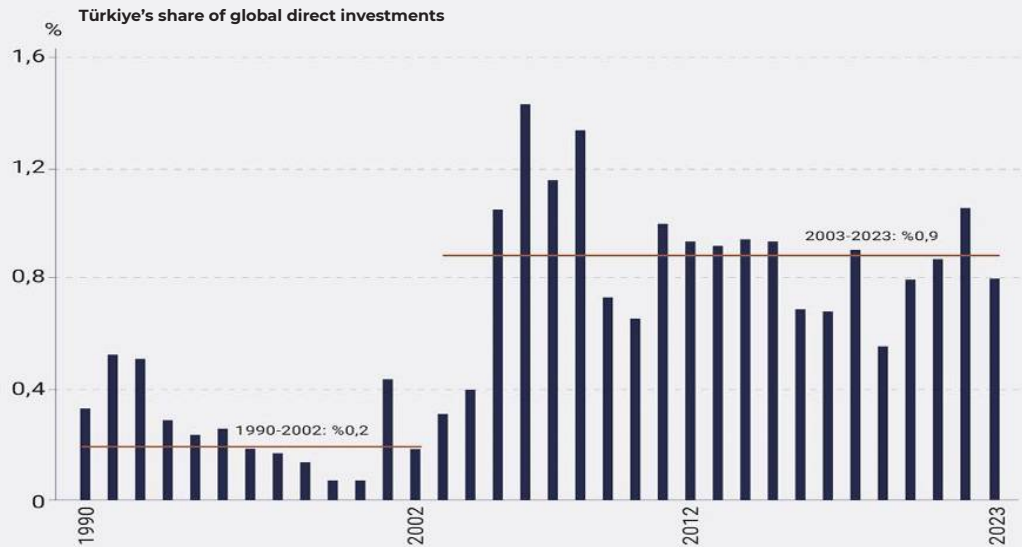
In 2023, when manufacturing industry products were categorised by key industrial sectors, it was found that 45.2% of the total sales value comprised intermediate goods, while 22.1% was made up of non-durable consumer goods. The share of the energy sector was 6.8%.

Proportional Distribution of Key Industry Sectors by Sales Value, 2019-2023



Türkiye on the radar of world giants in international investments

Direct investment inflows to Türkiye totaled 266.9 billion dollars between June 2003 and June 2024. Türkiye's share in global direct investments rose to 0.9% in the 2003-2023 period.



21.08.2024

Source: Ministry of Treasury and Finance



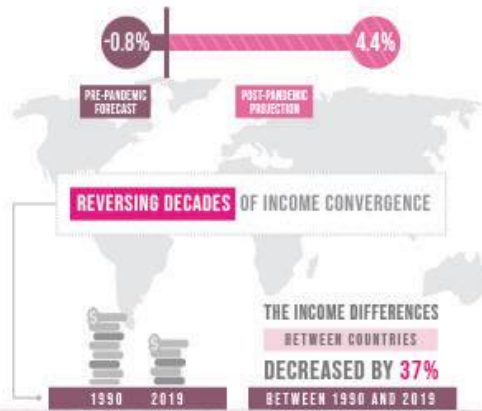
SDG 10 (Reducing inequality): Türkiye has made substantial progress in the improvement of income distribution and the reduction of absolute and relative poverty as a consequence of the implementation of social and economic policies. The main prerequisites of this SDG are as follows: reducing regional, sectoral, and vulnerable groups' inequalities, improving income distribution, and ensuring equality of opportunity.



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

COVID-19 TRIGGERS THE LARGEST INCREASE
IN BETWEEN-COUNTRY INEQUALITY IN THREE DECADES,

CHANGE OF BETWEEN-COUNTRY INEQUALITY
(2019-2020)

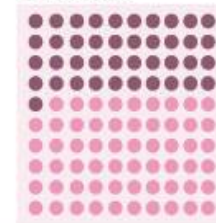


IN 2022, REFUGEE NUMBERS HIT A RECORD HIGH OF:

34.6 MILLION

AMONG THEM WERE:

● CHILDREN: 41%



GLOBALLY, WOMEN ARE TWICE AS LIKELY AS MEN TO REPORT EXPERIENCING DISCRIMINATION BASED ON THEIR SEX.



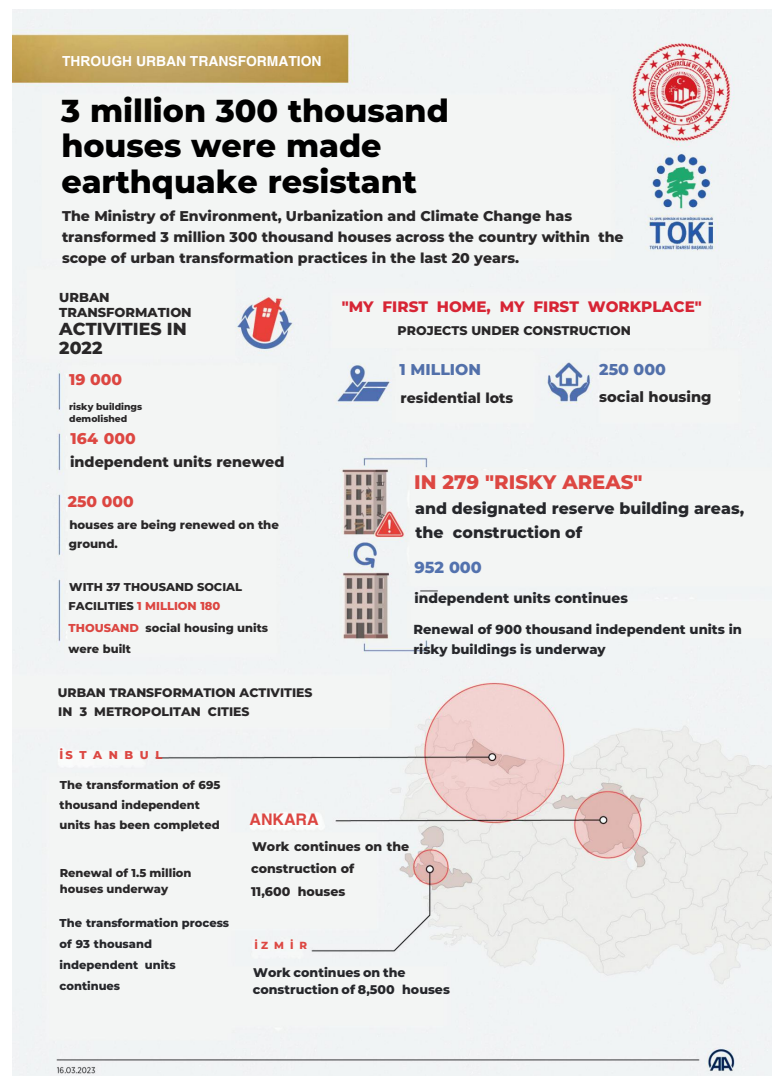
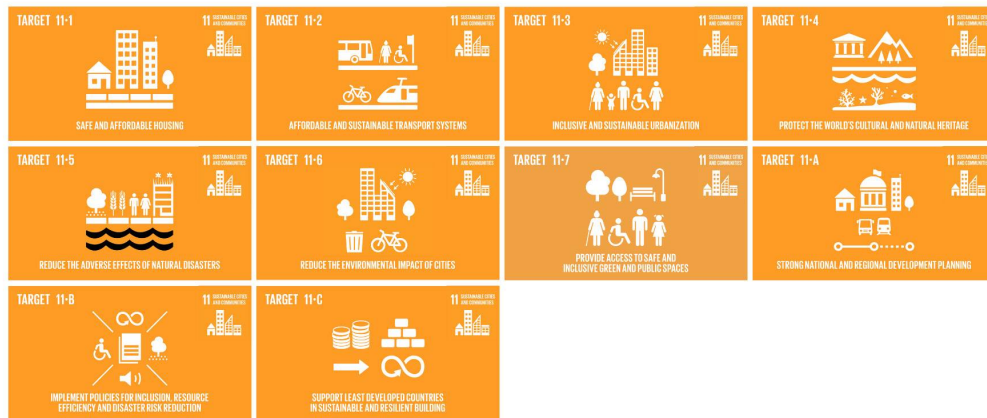
TARGET 10-1 REDUCE INCOME INEQUALITIES	TARGET 10-2 PROMOTE UNIVERSAL SOCIAL, ECONOMIC AND POLITICAL INCLUSION	TARGET 10-3 ENSURE EQUAL OPPORTUNITIES AND END DISCRIMINATION	TARGET 10-4 ADOPT FISCAL AND SOCIAL POLICIES THAT PROMOTE EQUALITY
TARGET 10-5 IMPROVED REGULATION OF GLOBAL FINANCIAL MARKETS AND INSTITUTIONS	TARGET 10-6 ENHANCED REPRESENTATION FOR DEVELOPING COUNTRIES IN FINANCIAL INSTITUTIONS	TARGET 10-7 RESPONSIBLE AND WELL-MANAGED MIGRATION POLICIES	TARGET 10-A SPECIAL AND DIFFERENTIAL TREATMENT FOR DEVELOPING COUNTRIES
TARGET 10-B ENCOURAGE DEVELOPMENT ASSISTANCE AND INVESTMENT IN LEAST DEVELOPED COUNTRIES	TARGET 10-C REDUCE TRANSACTION COSTS FOR MIGRANT REMITTANCES		

In Türkiye, numerous legal and institutional legislations have been enacted to eliminate inequalities. These legislations were enacted in the areas of social insurance, social aid, education, health, and the elimination of regional disparities. The legislations above include the following: Law No. 6701 on the Human Rights and Equality Institution of Türkiye, Law No. 5084 on Encouragement of Investments and Employment and Amendment of Certain Laws, Law No. 5502 on Certain Regulations for the Social Security Institution, Law No. 5449 regarding Duties of Development Agencies, Law No. 5510 on Social Insurance and Universal Health Insurance, Decree No. 2009/15199 regarding State Aids in Investments, and Decree-Law No. 642 on the Organisation and Duties of the Regional Development Administrations of the Eastern Anatolia Project, Eastern Black Sea Project, and Konya Plain Project, which allowed for the establishment of regional development agencies.



SDG 11 (Sustainable Cities and Communities): Türkiye has made substantial progress for sustainable urbanisation in terms of strengthening infrastructure, implementing urban transport and public transport, waste management, solving the slum issue, and increasing the resilience of cities. Access to housing has improved significantly due to changes in the property market and rising availability of homes.





Disaster management in Türkiye is conducted in a comprehensive framework with an integrated structure and various strategy documents. The main prerequisites of this SDG are as follows: increasing access to housing for individuals with low income, integrating climate change into the disaster management process, and ensuring infrastructure development for smart cities.

3,2 million houses renovated through urban transformation in Türkiye



NUMBER OF RENEWED HOUSES
3,2 MILLION



NUMBER OF HOUSES AND WORKPLACES INSPECTED
6,6 MILLION



NUMBER OF PEOPLE LIVING IN EARTHQUAKE RESISTANT HOUSING
24 MILLION



IN 81 PROVINCES
IN 922 DISTRICTS
250,000 HOUSES
ARE BEING REBUILT

URBAN TRANSFORMATION OF 39 THOUSAND HOUSES IN ANKARA

URBAN TRANSFORMATION OF 788 THOUSAND HOUSES IN ISTANBUL



NUMBER OF RENEWED HOUSES
695,000



NUMBER OF HOUSES UNDER TRANSFORMATION
93,000



TÜRKİYE AIMS TO HAVE NO HOUSING UNITS NOT UNDERGOING URBAN TRANSFORMATION BY 2035

21.03.2023

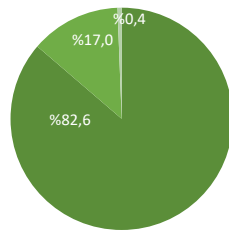
Kaynak: Çevre, Şehircilik ve İklim Değişikliği Bakanlığı



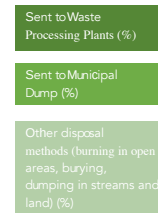
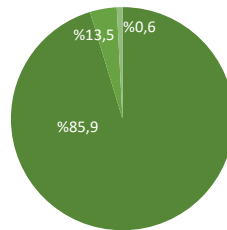
With the support of Half is on Us in Urban Transformation, which will ensure a major transformation in Istanbul, requests are collected without time limitations and arrangements are made in line with the demands of citizens. Accordingly, in all 39 districts where risk analyses have been completed, beneficiaries of all risky buildings eligible for transformation can receive assistance.

One of the most important issues in sustainable cities is waste management. In 2022, it has been recorded that waste services are provided in 1389 of 1391 municipalities in total. Of the 30.3 million tonnes of waste collected by municipalities through waste services, 85.9% was directed to waste treatment facilities, 13.5% was sent to municipal dumps, and 0.6% was disposed of through open burning, burial, or dumping in streams or landfills. The average amount of waste per capita per day collected in municipalities was calculated as 1.03 kg. Additionally, 348 thousand tonnes of waste water treatment sludge (measured in dry matter) were produced by waste water treatment plants operated by municipalities.

Municipal Waste Management, 2020



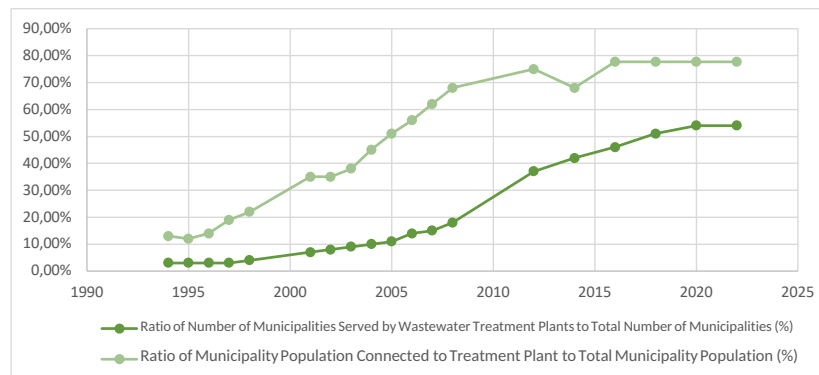
Municipal Waste Management, 2022



Proportional Distribution of Main Industry Groups by Sales Value, 2019-2023

Waste water treatment is an important practice for the more efficient use of water and protection of existing resources. The ratio of the total municipal population to the municipal population served by wastewater treatment plants was 77.7% in 2022.

Number of Municipalities and Rate of Population Served by Wastewater Treatment Plants (%)

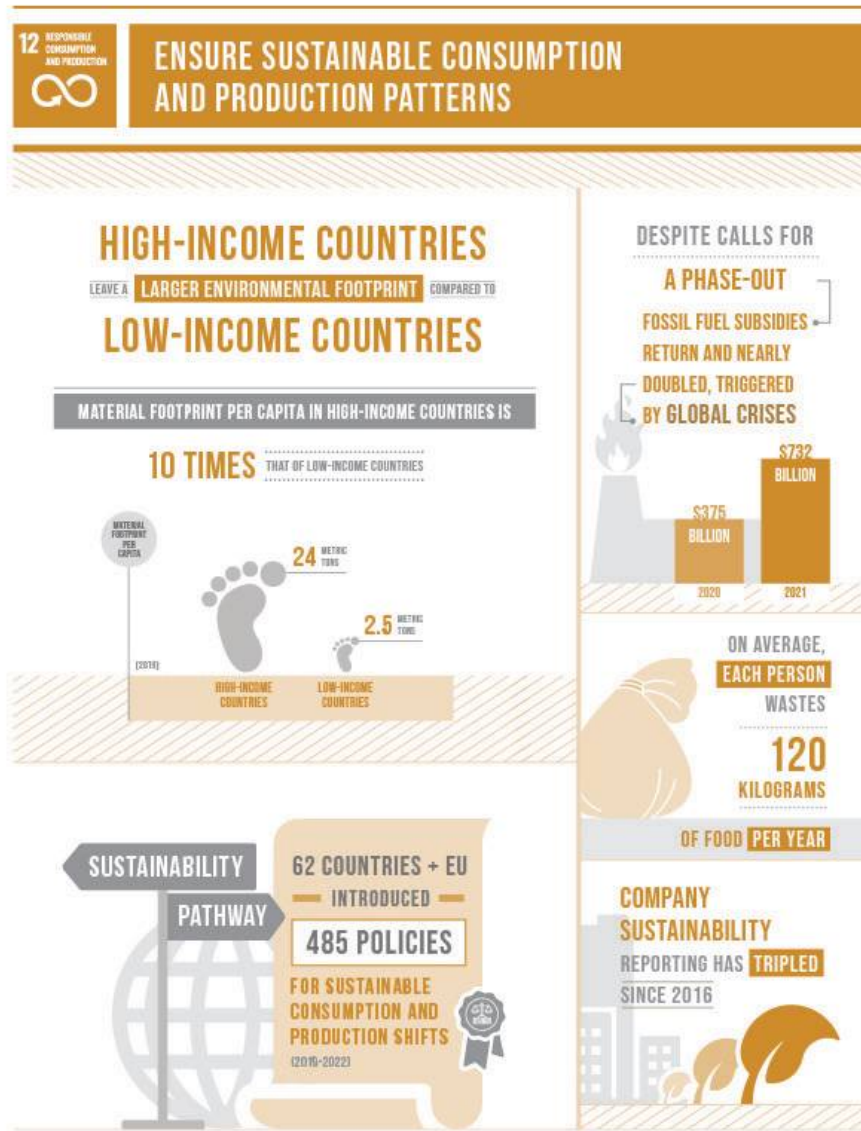


The number of wastewater treatment facilities has increased from 145 in 2002 to 1315 in 2022. Based on the distribution of these facilities, 20% of wastewater treatment plants in Türkiye are advanced, 51% are biological, 5% are physical, and 24% are natural.

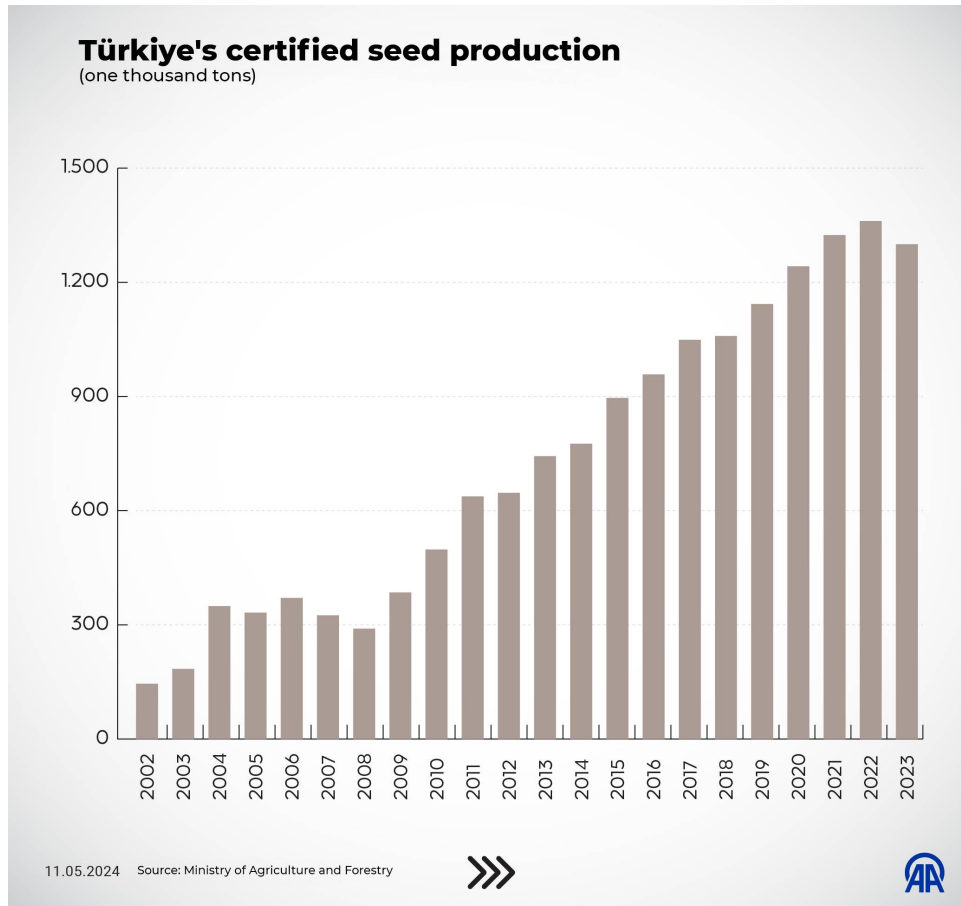
The Ministry of Environment, Urbanisation, and Climate Change issues Energy Incentive Reimbursement Certificates to the facilities whose applications are approved in accordance with the “Regulation on the Procedures and Principles regarding the Beneficiaries from Incentive Measures for Wastewater Treatment Plants” in order to cover 50% of the energy costs of wastewater treatment plants. The Ministry of Environment, Urbanisation, and Climate Change paid approximately 231.4 million TL in incentives to 795 facilities in 2022 to ensure the efficient operation of wastewater treatment plants and to improve the quality of the water in the receiving environment.

The Department of Sink Areas is another project within the Ministry of Environment, Urbanisation, and Climate Change that is designed to enhance the availability of safe, inclusive, and accessible green and public spaces by 2030, in accordance with Goal 11.7 and Goal 11.A. Sink area creation projects play a critical role in the fight against climate change by using nature-based solutions. These projects are planned and implemented in line with the Sustainable Development Goals (SDGs).

SDG 12 (Responsible Production and Consumption): Türkiye has implemented numerous policies, legislation, institutional regulations, and practices to achieve responsible production and consumption, demonstrating significant national capacity for each goal when assessed individually. Nevertheless, a more comprehensive approach to sustainable management and efficient use of natural resources, chemical management, clean production/eco-efficiency practices, and R&D activities is much needed.



TARGET 12-1 IMPLEMENT THE 10-YEAR SUSTAINABLE CONSUMPTION AND PRODUCTION FRAMEWORK	TARGET 12-2 SUSTAINABLE MANAGEMENT AND USE OF NATURAL RESOURCES	TARGET 12-3 HALVE GLOBAL PER CAPITA FOOD WASTE	TARGET 12-4 RESPONSIBLE MANAGEMENT OF CHEMICALS AND WASTE
TARGET 12-5 SUBSTANTIALLY REDUCE WASTE GENERATION	TARGET 12-6 ENCOURAGE COMPANIES TO ADOPT SUSTAINABLE PRACTICES AND SUSTAINABILITY REPORTING	TARGET 12-7 PROMOTE SUSTAINABLE PUBLIC PROCUREMENT PRACTICES	TARGET 12-8 PROMOTE UNIVERSAL UNDERSTANDING OF SUSTAINABLE LIFESTYLES
TARGET 12-A SUPPORT DEVELOPING COUNTRIES' SCIENTIFIC AND TECHNOLOGICAL CAPACITY FOR SUSTAINABLE CONSUMPTION AND PRODUCTION	TARGET 12-B DEVELOP AND IMPLEMENT TOOLS TO MONITOR SUSTAINABLE TOURISM	TARGET 12-C REMOVE MARKET DISTORTIONS THAT ENCOURAGE WASTFUL CONSUMPTION	



The state supports responsible production and consumption. The total insured value of state-supported agricultural insurance increased by 115.5% to 638,338,316,701 TL in 2023. The highest annual increase per insurance line is in aquaculture with 283.8%.

The total number of policies of state supported agricultural insurance increased by 0.3% year-on-year to 3,086,697.

Number of Policy and Insured Value of State Supported Agricultural Insurance, 2022, 2023

Branch Name	2022 Policy Number (Total)	2023 Policy Number (Total)	Change in Percentage (%)	2022 Insurance Cost (TL)	2023 Insurance Cost (TL)
Total	3.077.908	3.086.697	115,5	296.149.927.061	638.338.316.701
Plant Product	2.654.588	2.525.426	55,2	143.567.570.805	222.858.987.850
Greenhouse	38.519	38.083	55,8	42.712.205.781	66.541.523.981
Cattle	278.199	414.802	270,3	76.289.122.211	282.400.397.453
Small Cattle	91.148	91.551	81,4	24.224.827.254	44.052.786.465
Poultry	3.113	5.289	161,7	5.270.729.591	13.796.059.141
Aquaculture	178	216	257,6	870.136.937	3.111.060.412
Beekeeping (Hives with bees)	12.163	11.330	70,5	3.218.186.900	5.487.611.400

Support provided for organic and good agricultural practices reached 2.1 billion liras

The Ministry of Agriculture and Forestry has so far made 2.1 billion lira support payments within the scope of organic and good agricultural practices



PROMOTION AND SUPERVISION OF ORGANIC AGRICULTURE PROJECT



Launched in 2005



85 sub-projects are being implemented in 61 provincial directorates of agriculture and forestry in 2023



In 2022, 1.6 million tons of organic production was realized in 268 crop varieties on 310 thousand hectares

SUPPORT PAYMENTS MADE

Since 2005

1 billion TL

2023 46,6 million .TL



PROMOTION AND SUPERVISION OF GOOD AGRICULTURAL PRACTICES PROJECT



Launched in 12 provinces in 2012



Continues in 56 provinces in 2023



The area of good agricultural practices increased to 207 thousand hectares and production to 5.3 million tons

SUPPORT PAYMENTS MADE

Since 2008

1.1 billion TL

2023 47,9 million TL

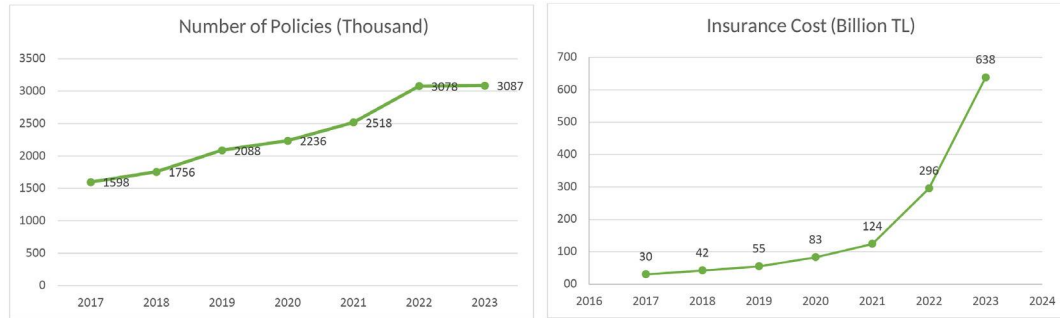
15.11.2023

Kaynak: Tarım ve Orman Bakanlığı



Total Number of Policies and Insured Value of State Supported Agricultural Insurance, 2017-2023

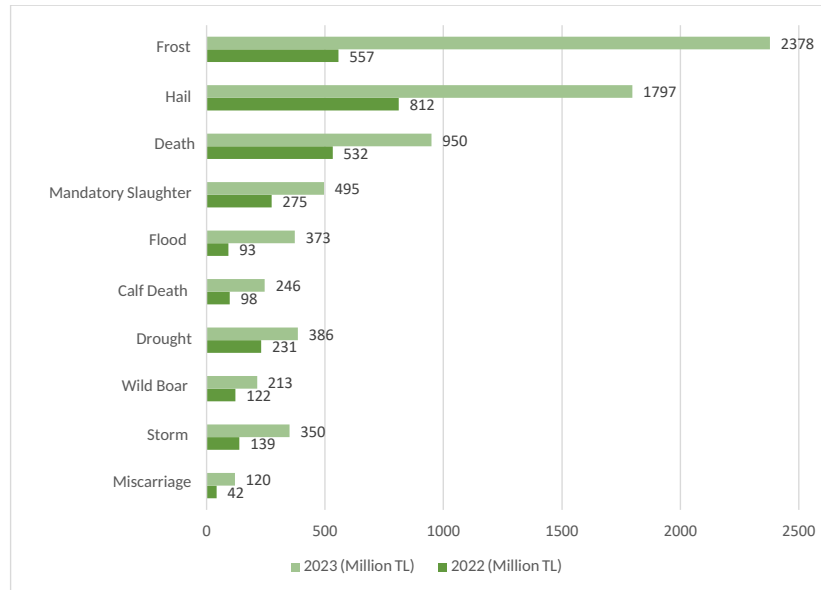
Branch Name	2022 Policy Number (Total)	2023 Policy Number (Total)	Change in Percentage (%)	2022 Insurance Cost (TL)	2023 Insurance Cost (TL)	Change in Percentage (%)
Total	3,077,908	3,086,697	0.3	296,149,927,061	638,338,316,701	115.5
Plant Product	2,654,588	2,525,426	-4.9	143,567,570,805	222,858,987,850	55.2
Greenhouse	38,519	38,083	-1.1	42,712,205,781	66,541,523,981	55.8
Cattle	278,199	414,802	49.1	76,289,122,211	282,400,397,453	270.3
Small Cattle	91,148	91,551	0.4	24,224,827,254	44,052,786,465	81.4
Poultry	3,113	5,289	69.9	5,270,729,591	13,796,059,141	161.7
Aquaculture	178	216	21.3	870,136,937	3,111,060,412	257.6
Beekeeping (Hives with bees)	12,163	11,330	-6.8	3,218,186,900	5,487,611,400	70.5



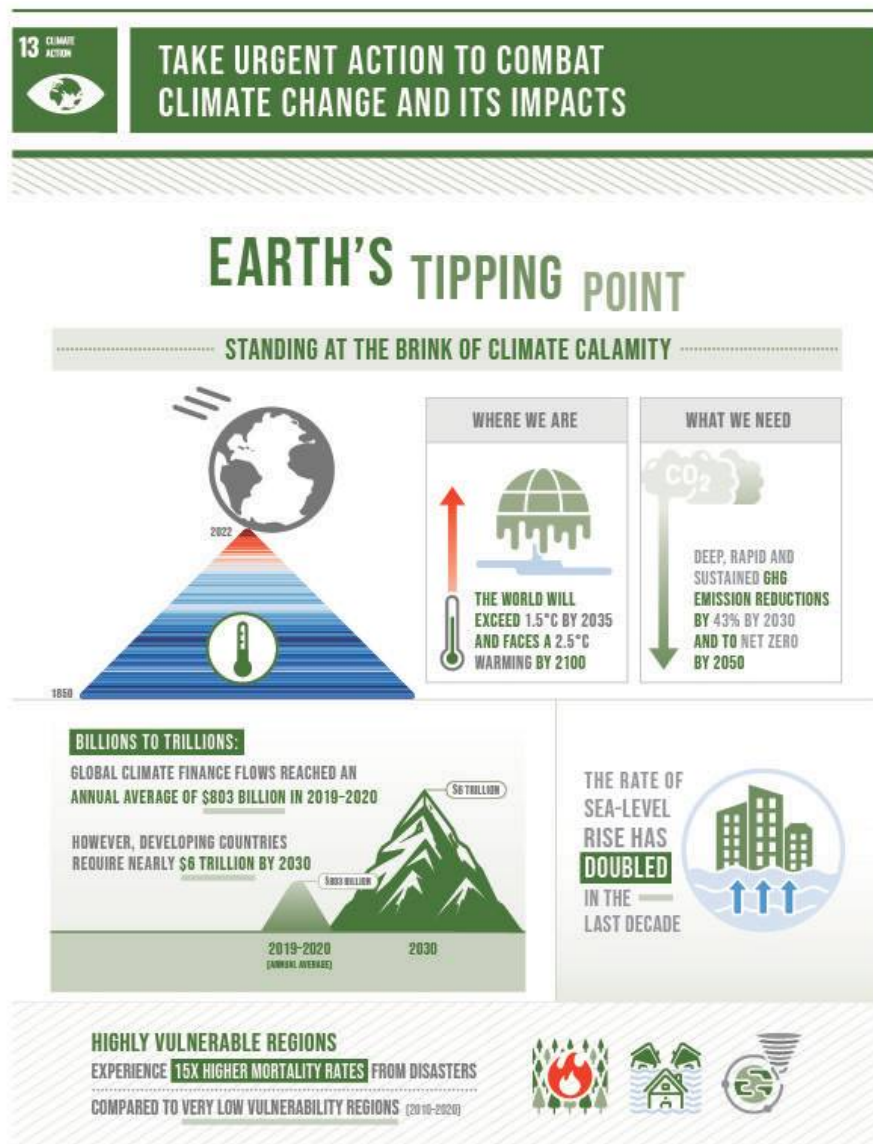
The total state support premium amount rose by 91.7% to 9,244,510,895 TL, while the total premium amount increased by 92.6% to 17,349,600,284 TL. The insured area (greenhouse included) decreased by 4.4% to 33,372,370 decares in 2023. The number of insured Cattle, sheep and goat also increased by 42.9% and 0.2% respectively.

When analysing the total amount of loss paid by insurance lines, crop insurance comes up first with a loss paid value of 5,076,169,657 TL, followed by cattle insurance with a loss paid value of 1,505,720,636 TL. Among the total loss paid per reason, the highest amount is attributed to frost, with a total paid loss value of 2,378,149,573 TL.

Claims paid by select causes of loss, 2022, 2023



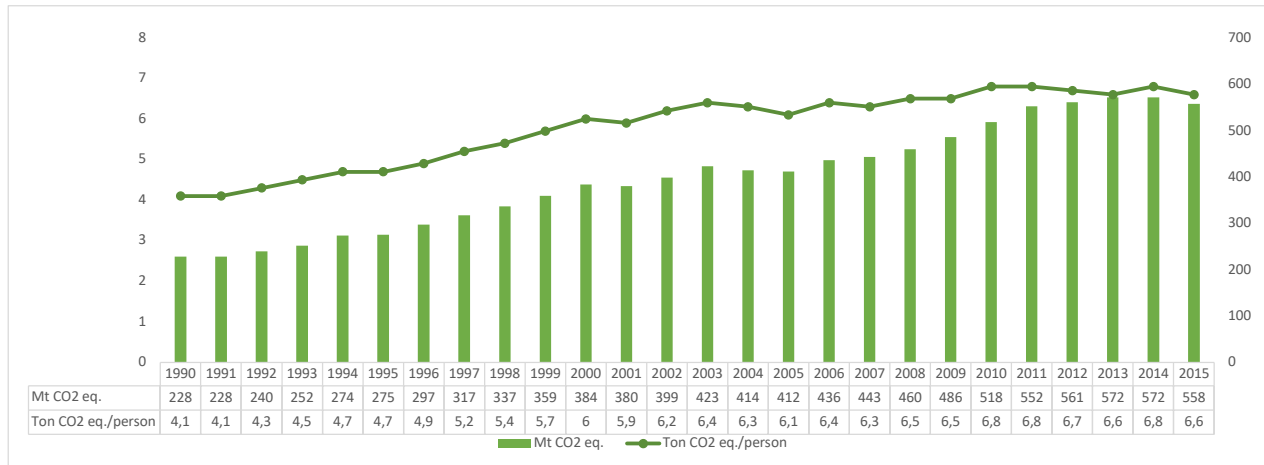
SDG 13 (Climate Action): Türkiye has made substantial progress in terms of policies, legislation, institutional framework, and an inventory of projects regarding climate action. A certain level of maturity has also been attained in the incorporation of climate change-related actions into national policies, strategies, and plans. The main prerequisites of this SDG are as follows: monitoring indicators in different and critical areas, including local/sectoral adaptation and climate risk plans in addition to standard indicators; promoting the efficient use of water in agriculture; protecting agricultural lands; developing new strategies on issues such as pasture/meadow rehabilitation, combating erosion, early detection of risks, and selection of drought-resistant species for crop and livestock production.





According to the results of the greenhouse gas inventory, total greenhouse gas emissions in 2022 were calculated as 558.3 million tonnes (Mt) of CO₂ equivalent (equi.), a decrease of 2.4% compared to the previous year. Total greenhouse gas emissions per capita were 4.1 tonnes CO₂ equivalent in 1990, 6.8 tonnes CO₂ equivalent in 2021, and 6.6 tonnes CO₂ equivalent in 2022.

Total and Per Capita Greenhouse Gas Emissions, 1990-2022



Türkiye to step up efforts to tackle climate change in 2023

Having ratified the Paris climate agreement and focusing on harmonization efforts with the European Union (EU) Green Deal, Türkiye plans to implement numerous projects in various fields ranging from transportation to industry, agriculture to trade as of 2023

Ministry of Transport and Infrastructure



Noise map is being prepared
Creating a noise map for segments exceeding 3 million annual peer traffic



Emissions reduced by 4.7 million to
Thanks to new roads, the annual amount of exhaust emissions emitted has decreased due to shorter travel times



Green transformation of railways
By 2025, 35% of the energy consumed by electric rail vehicles is planned to be covered by renewable energy sources



Ministry of Agriculture and Forest

Ministry supports production with climate-friendly projects



Rain harvest



Reduced tillage



Direct sowing method



Wind screen



Fighting agricultural drought



Ministry of Trade

"Climate diplomacy" with the EU



Work on financing mechanisms



Credit facilities are being improved



Ministry of Industry and Technology

Green OIZ Certification System will be implemented



Electricity production and consumption will be monitored instantly



Carbon and greenhouse gas emissions will be reduced



1,572 fast chargers to be installed in 81 cities in the first quarter of 2023

13.11.2022



The largest share of total greenhouse gas emissions in terms of CO₂ equivalent in 2022 was energy-related emissions at 71.8%, followed by agriculture at 12.8%, industrial processes and product use at 12.5%, and the waste sector at 2.9%.

Energy sector emissions are estimated at 400.6 Mt CO₂ equivalent in 2022, an increase of 179.8% compared to 1990 but a decrease of 1.4% compared to the previous year. Emissions from industrial processes and product use increased by 208.1% compared to 1990 but decreased by 6.4% compared to the previous year to 69.9 Mt CO₂ equivalent.

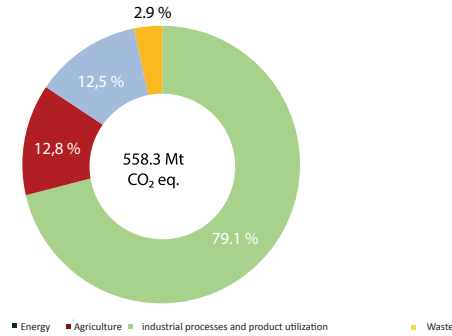
Agriculture sector emissions in 2022 are calculated as 71.5 Mt CO₂ equivalent, increasing by 37.9% compared to 1990 but decreasing by 5.1% compared to the previous year. Waste sector emissions are calculated as 16.3 Mt CO₂ equivalent, increasing by 57.7% compared to 1990 and 5.5% compared to the previous year.

Greenhouse Gas Emissions by Sector, 1990-2022

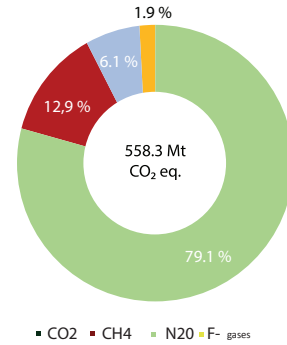
	1990	1995	2000	2005	2010	2015	2020	2021	2022	1990-2022 Change (%)	2021-2022 Change (%)
Total Emission	228	256,5	306,4	344,8	405,3	480,1	530,2	572	558,3	144,9	-2,4
Energy	143,1	170	219,8	247,7	290,9	344	369,5	406,5	400,6	179,8	-1,4
Industrial process and product usage	22,7	25,4	26,1	30,4	48,6	59,2	67,2	74,7	69,9	208,1	-6,4
Agriculture	51,8	49	46	46,3	47,7	59,2	75,4	71,5	71,5	37,9	5,1
Waste	10,3	12,1	14,5	16,9	18,1	17,7	17	15,4	16,3	57,7	5,5

Figures in the table may not add up to the total due to rounding.

greenhouse gas emission rates by sector, 2022



greenhouse gas emissions by gases, 2022



In 2022, 86.6% of total CO₂ emissions came from the energy sector, including 32.6% from electricity and heat generation, 13.1% from industrial processes and product use, and 0.3% from agriculture and waste.

60.5% of CH₄ emissions were from agriculture, 19.9% from energy, 19.6% from waste, and 0.02% from industrial processes and product use. 77.9% of N₂O emissions were from agriculture, 11.2% from energy, 6.2% from waste, and 4.6% from industrial processes and product use.

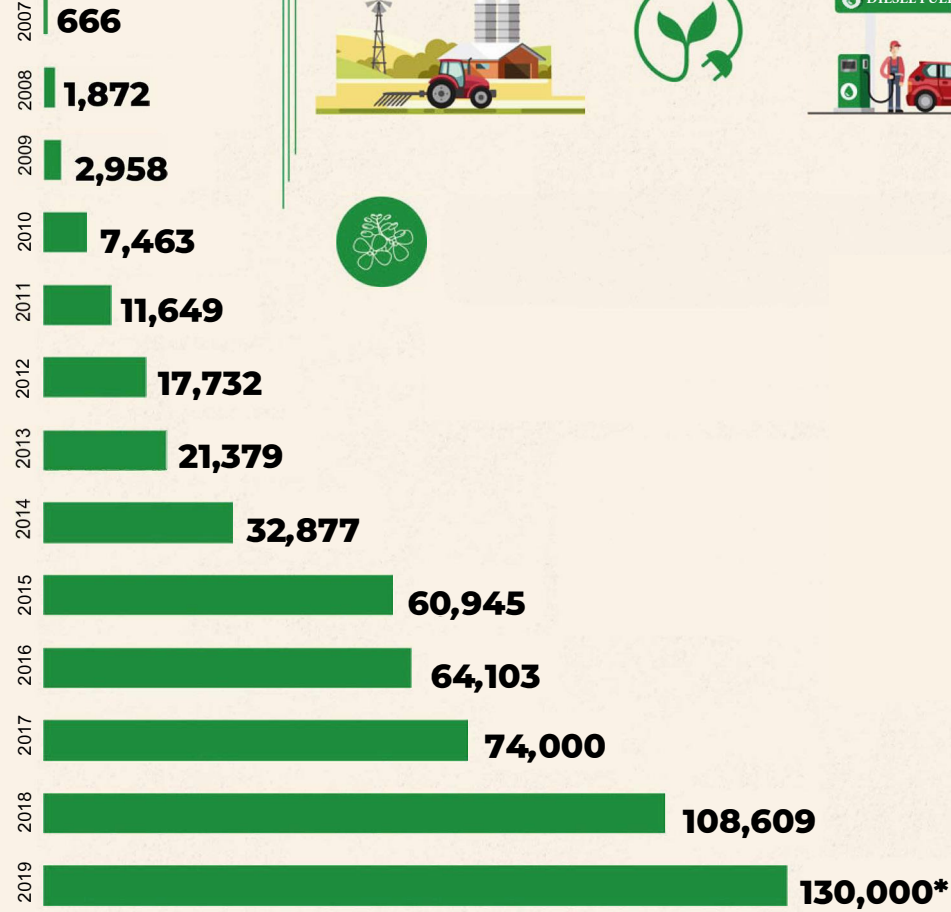
	1990	1995	2000	2005	2010	2015	2020	2021	2022	1990-2022 Change (%)	2021-2022 Change (%)
Total Emission	228.0	256.5	306.4	344.8	405.3	480.1	530.2	572.0	558.3	144.9	-2.4
CO ₂	154.1	184.1	232.4	267.0	317.6	386.3	414.4	455.2	441.4	186.4	-3.0
CH ₄	51.3	50.8	51.5	53.3	60.1	60.3	73.5	73.9	72.2	40.8	-2.4
N ₂ O	22.2	21.2	22.0	23.1	24.4	23.6	24.5	25.0	24.3	54.6	-2.8
F-gases	0.4	0.4	0.5	1.4	3.2	4.6	6.8	10.4	9.4	2349.0	50.6

Figures in the table may not add up to the total due to rounding. F-gases are fluororous gases.

Biodiesel production hits record high in Türkiye

Production growth in bio-diesel fuels derived from waste oils and oilseeds approaches record levels

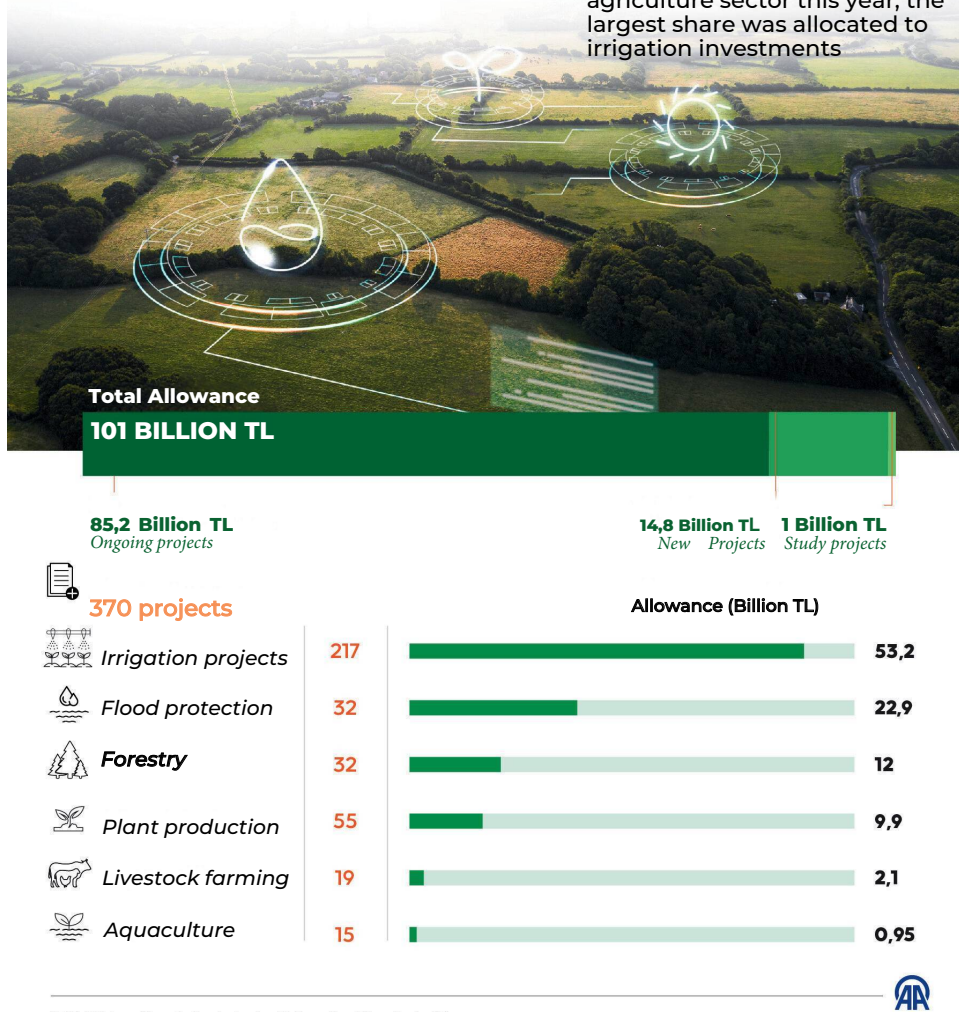
TÜRKİYE'S BIODIESEL PRODUCTION (TONS)



* Expected forecast production

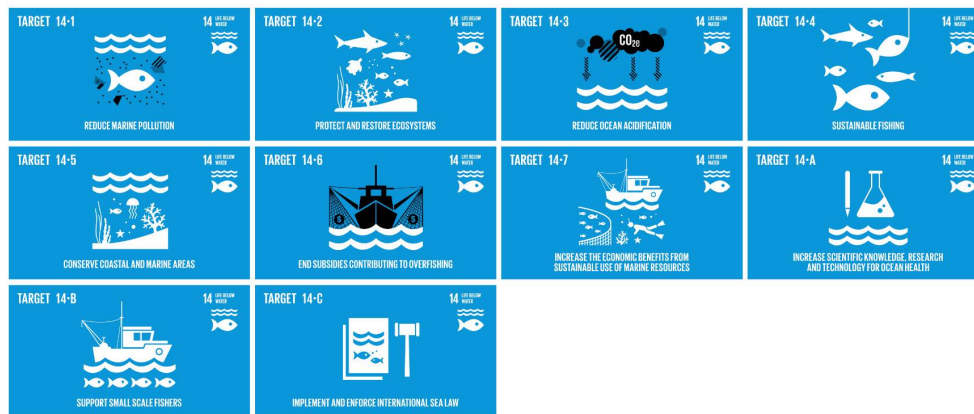
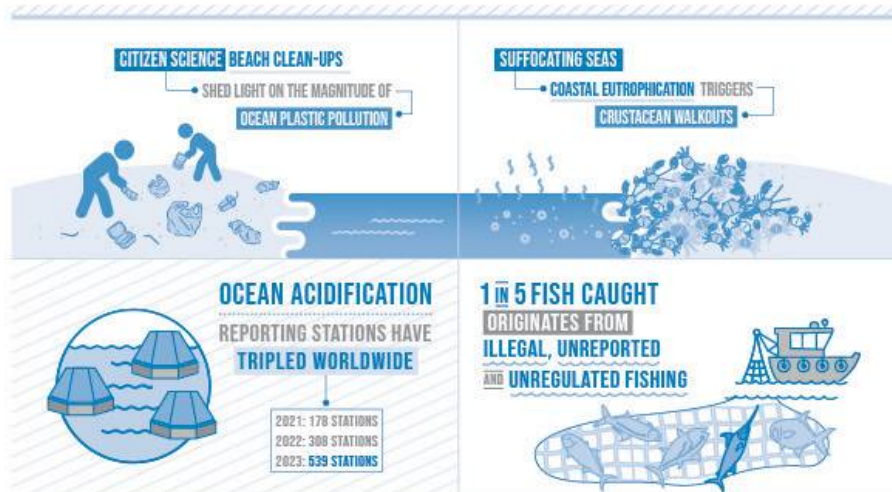
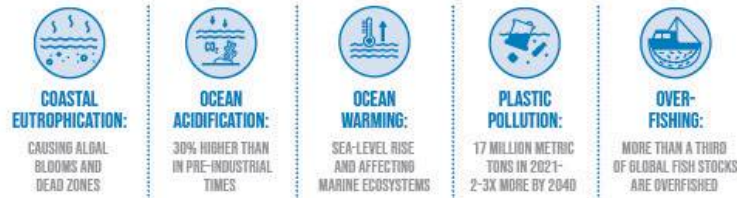
The biggest share of agricultural investments this year is allocated to irrigation projects

While 101 billion 8 million liras was allocated for 370 projects to be implemented in the agriculture sector this year, the largest share was allocated to irrigation investments



Greenhouse Gas Emissions by Gases, 1990-2022

SDG 14 (Life Below Water): Türkiye has made significant progress in reducing marine pollution and improving marine and coastal eco-systems through policies and projects. There is still room for improvement in the sustainable use and management of water resources. The main prerequisites of this goal are as follows: increasing the effectiveness of the management of marine and coastal protected areas; conserving and developing fish stocks; developing offshore fisheries in remote seas; and promoting good agricultural practices.



Türkiye has a total of 24 million hectares of marine area and 1.5 million hectares of inland water area. According to TURKSTAT data, aquaculture production was 849,808 tonnes in 2022, with an increase of 6.2% compared to 2021. Sea fish obtained by hunting accounted for 30% of the production; other sea products obtained by hunting accounted for 5.6%; inland water products obtained by hunting accounted for 3.9%; and aquaculture products accounted for 60.6%.

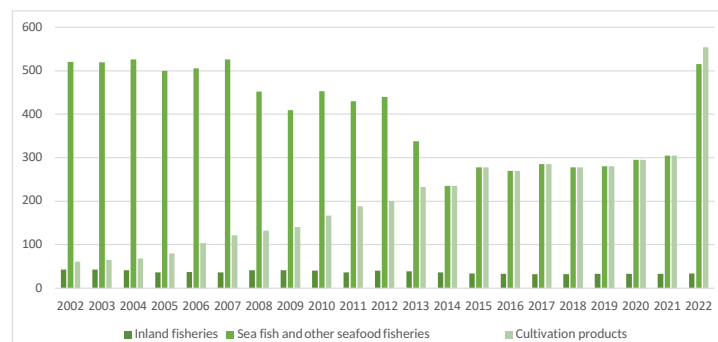
In 2022, compared to the previous year, capture fisheries in sea and inland waters increased by 2.7%, and aquaculture production increased by 9.1%. Hunting production was 335,003 tonnes and aquaculture production was 514,805 tonnes. Inland waters accounted for 28.4% of aquaculture production, while seas accounted for 71.6%.

Aquaculture production increased by 18.6% in 2023 compared to the previous year and reached 1 million 7 thousand 921 tonnes. Sea fish obtained by hunting accounted for 38.4% of the production; other sea products obtained by hunting accounted for 3.3%; inland water products obtained by hunting accounted for 3.3%; and aquaculture products accounted for 55%.

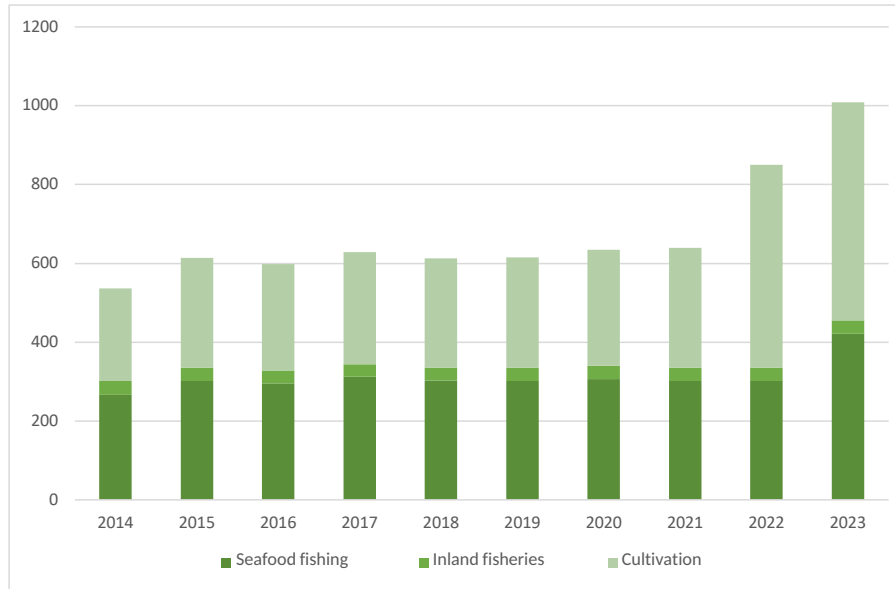
In 2022, the Western Black Sea Region ranked first in seafood production with 39.2%. It was followed by the Eastern Black Sea region with 34.2%, the Aegean region with 14.2%, the Marmara region with 8%, and the Mediterranean region with 4.3%.

Regulations are enacted regarding the location, period, length, species, distance, depth, and fishing gear and equipment in order to ensure the protection and sustainable operation of aquaculture resources. In addition, numerous efforts are made to monitor fish populations and safeguard endangered species, strengthen stocks through restocking, monitor water resources for pollution, and implement preventive measures.

Aquaculture Production Data by Years (2002-2022)



Aquaculture Production, 2014-2023 (Thousand tonnes)



In 2023, 399 thousand 529 tonnes (72.1%) of aquaculture production was realised in seas and 154 thousand 333 tonnes (27.9%) in inland waters.

Türkiye, like the rest of the globe, produces modest amounts of aquaculture products through hunting. Because of this, scientists' fundamental strategy for hunting is to maintain production by safeguarding stocks. The fishing fleet has grown and developed in terms of power, number, technology, and fishing gear until the 2000s. According to TURKSTAT data, while the number of active fishing vessels in our seas was 13,381 in 2000, this number increased to 18,396 in 2005 and decreased to 14,064 in 2022.

100 million baby fish will be released into the resources in the 100th anniversary of the Republic



NUMBER OF FISH FRY RELEASED INTO THE SPRINGS IN THE LAST 10 YEARS

89 million fry produced and released in 2022

5 thousand +



Carp

176 MILLION



Turbot

170 THOUSAND



Trout

21 THOUSAND



Shabut

9,5 MILLION



Granyose

80 THOUSAND



Catfish

21 THOUSAND



Siraz

820 THOUSAND



Sturgeon

23 THOUSAND



Black sea trout

5 THOUSAND

"PROJECT FOR CLEANING THE SEAS FROM ABANDONED FISHING GEAR"

2,3 million aquatic lives saved



Implemented in 2014

103 million square meters of area scanned

Approximately 800 thousand square meters of ghost nets, 35 thousand baskets, and other fishing gear were removed

11.04.2023 Kaynak: Tarım ve Orman Bakanlığı

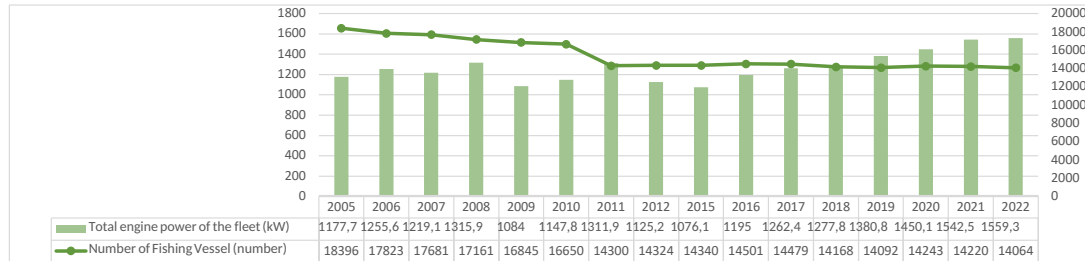


To safeguard fisheries resources and maintain their sustainability, no new vessel licences have been issued since 2002, limiting the fleet's future expansion.

To reduce fishing pressure on resources by maintaining a balance between fisheries stocks and the fishing fleet in the seas, fishermen who wish to withdraw their vessels from fishing are paid support payments based on the size of the vessel in exchange for the cancellation of their

licences, beginning in 2012. In this context, a total of 1,264 fishing vessels of 10 metres and above were removed from the fleet between 2012 and 2018. The total number of ships has been reduced with the enactment of this policy.

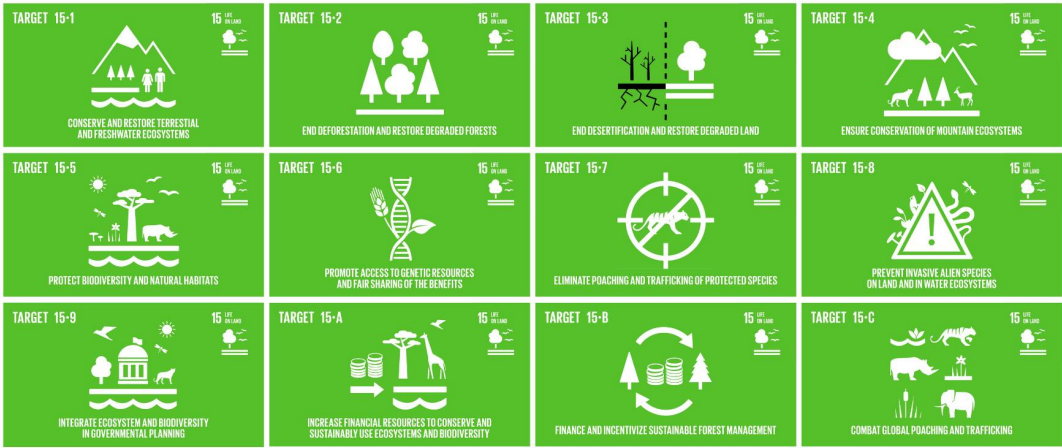
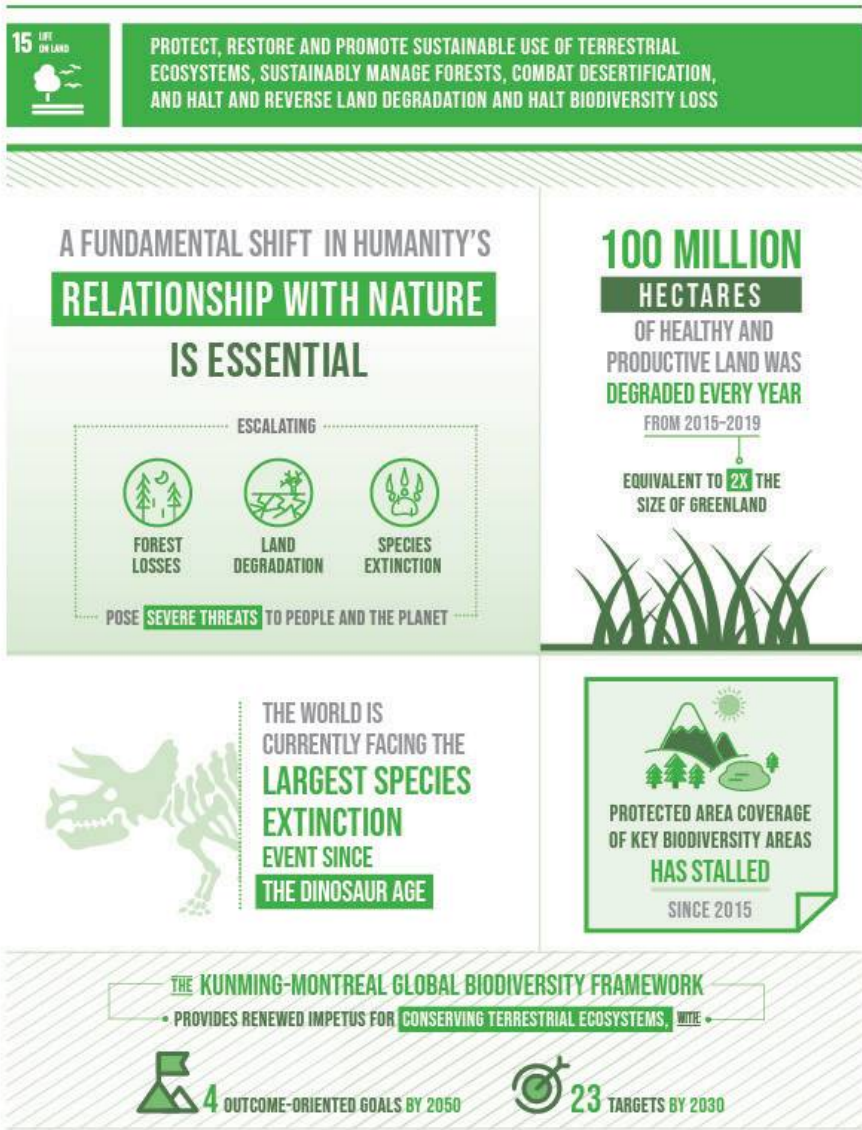
Number of Sea Fishing Vessels by Years



SDG 15 (Life on Land): Between 2000 and 2016, Türkiye made great efforts to maintain biodiversity and mitigate land degradation, particularly in battling desertification, and implemented an intensive afforestation strategy. Nonetheless, the negative pressures of rapid population growth, urbanisation, industrialisation, and climate change on terrestrial ecosystems are increasing, and protected areas in particular can be adversely affected by transport, mining, and energy projects. The main prerequisites of this goal are as follows: the effective use and protection of natural resources such as land, plants, forests, seas, and freshwater; the prevention of poaching; and the preservation of biodiversity and gene resources.

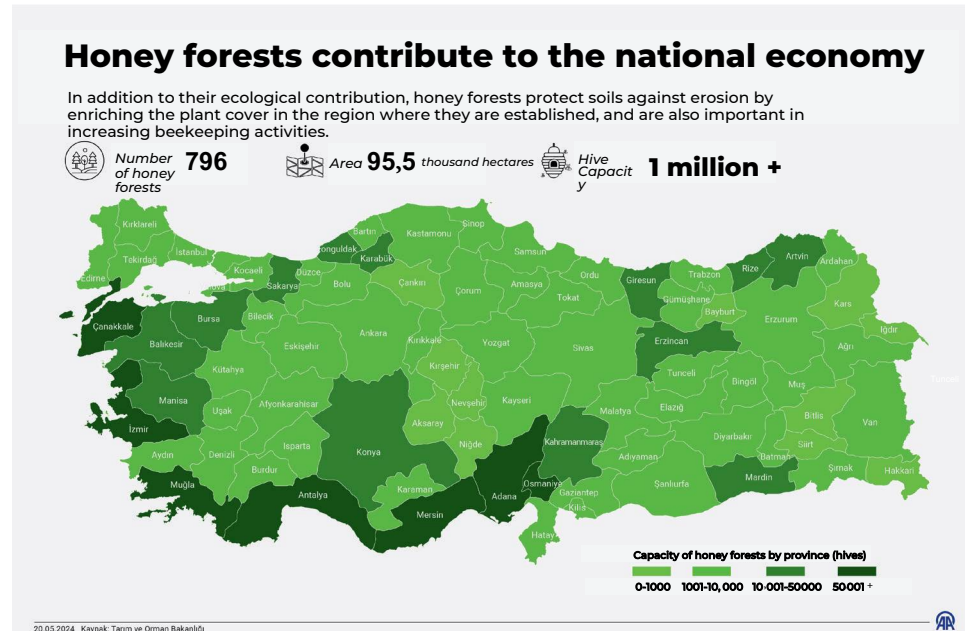
Environmental protection expenditures increased by 111.4% in 2022 compared to the previous year, totalling 140.3 billion TL. Financial and non-financial enterprises accounted for 70.3% of environmental pro-





tection spending, while non-profit organisations supporting the state and households accounted for 26.1% and households for 3.6%.

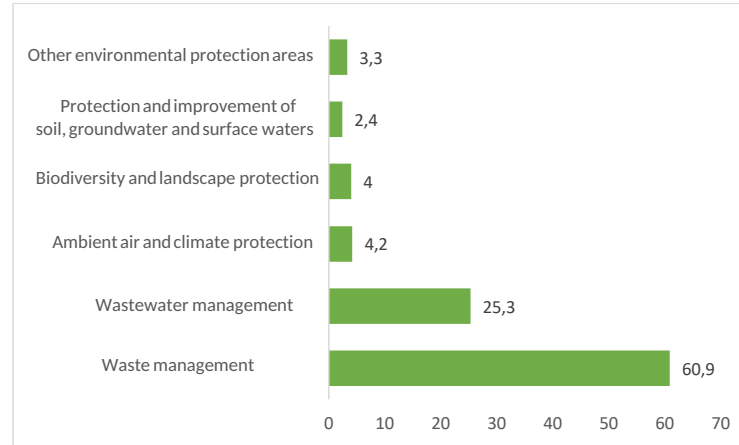
Environmental protection expenditures were divided as follows: 60.9% for waste management services, 25.3% for wastewater management services, 4.2% for ambient air and climate protection, 4% for biodiversity and landscape protection, 2.4% for soil, groundwater, and surface water protection and quality improvement, and 3.3% for other environmental protection issues.



Environmental protection expenditures by subject (%), 2022

	(Million TL)				
Corporate Sectors	2021 (Million TL)	Share (%) 2021	2022 (Million TL)	Share (%) 2022	Change compared to previous year (%)
Total	66362	100	140257	100	111,4
Non-profit organizations serving the government and households	18952	28,6	36610	26,1	93,2
Financial and non-financial companies	43078	64,9	98658	70,3	129
Households	4332	6,5	4989	3,6	15,2

In 2022, environmental protection investment expenditures increased by 140.9% to 32.7 billion TL, with 84.7% coming from financial and non-financial enterprises and 15.3% from non-profit organisations supporting the state and households. The ratio of environmental protection expenditures in GDP was 0.91% in 2021 and 0.93% in 2022.

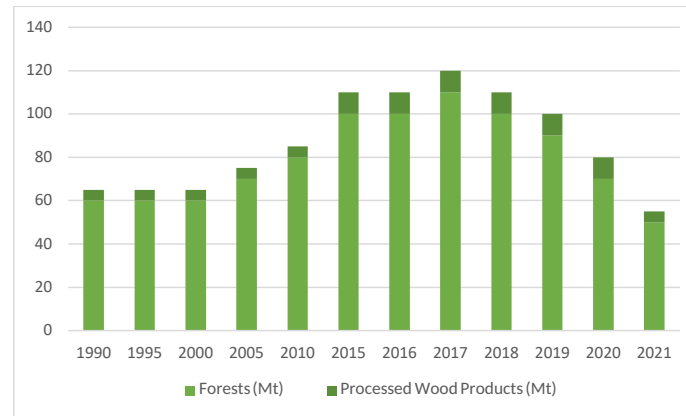


In terrestrial ecosystems, CO₂ in the atmosphere can accumulate in vegetation and soil as carbon through photosynthesis. Under the United Nations Framework Convention on Climate Change, any process, activity, or mechanism that removes greenhouse gases from the atmosphere and retains them is called a sink. The Demirci 100th Anniversary Carbon Sinks Project under the Ministry of Environment, Urbanisation and Climate Change aims to support economic, social, and environmental linkages between rural areas by strengthening national development planning. Through such projects, important steps are being taken to combat climate change through reforestation and ecosystem restoration.

The General Directorate of Forestry's sustainable forest management, afforestation, increasing forest area, conversion of degraded forests into productive forests (rehabilitation/restoration), forest maintenance (silviculture), effective forest protection, and forest fire management activities all increase forest sink potential and reduce greenhouse gas emissions.

According to the LULUCF section of the National Greenhouse Gas Inventory 2023 Report, Türkiye's total greenhouse gas emissions in 2021 were 47 million tonnes of CO₂ equivalent. This amount indicates that the LULUCF sector has reduced 8% of the country's emissions sequestered by forests and wood products, reducing total national emissions from 564 million tonnes to 517 million tonnes of CO₂ equivalent. The 2021 sequestration trends show a 29% decrease compared to 1990 data.

Sink Areas and Carbon Sequestration in Türkiye (1990-2021) (CO₂ equivalent Mt/year)

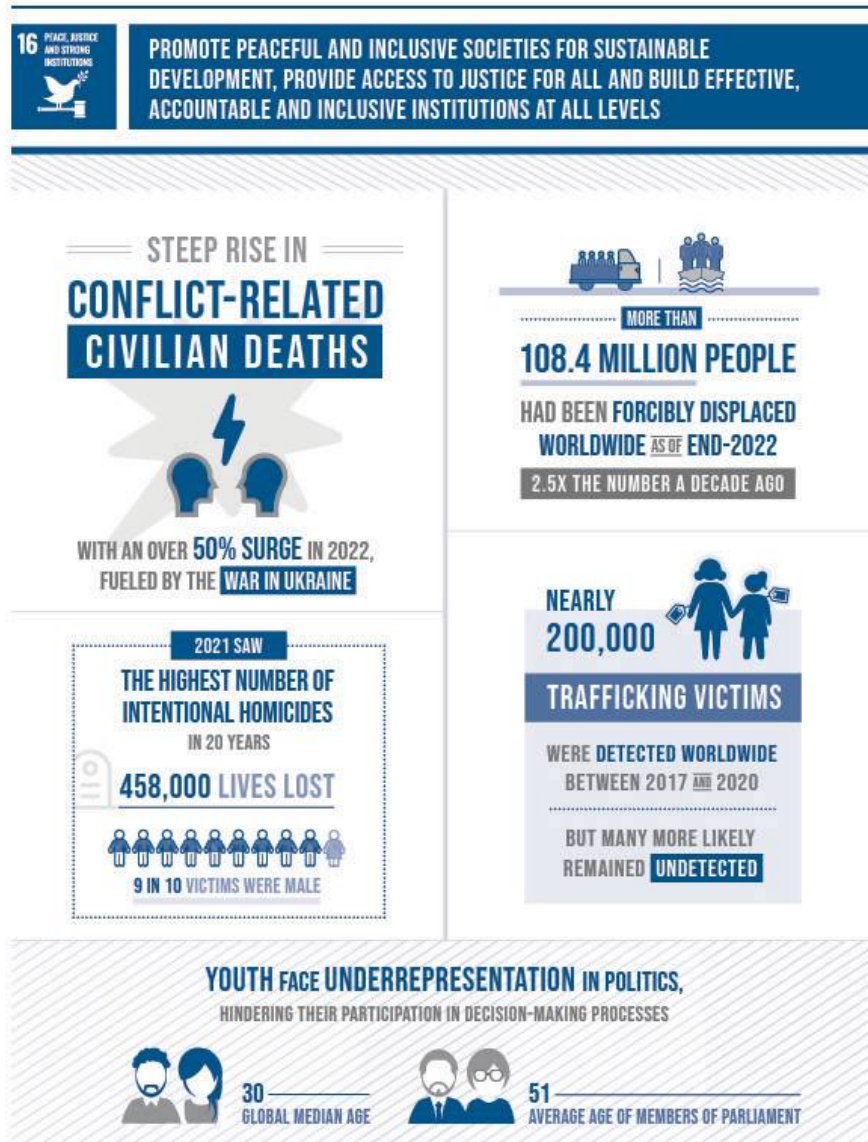


SDG 16 (Peace, Justice, and Strong Institutions): Türkiye has made significant progress in terms of policy, legislation, and institutional framework in combating violence and crime in the 2000s with the impact of the EU harmonisation process. Significant progress has also been made in the effectiveness of public services, particularly in implementation. The main prerequisites of this goal are as follows: eliminating problems in implementation, accelerating processes in access to justice, focussing more on crime prevention, solving problems related to financial crimes through further mechanisms and coordination, and generating sub-division data in SDG 16 indicators.

When Türkiye's justice statistics are analysed;

in Judicial Justice,

- » the number of files received by the Chief Public Prosecutor's Office of the Court of Cassation in 2023 decreased by 73.5%, in the General Assembly of Criminal Chambers and Criminal Chambers by 41.9%, and in the General Assembly of Civil Chambers and Civil Chambers by 75.5% compared to 2015. Compared to the previous year, the number of files received by the Chief Public Prosecutor's Office of the Court of Cassation decreased by 22.7%, the number of files received by the General Assembly of Criminal Chambers and Criminal Chambers decreased by 1.2%, and the number of files received by the General Assembly of Civil Chambers and Civil Chambers decreased by 15.2%.
- » The number of files received by the regional courts of justice in 2023 increased by 231.3% compared to 2017 and by 3.7% compared to the previous year.



TARGET 16-1  REDUCE VIOLENCE EVERYWHERE	TARGET 16-2  PROTECT CHILDREN FROM ABUSE, EXPLOITATION, TRAFFICKING AND VIOLENCE	TARGET 16-3  PROMOTE THE RULE OF LAW AND ENSURE EQUAL ACCESS TO JUSTICE	TARGET 16-4  COMBAT ORGANIZED CRIME AND ILLICIT FINANCIAL AND ARMS FLOW
TARGET 16-5  SUBSTANTIALLY REDUCE CORRUPTION AND BRIBERY	TARGET 16-6  DEVELOP EFFECTIVE, ACCOUNTABLE AND TRANSPARENT INSTITUTIONS	TARGET 16-7  ENSURE RESPONSIVE, INCLUSIVE AND REPRESENTATIVE DECISION-MAKING	TARGET 16-8  STRENGTHEN THE PARTICIPATION IN GLOBAL GOVERNANCE
TARGET 16-9  PROVIDE UNIVERSAL LEGAL IDENTITY	TARGET 16-10  ENSURE PUBLIC ACCESS TO INFORMATION AND PROTECT FUNDAMENTAL FREEDOMS	TARGET 16-A  STRENGTHEN NATIONAL INSTITUTIONS TO PREVENT VIOLENCE AND COMBAT TERRORISM AND CRIME	TARGET 16-B  PROMOTE AND ENFORCE NON-DISCRIMINATORY LAWS AND POLICIES

- » In the Chief Public Prosecutor's Offices, the number of files per public prosecutor in 2023 increased by 0.6% compared to 2015 and by 3.1% compared to the previous year.
- » The number of investigation files received by Chief Public Prosecutor's Offices in 2023 increased by 54.6% compared to 2015 and by 4.8% compared to the previous year.
- » In 2023, the number of files per judge in the First Instance Court for Jurisdiction decreased by 9.4% compared to 2015 and by 0.1% compared to the previous year.
- » The number of files received in criminal courts in 2023 increased by 29.3% compared to 2015 and by 45% in civil courts. The number of files received by criminal and civil courts increased by 2.5% and 6.3%, respectively, compared to the previous year.

In Administrative Justice;

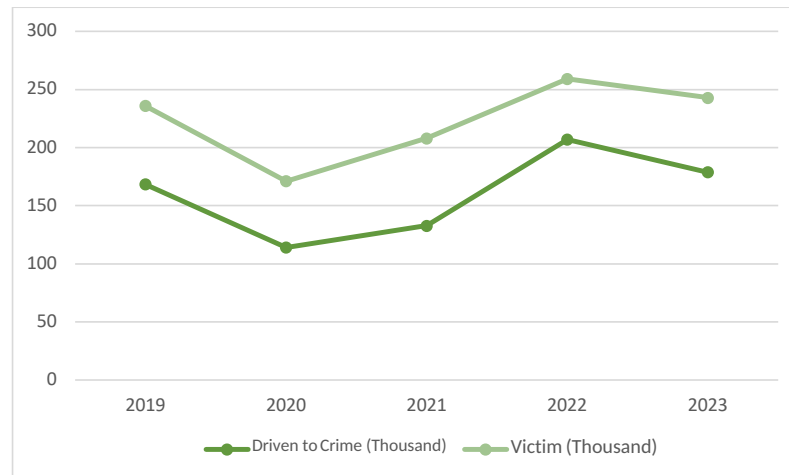
- » The number of files received by the Council of State departments and boards in 2023 decreased by 38.0% compared to 2015 and increased by 12.7% compared to the previous year.
- » The number of files received by the regional administrative courts in 2023 increased by 144.7% compared to 2015 and decreased by 2.9% compared to the previous year.
- » The number of files per judge in the court of first instance of administrative jurisdiction increased by 20.5% in 2023 compared to 2015 and decreased by 0.2% compared to the previous year.
- » The number of files received by administrative courts in 2023 increased by 66.7% compared to 2015, while it decreased by 7.5% in tax courts. Compared to the previous year, the number of files received by administrative courts increased by 11.1%, while the number of files received by tax courts decreased by 21.3%.

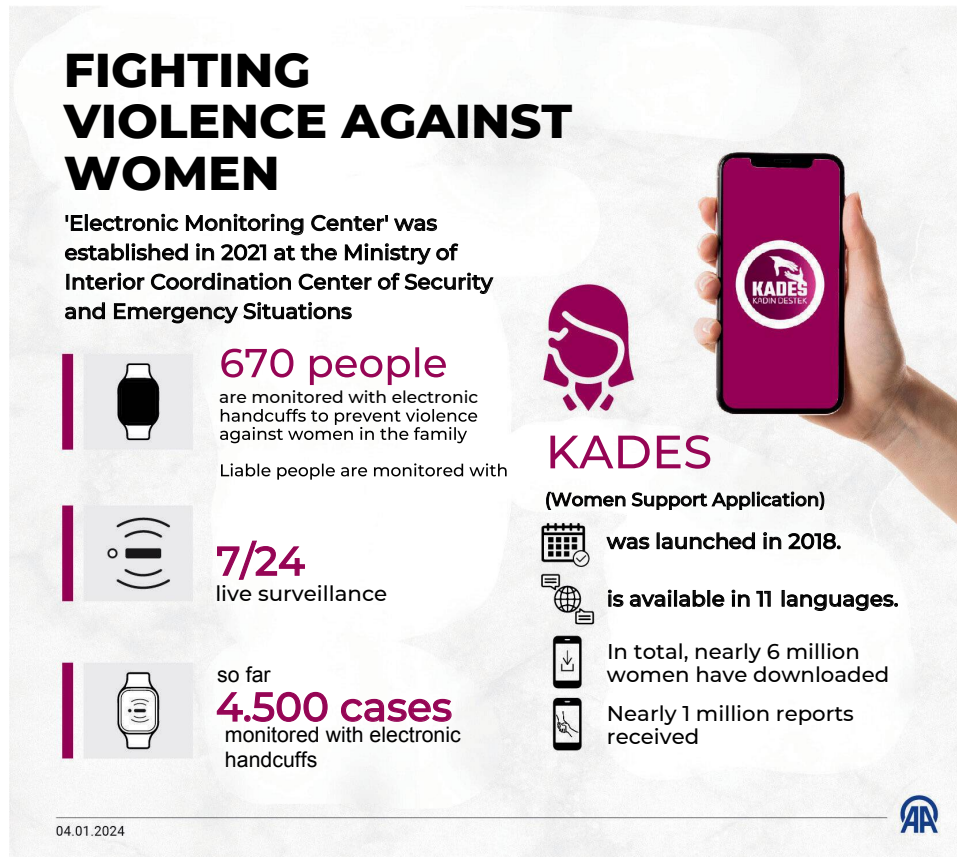
The number of incidents involving children who came to or were brought to security units decreased by 10.7% in 2023 compared to 2022 and reached 537,583. In these incidents, the number of children came to or were brought to security units: 242 thousand 875 children as victims, 178 thousand 834 children due to being dragged into crime (allegedly committing an act defined as a crime in the law), 84 thousand 751 children for information, 15 thousand 716 children due to being missing (reported missing and later found), 11 thousand 179 children

due to committing a misdemeanour, and 4 thousand 228 children for other reasons.

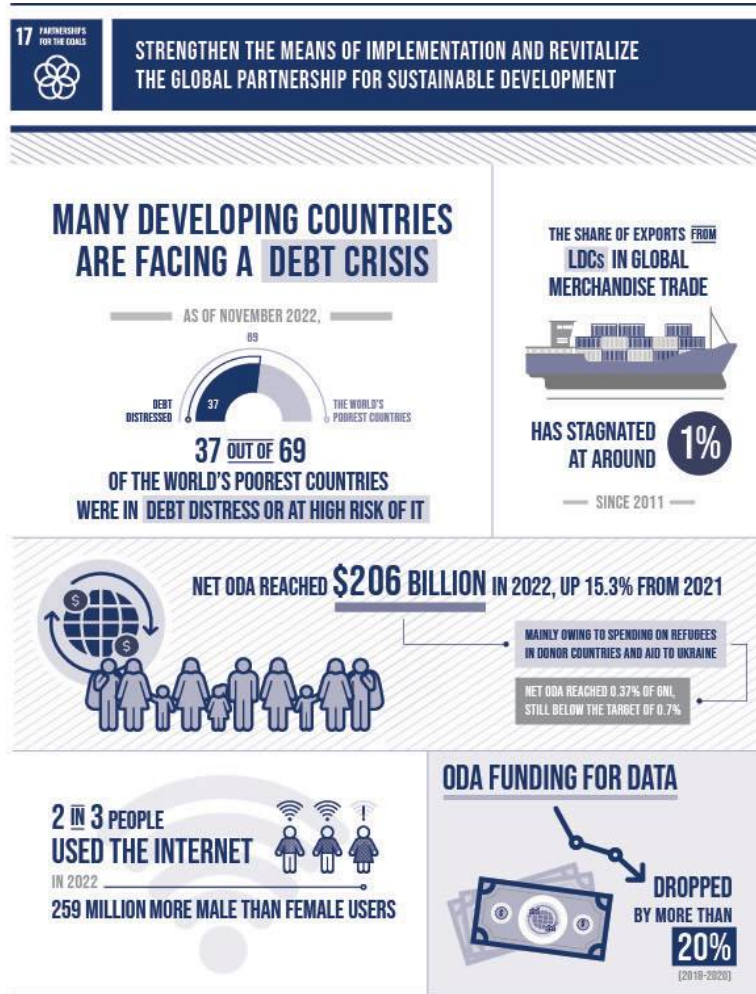
Number of Select Reasons for Arrival by Year, 2019-2023

SDG 17 (Partnerships for the Goals): Implementation tools cover financial resources, technology, international cooperation and institutional capacity, trade, policy harmonisation, and strengthening the data infrastructure needed to implement the goals. SDG 17 provides a framework for increasing and diversifying aid to both developing and least developed countries, improving the sustainability of their financial systems, and financing development. After 2011, Türkiye has continuously increased the volume of its official development assistance (ODA) and its share in GDP and has become one of the rising donor countries. In 2017, it provided USD 8.143 billion in ODA. This data corresponds to a 40.4% increase compared to 2016. As a result, it was achieved at 0.95% in 2017, significantly above the UN target of 0.7%. The main prerequisites of this goal are as follows: the completion of the establishment of the Technology Bank for Least Developed Countries in Türkiye, close monitoring of the Addis Ababa Action Agenda, and the designing of specific plans for the development of multi-stakeholder partnerships with neighbouring countries.





SDG 17 provides a basis for Türkiye to adapt to global partnerships and implementation tools developed, as well as to transfer experiences, develop policy, institutional frameworks, and implementation proposals in line with its capacities and needs. In a multifaceted and dynamic structure, SDG 17 is also significant for the integration of SDGs into national policies. SDG 17 is an objective that aims to develop an implementation mechanism for all SDGs with a macro perspective, especially in the international context. The goals situated under SDG 17 focus on creating a framework of sustainably financing development through diverse approaches such as increasing aid to both developing and least developed countries and diversifying their sources, providing the sustainability of their financial systems to support their sustainable economic development (tax systems and sustainable debt management, etc.), and combating the informal economy. The Addis Ababa Action Agenda is a landmark policy document that sets out the worldwide commitment of countries to finance and foster an enabling environment for sustainable development. Türkiye is a middle-high

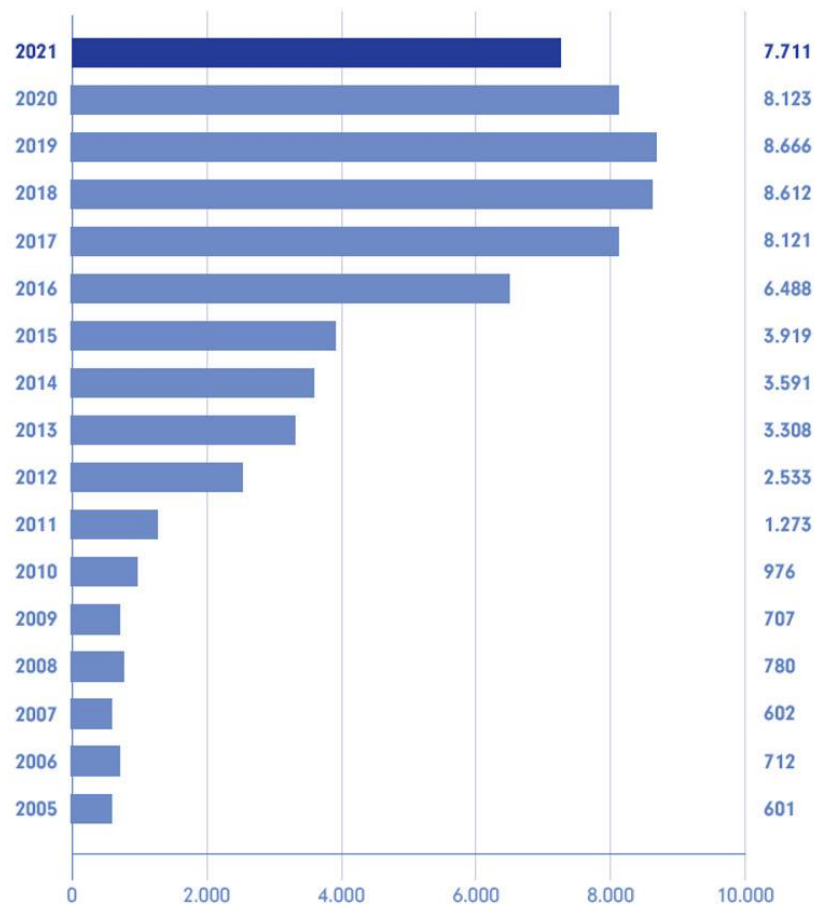


TARGET 17-1 MOBILIZE RESOURCES TO IMPROVE DOMESTIC REVENUE COLLECTION	17 PARTNERSHIPS FOR THE GOALS FINANCE	TARGET 17-2 IMPLEMENT ALL DEVELOPMENT ASSISTANCE COMMITMENTS	17 PARTNERSHIPS FOR THE GOALS FINANCE	TARGET 17-3 MOBILIZE FINANCIAL RESOURCES FOR DEVELOPING COUNTRIES	17 PARTNERSHIPS FOR THE GOALS FINANCE	TARGET 17-4 ASSIST DEVELOPING COUNTRIES IN ATTAINING DEBT SUSTAINABILITY	17 PARTNERSHIPS FOR THE GOALS FINANCE
TARGET 17-5 INVEST IN LEAST DEVELOPED COUNTRIES	17 PARTNERSHIPS FOR THE GOALS FINANCE	TARGET 17-6 KNOWLEDGE SHARING AND COOPERATION FOR ACCESS TO SCIENCE, TECHNOLOGY AND INNOVATION	17 PARTNERSHIPS FOR THE GOALS TECHNOLOGY	TARGET 17-7 PROMOTE SUSTAINABLE TECHNOLOGIES TO DEVELOPING COUNTRIES	17 PARTNERSHIPS FOR THE GOALS TECHNOLOGY	TARGET 17-8 STRENGTHEN THE SCIENCE, TECHNOLOGY AND INNOVATION FOR LEAST DEVELOPED COUNTRIES	17 PARTNERSHIPS FOR THE GOALS TECHNOLOGY
TARGET 17-9 ENHANCE SDG CAPACITY IN DEVELOPING COUNTRIES	17 PARTNERSHIPS FOR THE GOALS TECHNOLOGY	TARGET 17-10 PROMOTE A UNIVERSAL TRADING SYSTEM UNDER THE WTO	17 PARTNERSHIPS FOR THE GOALS TRADE	TARGET 17-11 INCREASE THE EXPORTS OF DEVELOPING COUNTRIES	17 PARTNERSHIPS FOR THE GOALS TRADE	TARGET 17-12 REMOVE TRADE BARRIERS FOR LEAST DEVELOPED COUNTRIES	17 PARTNERSHIPS FOR THE GOALS TRADE
TARGET 17-13 ENHANCE GLOBAL MACROECONOMIC STABILITY	17 PARTNERSHIPS FOR THE GOALS TRADE	TARGET 17-14 ENHANCE POLICY COHERENCE FOR SUSTAINABLE DEVELOPMENT	17 PARTNERSHIPS FOR THE GOALS SYSTEMIC ISSUES	TARGET 17-15 RESPECT NATIONAL LEADERSHIP TO IMPLEMENT POLICIES FOR THE SUSTAINABLE DEVELOPMENT GOALS	17 PARTNERSHIPS FOR THE GOALS SYSTEMIC ISSUES	TARGET 17-16 ENHANCE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT	17 PARTNERSHIPS FOR THE GOALS SYSTEMIC ISSUES
TARGET 17-17 ENCOURAGE EFFECTIVE PARTNERSHIPS	17 PARTNERSHIPS FOR THE GOALS SYSTEMIC ISSUES	TARGET 17-18 ENHANCE AVAILABILITY OF RELIABLE DATA	17 PARTNERSHIPS FOR THE GOALS SYSTEMIC ISSUES	TARGET 17-19 FURTHER DEVELOP MEASUREMENTS OF PROGRESS	17 PARTNERSHIPS FOR THE GOALS SYSTEMIC ISSUES		

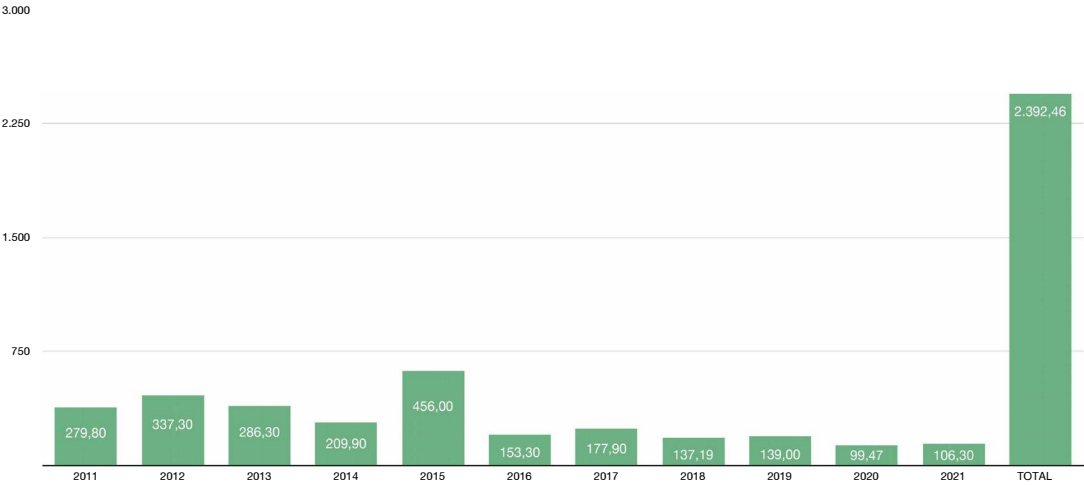
income country. In addition to current ODAs, it will be important to increase the share of foreign direct investments in GDP in order to raise the country's economy to a high income level. Today, the share of foreign direct investments in GDP remains low compared to the world average. In this perspective, co-investments with developing countries whose economies are growing much faster than those of other developing countries and which have growth potential could increase the potential for access to additional resources.

According to TİKA statistics, official development assistance, a crucial part of Türkiye's development assistance and used as a benchmark in international monitoring and evaluation studies, amounted to USD 7.71 billion in 2021.

Total Official Development Assistance of Türkiye [2005-2021 Million Dollars]



Türkiye's Aid to Least Developed Countries (2011-2021)



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Chapter IX

GREEN DEVELOPMENT

Green Economy

Green Energy

Green Business and Employment

Green Industry

Green Technology

Green Production

Green Water and Waste Management

Green Agriculture and Livestock

Green Transportation

Green Healthcare Services

Green Tourism

Green Economy

Green economy, in its broadest sense, refers to a concept that emphasizes environmental protection and the mitigation of environmental risks while achieving the goals of sustainable development. As the effects of climate change become increasingly evident, the “resource-efficient” and “transition to green economy” processes aimed at combating climate change and achieving sustainable development have become a global mobilization effort. Türkiye attaches great importance to efforts to limit global warming, prevent climate change, and address all challenges arising from it, showing a strong commitment to actively contributing to global efforts in this area. In this context, extensive work is being conducted in the field of green economy, as in many other areas, with the aim of maximizing the balance between economy and environment.

In this regard, Türkiye ratified the Paris Agreement, adopted at the 21st Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC), on October 6, 2021, and announced its carbon-neutral target for 2053. Within the framework of the Nationally Determined Contribution (NDC), a commitment to a 41% reduction in emissions by 2030 was outlined under the “reduction from increase” scenario.

Undoubtedly, leaving a livable world for future generations requires a reform process that will fundamentally change current production and consumption habits. The benefits that can be achieved on this

path depend on the collective effort and cooperation of all countries, and the realization of global climate change targets and efforts will only be possible with fair and reasonable access to international climate finance and new technologies.

The fight against climate change and the sustainability goals have become fundamental elements of today's economic growth strategies. In this context, the European Green Deal (EGD), which is poised to have a transformative impact on international value chains, holds particular significance for Türkiye.

Türkiye, as a historic production and trade hub connecting Europe, Asia, and Africa, has high integration in global trade and supply chains primarily through its Customs Union and Free Trade Agreement (FTA) network with the EU. Considering that 41% of Türkiye's total exports, amounting to \$255.8 billion, were made to the EU-27 countries in 2023, the anticipated changes under the EGD are expected to have direct effects on the value chains integrated with the close commercial and economic integration provided by the Customs Union.

In this context, Türkiye has identified a roadmap for adapting to the European Green Deal as part of its efforts towards green transformation. A Green Deal Action Plan (GDAP) was developed with the contributions of relevant institutions and published in the Official Gazette on July 16, 2021.

The Action Plan includes a wide range of activities, from developing a carbon pricing mechanism in Türkiye in response to the EU's anticipated carbon border adjustment, to establishing a circular economy and accessing clean energy and climate finance. The green transformation process will necessitate significant legislative and infrastructure changes in numerous policy areas while also prompting the private sector to review both production processes and corporate strategies. Within this framework, subject-based studies are being conducted under 20 Specialized Working Groups involving all relevant public institutions, the private sector, and stakeholders. The Green Deal Working Group (GDWG), chaired by deputy ministers, monitors the progress of these technical studies and provides strategic guidance.

Like many countries, Türkiye faces the challenge of combating climate change and preparing its industry for a green, sustainable, and resource-efficient economic transition. This process requires a complete shift in perspectives on consumption and production patterns.



In this context, particularly in energy and resource-intensive sectors, achieving a more efficient and environmentally sustainable production structure necessitates the combined evaluation of circular economy principles and industrial decarbonization efforts. The public, private sector, and academia cooperation provided under the Green Deal Action Plan facilitates a comprehensive and coordinated green transformation process.

The green and digital transformation process entails a substantial investment need associated with the adaptation of new technologies and digitalization, within the framework of goals such as low-carbon production, green energy transformation, reducing carbon and environmental footprints in production, adopting a resource-efficient, circular economy model, and promoting sustainable transportation and agriculture practices. The establishment of a global sustainable financing infrastructure, making economic activities environmentally compatible and sustainable, and managing climate risks are crucial areas where significant progress is being made. This process involves creating necessary financing sources for green transformation and directing these sources towards sustainable investments. In this context, the Green Deal Action Plan addresses each aspect of green and digital transformation in detail with the participation of relevant stakeholders; efforts are ongoing to strengthen the ecosystem supporting green finance in Türkiye, review national incentive mechanisms, and ensure the effective use of international financing sources.

Türkiye is taking steps to implement policies that will enable green transformation in line with its 2053 net zero target, strengthen its position in the transforming international trade system, and solidify its role in value chains. Concrete developments have been made in various areas, including preparing roadmaps for transitioning to low-carbon production in energy-intensive priority sectors, developing technological transformation roadmaps to support green growth, preparing a circular economy action plan, assessing regulatory needs for sustainable products, and strategic planning for transitioning to clean energy and improving energy efficiency.

In this scope, Türkiye is working on low-carbon production roadmaps to reduce greenhouse gas emissions in energy-intensive manufacturing sectors. So far, studies have been completed for the steel, aluminium, and cement sectors. With these roadmaps, the necessary technologies, additional investment needs, and policy steps for achieving green



transformation and reducing carbon emissions have been identified. These efforts will contribute to the development of financial support mechanisms for environmentally friendly industrial and technological transitions.

A Green and Circular Economy

Transitioning to a circular economy is a crucial roadmap for decoupling economic growth from resource use, ensuring efficient use of limited resources, achieving sustainable growth and employment, meeting climate change targets, and preventing biodiversity loss. This new economic model introduces a fresh approach throughout the entire lifecycle of products—from raw material procurement to production, consumption, and post-production processes. It aims to replace the linear economy model of “Buy - Use - Dispose” with the “Reuse - Repair - Recycle” philosophy.

In this regard, the EU announced the “Circular Economy Action Plan” on March 11, 2020, aiming to adopt a circular approach at every stage of the product lifecycle across the economy. The sectors/products identified as priorities for this circular transformation include electronics and information technologies, batteries, packaging, plastics, textiles, construction and buildings, food, water, and nutrients, due to their significant contribution to resource use, greenhouse gas emissions, and waste generation.

Circular Economy

The Ministry of Environment, Urbanization, and Climate Change has conducted a market research to identify the current status, gaps, needs, and potential solutions of key stakeholders for transitioning to a circular economy and to systematically calculate national and sectoral circularity using existing data infrastructure. This research has identified priority sectors and initiated detailed impact and needs analysis studies for these sectors, with the relevant reporting expected to be completed in the second quarter of 2024.

Additionally, as part of identifying priority sectors and determining their needs, the “Technical Assistance for Assessment of Türkiye's Potential on Transition to Circular Economy (DEEP)” project under the IPA II period has begun preparing a National Circular Economy Action Plan. The project aims to promote the transition to a circular economy, enhance Türkiye's institutional and technical capacity in line with the

EU Circular Economy Model, and develop a comprehensive National Strategy and Action Plan tailored to national conditions. Following the preparation of the “Sectoral Impact Analysis Report,” it is anticipated that the work on the Action Plan will accelerate, with completion expected in the second quarter of 2024.

Consumer Rights

To update consumer protection legislation in line with green transformation and sustainable development goals, the “Sustainable Final Consumption Specialized Working Group” has been closely monitoring global and national developments, decisions, and emerging issues. In the group’s second meeting held on November 28, 2023, topics such as eco-design requirements for products, environmental labelling, and the “Renewed Product System” applicable in Türkiye were thoroughly discussed.

To inform consumers, prevent misinformation about sustainability, and facilitate access to accurate information, the Directive on Empowering Consumers for Green Transformation has been adopted. Additionally, the draft Directive on Green Claims and the Directive on Common Rules Promoting the Repair of Goods have been outlined to prevent greenwashing. Thus, progress has been made in addressing greenwashing issues.

As part of the activities of the Advertising Board conducted by the Ministry of Commerce, commercial advertisements containing environmental claims have been reviewed to prevent “greenwashing” and ensure that claims about products and services are not misleading regarding their environmental impact. This review has been carried out in accordance with the “Guideline for Environmental Claims in Advertising,” adopted as a principle decision by the Advertising Board on December 13, 2022. Active participation has been provided in the working group formed under the International Consumer Protection and Enforcement Network (ICPEN) on greenwashing, and the EU directive proposals regarding environmental claims have been thoroughly examined.

Green Finance

The improvement of the green finance ecosystem, the creation of a sustainable finance infrastructure, making economic activities environmentally compatible and sustainable, and managing climate risks

remain crucial due to the increasing emphasis on environmental and social responsibility both in Türkiye and globally. Many countries, including EU member states, are taking significant steps in this field.

The EU has committed to directing a €1 trillion budget towards sustainable investments over the next decade as part of the Green Deal. The EU allocates 30% of its 2021-2028 multiannual budget to green investments and supports green transformation through financial programs such as NextGenerationEU, NextGenerationEU green bonds, and the Recovery and Resilience Facility. These investments are expected to mobilize both the private and public sectors.

Creating the necessary financing sources for green transformation and directing these sources towards sustainable investments is crucial. The EU anticipates that approximately 80% of the resources needed for green transformation will come from the private sector and has conducted a series of studies to develop the green finance ecosystem. In this context, in November 2023, the European Council and Parliament adopted the “Green Bond Standards Regulation,” establishing new standards for companies issuing “green bonds.” This regulation aims to help investors select sustainable companies and avoid greenwashing or misleading climate-friendly claims. Additionally, the EU taxonomy, which was published on July 12, 2020, and defines criteria for economic activities aligning with the 2050 net-zero target and broader environmental goals beyond climate, has been updated with new activities. This update, part of the sustainable finance package published on June 13, 2023, introduces new rules to enhance market transparency in the context of Environmental, Social, and Governance (ESG) criteria.

Furthermore, the EU Corporate Sustainability Reporting Directive 41 (CSRD) came into effect in January 2023, imposing detailed reporting obligations on companies to provide disclosures based on common criteria in the ESG areas aligned with climate targets. On July 31, 2023, the European Commission adopted 12 sustainability reporting standards previously drafted by the European Financial Reporting Advisory Group (EFRAG) through secondary legislation. This regulation ensures that companies provide comparable, relevant, and accurate information related to sustainability. On October 17, 2023, a proposal for a two-year extension was accepted, postponing the deadline for the adoption of the European Sustainability Reporting Standards (ESRS) to 2026. The Directive covers EU-based companies including listed companies,

insurance and credit institutions, and large enterprises (with net sales revenue of 50 million euros, total assets of 25 million euros, and 250 employees). For non-EU companies, those generating 150 million euros in revenue within the EU over two years and having a subsidiary or branch in an EU member state with 50 million euros more in revenue than the previous year will also be subject to EU regulations.

As a result, some companies operating in Türkiye may be directly subject to the EU Corporate Sustainability Reporting Directive, while others may be required to report indirectly by providing information to EU companies with whom they have commercial relationships (e.g., being part of a supply chain). Under the Green Deal Action Plan, the green finance framework crucial for supporting the development of a sustainable, resource-efficient, and green economy is built upon three main pillars: strengthening the ecosystem for green finance in Türkiye, reviewing national incentive mechanisms, and effectively utilizing international financing sources.

Activities aimed at strengthening Türkiye's green finance ecosystem include:

- » The initial work carried out in Türkiye for combating climate change and green transformation of the industry is the preparation of taxonomy legislation, which is designed to increase climate resilience and adaptation to climate change through accurate calculation of climate risks. The Ministry of Environment, Urbanization and Climate Change, in coordination with the French Development Agency, is executing the "Preparation of Guidelines for Reporting and Identification of Potential Users and Beneficiaries of the Green Taxonomy in Türkiye" project. Taxonomy studies modeled after the EU taxonomy are planned to be finalized in 2024.
- » Under the aforementioned project:
 - Global examples of taxonomy have been examined, potential users in the financial system analyzed, and reporting guidelines and manuals developed, with the project outcomes published.
 - A "Taxonomy Framework Document" evaluating global and EU developments in sustainable finance, taxonomy, and sustainability reporting, along with Türkiye's developments and future roadmap, has been published.

- A directive for the Technical Expert Group on Taxonomy has been issued, with the first meeting held on May 25, 2023, and the second on September 13, 2023, involving relevant stakeholders.
- The creation of a draft framework regulation defining the core elements of the national taxonomy is planned based on the Technical Expert Group meetings and workshops. Additionally, regulations related to mitigation and climate adaptation are expected to be completed in the first quarter of 2025, while legislation on sustainable water and marine resource use, transition to a circular economy, pollution prevention and control, and the protection and restoration of biodiversity and ecosystems is anticipated for 2026.
- Due to the increasing importance of corporate sustainability reports, the Public Oversight, Accounting, and Auditing Standards Authority (KGK) in Türkiye is working on establishing assurance audit standards for the Türkiye Sustainability Reporting Standards (TSRS), authorizing independent audit firms and auditors, ensuring the performance of assurance audits, and overseeing compliance with relevant standards.
- The KGK has translated the International Sustainability Standards Board (ISSB) standards, including IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures, into Turkish. Assurance standards published by the International Auditing and Assurance Standards Board (IAASB), such as GDS 3410 Assurance Engagements on Greenhouse Gas Statements, have also been incorporated into the regulations.
- Following the publication of the final versions of these standards by ISSB in June 2023, an official licensing agreement between KGK and ISSB was signed. The final versions of IFRS S1 and IFRS S2 have been incorporated into Turkish legislation through the “Determination of the Scope of Application of Türkiye’s Sustainability Reporting Standards” Decision published in the Official Gazette on December 29, 2023. Additionally, KGK has developed and launched a website to raise awareness among businesses and the public about corporate sustainability reporting and share updates on current developments.

- The amendments to the Turkish Commercial Code (TCC) delegate the authority to determine the application scope of the TSRS to KGK. Consequently, from January 1, 2024, companies meeting at least two of the specified thresholds in consecutive reporting periods will be required to comply with the TSRS.
- Thresholds set by TSRS:
 - Number of employees: 250
 - Total assets: 500 million Turkish Liras
 - Annual net sales revenue: 1 billion Turkish Liras
- » Although not mandatory, companies outside the scope can voluntarily report in accordance with TSRS. Entities within the scope are required to report their sustainability performance in greater detail and in compliance with TSRS standards. This regulation aims to encourage institutions with significant financial size, revenue levels, and employee counts to adopt more transparent and comprehensive sustainability reporting. Future plans include expanding the scope of mandatory reporting by lowering the thresholds.
- » To enhance the reliability and international validity of sustainability reports, businesses required to report on sustainability will be mandated to obtain assurance for these reports. Consequently, auditors and audit firms providing assurance on sustainability reports will be specifically authorized by KGK.
- » To ensure the independence and impartiality of assurance audits conducted in alignment with EU regulations, and to increase trust in and quality of audits while ensuring compliance with set standards and regulations, KGK will establish a public oversight structure.
- » Within the scope of developing the green finance ecosystem, the Central Bank of the Republic of Türkiye (CBRT) joined the Network for Greening the Financial System (NGFS) in December 2021, becoming involved in related international initiatives. Additionally, contributions are being made to the G20 Sustainable Finance Working Group, and from November 2023, weekly data on Environmental, Social, and Governance (ESG) bonds issued domestically and internationally by domestic residents, and on sectors holding these assets, will be published to address data gaps in sustainable finance.

- » As part of efforts to enhance the role of banks within the green finance ecosystem, activities conducted under the coordination of the Banking Regulation and Supervision Agency (BRSA) are summarized below:
- The BRSA's policies for the 2022-2025 period have commenced implementation under the “Sustainable Banking Strategic Plan” dated December 27, 2021. In this context, during the first half of 2022, two pilot studies on transition risks and physical risks, aimed at effective analysis and management of climate-related risks—one of the core strategic objectives of the plan—were carried out. The methodologies, findings, and results of these studies were shared with the public on the BRSA's website. The BRSA conducted an impact analysis study with the participation of all banks to assess the potential effects of the European Green Deal, specifically focusing on financial obligations that will commence in 2026, on the Turkish banking sector.
- At the beginning of 2022, a “Green Asset Ratio Working Group” was established in collaboration with the BRSA and the Banks Association of Türkiye (TBB). Within this group, a draft methodology was prepared for calculating the ratio of green assets to total assets on banks' balance sheets. This draft methodology is intended to serve as a temporary taxonomy until the national taxonomy is enacted.
- In this context, the “Draft Communiqué on Green Asset Ratio” aimed at measuring the contribution of banks to climate-related goals within the framework of the European Green Deal was published on October 1, 2023, and distributed to gather the opinions of relevant parties. The Communiqué aims to establish a methodology for calculating the green asset ratio to provide general criteria for industrial and commercial organisations regarding green transition, enable comparison of the sustainability performance of organisations, guide domestic investments towards green areas, and facilitate the transfer of resources from international green financial markets to Türkiye's real sector.
- According to the “Sustainable Banking Strategic Plan (2022-2025),” a “Sustainable Banking Working Group” was formed in early 2022 in cooperation with the BRSA and the TBB. This group facilitates the exchange of information and experience among banks on sustainable banking.





- To evaluate and enhance the capacity of the Turkish financial sector in managing climate-related financial risks and supporting the transition to a sustainable economy, the Financial Sector Assessment Program (FSAP-Türkiye) has, upon Türkiye's request, included "climate risks" and "green financing" for the first time. In the first half of 2022, the FSAP team, consisting of IMF and World Bank officials, conducted detailed examinations and assessments on these topics, with contributions from relevant financial authorities including the BRSA.
- With the BRSA Decision dated April 27, 2023, the "Regulation on Loan Operations of Banks" was amended to raise the limits on loan terms and loan-to-value ratios for consumer credits for electric motor vehicles produced in Türkiye, providing more favourable conditions for financing low-emission vehicles.
- To enhance the capacity of the Turkish banking sector to manage climate-related financial risks, the BRSA prepared and opened for consultation the "Draft Guidelines on Effective Management of Climate-Related Financial Risks." This Draft Guideline, which draws from the Basel Committee on Banking Supervision's "Principles for the Effective Management and Supervision of Climate-Related Financial Risks" published in 2022, is scheduled for release following input from relevant stakeholders.
- In 2023, a technical working group composed of TBB representatives and involving the BRSA was established to create a heatmap methodology for analysing banks' climate-related transition risks. It is anticipated that the methodology draft will be completed within 2024.
- o In 2023, "Sustainable Banking Questionnaire" was prepared to produce reliable and up-to-date information and data at sectoral level, with suitable scope and detail, on the strategies and policies, targets and commitments, corporate structures, risk management and reporting practices, financing activities and performances of banks operating in Türkiye concerning environmental and social sustainability and climate-related financial risks. Responses from banks are being evaluated, with findings and results expected to be compiled into a report in 2024.

- To enhance the analysis capacity for climate-related financial risks, a technical assistance project was launched in 2023 between the BRSA and the World Bank. The project aims to analyse and assess climate-related risks through stress testing/scenario analysis and integrate the developed approach into the BRSA's supervision system. Work on data needs and methodology is currently ongoing.
- » In line with the goals outlined in the Capital Markets Board's (CMB) 2022-2026 Strategic Plan for the development of sustainable finance practices, which aims to create a green financing ecosystem for capital markets, works are underway for:
 - Making amendments to the Capital Markets Law related to sustainability,
 - Updating the sustainability reporting framework for capital market companies to align with international standards, enabling investors to track sustainability risks and opportunities for companies,
 - Expanding the scope of the Guidelines on Green Debt Instruments, Sustainable Debt Instruments, Green Lease Certificates and Sustainable Lease Certificates to include innovative debt instruments such as social bonds, transition bonds, and sustainability-linked bonds, and
 - Developing regulations for responsible management principles and their implementation for institutional investors.
- » Again, to effectively oversee the sustainable finance infrastructure in capital markets and foster its growth in market terms;
- On October 2, 2020, the CMB published the "Sustainability Principles Compliance Outline" as an appendix to the Communiqué on Corporate Governance to disclose the performance and risk management of companies traded on Borsa İstanbul's Main Market, Star Market, and Sub-Market regarding environmental, social, and corporate governance aspects. The Regulation introduced an obligation for listed companies to publicly disclose their environmental and social impacts on an annual basis through the Annual Report. This is done in accordance with a set of voluntary rules, which follow the 'comply or explain' principle and aim to encourage adherence to international standards.

- To make sustainability reporting by companies more comprehensible and standardised for investors, the CMB decided on June 23, 2022, to use the Sustainability Report template published by the CMB and conduct corporate sustainability reporting through the Public Disclosure Platform (KAP). In 2023, these reports were transferred to the XBRL format by the Central Securities Depository & Trade Repository of Türkiye (MKK), enabling data production in this field.
- In 2021, banks issued the first sustainable capital-like lease certificates and partnership-based green lease certificates.
- Under the International Capital Market Association (ICMA) “Green Bond Principles,” the “Guidelines on Green Debt Instruments, Sustainable Debt Instruments, Green Lease Certificates and Sustainable Lease Certificates” issued in 2022 established a regulatory framework for financing projects that positively impact the environment and climate and support sustainability through international sustainable finance approaches. For the issuance of green and sustainable debt instruments and lease certificates, the CMB, Borsa İstanbul, and MKK apply a 50% fee discount.
- For the period between 2007-2023 (first quarter), Türkiye’s sustainable bond issuance amounted to 8.5 billion USD.

National Financing Opportunities for Green Transition

Public support is another crucial pillar in meeting the financing needs that will arise during the implementation of green transformation. The following is a summary of the efforts that have been conducted in a variety of areas in this context:

- » Advance Loans against Investment Commitment (ALAIC) Program:
- A new “Advance Loans against Investment Commitment (ALAIC) Program” was launched as per the “Communiqué on the Strategic Priorities and Technical Evaluation of Investment Projects” published in the Official Gazette dated November 26, 2023, and the “Advance Loans against Investment Commitment /Financing Implementation Directive” published by the Central Bank of Türkiye (TCMB) on November 24, 2023. As part of ALAIC’s mission to support qualified investments, a comprehensive list of Technology

Areas has been released. The list includes 284 Strategic Priority products for investment projects of 1 billion TL and above, as well as 261 topics covering areas such as clean energy and carbon emission reduction.

- For investors wishing to benefit from the program, the Ministry of Industry and Technology will calculate the Technology/Strategy Score (TSS). The interest rate on loans with a 10-year maturity, which will be provided for investment projects with a minimum total investment amount of 1 billion TL through intermediary banks, will be determined between 15% and 30% based on the TSP value, the proportion of foreign financing within the investment, and the financial stability assessment.
- The new ALAIC Program has an annual limit of 100 billion TL, with a total limit of 300 billion TL allocated over three years. The Ministry began accepting applications for Technology/Strategy Score (TSS) under the said programme on December 20, 2023.
- » Access to International Financing:
 - Given that green transition actions are essentially climate change mitigation actions, it is deemed impractical for any country to achieve this transition solely with domestic financial resources. Consequently, efforts are ongoing to increase Türkiye's access to international financing, including EU funding opportunities.
- » Instrument for Pre-Accession Assistance (IPA) Funds:
 - Under the III period of the Instrument for Pre-Accession Assistance (IPA), which Türkiye utilizes as a candidate country, six projects totalling 23 million euros, contributing to the green deal goals, have been approved by the European Commission. Additionally, programs such as Horizon Europe, Erasmus+, Digital Europe, European Solidarity Corps, and Single Market programs are open to applications from institutions and organisations in Türkiye, providing financing and support for projects aligned with the Green Deal Action Plan's objectives.
 - During the IPA II period (2014-2020), four projects were supported under the Competitiveness and Innovation Sector Operational Program (CISOP) managed by the Ministry of Industry and Technology. These projects aim to contribute directly or indirectly to

Türkiye's transition to a sustainable and resource-efficient economy and the comprehensive changes brought by the European Green Deal, with a total budget of approximately 19 million euros.

- For the IPA III period's 2023 programming, thematic areas such as "green transition" and "circular economy" have been prioritized. A project with a total budget of 7 million euros, including 6 million euros from the EU and 1 million euros from Türkiye, titled "Technical Assistance for Support to Sustainable Industry Transformation in the Key Sectors of Apparel, Textile, Chemical and International Transport" has been approved. The project focuses primarily on textile and garment and secondarily on chemistry and logistics/international transport sectors, taking into account their environmental damage, their significant share in GNP and their dependence on EU countries in terms of production and exports in order to directly serve green transformation. The project is expected to be implemented in 2024.
- The primary beneficiary of the project is the Istanbul Textile and Apparel Exporters' Associations [İTKİB]. The project is run by Türkiye Exporters Assembly [TEA]. It includes other exporters associations, namely the Istanbul Apparel Exporters' Association [İHKİB], the Istanbul Textile and Raw Materials Exporters' Association [İTHİB], the Istanbul Chemicals and Chemical Products Exporters' Association [İKMİB], and the International Road Transport Union [IRU].
- The project aims to contribute to efforts to reduce greenhouse gas emissions in the sector. It focuses on developing policies and strategies for carbon footprint assessments, pioneering carbon footprint measurement and reduction, and strengthening inter-institutional cooperation for the development of financial mechanisms, with participation from the textile and ready-made garment sectors, as well as logistics and chemical industries in Türkiye. The project seeks to enhance corporate capacity by providing training and consultancy services to SMEs on carbon footprint and product lifecycle, to raise awareness, and encourage the continuation of measurements within SMEs to achieve sustainability. The planned development of carbon emission measurement software aims to promote and spread the reduction of inter-sectoral carbon emissions under TEA.

- » Since 2018, TÜBİTAK's 1512-Technological Entrepreneurship Support Program (Individual Young Entrepreneurship-BiGG) has approved projects focusing primarily on R&D and innovation, addressing needs related to the European Green Deal. For the support programs, the Green Deal is prioritised, with additional points being awarded for applications related to the Green Deal in calls 1501, 1505, 1507, and 1707. The 1707 code Order-Based R&D Support Program also brings together firms in need of technology with SMEs developing technology.
- » Türkiye Investment Platform (TIP)
 - The European Commission established the Türkiye Investment Platform (TIP) to implement a blended (composite) financing method, combining grants and loans, for sectors requiring infrastructure investments such as environment, transportation, competitiveness, and energy during the IPA III period. This platform also aims to provide guarantees for loans administered through international financial institutions.
 - The Operational Committee meeting, which evaluated investment programs presented in the first call of TIP made to municipalities, public enterprises (sub-sovereign commercial), and the private sector in April 2022, was held on January 25, 2023. The investment projects, whose strategic goals align with the European Green Deal and were found favourable at that meeting, can be found below:
 - As part of the project to form a project pool under the EFSD+/Türkiye Investment Platform, focus group meetings were organised throughout 2023 on topics such as Decarbonization and Energy, Circular Economy and Waste Management, Agriculture, Biodiversity and Nature Conservation, Alternative Fuels, Aviation and Maritime, Green Finance Ecosystem, and Taxonomy, with representatives from public and private sector umbrella organisations that are the beneficiaries of the TIP mechanism.
- » Cross-Border Cooperation Programs
 - Within the framework of financial cooperation between Türkiye and the EU, three cross-border cooperation programs are implemented with the primary goal of supporting regional green transformation:

- On December 15, 2023, under the Mediterranean Sea Basin Cross-Border Cooperation Program, managed by the Directorate for EU Affairs as the National Authority, a call was issued with the objective of “a resilient Europe, directed towards low-carbon consumption for a greener and zero-carbon economy.”
- On March 13, 2023, under the INTERREG IPA Bulgaria-Türkiye Cross-Border Cooperation Program, a call was issued with the objective of “promoting energy efficiency, reducing greenhouse gas emissions, promoting transition to a circular economy.”
- For the Black Sea Basin Cross-Border Cooperation Program, the first call was issued in March 2023 with the objective of “a greener and low-carbon Europe.”

» Digital Europe Program

- The Digital Europe Program, which will utilize digital technologies and infrastructures to achieve the goals set out in the European Green Deal and to increase the resilience and strategic independence of European industry, is expected to contribute to several EU policies and strategies, such as the 2030 Digital Compass Goals, Digital Single Market Strategy, EU Data Strategy, and Artificial Intelligence Strategy. In this context, green and digital transformation, known as twin transition when addressed together, has been among the top priorities on Europe’s agenda in recent years and serves as a foundation for the European Union’s policymaking process.
- Türkiye, as part of this policymaking process, signed the Digital Europe Program Participation Agreement on August 31, 2023. This program, focusing on creating strategic digital capacities and expanding the use of digital technologies across Europe, will be implemented by the EU for the years 2021-2027. Participation to the program was completed as per the Presidential Decree No. 7746., which will be effective from January 1, 2023.
- Under the coordination of the Ministry of Industry and Technology (MoIT) and the Digital Transformation Office of the Presidency, various activities have been carried out by the MoIT in 2023. These include briefings and webinars regarding the Digital Europe Program and various calls, project writing training for potential candidates, collaborative and synergy events with other institutions

managing joint programs, and a briefing meeting on the “Digital Product Passport” call.

- The Digital Europe Program envisions establishing European Digital Innovation Hubs (EDIHs) and a network structure of these hubs to support the digital transformation of industry, SMEs, and public institutions.
- EDIHs are expected to be a significant tool in implementing EU policies, particularly in supporting the green and digital transformation of companies and the public sector. A network of EDIHs covering all regions of the member countries of the Digital Europe Program has been established. The national selection process for the EDIH representing Türkiye was completed by the Ministry of Industry and Technology in December 2023, and suitable applications have been submitted to the European Commission. The selection process for an EDIH, which will receive a total of 4.5 million euros in funding, is expected to be concluded in the first half of 2024.
- In 2023, activities carried out by the Ministry of Industry and Technology include meetings with the European Commission regarding the establishment mechanism of the EDIH network, preparations for establishing EDIHs in Türkiye, meetings with the officials from the MoIT and the Digital Transformation Office of the Presidency on preliminary application stages and selection processes, as well as briefing meetings for EDIH candidates.
- Updated information on EU funds available under the aforementioned bullet points and platforms, which can be utilized for the Action Plan's goals, is regularly shared with stakeholders in the public, private, and civil society sectors through meetings of the Financing of EU Projects Specialized Working Group.

Other International Financing Opportunities

- Under the Memorandum of Understanding signed on October 22, 2021, with the World Bank (International Bank for Reconstruction and Development - IBRD and International Finance Corporation - IFC), EBRD, Germany, France, and the United Nations, encompassing a climate finance package of approximately 3.2 billion dollars, a comprehensive green project portfolio has been established in collaboration with relevant organizations and Türkiye's Development Partners. Work on specific projects is ongoing.

- In 2022, the World Bank's Climate-Smart Agricultural Growth Credit, two credits obtained under treasury guarantees from the Asian Infrastructure Investment Bank and Japan International Cooperation Agency for financing renewable energy and energy efficiency investments in Türkiye, and two credits provided under treasury guarantees from the German Development Bank (KfW) for climate finance and energy transition investments are being allocated to suitable projects via TSKB (Industrial Development Bank of Türkiye) and TKYB (Development and Investment Bank of Türkiye).
- Additionally, efforts are being made for Türkiye to benefit from the Climate Investment Funds (CIF) Renewable Energy Integration Program.

Green Deal Compliance Project Support – Responsible® Program

The Green Deal Compliance Project Support came into effect with the Presidential Decree published in the Official Gazette No. 32469 dated February 23, 2024. The program began implementation with the publication of the Circular on June 26, 2024. Under the Responsible® Program, the Green Deal Compliance Project Support aims to raise awareness, conduct a current situation analysis, create a roadmap for improvement, and facilitate access to national and international funds for Turkish companies to achieve their transformation with a focus on corporate sustainability. Consulting service expenses incurred by companies will be supported by the Ministry of Trade at a rate of 50% up to a total of 10,000,000 TL over five years.

Moreover, a portal known as “responsible.gov.tr” has been launched, offering information on all aspects of the Green Deal process, enabling businesses to consult Ministry of Trade experts on information requests, and handling all consulting activities for supported enterprises. The Responsible® Portal includes a preliminary assessment set that allows companies not yet in the support process to conduct a form of current situation analysis under vision, environment, social, and governance categories. Companies can analyze their strengths and areas for improvement, with a score and evaluation for each category provided by the portal.

The Responsible® Program consists of a three-phase consulting system:

In Phase 1, a sustainability definition based on vision, environment, social, and governance criteria will be developed sector-wise, and a current situation analysis of the company will be conducted within the framework of sustainability criteria and parameters. As a result of this analysis, areas of strength and those requiring improvement will be identified, and a sustainability roadmap will be created based on projects to enhance these areas. This phase will determine the company's place in the sustainability world, show where it needs to head towards, and outline the roadmap to get there.

In Phase 2, technical and financial feasibility consulting support will be provided for the implementation of the sustainability roadmap on a project basis. Identified needs will be matched with technical and financial solutions. Once the company's needs for green transformation and corresponding solutions are established, financing sources such as government aid, incentives, and national or international funds will be identified, facilitating access to appropriate financing.

In Phase 3, consulting support for monitoring and verification of implemented projects will be provided, and the extent to which the outputs and targets set in the previous process have been achieved will be measured, monitored, verified, and reported.

Additionally, beyond Phase 1, Phase 2, and Phase 3 consulting expenses, IT consulting and sustainability consulting expenses for strengthening areas in the sustainability roadmap will also be supported. The Green Deal Compliance Project Support Responsible® Program was launched on July 30, 2024, with the participation of the Minister of Trade, Prof. Dr. Ömer Bolat.

Green Energy



In the global agenda of energy, a process is unfolding where combating climate change is also central to the energy sector's agenda. On one hand, there is a discussion about the scale, impacts, and solutions to the current global energy problem, while on the other hand, there is a discussion on the path to global net zero emissions and how the energy sector will be shaped along this path. Green energy transformation plays a key role in achieving countries' net zero emission targets.

Green energy, a subset of renewable energy, can be defined as “renewable energy sources and technologies aimed at providing environmental benefits.” Green energy can be produced from nature's resources without any chemical alterations. It is a crucial factor in reducing countries' dependency on external energy sources. Types of green energy include wind power, hydroelectric power, solar power, geothermal power, and power produced from biological waste.

The major advantages of green energy sources include their minimal depletion and zero carbon emissions, preventing harm to the planet. Fossil energy sources not only cause significant environmental concerns for the future but also trigger global warming. Green energy plays a significant role in mitigating and eliminating many of these issues.

In Türkiye, the primary focus of policies aimed at reducing carbon emissions in the energy sector includes renewable energy, energy efficiency, nuclear energy, utilising natural gas as a transition fuel, and ultimately exploring the potential of hydrogen. Diversifying energy sources and maintaining policies for transitioning to clean energy are of great importance.

In line with President Recep Tayyip Erdoğan's 2053 carbon-neutral target, renewable energy plays a crucial role in Türkiye's energy security, competitiveness, and climate change mitigation objectives.

Since the Paris Agreement was introduced in 2015, Türkiye's installed renewable energy capacity has doubled, increasing from 31.5 Gigawatts (GW) to 63 GW by the end of the second quarter of 2024. During the same period, the capacity for intermittent renewable energy sources has seen significant growth, with wind energy capacity increasing 2.7-fold and solar energy capacity expanding by 61 times.

With a total installed electricity capacity exceeding 110 GW, 57% of Türkiye's capacity now comes from renewable energy sources. These figures place Türkiye fifth in Europe and eleventh globally in terms of

renewable energy installed capacity. Additionally, Türkiye ranks seventh in Europe for installed wind power capacity and eighth for installed solar power capacity.

The share of renewable energy in Türkiye's energy resource diversity is increasing

As the size of renewable energy investments in Türkiye exceeds 50 billion dollars, installed capacity varies by source and province.



Türkiye ranks 11th in the world in renewable energy

(as of June 12, 2024)

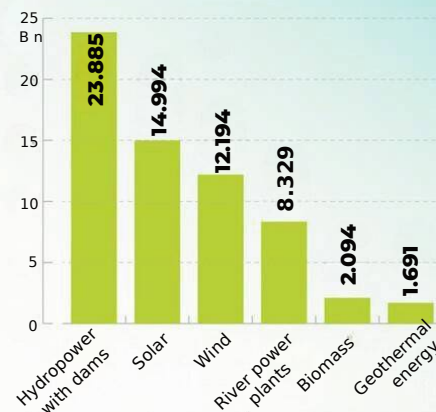
Türkiye's total installed electricity capacity

110.339
megawatt

Ratio of renewable energy to total installed capacity

%57,2

Distribution of renewable energy sources (Megawatt)



21.06.2024



Beyond these achievements, Türkiye aims to more than triple its renewable energy capacity by adding 60 GW of new renewable energy investments by 2035. This ambitious plan will require collaboration among public and private sectors, as well as international investors, not only in electricity generation but also in significant investments in transmission networks. A \$10 billion grid investment plan is in place to support this effort by 2030.

In addition to the Türkiye National Energy Plan (TUEP), the Ministry of Energy and Natural Resources has published the “Türkiye Hydrogen Technologies Strategy and Roadmap” through the Turkish Energy, Nuclear and Mineral Research Agency (TENMAK) in January 2023. The development of the “Türkiye Carbon Capture and Utilization Technologies Roadmap and Implementation Plan” is also underway.

According to the announced strategy document, the objective is to reduce the cost of green hydrogen production below \$2.4 USD/kg H₂ by 2035 and below \$1.2 USD/kg H₂ by 2053 and to increase the electrolyser installed capacity to 2 GW by 2030, 5 GW by 2035, and 70 GW by 2053. Incentives will be established to encourage the use of local components in the production and storage of green hydrogen. The use of green hydrogen will be promoted across various sectors, especially those with challenging emissions reductions such as chemicals, iron-steel, transportation, glass, and ceramics. To further aid in the heating sector's gradual decarbonisation, it is planned to mix hydrogen with existing natural gas pipelines. The detailed progress of green energy development since 2000 is outlined below.

The Development of Green Energy in Türkiye Since 2000

The objectives related to the development of renewable energy were first emphasized in Türkiye's Eighth Five-Year Development Plan. Published in 2000 and covering the years 2001-2005, the Eighth Five-Year Development Plan, under the "Energy" section, outlined plans to meet energy demand reliably and continuously at low cost, promote the efficient and economical use of energy, develop renewable energy sources, establish a structure for both the public and private sectors to operate, and create regulatory bodies. As a result of these efforts, Law No. 5346 on the Utilization of Renewable Energy Sources for the Purpose of Generating Electrical Energy was enacted in 2005. The enactment of this law provided significant momentum in the field of renewable energy. The law aims to promote the use of renewable energy sources for generating electricity, ensure these resources are integrated into the economy in a reliable, economical, and high-quality manner, achieve resource diversification, reduce greenhouse gas emissions, utilize waste, protect the environment, and develop the necessary manufacturing sector to achieve these goals.

The Eighth Five-Year Development Plan served as a pioneering document for creating a free and competitive energy market. Subsequently, the Ninth Development Plan, published in 2006 and covering the years 2007-2013, outlined goals under the section "Development of Energy and Transport Infrastructure," which included achieving balanced resource diversification and diversifying origin countries to enhance supply security, as well as maximizing the share of domestic and renewable energy sources within the production system.

Moreover, amendments made to Law No. 5346 in December 2010 led to the implementation of the Renewable Energy Support Mechanism (YEKDEM) for facilities generating electricity from renewable energy sources from 2011 onwards. YEKDEM provides price guarantees and various incentives to facilities generating electricity from renewable energy sources in Türkiye for a specified period.



In 2013, the Electricity Market Law No. 6446 was enacted. This law encompasses the rights and obligations of all actors within the energy market, including licensed and unlicensed electricity generation, aiming to establish a financially strong, stable, and transparent electricity market.

The Tenth Development Plan, published in 2013 and covering the years 2014-2018, set as its primary objective the establishment of a competitive energy system that supplies energy to end-users continuously, with high quality, securely, and at minimum costs, while emphasizing resource diversification in energy supply, utilizing domestic and renewable energy sources to the maximum extent possible, incorporating nuclear technology into electricity generation, and supporting the reduction of the economy's energy intensity. The Eleventh Development Plan, published in 2019 and covering the years 2019-2023, aimed to implement new investment models, including mechanisms involving local equipment use, research and development, technology transfer, and public procurement in the field of renewable energy, as well as to increase electricity generation from renewable energy sources and ensure the safe integration of renewable energy production into the grid.

In 2014, the Ministry of Energy and Natural Resources announced the “National Renewable Energy Action Plan.” This plan aligns with the European Parliament and Commission’s Directive 2009/28/EC, which includes a Commission Decision dated June 30, 2009, on creating a template for National Renewable Energy Action Plans. According to the National Renewable Energy Action Plan, by 2023, the aim is to meet at least 30% of total electricity demand from renewable energy sources, meet 10% of transportation sector needs from renewable energy, and reduce energy intensity—measured as energy consumption per unit of GDP—by at least 20% compared to the reference year 2011.

The Regulation on Unlicensed Electricity Generation in the Electricity Market, published in 2019, aims to allow consumers to meet their electricity needs from the production facility closest to the consumption point, integrate small-scale production facilities into the Turkish economy to enhance supply security, and reduce transmission/distribution costs and losses within the electricity grid through distributed generation, thereby increasing the share of renewable energy in production.

The 12th Development Plan, covering the years 2024-2028, is being implemented as Türkiye’s overarching strategic framework document. The plan emphasizes the utilization of domestic and renewable resources to the highest possible extent, as one of the main pillars of Türkiye’s energy policy. The Ministry of Energy and Natural Resources’ strategies and policies are based on ensuring energy supply security, diversifying energy sources, integrating domestic/renewable resources into the economy to reduce dependency on foreign sources, and achieving energy transformation in line with the 2053 net-zero target. Significant investments, particularly in renewable energy, have been made within this framework. Türkiye’s installed electricity capacity, which stands at 27,264 MW, has seen notable progress with 41% of this capacity being based on renewable sources, thanks to investments made over the last 24 years. As of June 2024, Türkiye’s installed electricity capacity has surpassed 110 GW (110,518 MW), with 57.6% of this capacity derived from renewable energy sources. In terms of electricity generation, production levels of 31.2 TWh have increased more than fourfold to 137.5 TWh by the end of 2023. Consequently, the share of renewable energy in electricity production has risen from 26% to 42% by the end of 2023.

In May 2024, Law No. 7501 Amending the Mining Law and Certain Other Laws, was published in the Official Gazette. This law amends Article 6 of the Coastal Law No. 3621, allowing the establishment of renewable energy production plants in areas designated by the Ministry of Energy and Natural Resources as renewable energy source areas on seas, dam lakes, artificial lakes, and natural lakes without the need for zoning plans under certain conditions.

The Regulation on Renewable Energy Source Areas, published in the Official Gazette on October 9, 2016, brought a new investment model into play in the assessment of renewable energy sources. The first YEKA project, the Karapınar YEKA SPP-1 site with a capacity of 1000 MWe, was completed in 2022, and visuals of the site are provided below.



Towards the end of 2022, the Ministry of Energy and Natural Resources published the Türkiye National Energy Plan, a long-term strategy covering the period from 2020 to 2035, which is aligned with the country's 2053 net-zero target. Within the scope of this plan, modeling studies were conducted to analyze the roles of renewable energy, fossil fuels, and other alternative fuels in both primary energy supply and electricity generation. The report took into account fundamental indicators such as population growth, economic development, and fuel prices, and provided a long-term analysis of energy demand across key sectors including industry, residential, agriculture, transportation, and services. In the scenario prepared under the plan for the 2020-2035 period, the following forecasts were made:

- » An increase in primary energy consumption to 205.3 Mtoe.
- » An increase in electricity consumption to 510.4 TWh.

- » An increase in the share of electricity in final energy consumption to 24.9%.
- » A 35.3% decrease in energy intensity.
- » Increases in the installed capacity to:
 - 189.7 GW in total,
 - 52.9 GW in solar energy,
 - 29.6 GW in wind energy (24.6 GW onshore, 5 GW offshore),
 - 7.2 GW in nuclear energy,
 - 35.1 GW in hydroelectric power plants,
 - 5.1 GW in geothermal and biomass energy.
- » With a projected capacity expected to be put into operation of 96.9 GW.
- » An increase in the share of renewable energy sources and intermittent renewable energy sources in electricity generation to 54.7% and 34.2%, respectively,
- » An increase in the share of renewable energy sources and intermittent renewable energy sources in installed capacity to 64.7% and 43.5%, respectively,
- » In order to meet the need for flexibility:
 - An increase in battery capacity to 7.5 GW,
 - An increase in electrolyzer capacity to 5.0 GW,
 - An increase in demand-side response to 1.7 GW.

For the 2035-2053 period, the following forecasts are made:

- » The annual average rate of increase in electricity consumption will rise to 5.2%.
- » The share of renewable energy sources in the installed capacity will reach 69.1% by 2053.



- » The share of intermittent renewable energy sources in electricity generation will rise to 61.4%.
- » The share of renewable energy sources in primary energy consumption will rise to 50% by 2053.

Additionally, under the Türkiye Hydrogen Technologies Strategy and Roadmap published by the Ministry of Energy and Natural Resources, it is aimed to increase the installed electrolyzer capacity to 2 GW by 2030, 5 GW by 2035, and 70 GW by 2053.



Green Business and Employment

The Ministry of Labour and Social Security is the institution responsible for setting national employment policies, overseeing their implementation and taking necessary measures to improve employment. Green business and employment have become a priority area of work for the Ministry, beginning with the announcement of the European Green Deal and progressing in parallel with the Turkish Green Deal and the Climate Summit efforts. In this process, defining the concept of just transition through policy documents published by the International Labour Organisation (ILO) and related international organisations, along with the regulations in the *acquis* of the EU, Türkiye's most important export partner, regarding sustainable production that respects the planet and workers' rights, has highlighted the urgency and importance of the Ministry of Labour and Social Security's responsibility to focus on the labour market policy aspect of just transition.

Just transition is regarded as a strategic initiative that assigns responsibility to relevant institutions to minimise the negative impacts of climate change and the shifts in all stages of the production process, such as technology, input use, logistics, and sales channels, resulting from the transition to a green economy while maximising the positive effects on labour markets.

In most countries, just transition is limited to fossil fuel phase-out and energy transition, whereas in Türkiye, it is considered to cover indus-

try, agriculture and most service sectors, taking into account global developments. Efforts are concerted to structure just transition with a multidimensional and holistic approach, mindful of the risk that the green and digital transformation could exacerbate vulnerabilities due to structural issues in labour markets.

In this context, the issues prioritised by the Ministry of Labour and Social Security in the just transition efforts are listed below:

- » Skill alignment,
- » Inclusiveness of labour markets and access to decent work for all,
- » Gender equality and equal opportunities,
- » Social dialogue,
- » Occupational health and safety in the face of climate risks,
- » Vocational education and lifelong learning,
- » Social protection,
- » Adaptation of micro, small and medium-sized enterprises to climate change/transformation processes,
- » Strengthening the sectoral and regional perspective in employment policies,
- » Coordination among institutions, sustainable cooperation and governance,
- » Effective information sharing and participation.

The just transition is considered an initiative in which the responsibility of the Ministry of Labour and Social Security in the process of transformation to a green economy is significantly embodied. In line with this responsibility, policies and measures related to just transition were incorporated into policy documents such as the Twelfth Development Plan, Climate Change Mitigation Strategy and Action Plan, Climate Change Adaptation Strategy and Action Plan, Women's Empowerment Action Plan, Climate Law, green transformation road map efforts for sectors such as steel, cement, aluminium and textile, and regional development plans. One of the four main policies of the National Employment Strategy for the period 2024-2028, which is being coordinated by the Ministry of Labour and Social Security, is 'Green and digital transformation in labour markets and improvement of skill alignment'.



Within the shared framework, experience sharing and cooperation efforts are made with international organisations such as the World Bank, ILO, European Bank for Reconstruction and Development (EBRD), counterpart ministries of cooperating countries, and relevant stakeholder institutions, particularly representatives of workers and employers. As part of the efforts undertaken with international organisations;

- » A technical cooperation work has been carried out with the World Bank on Understanding the Demand for Green Jobs and Skills in Türkiye since February 2024.
- » A symposium is planned to be held on August 26, 2024, with the cooperation of the ILO and the Ministry of Labour and Social Security to raise stakeholder awareness on just transition.
- » Talks are ongoing with the European Bank for Reconstruction and Development (EBRD) for a cooperation effort on just transition in the steel sector.
- » An online seminar on Green Economy and New Jobs in the Grip of Climate and Environmental Challenges was held on August 8, 2021.
- » An online seminar on Green Economy and New Jobs in the Grip of Climate and Environmental Challenges was organised by the Gen-

eral Directorate of Labour in order to assess the issue with experts at a time when the impacts of climate and environmental issues on our daily lives are increasing and global efforts to transform to a green economy are intensifying. The event began with the opening speech of the Director General of Labour and continued with contributions from representatives of the Economic Policy Research Foundation of Türkiye (TEPAV), United Nations Development Programme (UNDP), Technology Development Foundation of Türkiye (TTGV), and International Labour Organisation (ILO) respectively.

- » The issue of green jobs has been addressed through various activities within the scope of the Decent Future of Work Approach with a Focus of Gender Equality Project and is implemented with the financial support of the EU, of which the Ministry of Labour and Social Security (General Directorate of Labour) is the beneficiary.
- » The 3rd meeting of the Future Jobs Commission, which was established as part of the project, held on September 23, 2022, focused on the transition to a green economy. A working report on the subject was also prepared for the meeting, where green job opportunities and the just transition approach in the transition to a green economy were discussed. One of the related project activities was a working visit to Germany, which is among the countries that have made significant progress in green transformation, particularly in the energy sector. The sector analysis report written as part of the project also includes evaluations pointing to this issue.
- » The 13th meeting of the Labour Assembly, which brings together representatives of workers, civil servants, and employers to determine working life policies by the Ministry of Labour and Social Security, was held in Ankara on April 29-30, 2024, with the session titled “The Effects of Green and Digital Transformation on the Labour Market and Just Transition.”
- » Workshops on the new National Employment Strategy were held at the central level (2024) and in the provinces of Gaziantep, İstanbul, and Hatay (2023), with officials from relevant institutions as well as representatives from the private sector and social partners. In the workshops, stakeholders discussed the effects of the green transformation on employment and the steps to be taken.

Occupational Health and Safety Activities Related to Environmental Mobilization

The work carried out in the field of occupational health and safety is related to the Sustainable Development Goal of “Decent Work.” Among the occupational health and safety activities carried out in this context and preventive efforts against the factors affecting employee health, the main activities that will affect environmental health and sustainability of the environment were shared.



Green Energy

In this period when energy resources are starting to decrease worldwide and the whole world is turning to alternative energy sources, considering the environmental factors arising from traditional energy sources, Türkiye is also making significant progress towards different energy sources such as nuclear power plants, solar energy plants (SPP), and wind energy plants (WPP) as part of the transition to clean and sustainable energy.

For this purpose, within the scope of the cooperation protocol signed between the Energy Branch of the Sectoral Risk Management of the Directorate General of Occupational Health and Safety and Akkuyu Nükleer A.Ş., field visits are carried out at regular intervals, and cooperation is made with Akkuyu NPP to ensure that nuclear energy activities are carried out in a reliable and safe manner. In this context, occupational health and safety guidance is provided to Akkuyu NPP.

Furthermore, technical visits were made to the Kalyon Karapınar Solar Power Plant, Europe's largest solar power plant located in the Karapınar district of Konya province, and the Kalyon PV factory, the world's first and only fully integrated solar panel factory that produces the panels used in the plant, and working with the relevant authorities, efforts have been made to guarantee that the generation of solar energy follows occupational health and safety legislation.

Green Water and Waste Management

EU Waste Shipment Regulation (2024/1157) was promulgated by the European Union on 30.04.2024 and some of its provisions entered into force on 20.05.2024. The transitional provisions of the Regulation shall apply as of 21.05.2026.



The Ministry of Trade, as the legislative body for waste imports in Türkiye, is in charge of implementing and harmonising the Regulation in collaboration with other stakeholders such as the Ministry of Labour and Social Security and the Ministry of Environment, Urbanisation, and Climate Change.

Improvement of Occupational Health and Safety

Workers' exposure to environmental risk factors such as poor air quality, dust, noise, and chemicals in the workplace has a negative impact on their occupational health and safety. The effects of these risk factors on individuals are observed and controlled through periodic monitoring of health, occupational hygiene, and health promotion activities. The main activities carried out in this context are as follows:

- » Health Monitoring with Mobile Occupational Health Screening Vehicles
- » Dust Control Efforts
- » Field Work, Research and Projects:
 - Improvement of Occupational Health and Safety Project (ISAG, 2004-2006),
 - Joint Project to Investigate Working Conditions and Prevalence of Silicosis in Workplaces where Denim Sandblasting is Performed (2007),
 - Strengthening Occupational Health and Safety Laboratory Technical Infrastructure (OHS-LABTEK, 2010-2012),
 - Improvement of Occupational Health and Safety Conditions in Workplaces in Türkiye Project (İSGİP I, 2010-2012) Diagnostic Guide for Occupational Diseases and Work Related Diseases in Construction, Metalworking, Mining, SMEs, Guide for Health Monitoring in Work Life,
 - Increasing Detection, Diagnosis and Awareness of OHS (Occupational Health and Safety) Professionals on Occupational Diseases in Türkiye Project (2011-2013),
 - Improvement of Occupational Health and Safety Project (İSGİP II, 2015 - 2017): Manufacturing of Textile, Leather, Chemical Products, Food and Beverage Products and Furniture / OHS Management System / 8 Occupational Health Surveillance Guides,
 - Occupational Health and Safety Research Project (İSGAP, 2016 - 2018): 6 Sectors - Ceramics - Paint - Plastic - Undercover Cultivation - Woodworking Sectors - Lead Recycling Enterprises (2014-2016), Hard Metal Powders in Industrial Saws and Knife Sharpeners (2014 - 2015), Various Projects Regarding the Zonguldak Coal Mines (2014-2016),
 - National Pneumoconiosis Diagnosis, Detection, Notification and Monitoring System Development Project Hard Coal and Lignite Mining (2019-2022)

Improvement of Occupational Health and Safety Particularly in the Mining Sector (MISGEP) Project

Mining sector activities have direct and indirect impacts on environmental health and environmental sustainability. The Directorate General of Labour implemented the MISGEP Project with a €17.6 million budget, sponsored by the EU and Türkiye, to enhance the health and safety conditions in extremely hazardous sectors, particularly the mining sector. Within the scope of the MISGEP Project, which has three main components;

- » For employees, employers, OHS professionals, academics, and students; interactive training, health monitoring, seminars, and workshop activities were conducted through theatre plays in the technical assistance component, and additionally, cartoons and mobile applications were developed to expand the target audience.
- » In the grant component, grants were awarded to occupational health and safety projects developed by social partners and stakeholders, with a preference given to projects that were environmentally sensitive, demonstrated sensitivity to environmental sustainability, and proposed concrete measures during project evaluation.
- » The financial support component provided funding for experts seeking to enhance working conditions in mines and the relevance of their work. These efforts help to improve occupational health and safety, as well as environmental health, by building management systems for effective risk control.

Activities Conducted by the Vocational Qualifications Authority within the Scope of Green Transformation

The Vocational Qualifications Authority determines the human resource profile that will be required in the green transformation process, redefines occupations that will be changed and transformed as part of the green transformation process, and conducts green economy and development activities to raise environmental awareness in 5 (five) major sectors, primarily the environment and energy. The sectors are energy, environment, glass-cement, plastics, and metal.

In this regard, 45 national occupational standards have been prepared and implemented, with 30 in the environment and 15 in other industries. Türkiye has become the world's eighth country to establish occupational standards in this area.

Green Industry

New EU legislation under the European Green Deal has removed sustainability and circularity from the “volunteering” premise and made it a rule within the scope of the Sustainable Product Initiative. In this context, the price/performance ratio is no longer the main criterion for competitiveness, and adherence to sustainability and circularity regulations has become a top priority for competitiveness.

This economic model, which will result in a fundamental shift in current consumption and production habits, aims to extend product lifespans, design products to reduce waste generation, and reintroduce them into the economy as a resource once they reach the waste stage.

In this framework, the EU’s waste economy attempts to boost resource efficiency by using secondary raw materials derived from waste while producing with lower emissions.

Accordingly, the EU’s Circular Economy Action Plan, announced on March 11, 2020, identified electronics and information technologies, batteries/cells, packaging, plastics, textiles, building and construction, food, water, and nutrients as priority sectors and product groups for establishing a circular economy. The legislative proposals announced in accordance with this priority are listed below:

- » Draft Regulation on Eco Design for Sustainable Products
- » EU Strategy for Sustainable and Circular Textiles
- » Regulation on Battery and Battery Waste (2023/1542)
- » Draft Regulation on Packaging and Packaging Waste
- » Regulation on Recycled Plastic Materials and Articles Intended to Come into Contact with Foods (2022/1616)
- » Draft Regulation on Construction Products
- » Draft Regulation on Circularity Requirements for Vehicle Design and End-of life Vehicle (ELV) Management
- » Regulation on the Revision of the Industrial Emissions Directive
- » Draft Directive on Corporate Sustainability Due Diligence
- » Prevention of Green Laundering
- » Regulation on Waste Shipment
- » Revision of the Waste Framework Directive



In addition, on February 1, 2023, the European Commission announced the Green Deal Industrial Plan to increase the prevalence of Europe's net-zero technologies and further enhance the competitiveness of EU industry in this field. In light of this:

- » Net-Zero Industrial Act: According to the draft, which was announced on March 16, 2023 as part of the "Green Deal Industrial Plan," 40% of the need for essential technologies for achieving climate neutrality, such as solar panels, batteries, electrolyzers, and their key components, such as photovoltaic cells and wind turbine blades, is expected to be produced in the EU. This framework envisions measures such as streamlining the legal framework for the manufacturing of these technologies, establishing net-zero accel-

eration valleys and technology clusters, and improving access to financing.

- » Draft Act on Critical Raw Materials : Strategic and critical raw materials have been identified in order to ensure the security and sustainability of supply for raw materials such as lithium and nickel, which will be required for technologies that are critical for the transition to a green and digital economy. The draft includes measures to build capacity within the EU for the extraction (10%), processing (40%), and recycling (25%) of these raw materials and to eliminate any EU dependence on raw materials.

Furthermore, according to the EU Deforestation Regulation 2023/1115, which entered into force on June 9, 2023, sectors such as chocolate, furniture that use soy, beef, palm oil, wood/tree products, cocoa, coffee and certain products derived from these products as inputs in production or firms that trade these products are required to demonstrate that they have been produced in a way that does not cause deforestation at the time of entry of the products concerned into the EU market; the legislation also envisages the grouping of countries according to their deforestation risk and seeks to ensure that supply chains are designed in a way that does not encourage deforestation.

Waste Management

In addition to decarbonisation aims, waste management, which is central to circular economy policy, is critical in mitigating climate change. In this framework, the National Contribution Statement includes the following targets: preventing waste generation and reducing the amount of waste generated within the framework of circular economy principles; increasing the recovery rate of municipal waste to 60% by 2035, increasing the recovery rate of methane gas from biodegradable waste, reducing the percentage of waste landfilled in sanitary landfills to reach the target of zero municipal waste landfill without pre-treatment by 2053; increasing the production of RDF (refuse derived fuel) from municipal waste; converting wastewater treatment plants into biorefinery plants, increasing the percentage of reuse and expanding the utilisation areas of treated wastewater.



Moreover, the Ministry of Environment, Urbanisation and Climate Change has begun work on establishing, implementing, and disseminating a zero waste management system, as well as revising the National Waste Management and Action Plan (2016-2023), and work is currently underway to prepare a National Waste Management Plan (2023-2035).

The National Waste Management and Action Plan aims to identify issues that need to be improved or developed in the field of waste management by analysing current situation data, as well as to reveal periodic waste management models by making population and waste projections needed for the 2035 plan. The plan's goal is to determine "sustainable waste management strategies" across the country by analysing the current state of waste management in 81 provinces, examining wastes by type, collecting them separately from their source, recycling them, recovering them using various methods, and determining methods for their elimination.

Furthermore, the "Technical Assistance Project for the Development of the End of Waste Concept in Türkiye" began on April 25, 2023, as part of the Environment and Climate Action Sector Operational Programme within the scope of the IPA II period, to identify the criteria for access to quality waste as a raw material. The project's goal is to build technical and institutional capacity in Türkiye to define and effectively implement end-of-waste criteria for specific waste types in accordance with the Waste Framework Directive 2008/98/EC and Directive 2018/851, which amends Directive 2008/98/EC on Waste.

Green Organised Industrial Zones (Green OIZs)

Green OIZs and Green Industrial Zones represent a significant opportunity to ensure industrial symbiosis and boost green competitiveness in terms of furthering the green transformation of industry in Türkiye. In this context, the Ministry of Industry and Technology's work on the implementation of Green OIZs and Green Industrial Zones has neared completion; technical work has been completed to receive applications for the preliminary criteria, the first step in the Green OIZs Certification System, and applications have started to be received through the MEY-DİP (Spatial Management and Digitalisation Project for Organised Industrial Zones) system. The Turkish Standards Institution (TSE) completed the required work for the second step of the certification system, the performance indicators, and released the application guide on its website on July 28, 2023. In 2023, 19 of the 25 applications received for preliminary criteria evaluation met all of the criteria, and the process of evaluating their performance indicators is still underway.

The World Bank-financed Türkiye Organised Industrial Zones Project aims to support basic and green infrastructure investments and investments in innovation centres for OIZs in order to improve the efficiency, environmental sustainability and competitiveness of the selected OIZs.



Certificate for Green Transformation in Industry

In accordance with the vision that it is possible to produce without polluting in industry, it is intended to expand clean and environmentally friendly production within the framework of “Green Transformation in Industry” through efforts to reduce industrial emissions at the source using the best available techniques and to increase Turkish industry’s competitiveness through environmental improvements.

In this respect, the “Certificate for Green Transformation in Industry” is awarded to facilities that exhibit energy and resource efficiency, zero pollution of air, water, and soil principle, and conduct their activities with this sensitivity as an indicator of environmentally sustainable production.

It is critical for facilities that receive this certificate to demonstrate that they carry out their activities in an environmentally friendly manner in order to qualify for environmental investment funds and green financing opportunities by meeting the environmental taxonomy criteria. The Certificate for Green Transformation in Industry seeks to help industrialists become more effective in the worldwide market and gain access to loans and grants through the framework legislation that will be implemented in this regard.

Support Programmes and Projects

Support from Development Agencies

Since their establishment, development agencies have provided support as part of financial and technical support programmes for 481 projects related to Green Deal, Sustainable and Green Development. The some efforts of development agencies on the mentioned topics are given below:

Antalya Photovoltaic Solar Power Plant Installation Project for Agricultural Irrigation (Western Mediterranean Development Agency)

Since 2019, the project has offered energy support to 16,428 farmer families and 51 agricultural irrigation cooperatives operating in the agricultural sector via solar power plants. To reduce farmers' input costs, 85 per cent of the energy costs of 51 irrigation cooperatives are reimbursed by energy generated by 7 solar power plants owned by Antalya Metropolitan Municipality, totalling 4.86 MW.



Energy Efficiency Project with Aeration Tank Revision in İnegöl OIZ Wastewater Treatment Plant (Bursa Eskişehir Bilecik Development Agency)

Domestic wastewater from the district and industrial wastewater from the OIZ's businesses are treated jointly in the 130.000 m³/day Wastewater Treatment Plant (WWTP) of İnegöl OIZ. The project aims to reduce energy costs without compromising treatment performance. The revisions have resulted in approximately 32% energy savings in the aeration tanks at İnegöl OIZ WWTP. Furthermore, the biological treatment process has become more efficient by including effective aeration, and the quality of treated wastewater discharged into the receiving environment has improved.

Revision Project for Increasing the Efficiency Capacity of the Regional Central Treatment Plant (Çukurova Development Agency)

Mersin Tarsus Organised Industrial Zone Region I now has a treatment capacity of 4,500 m³/day after adding a 1,500 m³/day tank to the existing 3,000 m³/day treatment plant. The project support amount is 11.6 million TRY at 2024 prices, with a project budget of 50 million TRY.



Separation of Debris Waste Project (Eastern Mediterranean Development Agency)

Following the earthquakes in February 2023, approximately 200 million tons of debris waste were generated. To minimise the environmental impact of these wastes and to incorporate them into the circular economy, efforts are underway to turn the waste into high-value products such as cement and concrete at designated pilot waste sites in the TR63 region. A feasibility report, including analyses and calculations for setting up sorting/recycling facilities, has been prepared in collaboration with Hacettepe University. This report covers plans to operationalise two additional UNDP sites in the region, as well as to construct new ones. Additionally, mechanisms for supporting the private sector in expanding these facilities are planned. In addition to these activities, debris waste obtained from a sorting facility built by UNDP in Hatay's Altınözü district has been used in cement production at a rate of 10-15%, marking the first time cement has been produced from debris waste in Türkiye.



Energy Efficiency Mentorship Program (South Marmara Development Agency)

Under the Energy Efficiency Mentorship Program of the South Marmara Development Agency, energy surveys were conducted at 17 industrial enterprises in Balıkesir and Çanakkale provinces. Fieldwork for these surveys took place between August 2022 and June 2023, involving detailed measurements and analyses of all energy-consuming systems within the enterprises and the development of energy efficiency projects. The General Results Report drafted according to the December 2023 data indicated that the total annual energy consumption of the 17 industrial enterprises in 2022 was 64,988 TOE. Energy efficiency projects proposed through the surveys could save 6,133 TOE, representing a 9.4% total savings rate. Implementing these projects would prevent 93,438 tons of carbon emissions, equivalent to the amount absorbed by approximately 14,000 trees.

Renewable energy project proposals could provide a total of 246,603,525 kWh or 21,208 TOE of electricity, which corresponds to 75% of the enterprises' total electricity consumption. Solar Power Plant

projects could prevent 123,302 tons of carbon emissions, equivalent to the amount absorbed by approximately 18,403 trees.

5 MW Solar Power Project of Gaziantep Governorship - Department of Investment Monitoring and Coordination (YİKOB) (İpekyolu Development Agency Project)

Within the framework of the 2020 Guided Project Support Program, the İpekyolu Development Agency supported the “Gaziantep 5 MW Solar Power Plant Construction Project,” which involved the establishment of a solar power plant in Gaziantep’s Nizip district. The electricity generated by the plant is used to lift pumps for agricultural irrigation in the region. Thanks to the plant, approximately 35,000 decares of agricultural land in Nizip are irrigated using solar energy. The project has significantly reduced the agricultural irrigation costs for approximately 1,000 farmers in the region.



Ship Emissions Control Area for Liveable İstanbul Project (İstanbul Development Agency)

In collaboration with İstanbul Technical University and various ministries, a comprehensive analysis of the impact of ship emissions on air pollution and human health has been conducted. An emissions database has been created, revealing that ship emissions increase air pollution by 25% to 50%.

Test and Research Centre for Recovery (GETAM) Project (İstanbul Development Agency)

To enhance the effectiveness of waste management and recycling processes in Türkiye, the Test and Research Centre for Recovery (GE-

TAM) has been established under Yıldız Technical University to carry out tests and research at international standards, providing infrastructure for testing and researching the recoverability of wastes that were previously untested in Türkiye.

Project for Citizen-Oriented, Innovative, and Sustainable Waste Management System through Smart Technology (İstanbul Development Agency)

A model has been developed to enhance the waste management system in Pendik by leveraging digital technologies. This model aims to increase recycling, reduce carbon emissions, and contribute to the transformation of İstanbul through innovative solutions, incorporating smart waste container infrastructure and mobile applications.

Development of an Accredited Laboratory to Make On-Board Ship Emissions Measurements in İstanbul and IT Supported Training Project (İstanbul Development Agency)

The project involves establishing a laboratory capable of measuring ship emissions according to international standards, along with training, inspection, and R&D activities.

Energy-Efficient Lighting Technologies Research, Development, Education, and Application Laboratory Project (İstanbul Development Agency)

The project has established an internationally standard optical and electronic measurement laboratory in Türkiye, providing R&D support to the Turkish lighting industry and extensive information on LED technologies.

Production of Innovative Membrane Modules for Water and Wastewater Treatment Project (İstanbul Development Agency)

As part of the project, two shared laboratories have been established for the production of membranes used in wastewater treatment, national and international papers and articles have been published, patent applications have been filed, moulds for commercial products have been produced, domestic membrane modules have been developed and tested at a pilot facility of the İstanbul Water and Sewerage Administration.

Circular Economy and Resource Efficiency Platform Project (İstanbul Development Agency)

A platform has been established to enhance circular economy practices and resource efficiency in İstanbul's industry, with the goal of raising awareness about sustainability and clean production, creating road-maps and developing action plans. The platform conducts activities such as increasing awareness among businesses, providing training, offering consulting services, and performing clean production surveys.

Sustainability and Certification Centre Project for Ensuring Compliance of İstanbul's Aluminium Sector with EU Green Deal Policies (İstanbul Development Agency)

As part of the project, efforts have been made to establish a centre that will provide sector-specific guidance, technical support, and certification services to help aluminium producers comply with the EU Green Deal and circular economy regulations.

Measurement-Based Modelling Project for Fuel Consumption and Emission Reduction of İETT City Buses (İstanbul Development Agency)

Through the project, emission and fuel consumption measurements were conducted on Mercedes-Benz buses operating on the Avcılar-Zincirlikuyu Metrobus line. Based on this data, route and vehicle models were developed and validated. Over 2,000 variations were tested to determine the optimal driving characteristics.

Membrane Materials and Technologies Application and Research Centre Project (İstanbul Development Agency)

The project aims to treat and recover domestic and industrial wastewater using membrane technologies. The goals are to contribute to the national economy by developing high-value-added products, reduce foreign dependency by establishing domestic membrane production facilities, and enhance workforce skills and technological capacity related to water treatment.

Energy Efficiency and Greenhouse Gas Reduction in Aluminium Manufacturing Facilities Project (İstanbul Development Agency)

The project focuses on increasing energy efficiency in aluminium production without reducing production quality and quantity. It aims to reduce energy consumption and improve efficiency through energy

intensity measurements, product development, improvement activities, and sector-based analyses.

Project for Establishment of a Biomass Energy Systems and Technologies Centre in İstanbul (İstanbul Development Agency)

Within Koç University's Energy Research Centre (KÜTEM), a platform has been established in İstanbul to encourage the exchange of information and technology related to biotechnology and microalgae research. This platform has led to the creation of large-scale algae cultivation facilities, the organisation of various seminars and workshops, and the development of mutant algae strains. These efforts have strengthened collaboration among academic and industrial stakeholders in İstanbul and its surrounding areas and have contributed to the development of an infrastructure that supports clean energy production and energy efficiency.

Biomass Energy Systems and Technologies Centre Project (İzmir Development Agency)

The "Biomass Energy Systems and Technologies Centre" project, led by Ege University's Solar Energy Institute, has been established as a test centre for biomass investments in İzmir and surrounding provinces. It also serves as a facility where R&D activities related to biomass energy systems are conducted in collaboration with the industry.

Green Transformation and Blue Opportunities Perspective Document (İzmir Development Agency)

In line with İzmir's green and blue growth approaches, a "Green Transformation and Blue Opportunities Perspective" has been developed to guide and support the city's transition. This perspective assesses the scale of existing risks and how these risks can be mitigated with the transition to green and blue growth, as well as the economic, environmental, and social benefits that could arise from various intervention scenarios. It also explores how opportunities around sustainable technologies and industries can be created and the potential gains from these opportunities.

The Green Transformation and Blue Opportunities Perspective is crafted with a unique methodology and serves as a guiding document, offering a broader vision for decision-makers and stakeholders involved in the transformation process beyond a traditional strategy document.

The study features a three-layered architecture: macro level, sectoral level, and intervention/action level. In this ten-year outlook, priority sectors and spatial focuses in three areas—waste, water, and energy—have been identified. Transformation interventions for achieving green and blue transformation have been determined, and the benefits and costs of these interventions, if implemented, have been calculated.

Processing Natural Stone with Natural Energy Project (Northeast Anatolia Development Agency)

A 300 kW solar energy system has been installed on the roof of a natural stone factory in Bayburt, one of Bayburt's key industrial investments and contributor to the region's exports, reducing operating costs and supporting the use of renewable energy in industry.

Tourism Invitation with Green Energy Project (Northeast Anatolia Development Agency)

The Baberd Hotel in Bayburt has completed its Solar Energy Plant transformation with a 40 kW solar energy system installed, promoting renewable energy use in tourism.

Renewable Energy and Sustainable Competitiveness Financial Support Program (Central Anatolia Development Agency)

The general objective of the “Renewable Energy and Sustainable Competitiveness Financial Support Program” is to contribute to regional competitiveness in the TR72 Region by evaluating the renewable energy potential, enhancing energy efficiency through the transformation of low-efficiency motor systems in the industry, reducing environmental pollution through the use of waste management systems, and reducing development disparities within the region by increasing production capacity and efficiency in Sivas and Yozgat provinces.

The program aims to address the anticipated increase in energy needs due to the shift towards industrial and service sectors in the coming years. By promoting the use of renewable energy sources, it seeks to support regional development and improve the efficiency of energy use in manufacturing sectors through better performance of motors, transformers, and other equipment. The program has provided support to a total of 23 institutions, organisations, and companies.

Zafer Development Agency Projects

Zafer Development Agency has supported a total of 32 projects with a green energy theme through the Tourism, Energy, and Environmental

Infrastructure Financial Support Program (TEÇDP) in 2014, the Sustainable Environmental Infrastructure Financial Support Program (SÜÇEP) in 2016, and the Environmental and Energy Infrastructure Financial Support Program (ÇEDEP) in 2018. In the TR33 region, which has a total of 619 solar power plants, the total installed capacity is 542.99 MW. With the support of the Zafer Development Agency, an installed capacity of 7.65 MW has been established.

Zafer Development Agency has also supported a total of 20 projects with a green environment theme through the Tourism, Energy, and Environmental Infrastructure Financial Support Program (TEÇDP) in 2014, the Sustainable Environmental Infrastructure Financial Support Program (SÜÇEP) in 2016, and the Environmental and Energy Infrastructure Financial Support Program (ÇEDEP) in 2018. These investments have achieved a total annual wastewater treatment capacity of 36 million m³ and an annual solid waste treatment capacity of 30,000 tons. The installed renewable systems in these facilities result in a total annual electricity saving of 600 kW.

Regional Development Agencies' Supports

Eastern Anatolia Project (DAP) Regional Development Administration (BKİ)

Since its establishment, DAP BKİ has been providing support in agriculture, industry, human resources, education, and culture sectors within its responsibility area, which includes the provinces of Ağrı, Ardahan, Bingöl, Bitlis, Elâzığ, Erzincan, Erzurum, Hakkâri, Iğdır, Kars, Malatya, Muş, Sivas, Tunceli, and Van. In the agriculture sector, support is particularly focused on agricultural irrigation projects. By bringing water from the source to the fields through a closed system, water loss is prevented, and productivity and sustainability in agriculture are increased.

To prevent excessive cultivation of agricultural lands, direct seeding machines are provided to producers, which helps reduce the environmental damage caused by intensive soil cultivation. Additionally, support has been given for the establishment of compost production facilities to prevent food waste and facilitate the return of waste to the soil. This facility transforms food waste from hospitals, schools, etc., into compost for use on agricultural lands.

Furthermore, recreational projects have been supported in various provinces and districts to increase the per capita green space and create environmentally friendly recreational areas.

Konya Plain Project (KOP) Regional Development Administration

Energy Efficiency Measurement Support Project

In the KOP Region, the aim is to cover the full cost of energy surveys for businesses of all sizes operating in the area, provided that they first conduct existing energy efficiency surveys and send at least one employee to either Energy Manager Training or Survey-Project Training activities.

Based on the reports generated, measurements taken for public institutions have shown that a total of 12.5 million TRY/year in energy savings can be achieved, and 2,000 tons of CO₂/year in carbon emissions can be reduced across 16 public institutions. Similarly, measurements for private enterprises have revealed that 70 million TRY/year in energy savings can be achieved, and 12,850 tons of CO₂/year in carbon emissions can be reduced across 14 private enterprises.



Geothermal Resources Evaluation Project

In 2019, the Geothermal Resources Evaluation Project was carried out under the consultancy of TÜBİTAK (The Scientific and Technological Research Council of Türkiye) - Turkish Management Sciences Institute. As part of this project, an inventory of the existing geothermal resources in the KOP Region was compiled, resource-based analyses were conducted, and a total of 73 action proposals across 13 areas in 4 sectors (health, tourism, agriculture, and energy) were developed. This work led to the creation of a geothermal energy roadmap.

International Projects

Socially Inclusive Green Transition Project (SoGreen)

The Socially Inclusive Green Transition (SoGreen) project, financed by the World Bank and implemented by the Ministry of Industry and Technology, will utilise a \$400 million loan to fund various support programs and projects aligned with the theme of inclusive green transition across 81 provinces through the development agencies' existing support mechanisms.

The project, designed to enhance green livelihood opportunities for target vulnerable groups, especially women and youth, is planned to be implemented over seven years under four components:

- » Support for Inclusive and Green Investments and Entrepreneurship: Supporting projects with significant economic and social impacts that create sustainable employment in labour-intensive sectors potentially adversely affected by the green transition,
- » Support for the Establishment of Inclusive and Green Livelihood Facilities: Supporting local, inclusive, green, and innovative infrastructure investments to boost employment and green development,
- » Project Management and Capacity Building,
- » Emergency Response for Unexpected Situations.

Boosting Effective and Sustainable Transformation for Energy (BEST for Energy) Project

The BEST For Energy (Boosting Effective and Sustainable Transformation for Energy) project, supported by the European Union under the Ministry of Industry and Technology's Competitive Sectors Program, was carried out by İzmir Development Agency (İZKA) in partnership with the Energy Industrialists and Businesspeople Association (ENSİA). The project officially commenced on June 21, 2020, and was completed in June 2023, spanning a total of 36 months. The project aimed to develop a competitive cluster in the İzmir region focused on clean energy and clean technologies, encompassing equipment and technology production as well as services. It concentrates on sub-sectors such as wind, solar, geothermal, biomass, and green hydrogen. Activities included analysis, ecosystem development, pro-

motion, and internationalisation efforts. Additionally, the project organised meetings and events to raise awareness about clustering, encourage the adoption of clustering by relevant institutions and ensure coordination among stakeholders. The project was awarded the “Best Project” award at the “Çetin Ceviz Awards” organised by the Turkish Project Management Professional Institute.

Better Cotton Initiative

Launched in 2021 through GAP Regional Development Administration (GAP BKİ), which represents the Better Cotton Standardisation in Türkiye’s GAP Region, the Better Cotton Initiative focuses on Şanlıurfa and Diyarbakır provinces. Since its inception, 2,150 farmers have been involved in the project, benefiting from technical training support, demonstration fields, and awareness-raising activities, leading to the optimisation of input costs without yield loss. In addition to technical training focused on soil, nature, water, pesticides, and fertilisers, significant steps have been taken to improve the social aspects of cotton production, which involves over 3,000 workers as well as farmers. Key areas addressed include worker working conditions, prevention of child labour, legal rights, rest areas, and the use of protective equipment. Furthermore, project objectives have been expanded to include the transition of farmers to organic fertilisation methods instead of synthetic fertilisers starting in 2023. This shift aims to enhance both soil organic structure and fibre quality. Through these efforts, the project has achieved optimisation of input costs, emphasised the importance of soil-nature-human health, improved working conditions, and strengthened the competitiveness of the region’s cotton supply chain.



Green Technology

Green technology aims to promote energy efficiency and natural resource conservation by introducing environmentally friendly innovations that are compatible with sustainable development goals. Türkiye has taken significant steps in recent years to capitalise on its potential in this area, including increased investments in renewable energy, waste management, and cleaner industrial technologies.

Legislative Regulation for Green Technology Projects

Article 40, paragraph 2, of Decree Law No. 655 on Certain Regulations Regarding the Field of Transportation and Infrastructure was amended. This amendment made the necessary legislative arrangement for the Ministry of Transport and Infrastructure to achieve digital transformation and zero emission targets in sectors related to electronic communications, aviation, space, rail systems, and maritime technologies and to provide support to various projects within this scope, towards national and global environmental issues, especially the United Nations Sustainable Development Goals and the Green Deal that will contribute to Türkiye's "Green Development Vision" and "2053 Net Zero Emission Target."

Symposium on Measures to Reduce Greenhouse Gas Emissions from Maritime Transportation

In order to achieve GHG reduction targets, the Ministry of Transport and Infrastructure continues to take steps to reduce emissions by sup-

porting the maritime sector and promoting innovative green technologies to be used for environmentally friendly, sustainable, and safe transportation in ships and ports. The Ministry held the “Symposium on Measures to Reduce Greenhouse Gas Emissions from Maritime Transport” on February 6, 2023, at the Directorate of National Maritime Safety (UDEB), Tekirdağ. At the symposium, national and international experts discussed measures to reduce greenhouse gas emissions generated by maritime transportation, the effects of emissions on the Turkish and global maritime merchant fleet, and alternative green marine fuels.

Ministry of Trade-Green Deal Working Group

Strengthening the technology infrastructure is also a priority for green transformation. An R&D and innovation-focused approach is required for the development of green technologies that will help Türkiye produce high-value-added, environmentally friendly products. Within the scope of determining the technologies that will support compliance with the European Green Deal (EGD) and green production through sectoral needs analysis and conducting research on the development, dissemination, and transfer of the identified technologies, preparatory work on the “Green Growth Technology Roadmap” (GGTR) was carried out under the coordination of TÜBİTAK and the Ministry of Industry and Technology in cooperation with the Technological Transformation/Development Specialised Working Group (TDWG), which includes all relevant institutions, potential producers, technology developer companies and universities.

Development of the Green Growth Technology Roadmap

In the first phase of the Technology Roadmap study, six pilot sectors were identified, namely iron and steel, aluminium, cement, chemicals, plastic, and fertiliser, which are critical for the Turkish economy, provide basic inputs to the sectors, stand out in terms of carbon emissions, and are in the first stages of the production chains. In the second phase of the GGTR development, the “Identifying Sectoral Needs for Harmonisation with the European Green Deal and Defining Technological Solutions to Address These Needs” project was conducted. In this phase, Sector Focus Groups were formed. Based on the processes, inputs, and outputs unique to each of the pilot sectors, the fundamental technological requirements that prohibit businesses from operating in accordance with a scenario that limits global warming

and solution suggestions were determined using the product life cycle approach through Sector Focus Group Studies. Inputs from the “Best Available Techniques (BAT)” reference documents in each sector were consolidated, and technological needs and solutions in the pilot sectors were drafted. The third phase of GGTR efforts involved the Verification and Enrichment of Technological Needs and Solutions. Draft R&D and Innovation Topics were laid out by consolidating the contributions received through the Process-Input-Output and Needs-Solution matrix. Creating the Roadmap was the focus of the fourth stage of the GGTR initiative. For each pilot sector, Advisory Groups were formed consisting of Sector Focus Group sector representatives and academics. Following the identification of R&D and Innovation topics focussing on final technological needs and solutions through Advisory Group Meetings, the technological readiness levels achieved in previously supported R&D and Innovation projects on these topics, technology-developing organisations, technical explanations of the topic, successful examples from around the world, and initiatives in Türkiye were laid out.

Additionally, beginning 2018, the TÜBİTAK 1512-Techno-Entrepreneurship Capital Support Programme (Individual Young Initiative - BiGG) has welcomed projects pertaining to priority topics in research and development and innovation, primarily addressing the needs of the European Green Deal.

Furthermore, steps are being taken to disseminate Life Cycle Assessment efforts, allowing the environmental impacts of products and services produced in Türkiye to be evaluated holistically and concretely at all stages of the value chain (life cycle). To that end, the Ministry of Industry and Technology signed a service procurement contract to operate the TURventory Database Management System (DBMS) and web portal from August 2022 to February 2023, and the TURventory website’s design was improved. Evaluations are underway to expand the UYDD (National Life Cycle Assessment) database with datasets on product groups to be determined, as well as to ensure the management and sustainability of the UYDD database, which includes the developed datasets, and meetings with potential stakeholders are also taking place regarding this issue.

It is now possible to access test, device, product, and contact information for public and higher education laboratories/research infrastructures in Türkiye at <https://labs.sanayi.gov.tr/> and use this information for R&D efforts.

Furthermore, the Green Deal Action Plan outlines actions for managing industrial emissions, including sustainable consumption and production and integrated pollution prevention and control. In this context, developments regarding the Proposal for a Revision of the Industrial Emissions Directive, which is an important basis of the EU's zero pollution action plan announced on April 5, 2022 and includes issues for managing environmental pollution at the source using the best technologies, are closely monitored. The Industrial Emissions Directive aims to prevent and reduce pollution at the source in large industrial facilities by establishing strict permitting requirements for water and air emissions, investing in sustainable and clean technologies, and implementing production processes that use safer, less or non-toxic chemicals, all while ensuring energy, water, and resource efficiency and reuse through Best Available Techniques (BAT).

In this framework, the Ministry of Environment, Urbanisation, and Climate Change has been conducting research for many years to determine the needs of the energy, iron and steel, aluminium, chemical, mineral, automotive, textile, food, fertiliser, cement, and waste management sectors and their adaptation status to resource-efficient cleaner production technologies, which are included in the scope of green transformation in industry. Sectoral research for the minerals and chemical industries, in particular, is being conducted as part of the Determination of Industrial Emissions Strategy of Türkiye in accordance with Integrated Pollution Prevention and Control (DIES), which began in 2020 and is expected to be completed in 2023 and includes many actions from the Green Deal Action Plan. For sectors where no research has been conducted, a general approach is adopted and in addition to the "National Action Plan," "BAT Reference Documents," and "Sectoral BAT Outcome Documents," legislation and Green Transformation Document Software, which include the date of harmonisation, are being prepared.

Strengthening the technology infrastructure is also a priority for green transformation. An R&D and innovation-focused approach is required for the development of green technologies that will help Türkiye produce high-value-added, environmentally friendly products. Within the scope of determining the technologies that will support compliance with the European Green Deal (EGD) and green production through sectoral needs analysis and conducting research on the development, dissemination, and transfer of the identified technolo-

gies, preparatory work on the “Green Growth Technology Roadmap” (GGTR) was carried out under the coordination of TÜBİTAK and the Ministry of Industry and Technology in cooperation with the Technological Transformation/Development Specialised Working Group (TDWG), which includes all relevant institutions, potential producers, technology developer companies and universities; and technological transformation roadmaps for the iron and steel, aluminium, cement, chemicals, plastics and fertiliser sectors were shared with the public.

Green Growth Technology Roadmap (GGTR)

“Technological Transformation/Development Specialised Working Group” was established with representatives from 13 public institutions and 27 private sector umbrella organisations to determine industrial enterprises’ technological needs in relation to Türkiye’s green development goals. As part of the Group’s work, “Green Growth Technology Roadmap” efforts were carried out between July 2022 and May 2023 in the iron and steel, aluminium, cement, chemicals, plastics, and fertiliser sectors, which are critical for the Turkish economy, provide basic inputs to the sectors, stand out in terms of carbon emissions, and are in the first stages of the production chains. The technological requirements for these sectors have been determined using a product life cycle approach, which encompasses everything from raw materials to manufacturing processes, energy inputs to waste management, and post-use recovery. Sector-representing umbrella NGOs were in charge of determining industrial enterprises’ technological requirements. The Sectoral Focus Groups formed with 371 private sector representatives are assembled by Turkish Steel Producers Association (TÇÜD) for iron and steel sector, by Entrepreneur Aluminium Industrialists and Businessmen Association (GALSİAD) for aluminum sector, by Turkish Chemical Manufacturers Association (TKSD) for chemical sector, by Turkish Plastics Industrialists’ Research, Development and Education Foundation (PAGEV) for plastics sector, by Turkish Cement Manufacturers’ Association (TÜRKÇİMENTO) for cement sector and by Association of Fertiliser Manufacturers, Importers and Exporters (GÜİD) for fertiliser sector. The technological requirements identified by industrial enterprises were supplemented with the Climate Council Science and Technology Commission’s outputs, inputs from each sector’s “Best Available Techniques (BAT)” reference documents, and global technology trends. Over 60 meetings held over three months with approximately 100 academicians and researchers

resulted in technology solutions to the needs identified for the private sector's green transformation. In accordance with Türkiye's 2053 net zero emission target and green development policy, groundbreaking R&D and innovation-based solutions have been identified as targets for 2026, 2030, and 2035 in the iron and steel, aluminium, cement, chemicals, plastics, and fertiliser sectors, in collaboration with all ecosystem stakeholders. The research identifies 31 Technological Targets that will improve Türkiye's technological capability for green production, 72 Critical Products that focus on the domestic development of green production technologies, and 189 R&D and Innovation Topics that will stimulate green technological production and employment in six sectors. All technological targets are detailed, along with supporting elements such as technical explanations, current technological readiness levels in the world and Türkiye, national and international success stories, infrastructures for technology use and dissemination, human resources, and incentives.

Furthermore, steps are being taken to disseminate Life Cycle Assessment efforts, allowing the environmental impacts of products and services produced in Türkiye to be evaluated holistically and concretely at all stages of the value chain. TÜBİTAK MAM submitted a Public Investment Project proposal for 2024 to the Presidency of Strategy and Budget of the Presidency of the Republic of Türkiye. "Development of National Life Cycle Assessment Data Sets" project, which runs from 2024 to 2025, aims to provide data sets for five types of products.

Furthermore, under the DEEP Project, the Ministry of Environment, Urbanisation, and Climate Change will offer a training programme on conducting Life Cycle Analysis of Single Use Plastics and Life Cycle Assessment to promote circular economy monitoring.

The Laboratory and Research Infrastructure Information System is an inventory system that stores test, device, sample, personnel, and general information about laboratories, centres, and research infrastructures that provide testing, calibration, and research services to industry. It also facilitates access to test, device, product, and contact information of public and higher education laboratories/research infrastructures in Türkiye and their use for R&D studies.

Green technology provides innovative solutions that enhance environmental sustainability, and the Ministry of Environment, Urbanisation, and Climate Change plays an important role in their implemen-

tation and dissemination. The Department of Technology and Green Transformation acting within the Ministry within this scope has the following objectives:

- » To explore technology and innovative solutions that need to be implemented within the scope of net zero emission and green development goals, to collaborate with national and international organisations functioning in this area, and to ensure cooperation,
- » To conduct conceptual research on new technology and innovative solutions, and to develop legislation, guidelines, and manuals,
- » Within the scope of the net zero emission and green development target, to ensure coordination among relevant institutions, to follow up on the process, and to carry out the necessary work for the development and dissemination of clean technologies in energy, transportation, agriculture, waste, health, industry, and other related sectors,
- » To follow and contribute to the negotiation processes within the Department's sphere of duty and authority, within the scope of international bodies and conventions connected to technology and green transformation, and to fulfil the tasks of being a national focal point,
- » To carry out training and capacity-building activities on new technologies and innovative solutions within the scope of the net zero emission and green development goals, to create and implement national and international projects for this purpose,
- » To track the work of the European Union acquis on technology and green transformation, contribute to harmonisation efforts, and follow up on the work,
- » Performing other duties assigned by the Department.

Green Production

The green production strategy, which is focused on the effective use of resources for a sustainable existence while battling the climate problem, seeks to limit environmental consequences in accordance with particular principles during the production process. Accordingly, it is aimed to reduce pollution by disseminating green production technology methods and ensuring product reuse through recycling. The key green production techniques are energy conservation, increased use of renewable energy, waste management strategies, producing environmentally friendly and sustainable products, and the use of ecological materials during the product design process. To ensure that industrial processes adapt as a result of inclusive measures implemented in this context, it is equally necessary that society shifts towards environmentally friendly products and develops consuming habits in this direction. It is believed that green production methods help to a sustainable economy by lowering costs not just in the production system but also in the manufacturing process. It is also claimed that because the aim of increasing the usage of renewable energy is to restrict greenhouse gas emissions, green production techniques lessen the consequences of global warming. In the same vein, it is argued that gathering the product obtained through sustainable harvesting in a way that does not affect the environment and does not permanent-

ly deplete the resource has an integrated effect with green production techniques in terms of sustainable agriculture.

In this framework, with the Green Deal Action Plan, prepared as a roadmap for sustainable development and global growth, actions for the management of industrial emissions, including sustainable production and consumption, pollution prevention and control, and developments, including an important part of the zero pollution action plan, which includes aspects for environmental pollution management using the best technologies, are closely monitored. For many years, the Ministry of Environment, Urbanisation, and Climate Change has worked to determine the adaptation status and requirements for resource-efficient cleaner production technologies in industries such as energy, iron and steel, aluminium, chemistry, minerals, automotive, textile, food, fertiliser, cement, and waste management. As part of the Determination of Industrial Emission Strategy of Türkiye in Accordance with Integrated Pollution Prevention and Control (DIES) Project, field-based studies are carried out for the minerals and chemical industry, and a general approach is introduced for the areas where no studies are conducted, and arrangements are made to include the National Action Plan as well as the BAT Reference Documents and Sectoral BAT Outcome Documents harmonisation date. In keeping with the insight that it is possible to produce without polluting in industry, the goal is to expand clean and environmentally friendly production while also increasing Turkish industry's competitiveness through environmental improvement. In this direction, facilities that demonstrate energy and resource efficiency, the zero pollution principle for air, water, and soil, and carry out their activities with this sensitivity are given the Green Transformation in Industry Certificate as an indicator of environmentally sustainable production. Important steps are being taken to ensure that the facilities that receive this certificate meet the environmental taxonomy criteria and benefit from environmental investments. It is claimed that the dissemination of cleaner production through the implementation of BATs in industrial sectors contributes to the country's industry in terms of resource efficiency and global competitiveness as well as environmental benefits. In this context, the Green Transformation in Industry Strategy Document aimed to promote clean production within the scope of the Zero Pollution for Air, Water, and Soil Action, and national policies were linked accordingly.

The Ministry of Environment, Urbanisation, and Climate Change coordinates activities related to sustainable consumption and production in Türkiye, acting as the National Focal Point for the Sustainable Consumption and Production Regional Activity Centre. The Medium Term Programme for 2023-2025, titled 'Green Transformation,' and the 12th Development Plan, titled 'Competitive Production with Green and Digital Transformation,' include numerous policies and measures to promote green production practices. Türkiye aims to become a major production centre in the global market by developing a production structure that maximises local resources, adapts to changing competitive conditions, and focuses on green and digital transformation during the 12th Development Plan period. In this direction, R&D activities and technology transfers are supported to facilitate the adoption, development, and dissemination of sustainable production and green transformation technologies in the manufacturing industry, based on identified needs for different groups, in line with the 2053 net-zero target. Similarly, within the framework of the developing global mobility vision in the automotive sector, the plan is to implement sustainable practices at all stages from design to production by adapting to the green and digital transformation process and to develop investments and technologies for hydrogen fuel cells and components and hydrogen-based engines. Another aim is to expand the use of electric buses and achieve green transformation in the automotive sector through the transition to a circular economy. A programme covering all vehicle types is being designed to withdraw old vehicles with high polluting characteristics from traffic and replace them with environmentally friendly and safe vehicles by establishing a system for battery recycling, their secondary use and disposal.



Clean energy production and utilisation are encouraged as part of green production practices. In order to increase the share and diversity of renewable energy sources in total electricity generation, a Renewable Energy Support Mechanism will be developed, with the aim of expanding the production of domestically manufactured components and integrating parts used in facilities that generate electricity from renewable energy sources. In this direction, the Law on the Amendment of the Civil Servants Law, Certain Laws, and Decree Law No. 375 allows legal entities that commit to establishing an electricity storage facility to also establish an electricity generation facility based on wind and/or solar energy, with a capacity matching that of the storage facility they commit to building. It is aimed to certify the facilities that report energy and resource efficient production by reducing their emissions towards the zero pollution target. To accelerate the energy transformation of buildings, R&D activities are conducted to promote energy-efficient buildings supported by renewable energy and to explore more environmentally friendly uses of coal, such as hydrogen, methanol, and ammonia production, along with utilising reserves with clean coal technologies. Similarly, it is aimed to increase Türkiye's share in world production and exports by producing sustainable products in the chemical industry and making integrated investments compatible with green and digital transformation. To ensure sustainability by producing high value-added products in the electrical equipment sector, a holistic approach is taken in implementing eco-design requirements for electronic goods and components and in the recovery of lead, which is the primary raw material for accumulators. To improve the capacity for collecting and recycling batteries, efforts are being made to harmonise with the EU Directive on Batteries, Accumulators and Waste Batteries and Accumulators. Similarly, it is aimed to popularise the production and use of environmentally friendly furniture in the furniture industry.

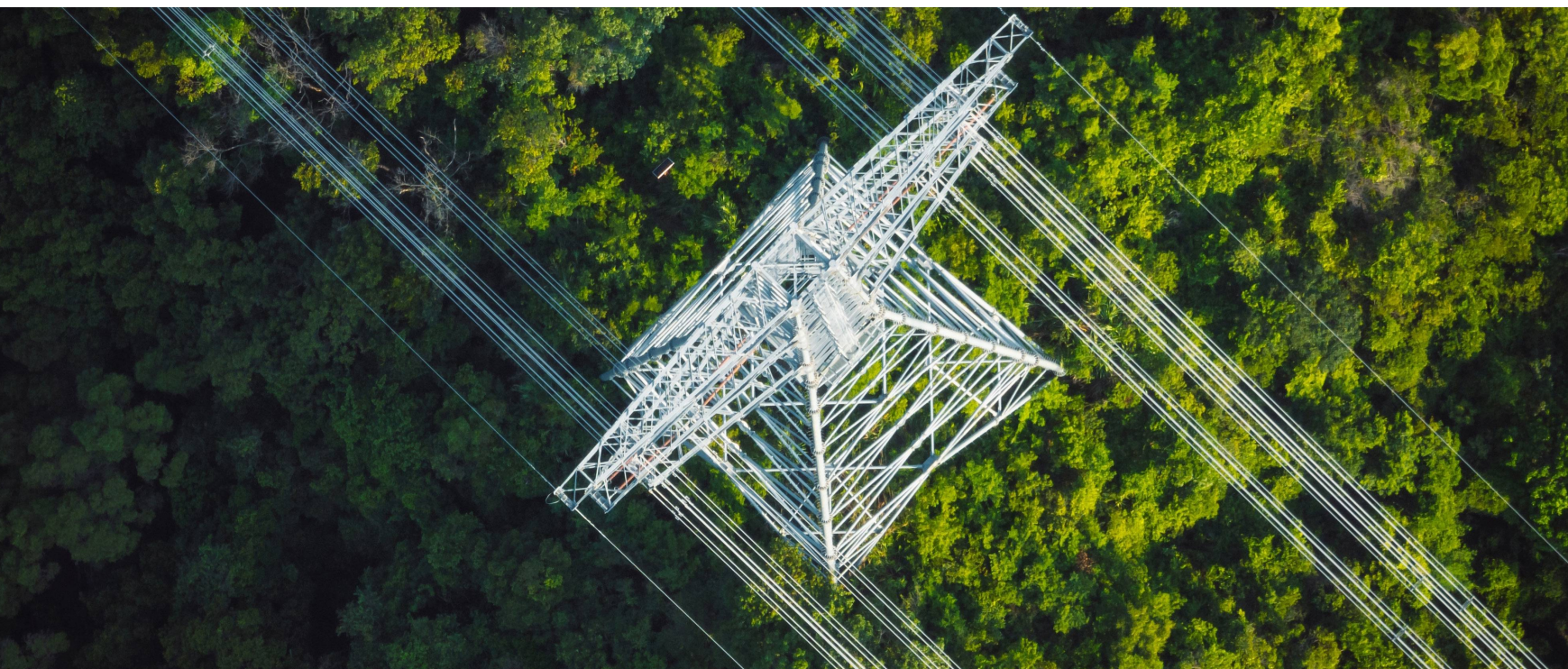


In Türkiye, one of the key practices for addressing water pollution and limiting water consumption is the implementation of clean production principles, which are central to the circular economy and align with the principles of sustainable production and consumption. Through cleaner production practices, industrial facilities are encouraged to use the best available techniques, thereby reducing water consumption, preventing air pollution, using energy efficiently, and minimising waste. In this direction, significant efforts are being made for the transition to clean production in the textile and leather sectors. The Circular on Cleaner Production Practices in the Textile Sector No. 2022/20, which outlines the steps for the implementation of certain BATs as part of cleaner production practices for the short-term solution of emissions from the textile sector, has entered into force. Online and face-to-face training programmes were organised for sector representatives in order to disseminate the implementation of the Circular. The Circular aims to reduce the oil vapour released into the atmosphere from the chimneys of textile factories, a major source of complaints in cities with textile production in Türkiye, to limit energy consumption and air emissions from these facilities. For the first time, a limit has been set for reducing volatile organic compound and dust emissions specific to the sector, and compliance with the following rules in textile production has become mandatory:

- » Compliance with sector-specific limit values for reducing volatile organic compound and dust emissions,
- » Limiting and reporting energy consumption per production,
- » Online monitoring of emissions using suitable treatment systems and information technology to ensure a reduction in dust emissions,
- » Removing color from textile wastewater and reusing treated wastewater by applying techniques that enable the reuse of salty water in fabric dyeing and washing, specifically by treating dye bath wastewater in textile enterprises,
- » Ensuring that wastewater is treated and reused where possible to save water and energy,
- » Separate collection and reuse of cooling water and wastewater with low pollutant load as much as possible,
- » Solving the conductivity problem arising from textile wastewater and removing the ions contained in the brine solution used in wa-

ter softening systems with a suitable technology to reduce the conductivity at the source.

Green production practices, which consider the economic, social, and environmental dimensions of production, have led to significant transformations in the agriculture and food sectors. In the second quarter of 2023, as part of efforts to improve the management of agricultural waste and by-products, protein was isolated from cherry pits—waste from the fruit juice and canning industries—to produce high-protein bars. This process not only repurposes waste but also creates economic value by transforming it into a high-value product. The project, which involves the private sector, is set to scale up to commercial production. Under this initiative, two projects are also ongoing to evaluate olive oil production waste, specifically olive pomace and vegetation water, with the goal of increasing the areas and quantities dedicated to organic agriculture. In plant production, planning is carried out to enhance yields using high-quality genetic materials, with a focus on increasing production through the expansion of greenhouse cultivation, particularly in densely populated metropolitan areas. Efforts continue to support the production and use of certified seeds to protect the environment and reduce greenhouse gas emissions in the agricultural sector. Environmentally friendly agricultural practices are being implemented to fight climate change. The production and use of organic fertilizers are being promoted, and alternatives to pesticides and antimicrobials are being developed. To contribute to the sustainable use of natural resources, efforts are underway to advance good agricultural practices and organic farming within the framework of the “Regulation on Agricultural Production Planning.” The efforts include the following:



- » The production of products with supply deficiencies in Türkiye, which are strategic and regionally critical, important for human nutrition, health and animal production, is planned on the basis of agricultural basins and agricultural support is directed accordingly.
- » Criteria including climate, climate projections, soil, topography, and water availability/shortage are taken into consideration when determining which crops to support in agricultural basins.
- » The use of efficient irrigation systems, such as drip irrigation, is promoted through support programs.
- » The cultivation of legumes and forage crops that consume less water is supported in agricultural basins with limited groundwater.



Green Water and Waste Management

What is Water Management?

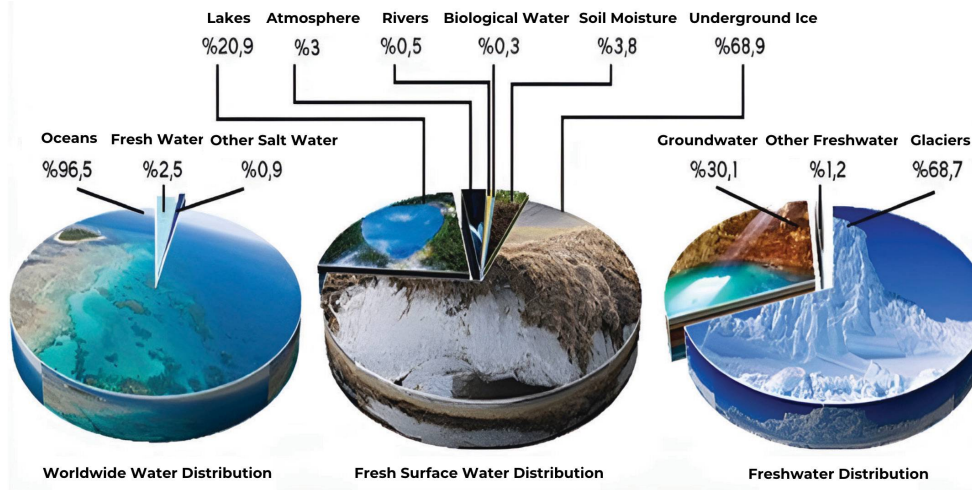
Water management involves the development, distribution, monitoring, regulation, and improvement of water resources to meet demands in the most efficient way, as well as addressing current and future challenges in water allocation.

Water is an irreplaceable and vital resource necessary for sustaining human life and ecosystems. Given this critical importance, active water management and the regular updating of existing water policies to align with changing environmental, economic, and social conditions are high priorities on the global agenda.

Water management is a key aspect of global sustainability efforts. The joint efforts of all nations, relevant national and international institutions, and organizations are crucial in developing policies for the protection, sustainable use, and enhancement of water resources. Identifying a suitable water management model based on these policies is essential.

Many countries are working on sustainable projects and technologies to mitigate the negative effects of water scarcity, including rainwater harvesting, water transfers, desalination, and wastewater manage-

ment. In recent years, the recovery of wastewater, due to its water and nutrient content, and even its potential use as an energy source, has gained more attention. The sustainability of water resources is no longer just a governmental concern.



The total water volume on Earth is estimated at 1.4 billion cubic kilometers. Of this, 97.5% is saltwater in oceans and seas, while only 2.5% is freshwater found in rivers, lakes, polar ice caps, and underground sources.

Areas with the Most Freshwater on Earth:

- » Canada
- » Amazon Basin
- » North and partly west of Europe
- » Indonesia, Malaysia, the Philippines
- » Siberia
- » Congo Basin
- » Brazil
- » Oceania

Areas with the Least Freshwater on Earth:

- » Deserts, where freshwater sources are scarce
- » The Sahara Desert

- » Eastern and Southern Africa (Kenya, Kalahari, Zimbabwe)
- » Arabian Deserts
- » Pakistan
- » Poland and surrounding areas have the lowest per capita freshwater availability
- » Kuwait has the lowest per capita freshwater availability in the world

With a new initiative on Environment Emine Erdoğan Launches The Water Efficiency Campaign



Zero Loss in Water



I believe that when we ask "How can I contribute?" instead of thinking "What can I do?", we will overcome this challenge together.

The First Lady Emine Erdoğan, the wife of President Recep Tayyip Erdoğan, added a new one to her sensitive work on the environment. She announced the launch of national-scale Water Efficiency Campaign under the coordination of the Ministry of Agriculture and Forestry with a promotional meeting held at the Presidential Complex on January 31, 2023.

In our country, which is located in the Mediterranean climate zone, the effects of climate change are felt intensely. The pressure on water resources, which are under threat due to increasing temperature and evaporation and decreasing precipitation, increases even more with population growth and the water demand of developing production. Emphasizing the importance of the existence of water at the meeting, Emine Erdoğan said: "Although we have the misconception that the riches that nourished these lands for thousands of years before us will always exist, our resources are not unlimited. Due to decreasing precipitation and unconscious water consumption, our agricultural lands, wetlands, rivers and streams, and underground water resources are being tested by the threat of drought. We must not forget that every drop of drying up of the earth's waters means a destroyed home for fish, birds, plants and many other creatures living in this ecosystem.



Likewise, we need to remind ourselves that the fight against drought is actually a struggle for life for us, humans who cannot survive even for three days without water. I believe that with the Water Efficiency Campaign we have launched with this perspective, we will flourish the hope for a livable future by multiplying drop by drop. Pointing to the importance of water in Turkish culture, Emine Erdoğan said, "Water is a mercy sent down to the earth as a gift from the Creator. This point of view, which sees water as a precious treasure, reflects the spirit of the Campaign we have launched." "Our business people and sector representatives have important responsibilities here. Do not forget that every drop you save will return to our future, our children, nature and living creatures as water of life. Although institutional steps are important, we need a total mobilization in which each citizen will contribute on an individual level. I believe that when we ask "How can I contribute?" instead of thinking "What can I do?", we will overcome this challenge together. She invited all citizens to participate in the Campaign.

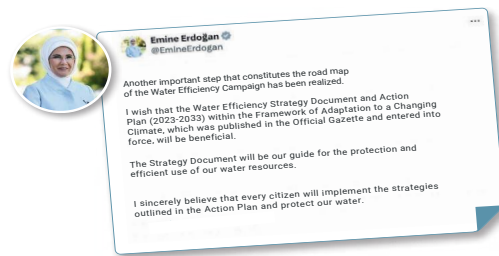
During the meeting, The Group for the Research and Promotion of Turkish Music (TUMATA) emphasized the place of water in our ancient culture with a mini concert. In the meeting, a plaque of appreciation was also given for the practices implemented for the protection of our water resources.



Water Resources in Türkiye

Türkiye receives an average annual rainfall of approximately 574 mm, which corresponds to an average annual water volume of 450 billion cubic meters. Under current technical and economic conditions, the exploitable surface water potential is approximately 94 billion cubic meters annually. Including the 18 billion cubic meters of groundwater potential, Türkiye's total exploitable water resources amount to 112 billion cubic meters per year, of which 57 billion cubic meters are currently used.

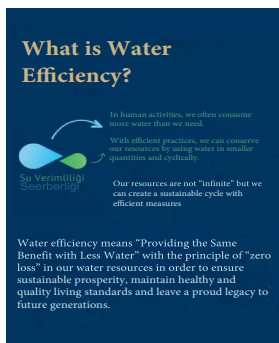
The General Directorate of State Hydraulic Works (DSİ) has planned to fully develop the total available exploitable water resources. Scientific projections indicate that climate change will significantly impact the water cycle, potentially reducing water resources in Türkiye. Some basins are already experiencing a decline in rainfall, a rise in temperatures, and reduced water flows. For instance, 50% of surface water in the Gediz and Büyük Menderes basins could disappear within this century, leading to severe water shortages for agricultural, industrial, and domestic users.



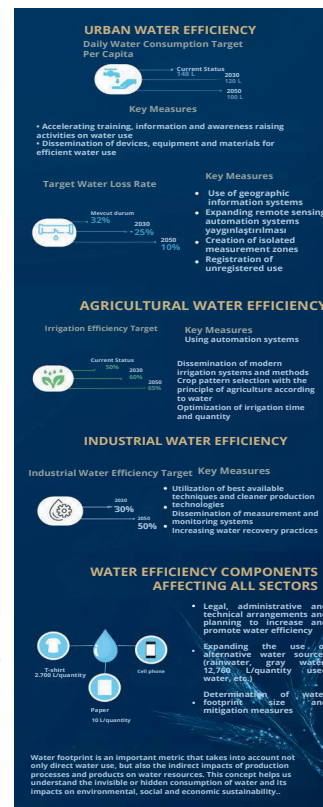
"Water Efficiency Strategy Document and Action Plan in the Framework of Adaptation to the Changing Climate (2023-2033)", which is a roadmap on water efficiency for all sectors operating in our country, entered into force after being published by Presidential Circular.

In the document published with the following message from the Minister of Agriculture and Forestry İbrahim Yumaklı 9 Targets, 49 Strategies and 114 Actions were identified to improve urban, industrial, agricultural and individual water efficiency.

Yumaklı: "Within the scope of the mobilization, we aim to ensure the sustainability of our resources by using our water efficiently in almost every field from individual to urban, agriculture to industry. We accept the Water Efficiency Mobilization as a milestone and aim to transform water efficiency into a culture of life in our country without leaving any stakeholder behind."



The Turkish and English versions of the Strategy Document and Action Plan are available on the official websites of the Ministry of Agriculture and Forestry and the Water Efficiency Mobilization Campaign.
(www.tarimorman.gov.tr)
(www.suverimilligi.gov.tr)



While climate conditions are a primary factor, other key issues include overuse of water for irrigation, illegal groundwater extraction, management problems at existing facilities, water loss and leakage in networks, administrative and institutional challenges, investment delays, and water pollution due to various reasons—all of which must be addressed to adapt to the impacts of climate change.

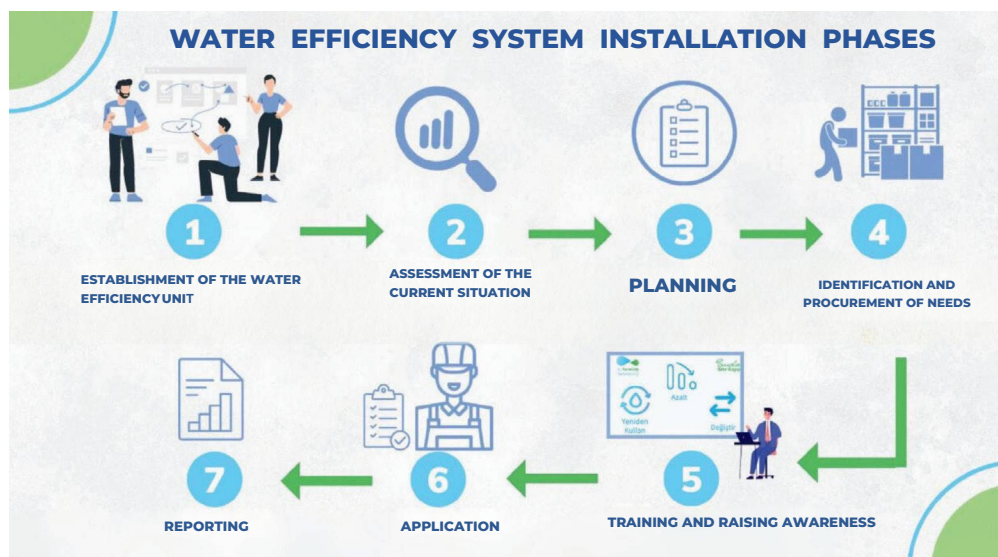
The rise in summer temperatures due to climate change in Türkiye, along with the decrease in winter precipitation (particularly in western provinces), the loss of surface water, the increased frequency of droughts, soil degradation, and the erosion and flooding along coast-

lines, all pose a significant threat to the availability of water resources needed for food production and rural development.

In terms of water resources, Türkiye ranks among countries with water scarcity, with an annual per capita availability of 1,313 m³ of usable water. Therefore, the protection of existing water resources, the development of alternative sources, the use and promotion of environmentally friendly technologies, and the establishment of sustainable water policies are of utmost importance for achieving sustainable development.

Rivers and Lakes in Türkiye

Türkiye has over 120 natural lakes, including small ones in mountainous regions. The largest and deepest lake is Lake Van, with an altitude of 1,646 meters and an area of 3,712 km². The second largest is Lake Tuz, with an altitude of 925 meters and an area of 1,500 km².



Türkiye's lakes are concentrated in four main regions: The Lake District (Eğirdir, Burdur, Beyşehir, Acıgöl), South Marmara (Sapanca, İznik, Ulubat, Kuş lakes), Lake Van and its surroundings, and Lake Tuz (Salt Lake) and its surroundings. Some of the lakes in Türkiye are over 30 meters deep, while others are only a few meters. The depth of Lake Van exceeds 100 meters. Lakes that are connected to the sea, such as Lake Köyceğiz, have low salinity.

In addition to natural lakes, Türkiye also has approximately 591 reservoir lakes. The surface areas of some of these include: Atatürk Dam at 817 km², Keban Dam at 675 km², Karakaya Dam at 268 km², Hırfanlı Dam at 263 km², Altınkaya Dam at 118 km², and Kurtboğazı Dam at 6 km².

In addition to lakes, Türkiye is rich in rivers. Numerous rivers originating in Türkiye flow into various seas: To the Black Sea: Sakarya, Filyos, Kızılırmak, Yeşilırmak, Çoruh; to the Mediterranean: Asi, Seyhan, Ceyhan, Tarsus, Dalaman; to the Aegean: Büyük Menderes, Küçük Menderes, Gediz, Meriç; and to the Marmara: Susurluk/Simav Stream, Biga Stream, Gönen Stream



Additionally, the Euphrates and Tigris rivers empty into the Persian Gulf, while the Aras and Kura rivers flow into the Caspian Sea.

Water Management in Türkiye

The principle of zero loss refers to achieving the same benefit from water sources with less water or providing more benefit with the same amount of water, with the goal of ensuring sustainable prosperity, maintaining healthy and high-quality living standards, and leaving a good legacy for future generations.

The Water Efficiency Campaign is sustainable not only through institutional efforts but also by spreading throughout society. In a broad sense, the “Water Efficiency Campaign” should not be confined to specific limits or lines but should be nationwide. Therefore, in water efficiency, there is no line of defence but a territory of defence; beyond that, not just lines or territory, but a “global water campaign” is essential.

Water Efficiency Campaign

Launched under the principle of “Zero Water Loss,” the Water Efficiency Campaign aims to ensure the sustainability of resources by reducing water losses. This includes methods such as rainwater harvesting, grey water usage, and the reuse of treated wastewater, as well as utilizing alternative water sources. It also encompasses the use of efficient technologies in agriculture, industry, and individual water use, pro-

moting conscious production, and improving individual water usage habits. Actions are defined within the framework of these main efficiency practices.

To adapt to the changing climate, protect water resources, and ensure sustainable management, the “Water Efficiency Campaign” was launched under the auspices of First Lady Emine Erdoğan on January 31, 2023. This initiative focuses on water-efficient and sustainable use in sectors with high water consumption, particularly in urban, agricultural, and industrial uses.

As the first step of the campaign, the “Water Efficiency Strategy Document and Action Plan in the Framework of Adaptation to the Changing Climate,” which was prepared to ensure adaptation to the changing climate, protection and sustainable management of water resources and includes action plans for water efficiency across all sectors, has come into effect through a Presidential Decree. The Action Plan sets strategies and actions for reducing water losses, utilising alternative water sources through methods like rainwater harvesting, grey water usage, and reuse of treated wastewater, employing efficient technologies in agriculture, industry, and personal water uses, and promoting responsible production and improving individual water use habits. A total of 162 water efficiency guides have been prepared as a roadmap for the implementation of these actions.

In line with the “Water Efficiency Strategy Document and Action Plan,” efforts are underway to promote urban, agricultural, industrial, and individual water efficiency practices. Achieving these sectoral goals will help reduce Türkiye’s water footprint.

In the industrial sector, guides containing water efficiency techniques for 152 different industries have been prepared with a focus on efficient water use and achieving a sustainable water footprint. Efforts are ongoing to disseminate these water efficiency techniques.

‘Water Efficiency Campaign’ launched

The publicity meeting of the ‘Water Efficiency Campaign’ launched under the coordination of the Ministry of Agriculture and Forestry and led by First Lady Emine Erdoğan, spouse of President Recep Tayyip Erdoğan, was held at Beştepe National Congress and Culture Centre. (metin resmin altına yerleştirilecek)

Based on ecosystem integrity in conformity with the EU Water Framework Directive (2000/60/EC), monitoring the quality of water resources in Türkiye follows a monitoring and assessment strategy.

Under the Water Framework Directive, the General Directorate of Water Management of the Ministry of Agriculture and Forestry and the Directorate General of State Hydraulic Works (DSİ) cooperatively conducted the “Technical Assistance Project for Capacity Building on Water Quality Monitoring” between 2011 and 2015 to establish the infrastructure for the National Monitoring Network and to improve the legal and institutional capacity for the implementation of water quality monitoring and assessment.

Reducing urban water losses is one of the top priorities to be addressed within the framework of the “Water Efficiency Campaign” and “Water Efficiency Strategy Document and Action Plan in the Framework of Adaptation to the Changing Climate.”

Water losses in drinking water systems are regarded as the most critical factor in ensuring urban water efficiency. In 2015, the average water loss in Türkiye’s drinking and potable water systems was 39%, and this rate was reduced to 32% by 2022. According to regulations, the short-term target is to reduce the water loss to 25% in metropolitan and provincial municipalities by 2028 and in other municipalities by 2033. To achieve this, municipalities’ efforts and results are monitored annually, field visits are conducted, and technical support is provided.

Within the campaign, extensive activities are organized with municipalities and relevant institutions under the theme of “efficient urban water management.” These events offer valuable technical insights from experts in the field and municipalities that implement good practices on various topics, including water loss management, xeriscape practices in cities, reuse of used water in urban areas, rainwater harvesting, grey water systems, etc.

Publications prepared to ensure efficient urban water management include:

- » Handbook on Controlling Water Losses in Drinking Water Supply and Distribution Systems
- » Methodological Guide on Pricing Drinking Water Supply and Wastewater Management
- » Guide on Rainwater Harvesting

- » Guide on Grey Water Usage
- » Guide on Reuse of Used Water
- » Guide on Xeriscaping Practices

Under the Regulation on Protecting Waters from Pollution caused by Nitrates from Agricultural Sources, nitrate pollution from agricultural sources in waters is monitored at a total of 4,852 stations across Türkiye, including 2,533 surface water and 2,319 groundwater stations. The objective of monitoring is to determine the extent of pollution, identify areas that are sensitive to nitrates, and assess the efficacy of the Nitrate Action Plan once it is put into practice. The Nitrate Information System (NİBİS) has been established to evaluate the obtained data.

A Code on Agricultural Practices, containing measures to be taken by farmers to prevent and reduce pollution from agricultural activities, has been prepared.

A national project on “Organic Waste and Residue Management” is being conducted to protect soil health and productivity by evaluating various plant and animal waste and residues. Sub-projects investigate the effects of direct use, composting, and biochar application of wastes and residues on plant and soil quality. The impacts of the usage in agriculture and recycling of organic resources (vegetation water, biogas digestate, wood vinegar), which are released from different facilities and whose direct discharge to the receiving environment creates environmental problems, are investigated.

The growing gap between available natural water resources and water needs necessitates the treatment of wastewater using suitable technologies and its subsequent reuse in agriculture, irrigation, and energy sectors. Treating these marginal waters in a way that does not endanger the environment or human health and reusing them in agricultural irrigation helps to contribute to the efficient and sustainable use of irrigation water, therefore generating input to the economy. In this context, the “Investigation of the Marginal Water Usage in Agricultural Irrigation and Determination of its Contribution to the Circular Economy (MARSUDE)” project, led by the General Directorate of Agricultural Research and Policies in collaboration with the General Directorate of Water Management, was initiated in five different regions for sunflower and corn crops as of 2021. The project is ongoing, and the results are expected to contribute to the use of alternative water sources in water management.

The biggest share of agricultural investments this year is allocated to irrigation projects

While 101 billion 8 million liras was allocated for 370 projects to be implemented in the agriculture sector this year, the largest share was allocated to irrigation investments



85,2 Billion TL
Ongoing projects

14,8 Billion TL **1 Billion TL**
New Projects Study projects



370 projects



Irrigation projects

217

Allowance (Billion TL)

53,2



Flood protection

32

22,9



Forestry

32

12



Plant production

55

9,9



Livestock farming

19

2,1



Aquaculture

15

0,95

17.01.2024

Kaynak: Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı



A significant portion of agricultural investments this year was dedicated to irrigation projects.

With a significant budget allocation of 101 billion 8 million liras, this year will see the implementation of 370 projects in the agriculture sector. Notably, the largest portion of the budget has been dedicated to irrigation investments.

The Water Efficiency Campaign and the “Water Efficiency Strategy Document and Action Plan in the Framework of Adaptation to the Changing Climate” aim to achieve up to 40% water savings through increased water use efficiency in the tourism sector over the 2023-2033 period. To this end, the “Guide on Water Efficiency for the Tourism Sector” has been published, highlighting measures such as:

- » Transitioning to xeriscaping practices in large landscape areas of tourism facilities, optimising irrigation methods, timing, and duration,
- » Increasing the reuse of water through grey water and rainwater systems,
- » Using automatic equipment and devices that save water,
- » Regularly informing guests about efficient water use,
- » Organizing staff training on efficient water use.

The Ministry of Culture and Tourism has developed a certification system under the “Türkiye Sustainable Tourism Program,” where the adoption of water-saving practices in facilities is also among the criteria for certification.

Accordingly, on July 16, 2024, a cooperation protocol was signed between the Ministry of Agriculture and Forestry and the Ministry of Culture and Tourism to disseminate the measures in the “Guide on Water Efficiency for the Tourism Sector” and the criteria of the Türkiye Sustainable Tourism Program in tourism facilities. Within the framework of the relevant protocol, it is intended to collaborate on efforts to ensure and extend the efficient use of water resources in the tourism industry.

Preparation of River Basin Management Plans

Türkiye’s Water Management Goals

Water and Health Conferences in Türkiye

In the context of monitoring and regulating water quality for consumption, swimming, pools, and spas, “Water and Health Conferences” were organized nationally in 2015 and internationally in 2017 and 2019 with participation from the Ministry, universities, and relevant public institutions.

These conferences addressed topics such as drinking water, bottled waters (natural spring waters, drinking waters, and mineral waters), swimming waters, swimming pools, wastewater, spas, water products, water pollution, protection of water resources, water management in disasters, water in communal living spaces, monitoring of water quality, laboratories, and national and international water legislation.

The primary goal of the “1st Water Council” held in 2021 was to create short-, medium-, and long-term strategies related to water and to develop water management policies with all stakeholders, from farmers to academics and from NGOs to bureaucrats. To meet the goals set for the next three decades, several measures have been planned. These include reducing losses and leakages, reusing water from irrigation, promoting water-saving practices through increased awareness, improving irrigation efficiency with piped network systems, and enhancing efficiency in food production and agricultural yield. It is also among the goals that the achievements in water management will provide guidance for future generations.

The ‘86th Meeting of the Board of Governors of the World Water Council’ took place in Istanbul on 17 February 2024. The meeting brought together Minister of Agriculture and Forestry İbrahim Yumaklı, President of the World Water Council Loic Fauchon, and representatives



from different countries to discuss issues related to water sustainability in Türkiye and worldwide. During the meeting, a Memorandum of Understanding was signed with the World Water Council to promote water efficiency campaign.

Transboundary Waters

It is widely recognised that water has become a major concern on the global stage. The primary reasons for the increasing global attention to water include population growth, rapid urbanisation and industrialisation leading to higher water demands, increased agricultural water use to ensure food security, pollution of water resources, and the adverse effects of climate change. Therefore, the sustainable and efficient

use of water resources and the construction of infrastructure such as dams and irrigation systems considering environmental and social conditions are crucial for the sustainable development of countries.

Water, a matter of interest to many sectors, is among the “horizontal” components of the UN 2030 Sustainable Development Agenda. Goal 6 of the Sustainable Development Goals is concerned with ensuring availability and sustainable management of water and sanitation for all. Contrary to popular belief, Türkiye, located in a semi-arid climate zone, is not water-rich but is among the countries experiencing water stress. This situation necessitates the efficient use and integrated management of limited water resources. In arid and semi-arid regions where precipitation is generally limited to four or five months, the development of water resources projects, including dams, other storage systems, and irrigation networks, is essential for sustainable development. Türkiye’s investments in water infrastructure also benefit downstream neighbouring countries. Thanks to its dams, Türkiye leaves water for downstream countries, even during dry seasons. Given its significant investment and implementation capacity in water and its role as a key transboundary waters country, Türkiye hosted the 5th World Water Forum in March 2009, including a Summit and Ministerial Conference with limited participation, taking a leadership role internationally. This role continues to this day.

In the context of the global water agenda, the UN Water Conference held in New York in March 2023 and the 10th World Water Forum held in Bali, Indonesia, in May 2024 have been significant international events shaping global water policies. Water is set to take centre stage and will be discussed on numerous international platforms and in documents in the near future. In particular, competition over transboundary water resources in the Middle East, Africa, and Central Asia is leading to intensified diplomatic efforts.

In the context of recent significant national developments on transboundary waters, on December 25, 2023, the National Water Council Meeting was held where the relevant Ministry was tasked with leading the Transboundary Waters Policy and Hydro-political Development Subcommittee to evaluate transboundary river basins with an integrated approach in line with Türkiye’s circular economy and sustainable development goals in agriculture, environment, and energy policies. In the framework of bilateral cooperation on transboundary waters, a proposal was made to Iraq in 2023 to establish a “Joint Per-

manent Committee” (JPC) composed of relevant institutions to address water issues in an institutionalised manner, which was positively received by the Iraqi side. Accordingly, the first meeting of the JPC was held in Ankara on November 16-17, 2023, and the second meeting on July 1, 2024, in Baghdad.

On April 22, 2024, during a visit to Iraq, President Erdoğan signed the “Framework Agreement on Cooperation in the Field of Water.” Technical discussions to determine the steps for implementing the Agreement were held in Baghdad on July 11, 2024.

A delegation from the Ministry of Agriculture and Forestry visited Tehran on November 19-20, 2023, to discuss water issues. During this visit, it was decided to establish a “Technical Working Group on Water.” The first meeting of this Working Group was held in Ankara on February 28, 2024, with the next meeting scheduled to take place in Tehran.

Dialogue to reduce and prevent the impacts of floods in the Meriç Basin began with the establishment of the “Türkiye-Bulgaria Joint Commission” in 2009 between the foreign ministries of Türkiye and Bulgaria. Technical level discussions commenced under the “Joint Statement on Cooperation in the Field of Water Resources” signed on March 20, 2012, on the sidelines of the “Türkiye-Bulgaria High-Level Cooperation Council Prime Ministers’ Meeting” held in Ankara. Meetings of the “Water Experts Group” were regularly held for a while but were interrupted for about seven years after the 4th Water Experts Meeting in 2015. As a result of Türkiye’s initiatives, the 5th Water Experts Meeting was held in Sofia on May 30-31, 2022, and the 6th Water Experts Meeting in Edirne on November 29, 2022. Discussions with Bulgarian authorities on the date for the 7th Water Experts Meeting are ongoing.

Alignment with European Union Legislation

In Türkiye, the alignment of legislation used in monitoring and regulating drinking and potable waters with EU standards was addressed through the “Twinning Project for Strengthening the Ministry of Health to Harmonise and Implement Legislation in the Field of Water for Public Health Protection-TR 04-IB-EN-04 (2005-2008)” between 2005 and 2008. In 2013, the “Emergency Management and Risk Analysis in Drinking Water for the Protection of Public Health TR/09/IB/EN/04 EU short-term twinning Project (SEI- 2013)” was implemented to develop emergency management and risk analysis guidelines for drinking water.

Another significant effort was monitoring the quality of bathing waters. The “Alignment in Bathing Water Monitoring, European Union Twinning Project- TR/10/IB/EN/02 (2013-2015)” was carried out between 2013 and 2015 to align national legislation with EU regulations, leading to the enactment of the “Regulation on the Management of Bathing Water Quality” in 2019.

Resilient Cities

The Organisation for Economic Cooperation and Development (OECD) defines resilient cities as those that are ready for future economic, environmental, social, and institutional shocks, can absorb them, and emerge stronger. These cities promote sustainable development, prosperity, and inclusive growth. In other words, the notion of a resilient city refers to the capacity of cities to withstand natural disasters, environmental changes, and human-made catastrophes. This capacity is built on the strengths of the cities’ environmental, social, economic, and political systems, which enable them to cope with such crises.

From 2021 to 2023, the Ministry of Agriculture and Forestry carried out the “Project for Adaptation to Climate Change in Water Resources”, conducting cost-benefit analyses of activities related to rainwater harvesting and the use of greywater for 30 metropolitan provinces. The project also examined implementation challenges and raised awareness among local implementing units.

Under the “Water Efficiency Strategy Document and Action Plan (2023-2033) for Adaptation to Climate Change” which includes the “Water Efficiency Action Plan for All Sectors”, the following actions fall under Objective 3: Expanding the use of alternative (unconventional) water sources (rainwater, greywater, used water, seawater, brackish water, etc.):

- » Amending the Planned Areas Zoning Regulation to determine building criteria that make greywater use mandatory,
- » Arranging the assignment of storm water network construction and operation duties to water and sewerage administrations,
- » Introducing regulations to prioritize infrastructure works related to the use of rainwater and greywater in urban transformation areas, residential complexes, industrial zones, and during planning and permitting processes.

Xeriscaping

Xeriscaping is a landscape technique that aims for the most rational use of water in areas with arid climates and limited water resources by moving away from “aesthetic landscaping” concerns and “classical landscaping” approaches. It focuses on preserving and enhancing the ecosystem in harmony with nature. According to literature and practical examples, partial application of xeriscaping techniques in landscape areas can achieve water savings of 20% to 50%, while converting all lawn areas to xeriscaping can result in up to 80% water savings. Additionally, maintenance and energy costs can be reduced by half.

As part of the Environment Chapter that includes the “Water Quality Sector” which was opened for negotiation on December 21, 2009, studies were conducted to ensure the harmonization and implementation of the EU *acquis* and national legislation, and in this context, the Water Framework Directive (WFD), which forms the basis of water quality management, was prioritized.

The “Surface Water Quality Regulation (YSKY)” which came into force in 2012, established the principles and procedures for the management of water resources with an ecosystem-based holistic approach in line with the WFD requirements. The Regulation sets out the procedures and principles for determining and classifying the biological, chemical, physico-chemical and hydromorphological quality of surface waters, including coastal and transitional waters, monitoring water quality and quantity, determining the purposes of use of these waters by considering the balance of conservation and utilization in line with sustainable development goals, protection and measures to be taken to achieve good water status.

On the other hand, efforts have been made to strengthen the legislative infrastructure necessary for the protection and improvement of quality of water resources. The “Communiqué on Determination of Environmental Objectives for Surface Water Bodies” which was prepared to determine the environmental objectives for surface waters, came into effect in 2020. The Communiqué sets out the principles and procedures for determining the environmental objectives to be achieved for all surface water bodies, including coastal and transitional waters, to achieve good status. It also includes provisions for evaluating both ecological and chemical water quality statuses together and for determining the final water quality status.

As part of the harmonization of the Water Framework Directive with Turkish legislation, the “Regulation on the Monitoring of Surface and Ground Waters” was enacted in 2014, thus ensuring harmonization of legislation on monitoring. The purpose of this Regulation is to establish the procedures and principles for determining the current status of all surface waters and ground waters throughout the country in terms of quantity, quality and hydromorphological components, monitoring the waters with an approach based on ecosystem integrity, ensuring standardization in monitoring and coordination among monitoring institutions and organisations. This regulation covers issues related to the monitoring of inland surface waters, ground waters, transitional and natural mineral waters, including coastal waters at the points where water resources flow into the sea regardless of their intended use, excluding geothermal resources and sea waters, and excluding other coastal waters. The procedures and principles regarding sampling of surface and ground waters and sediments, transportation, preservation, and storage of samples, and sampling and preservation of biological quality elements in surface waters are set out in the “Communiqué on Sampling and Biological Sampling of Surface Waters, Ground Waters and Sediment” which entered into force in 2015.

The “Communiqué on Biological Monitoring” entered into force in 2019 in order to ensure standardization in biological monitoring studies by determining the procedures and principles regarding the monitoring of biological quality components in surface waters. In addition, the “Communiqué on Hydromorphological Monitoring” entered into force in 2023 in order to ensure standardization in hydromorphological monitoring studies by determining the procedures and principles regarding the monitoring of hydromorphological quality components in surface waters.

National Water Information System (NWIS)

The National Water Information System (NWIS), which was established as an important decision support system to establish holistic and sustainable water management in Türkiye, to guide national water policy and to share data on water resources within a single system, was put into use in 2017. NWIS, which includes a national water inventory to support decision-makers, serves as an important tool in shaping the country’s water management policies.

The main purpose of NWIS is to serve holistic water management by taking into account all components of water such as surface, ground and coastal water quality, water quantity, floods and flood risk/hazard maps, impact of climate change and drought, allocations, basin management plans, drinking water and pressure factors on water resources, etc.

With the National Water Information System;

- » an inventory of monitoring data on the quantity and quality of water resources is kept,
- » the status of water resources according to chemical and ecological quality parameters is determined,
- » the measures established to improve the current state of water resources are followed-up,
- » the quality of drinking water sources, efficiency of drinking water treatment plants and losses in drinking water network lines are monitored at the local government level,
- » the existing aquatic biodiversity of Türkiye is recorded,
- » potential water-related disaster (drought and flood) risks are assessed,
- » sectoral allocation and utilization of available water is monitored.

Development of the system continues in line with technological advancements and emerging needs.

Project for the Preparation of Monitoring Programs by Digitising Water Resources, Typology, Mass and Risk Studies

Within the scope of protection, improvement and sustainable use of Türkiye's water resources, studies for the generation of digital water resources data, which is one of the most basic needs in order to ensure effective and efficient water management, were carried out as part of the "Project for the Preparation of Monitoring Programs by Digitising Water Resources, Typology, Mass and Risk Studies" between 2017-2021.

The studies conducted under this Project across Türkiye were categorised into five main components. These are:

- » Creation of a highly precise water resource base,
- » Identification of water types,

- » Identification of water masses,
- » Conducting pressure-based risk analysis specific to water masses,
- » Preparation of Basin Monitoring Programs.

In the Project, more than 80 million data were processed and approximately two million changes/corrections were made within the scope of the production and updating of digital data in order to ensure the management of water resources in digital environment. “Türkiye Digital Water Resources Base” was created on a national scale including 10 unique data layers for 25 basins specific to water management needs.

With the project, an important need of institutions and organisations has been met by producing high-precision digital data, especially nationwide and for the first time. In addition, basic and value-added data were produced to be used in many works and processes such as master plans, especially “River Basin Management Plans” (RBMP), construction of water structures, irrigation control, flood control, environmental risk analysis, measures program, special provision studies, etc.

Project for the Establishment of Türkiye’s Water Resources Geographical Management System (Digitalization of Drinking-Utility Water Basins and Preparation of Türkiye Water Atlas)

For an effective and sustainable water management, the production/ updating of water and related digital data and the follow-up of the data obtained in the monitoring studies carried out in the basins are essential, and a systematic structure is needed for the management of these data.

The works of the “Project for the Establishment of Türkiye’s Water Resources Geographical Management System”, which was prepared to ensure the production and sustainability of geographical water resources digital data, will continue in 2024-2025.

As part of the project, it is aimed to update drinking-utilization water basin boundaries with advanced digitization methods, update and name sub-basin boundaries, and publish “Türkiye Water Atlas”.

Water Quality Modelling Studies

The project titled “River Basin Explorer (RBE)-SYMP (Water Management Modelling Platform): A Modelling Tool for River Basin Planning in Türkiye” was conducted in collaboration between the General Di-

rectorate of Water Management and the Dutch DELTARES Institute from 2014 to 2016. The project focused on developing a water resources model suitable for local conditions, involving infrastructure work and applying hydrology, water quality, and ecological models in the Büyük Menderes Basin.

The “Hydrological, Water Quality and Ecological Modelling Tools For Sustainable Management of Water Resources In Türkiye, HİDROTÜRK PHASE I” project, undertaken by the General Directorate of Water Management between 2016 and 2019, aimed to reduce reliance on foreign, licensed, and costly models, prevent external dependency, and ensure data security. This project led to the development of a domestic and national water resources modelling platform (HİDROTÜRK).

The project encompassed the development of flexible, integrated models for hydrology, hydrodynamics, hydrogeology, water quality, and ecology. In addition to these models, user-friendly tools such as the National Water Information System integration interface, Ecological Quality Ratios, and a Data Completion Tool for Missing Meteorological Data were also developed. The HİDROTÜRK model serves as a decision support system, compatible with the conditions in Türkiye and adhering to international standards, offering an open-source and interface-compatible solution applicable at the basin or water body scale.

Development and Sustainability of the HİDROTÜRK Model Project - HİDROTÜRK Phase II (2022-2025)

“Development and Sustainability of the HİDROTÜRK Model Project” encompasses efforts to enhance the technological infrastructure of the HİDROTÜRK national software, developed by the General Directorate of Water Management, and to develop new modules for integration into the model. In this context, a Hydrology and Water Quality Model capable of operating with a monthly time step is planned to be developed and integrated into the HİDROTÜRK model for situations requiring rapid decision-making in water resource management. Additionally, it is planned to develop and integrate a Water Management and Allocation Model into the HİDROTÜRK model, which will facilitate optimal water distribution among water users within the basin.

Assessment of Drinking Water Resources and Treatment Plants in Türkiye

The “Assessment of Drinking Water Resources and Treatment Plants in Türkiye” project, conducted under the European Union IPA Programme between 2015 and 2017, evaluated the institutional and legal aspects of the drinking water sector. It involved visits to all surface drinking water resources and treatment facilities across Türkiye to assess the condition of existing facilities. The quality of raw and treated water (41 conventional, five biological, and 89 micro-contaminant parameters) was analysed to determine whether plant upgrades were needed. Preliminary projects for capacity enhancement, modernisation, and energy efficiency were prepared for six selected plants.

River Basin Management Plans (RBMPs)

Currently, River Basin Management Plans in Türkiye have been completed for 12 basins (Büyük Menderes, Susurluk, Konya, Meriç-Ergene, Gediz, Küçük Menderes, North Aegean, Burdur, Yeşilırmak, Western Mediterranean, Sakarya, and Akarçay). The “Water Quality Monitoring in Seyhan Basin and Preparation of River Basin Management Plan” project commenced in December 2023 and is scheduled for completion by June 2026. Additionally, work on RBMPs for six basins (Marmara, Eastern Mediterranean, Western Black Sea, Eastern Black Sea, Kızılırmak, and Antalya) started in September 2021 under the EU Technical Assistance Project and is expected to be completed in 2025.

Sectoral Water Allocation Plan

The Ministry of Agriculture and Forestry is preparing Sectoral Water Allocation Plans (SWAPs) to ensure sustainable water management at the basin scale and plan water usage for all sectors (environment, drinking and domestic use, agriculture, industry, energy, mining, fishing, and aquaculture) in the basin for future activities.

At the basin and sub-basin scale, both surface and groundwater budgets are calculated. To address the risks of drought potentially caused by climate change, five different drought conditions (normal, mild drought, moderate drought, severe drought, and very severe drought) are considered. Water allocation scenarios are prepared according to the water needs of various sectors within the basin—such as the environment, drinking water, agriculture, industry, livestock, and tourism—for future periods (1st, 6th, 12th, and 18th years). Water allocation planning is conducted based on these scenarios.

As the sector with the highest water consumption, agriculture's water demand is expected to be met at lower rates, particularly under drought conditions. Therefore, it is essential for the agricultural sector to use water more efficiently and sustainably. To achieve this, the Sectoral Water Allocation Plans (SWAPs) include studies on optimal crop patterns that enable farmers to generate more income with less water usage. Additionally, the irrigation water needs for irrigation groups within the basin are calculated.

To address drought forecasts, Action Plans are prepared alongside SWAPs to implement preventive measures and monitor allocation quantities in coordination with relevant institutions and organisations.

SWAP efforts began in 2015, with plans completed for 11 basins (Seyhan, Akarçay, Konya, Gediz, Küçük Menderes, Burdur, Büyük Menderes, North Aegean, Western Mediterranean, Aras, and Çoruh).

As of 2024, planning activities are ongoing for nine basins (Antalya, Eastern Mediterranean, Marmara, Western Black Sea, Kızılırmak, Eastern Black Sea, Sakarya, Susurluk, and Meriç-Ergene).

Additionally, as part of Türkiye's Green Deal Action Plan "2.4.2. Türkiye's Water Footprints," the calculation of blue, green, and grey water footprints at the basin and sub-basin scales for the Büyük Menderes, North Aegean, and Western Mediterranean basins has been completed. This work was carried out within the scope of the preparation of Sectoral Water Allocation Plans (SWAPs).

By 2028, the goal is to complete SWAP activities for all basins.

Waste Management

Waste management can be defined as a management approach involving the reduction of waste at the source, segregation according to its nature, collection, temporary storage, intermediate storage, recycling, transportation, disposal, and monitoring after disposal.



In combating climate change, waste management, a cornerstone of circular economy policies alongside decarbonisation targets, plays a crucial role. Within the framework of Türkiye's National Contribution Statement, goals include preventing waste generation and reducing the amount of generated waste in accordance with circular economy principles; increasing the urban waste recovery rate to 60% by 2035; enhancing methane recovery from biodegradable waste; reducing the percentage of waste deposited in landfills without pre-treatment to achieve zero urban waste disposal by 2053; increasing the production of Refused Derived Fuel (RDF) from urban waste; converting wastewater treatment plants to bio-refinery facilities; and expanding the re-use rate and applications of treated wastewater.

Moreover, Türkiye has initiated efforts to establish, implement, and expand a zero-waste management system and to revise the National Waste Management and Action Plan (UAYP) (2016-2023). The preparation of the National Waste Management Plan (2023-2035) is underway.

In the National Waste Management and Action Plan (UAYP), the objective is to address the current status data to identify areas in need of improvement or development in waste management and to establish population and waste projections necessary for the 2035 plan, thereby creating periodic waste management models. The plan aims to determine sustainable waste management strategies across the country by analysing the current situation of waste management in 81 provinces by examining waste by type, ensuring separate collection at the source, facilitating recycling, exploring various recovery methods, and identifying disposal methods.

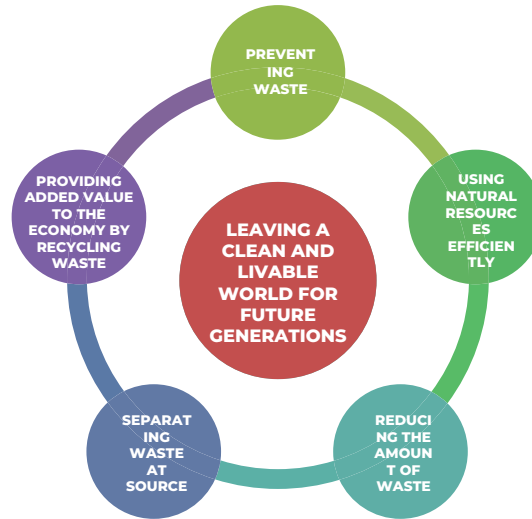
As part of the National Waste Management and Action Plan (2023-2035), waste composition studies have been conducted at the provincial level, leading to the determination of average composition values. Municipal waste consists of approximately 50% biodegradable waste and about 25% recyclable waste. In 2022, 30.13% of municipal waste was recovered at waste processing facilities (biomethanisation, composting, incineration, and recycling facilities). Additionally, in line with the Draft EU Waste Shipment Regulation, a Waste Shipment Working Group has been established under the coordination of the Ministry of Trade to assess the compliance of waste and scrap import and management regulations and recycling facility conditions with EU legislation and other international best practice techniques. The working group aims to enhance Türkiye's capacity to collect recyclable waste within the country, ensure that waste processing facilities operate according to the best available techniques, and prepare a roadmap to ensure supply security in light of the increasing raw material demand due to the development of a circular economy. Work on this roadmap is ongoing.

Furthermore, to determine the criteria for accessing high-quality waste as a raw material, the Project titled "Technical Assistance for Development of End-of-Waste Concept in Türkiye" was launched on April 25, 2023, under the IPA II Period. The project aims to establish and effectively implement end-of-waste criteria for specific waste types in Türkiye and enhance technical and institutional capacity.

Zero Waste

"Zero Waste" is defined as a goal that encompasses preventing waste, using resources more efficiently, reducing waste generation, establishing effective collection systems, and recycling waste. Ineffective disposal of waste within the recycling and recovery process leads to significant material and energy resource losses. In recent years, zero-waste initiatives have been gaining traction globally at individual, institutional, and municipal levels.

Under the leadership of Emine Erdoğan, the wife of President Recep Tayyip Erdoğan, the "Zero Waste" project was initiated in 2017. In December 2022, Türkiye presented this initiative at the 77th UN General Assembly, co-hosted by 105 countries, bringing it to an international stage. Following the adoption of the UN resolution on Zero Waste, an advisory board was established to operate for three years to promote local and national zero waste initiatives, and March 30 was designated as "International Day of Zero Waste" to be celebrated annually.



On March 30, 2023, the “International Day of Zero Waste” was observed with a high-level meeting at the UN General Assembly, where UN Secretary-General António Guterres announced the establishment of the Advisory Board of Eminent Persons on Zero Waste under the leadership of Emine Erdoğan. The first meeting of the Advisory Board on Zero Waste took place in Istanbul on November 1, 2023, chaired by Emine Erdoğan, and the second meeting was held online on June 5, “World Environment Day.”

In 2023 and 2024, the events organised in collaboration with Türkiye’s embassies/permanent missions and the accredited UN agencies were highly successful in terms of content, representation level, and number of participants for the celebration of March 30, International Day of Zero Waste. Emine Erdoğan’s pioneering and leadership role in zero waste was highlighted, and Türkiye’s efforts in this domain received widespread recognition and praise.

On the other hand, the “Global Commitment to Zero Waste,” which was first signed by First Lady Emine Erdoğan and UN Secretary-General António Guterres in September 2022 to raise awareness on zero waste practices, was made available for further signatures during the Zero Waste side event organised by First Lady Emine Erdoğan at the margins of the 78th Session of the UN General Assembly. The first person who signed the document was President Recep Tayyip Erdoğan. The Global Commitment to Zero Waste received support from thousands of people, including the spouses of heads of state and government from over 30 countries.

Various projects have been developed in collaboration with different centres to enhance the efficiency of waste management and recycling. The Second Meeting of the UN Advisory Board of Eminent Persons on

Zero Waste, chaired by First Lady Emine Erdoğan processes in Türkiye. Examples include:



-Energy Efficiency Project with Aeration Tank Revision at İnegöl OIZ WWTP

In the wastewater treatment plant (WWTP) with a capacity of 130,000 m³/day in İnegöl Organised Industrial Zone (OIZ), both domestic wastewater of the district and industrial wastewater of the workplaces in the OIZ are treated together. The project aims to reduce energy costs without compromising treatment performance. Revisions to the aeration tanks at the WWTP in İnegöl OIZ have resulted in approximately 32% energy savings. In addition, the efficiency of the biological treatment process has increased by providing an effective aeration efficiency, and the quality of the treated wastewater discharged to the receiving environment has improved.

-Debris Waste Separation Efforts

Following the earthquakes that occurred in February 2023, around 200 million tonnes of debris waste was generated. To minimise environmental damage and contribute to the circular economy, efforts have been made to transform this waste into high-value products such as cement and concrete at pilot sites in the TR63 Region. In collaboration with Hacettepe University, feasibility reports have been prepared, including analyses on the utilisation of debris wastes and calculations for the establishment of a sorting/recycling facility. Within the scope of this report, it is planned to enhance the functionality of the two ex-

isting UNDP-supported facilities in the region and to establish new facilities. It also aims to develop support mechanisms for the private sector in order to expand these facilities in the future. In addition, debris from the sorting facility in Hatay's Altınözü district, established by the UNDP, was used by a cement manufacturer to produce cement at a 10-15% ratio, marking the first time in Türkiye that cement was made from debris waste.

-Recovery Test and Research Centre (GETAM) Project

A Recovery Test and Research Centre (GETAM) has been established within Yıldız Technical University to enhance the efficiency of waste management and recycling processes in Türkiye. This has enabled the establishment of infrastructure for the testing and research of waste recoverability, which was previously unavailable in Türkiye.

-Project for Making the Waste Management System Citizen-Centric, Innovative, and Sustainable through Smart Technologies

In order to minimise carbon emissions by enhancing the waste management system in Pendik through digital technologies and increasing recycling, as well as to contribute to the transformation of Istanbul through innovative solutions, an infrastructure of smart waste bins was established and a model supported by mobile applications was developed.

-Innovative Membrane Module Production for Water and Wastewater Treatment Project

As part of the project, two shared-use laboratories were established for membrane production for wastewater treatment, resulting in the publication of national and international papers, patent applications, and the development of moulds for commercial products. Local membrane modules were developed and tested at a pilot plant operated by Istanbul Water and Sewerage Administration.

-Membrane Materials and Technologies Application and Research Centre Project

This project aims to treat and recover domestic and industrial wastewater using membrane technologies. In this way, it aims to contribute to the national economy by developing high-value-added products, reduce foreign dependency by establishing domestic membrane production facilities, and increase the labour force and technological ca-

capacity in water treatment.

-Green Transformation and Blue Opportunities Perspective Document

The Green Transformation and Blue Opportunities Perspective has been prepared to guide Izmir's development in line with its green and blue growth approaches and to support this transition. The perspective has determined the extent of current risks, the methods by which these risks can be mitigated as Izmir transitions to green and blue growth, the economic, environmental, and social advantages that will arise from a variety of intervention scenarios, the opportunities associated with sustainable technologies and industries, and the benefits that these opportunities provide.

The Green Transformation and Blue Opportunities Perspective has been prepared with a unique methodology, going beyond a classical strategy document to offer a horizon for decision-makers and stakeholders regarding the transformation process, serving as a guiding work.

The Perspective has a three-layered architecture: macro dimension, sectoral dimension, and intervention/action dimension. In this ten-year strategically designed effort, priority sectors and spatial focuses in three areas—waste, water, and energy—have been identified. Transformation interventions for achieving green and blue transformation have been determined, and the benefits and costs that will arise from the realisation of these interventions have been calculated.

-Thematic Regional Development Programmes

As part of the Attraction Centres Support Programme, which is one of the thematic regional development programmes, three projects were supported to ensure green water and waste management in organised industrial zones. Information about the projects is as follows:

1. Malatya 1st OIZ WWTP Efficiency and Capacity Improvement Project

Integrated textile investments necessitating intensive treatment, such as dyeing facilities, were unable to be allocated space prior to the project due to the insufficient capacity of the current treatment plant in Malatya's 1st Organised Industrial Zone. With the expansion of the plant's capacity as part of the project, space has been allocated to investors facing treatment facility-related problems, thereby contribut-

ing directly to production, exports, and employment. With the project, the plant's capacity was increased by 67%.

2. Şinik OIZ Drinking Water Treatment, Biological Wastewater Treatment, and Water Transmission Line Project

This project includes the installation of a 350 m³/day capacity Package Treatment System for drinking water and biological wastewater treatment infrastructure, along with the construction of a water transmission line.

3. Beşikdüzü OIZ Drinking Water Treatment and Biological Wastewater Treatment Project

This project involves the installation of a 350 m³/day capacity Package Treatment System for drinking water and biological wastewater treatment infrastructure.

Green Agriculture and Livestock

Türkiye has exerted significant efforts in the field of green agriculture and livestock to increase sustainability and promote environmentally friendly practices in agriculture and livestock. In this context, various projects and supports are provided for issues such as promoting organic farming, enhancing water and energy efficiency, and adopting environmentally friendly production methods. These nationwide efforts contribute to both improving the quality of agricultural production and preserving ecosystems.

The Ministry of Agriculture and Forestry, which has assumed broad responsibilities in the fields of agriculture, water, and forestry, has developed long-term policies with a corporate responsibility approach to ensure the protection of biodiversity, sustainability in soil and water resources, increased efficiency in agricultural production, food security and safety, introduction of innovative products and informatics practices, and expansion of branding and market share.

The rapidly changing conditions affecting agricultural production worldwide have made it necessary to develop a vision for agriculture and livestock suitable for the Century of Türkiye. This vision has been determined considering factors such as climate change, population growth, migration movements, geopolitical risks, natural disasters,

epidemics, food safety, reduction and pollution of soil and water resources, global food supply security, food nationalism, protectionist trends in food trade, and instability in agricultural input prices. Accordingly, the mission of the Ministry of Agriculture and Forestry in its 2024-2028 Strategic Plan is to “Determine and implement policies to ensure efficient and sustainable agricultural production, access to sufficient and safe food, and rural development by protecting agriculture, forestry, water resources and natural ecosystems”; its vision is “A sustainable and secure future in agriculture, forestry, and water resources in the Century of Türkiye.”

The Expert Working Group on Sustainable Agriculture within the Ministry of Agriculture and Forestry carries out various activities to implement the principle of sustainability in the agricultural sector. Among the Group's primary tasks are ensuring the effective and efficient use of natural resources in agricultural production, promoting environmentally friendly agricultural practices, and guiding farmers on these issues. Additionally, the Working Group is responsible for developing strategic plans in critical areas such as climate change, the protection of water resources, soil health, and biodiversity sustainability, as well as coordinating the implementation of these plans. The Group's activities also include providing policy recommendations for the widespread adoption of sustainable agricultural practices and maintaining environmentally conscious agricultural production in the long term.

Regulatory Developments Related to Environmental Issues in Türkiye

- » Drought, considered one of the most significant consequences of climate change, was experienced in Türkiye in 2007. Consequently, the Decision of the Council of Ministers No. 2007/12477 was issued in 2007. In this framework, the Agricultural Drought Fighting Strategy and Action Plan covering the period 2008-2012 was prepared and put into effect.
- » Due to the restructuring of the Ministry of Agriculture and Forestry and changes in the affiliated institutions and organisations, as well as the abolition of some of them, the Decision of the Council of Ministers No. 2012/3191 was issued in 2012 and published in the Official Gazette on 06/06/2012. In this context, the Türkiye Agricultural Drought Fighting Strategy and Action Plan for the periods of 2013-2017 and 2018-2022 were prepared and published.

- » With the transition to the Presidential System of Government in 2018, Presidential Decree No. 2022/5140 was issued on 02/02/2022 and published in the Official Gazette. Under the Decree, the Türkiye Agricultural Drought Fighting Strategy and Action Plan for the period of 2023-2027 was prepared and put into effect.
- » The “Ecosystem-Based Adaptation Strategy Document for Anatolian Steppe Ecosystems” was published and enacted with Presidential Circular No. 2022/8 on 07/06/2022 in the Official Gazette No. 31859.
- » The “Regulation on the Protection of Waters Against Agricultural Nitrate Pollution,” corresponding to the EU Nitrates Directive, was first published on 18/02/2004 to regulate the procedures and principles for detecting, reducing, and preventing pollution caused by agricultural nitrates in waters. The regulation was revised and re-published on 23/07/2016 in the Official Gazette No. 29779.
- » The Code of Good Agricultural Practice for the Protection of Waters from Nitrate Pollution of Agricultural Origin (Communiqué No: 2016/46) was published on February 11, 2017.
- » In 2017, the “Regulation on Water Audit and Water Losses Control in Irrigation Systems” was published to ensure the efficient use of irrigation water, water saving, reduction of losses, prevention of unauthorized use of water, and reduction of costs related to water supply, distribution, and use.
- » The Regulation Amending the Regulation on Water Audit and Water Losses Control in Irrigation Systems was put into effect in 2014. The purpose of the regulation is to set procedures and principles for auditing water losses in drinking and domestic water supply and distribution systems to ensure the protection of water resources and increase efficiency.
- » The Ministerial Circular on the Launch of the Biodiversity Research Permits Information System and Database (2016/6) was prepared to contribute to Türkiye’s scientific progress by expanding electronic government services, reducing bureaucracy and paper-work, facilitating and organising scientific research on biological diversity, and storing results in a manner that benefits the public.
- » The “Regulation on the Procedures and Principles for Capturing Scorpion Species from Nature” (2020/06) was published in the Of-

Official Gazette No. 31152 on June 11, 2020, to ensure the protection of biodiversity and establish a sustainable conservation-use balance with the increasing use of products obtained from scorpion species in the healthcare sector.

Strategy Documents and Action Plans

Türkiye's Strategy for Combating Agricultural Drought and Action Plan

The Ministry of Agriculture and Forestry is in charge of coordinating efforts regarding the agricultural drought. For this purpose, the Ministry has been preparing and implementing Türkiye's Strategy for Combating Agricultural Drought and Action Plan for the periods 2008-2012, 2013-2017, 2018-2022, and 2023-2027 under the relevant Decree of the Council of Ministers since 2007.

This action plan aims to engage stakeholders in the process by enhancing public awareness of agricultural drought; take all of the necessary measures for the future in drought-free periods with environmentally sustainable agricultural water use planning; and implement an effective mitigation plan in times of crisis to minimise the effects of drought.

Ecosystem-Based Adaptation Strategy to Climate Change for Anatolian Steppe Ecosystems

"Ecosystem-Based Adaptation Strategy Document to Climate Change for Anatolian Steppe Ecosystems" went into effect with the promulgation of Presidential Circular No. 2022/8 in the Official Gazette No. 31859 dated June 7, 2022.

The Strategy Document introduces an integrated approach to climate change through integrated management of agriculture, pastures, wetlands, and forest areas in agricultural production. The Ministry of Agriculture and Forestry aims to systematically disseminate this approach in Anatolian steppes with the Strategy Document.

Basin-Based Production and Support Model

The production of agricultural products in sufficient, high quality and at affordable costs is possible through systems and practices that will improve the protection of agricultural land, farmers, the environment, and natural agricultural resources.

The following criteria are taken into consideration in the planning of agricultural activities:

- » Profitability (economic sustainability),
- » Broad-based benefit for society (social sustainability),
- » A positive or neutral impact on the natural environment (environmental sustainability),

Land structure, climate conditions, and soil structure are the main factors affecting vegetation in a given area in crop production activities.

The soils of Türkiye are characterised by a high degree of diversity, which is a result of the country's diverse landforms, bedrock, climate, and vegetation, and it is of great importance to protect the country's soils.

Global warming-related climate change has a negative impact on natural resources. Climate change threatens water and soil resources. Ensuring the sustainable use of these indispensable natural resources for agriculture is essential for the continuity of agriculture and food security for the growing population.

Türkiye aims to direct strategic agricultural production with basin-based planning, increase crop production, boost yield and quality, decrease costs, ensure sustainability and develop alternative eco-friendly agricultural practices, increase income levels of the producers, diversify economic activities in rural areas, make forward-looking projections, supply quality raw materials for industry, and increase the international competitiveness of products.

For these purposes, the Agricultural Basins Project has been implemented since 2009. Basin-Based Production and Support Model implemented under the Agricultural Basins Project, undertaken by the Ministry of Agriculture and Forests, identified ecologically similar agricultural basins of manageable size, suitable for the administrative structure of the country, where agricultural products can be grown in the most ecologically and economically appropriate way by using more than 1 billion data on climate, soil, topography, and land classification. In this context, the Decree of the Council of Ministers on the Determination of Agricultural Basins of Türkiye (Decree No. 2009/15173) was published in the Official Gazette No. 27297 dated July 23, 2009.

The Basin-Based Support Model aims at implementing rational, directive, and effective crop production supports; ensuring supply-demand balance in products; protecting soil and water resources to ensure their sustainable utilisation; meeting the needed strategic and supply deficit of agricultural products primarily from the country's resource-

es; producing agricultural products efficiently and with high quality in ecologically and economically suitable areas; and increasing agricultural output. In line with these objectives, crops have been included in the scope of support in regions that are most ecologically and economically suitable for production.

Enabling Agricultural Lands for Utilisation Project

The agricultural sector has a significant impact on the health and development of societies. Food and agriculture will carry more critical importance for the world in the future than today. Expanding agricultural land to accommodate expanding demands is impossible. Therefore, it is imperative to increase produce yields per unit of area, optimise the use of agricultural land, cultivate climate-compatible crops, and ensure the sustainable use of natural resources.

For this purpose, the Enabling Agricultural Lands for Utilisation Project (TAKE) has been implemented in 81 provinces, primarily to increase crop production on uncultivated and fallow land and areas that are not suitable for cultivated agriculture since 2021.

The TAKE Project ensures that the lands that are uncultivated, fallow or unsuitable for cultivated agriculture are primarily used in the production of strategic products by implementing appropriate alternation plans and planting methods, and that the production of grain legumes and oily seed crops is improved with appropriate varieties by taking climate change into account.

With consideration to the supply deficiency in Türkiye, these projects prioritise the protection of the soil structure, reduction of greenhouse gas emissions, and expansion of legume production, which are effective in reducing the use of synthetic fertilisers and water and have an important place in meeting protein needs in both human and animal nutrition, reducing the use of chemical fertilisers in agricultural production, as well as in crop rotation practices and in fallow areas. The utilisation of microbial fertilisers and suitable irrigation systems is promoted in the relevant projects, and producers are advised to adopt a more conscious approach to production.

In order to reduce costs, ensure the efficient use of water resources, and reduce methane gas emissions, projects are being implemented to expand the drip irrigation system in paddy agriculture, which consumes a significant amount of water.



PRODUCTION AREAS IMPLEMENTED IN KARS AS PART OF THE TAKE PROJECT

Plant Nutrition

For the first time since the 2019 production season, solid organic and organo-mineral fertiliser aid has been provided to farmers using microbial, organic, and organo-mineral fertilisers in addition to the existing fertiliser aid in order to increase the use of microbial, organic, and organo-mineral fertilisers, sustain soil fertility, and reduce the use of chemicals in fertilisers under the European Green Deal. The aforementioned fertiliser aid has increased year-over-year.

As a result, the use of organic and organo-mineral fertilisers in Türkiye increased from 232 thousand tonnes in 2019 to 388 thousand tonnes in 2020, 666 thousand tonnes in 2021, 565 thousand tonnes in 2022, and 433 thousand tonnes in 2023, with an 86% increase in the use of this fertiliser between 2019 and 2023.

In the 2024-2028 Strategic Plan of the Ministry of Agriculture and Forestry, one of the performance indicators of the Target Card prepared with the aim of “Creating an Innovative, Flexible, and Diversified Agricultural Sector Open to Development” is to increase the amount of organic and organo-mineral fertiliser use to 1 million tonnes in 2028.

Agricultural Production in Penal Institutions

With the goal of increasing forest areas, preventing erosion, and fostering a greener environment in Türkiye, afforestation, fruit and aromatic plant cultivation activities are carried out on vacant lands belonging to workshop directorates of penal institutions for the green transformation and value attribution of empty land areas in cities. The total agricultural area of the penal institutions is 40,859,371 m². The arable

agricultural area is 22,724,173 m². Fruit, vegetable, fodder crops, energy crops, and grain cultivation and production activities are undertaken in these fields within the scope of agricultural activities.

- » As part of the afforestation activities by various penal workshop directorates across the country, 99,474 fruit trees were planted in an area of 2,485 decares.
- » As of the 2018-2019 production season, the use of local seeds has been encouraged in open penal institution's workshop directorates engaged in agricultural production, and a total area of 2,890 decares has been seeded. The use of local seeds contributed to the development of national agriculture and economy.
- » Thyme, lavender, medicinal daffodil, mint, echinacea, lemon balm, rose of Isparta, black cumin, and cumin were planted by workshop directorates in various provinces for the cultivation of medicinal and aromatic plants.
- » A good agricultural practices certificate was obtained from a company authorised by the Ministry of Agriculture and Forestry to carry out good agricultural practices in rose and lavender production as part of ecological production. Therefore, the good agricultural practices certification ensured that the pesticides and fertilisers to be used throughout production are inspected, analysed, and certified every year.
- » Greenhouses are structural units with controlled environmental conditions that allow plants to grow, and plant production takes place in 177 decares of greenhouse facilities of the workshop directorates of penal institutions across the country.

PRODUCTION AREAS IMPLEMENTED IN KARS AS PART OF THE TAKE PROJECT



AGRICULTURE ACTIVITIES USING LOCAL SEEDS, ISPARTA



Organic Agriculture and Good Agricultural Practices

Organic agriculture and good agriculture are agricultural production practices that are environmentally friendly, harmless to human and animal health, aim to protect natural resources and sustainability, are extremely important for ensuring traceability and reliable product supply, and are regulated and certified at every stage from production to consumption.

Producers receive field-based support and are encouraged through national and international projects for the development and dissemination of organic agriculture and good agricultural practices.

The General Directorate of Plant Production has been implementing the Promotion and Regulation of Organic Agriculture Project since 2009 and the Promotion and Regulation of Good Agricultural Practices Project since 2012 as part of the Investment Programme. Both projects contribute significantly to the promotion and development of organic agriculture and good agricultural practices, the protection of nature and biodiversity, the continuity, sustainability and safety of agricultural production, as well as the development of the sector related to sustainable agricultural practices.

When the project was first implemented in 2012, the organic agriculture project began to be implemented in 26 provinces, and the good agricultural practices project was implemented in 12 provinces. In 2024, the activities of these projects persist in 59 provinces for organic agriculture and 58 provinces for good agricultural practices. Based on the experiences of these provinces, the objective is to increase the number of provinces participating in the projects each year.

The “Ensuring Integrity and Establishment of Competitive Value Chains by Strengthening the Organic Agriculture System within the Scope of the Green Deal” project, which was prepared under the EU Instrument for Pre-Accession Assistance III phase (IPA III) for the European Green Deal and submitted to the EU Commission by the Directorate General for Crop Production and adopted, will be implemented between 2025-2028. The project aims to ensure sustainable organic agriculture development in Türkiye through activities and legislative efforts that align with the “From Farm to Fork” strategy. Sustainability in agriculture and a decrease in environmental pollution (soil, water, air) through the promotion and development of environmentally and ecosystem-friendly organic agriculture practices in all regions of Türkiye are aimed.

In addition, the “Integrating Good Agricultural Practices To Ameliorate Agricultural Ecosystems In Earthquake Affected Region In Türkiye” project, which was prepared and adopted by the General Directorate of Plant Production within the scope of the Global Environment Facility (GEF), will be implemented in the earthquake-affected region between 2025 and 2028. The project will contribute to ameliorating and protecting the agricultural ecosystem in the earthquake zone by implementing restorative and protective technical practices within the framework of good agricultural practices that are environmentally friendly, harmless to human or animal health, and conserve natural resources. The project also seeks to mitigate the pollution risk associated with excessive use of inputs, safeguard natural resources in agricultural production, and ensure the sustainability of agricultural production by implementing enhancements within the framework of good agricultural practices.

Through these incentives and supports in Türkiye, the number of organic products increased to 259 in 2023 from 150 in 2002, the number of organic agriculture farmers rose to 42,189 from 12,428, the total organic agriculture production area expanded to 342,548 hectares from 89,827 hectares, and the number of products from organic agriculture grew to 1,635,523 tonnes from 310,125 tonnes. Good agricultural practices, which were carried out in 2007 in 18 provinces with 651 producers on an area of 53,607 hectares, reached 3,726,514 hectares with 8,045 producers in 70 provinces in 2023.

Use of Renewable Energy in Agriculture

Within the scope of the target to increase the use of renewable energy in agriculture, activities in the Kadikoy neighbourhood of Efeler district of Aydın province, Sarayköy district of Denizli province, Dikili district of İzmir province, Diyadin district of Ağrı province, Simav district of Kütahya province, Kozaklı district of Nevşehir province agriculture-specialised (geothermal greenhouse) organised industrial zones are ongoing in order to make use of existing geothermal resources in agriculture-specialised (geothermal greenhouse) organised industrial zones.

Greenhouses and production facilities powered by renewable energy are also supported. In this context, 20 applications were filed in 2022, and contracts were signed.

Between 2021 and 2022, a total of 27 million 600 thousand TL was granted to 43 projects. This included 15 million 700 thousand TL for 14

greenhouses that used renewable energy and 11 million 900 thousand TL for 29 renewable energy production facilities.

Waste Management in Agricultural Production

Within the goal of improving waste and residue management in agricultural production, it is aimed to utilise directly, compost (chicken manure, peanut wastes, etc.) and produce biocoal from various plant and animal waste and residue as part of exploring the possibilities of using waste by returning them to soil (olive wastewater, liquid fermented waste of biogas facilities, etc.) action. For these purposes, 12 projects are being implemented in Ankara, Tekirdağ, Konya, Antalya, Giresun, Osmaniye, Tokat, and Samsun.

Additionally, 4 projects are being carried out in İzmir, Kırklareli, and Ankara provinces in order to re-purpose the wastes of agricultural production, such as olive wastewater and liquid fermented products of biogas facilities that cause environmental problems when discharged directly by recycling them back to the soil.

Within the framework of re-purposing agricultural wastes and residues for energy production, a total of 7 research projects, three in Samsun, two in Tekirdağ, and one each in Eskişehir and İzmir, are being carried out on re-purposing biofuels and agriculture waste obtained from agricultural production through energy production and utilisation of biogas wastes. Three pellet projects in Samsun have been included in the programme and began its activities in 2022. Research is being conducted on the possibilities of using bioactive substances isolated from agricultural waste in pharmaceuticals, food supplements, textiles, and the chemical industry. In this context, six R&D projects are still in progress and nine have been completed.

Aquaculture

The Ministry of Agriculture and Forestry supports aquaponics, in which aquaculture and fish and vegetable cultivation are carried out together with aquaculture with a closed-circuit system based on the principles of reusing the water in aquaculture in ponds through processing without being discharged and producing more with less water.

Türkiye's endemic and endangered species with high economic value are produced in hatcheries and released into the seas and inland waters through the "Fish Restocking in Water Resources Project," which is being carried out within the scope of the development and manage-

ment of aquaculture resources with consideration to the balance of protection and utilisation. This project aims to meet the quality and healthy food needs of the public, use aquaculture resources sustainably, support commercial and amateur fisheries by increasing aquaculture stocks, partially eliminate the negative effects on aquaculture stocks caused by habitat changes caused by climate change, dams, HEPPs, and regulators built on rivers, and increase the stocks of aquaculture products in water resources for improving both the supply and the income of fishermen in the region.

Additionally, the “Ghost Net Project,” which aims to protect aquatic biodiversity, contributed to removing 2 million m² of abandoned nets and 60,500 fishing gear, such as baskets/beam trawls, etc., from the sea and inland waters by scanning 375 million m² of water surface throughout the country. Some of these materials were recycled to be used for other purposes. It is estimated that these efforts have prevented approximately 6.6 million aquatic organisms from meeting their inevitable demise.

Türkiye Climate Smart and Competitive Agricultural Growth Project (TUCSAP)

Türkiye Climate Smart and Competitive Agricultural Growth Project (TUCSAP), which was inaugurated on June 20, 2023, and funded by the World Bank, aims to increase the capacity for sustainable and competitive agricultural growth and promote the use of climate-smart approaches in the agricultural sector in Türkiye.

The project will contribute to the transition of the agricultural food sector to more sustainable, competitive, and climate-smart growth by supporting the generation and dissemination of knowledge for sustainable soil and land use planning and management, agricultural data collection and analysis, animal health, farmers and agricultural businesses to implement and use smart agriculture and climate-smart technologies, and capacity building in these areas. Project investments are expected to drive agricultural productivity and competitiveness while also contributing to resilience and sustainability.

The project has four components: Investment, Project Management, Monitoring and Evaluation regarding the Strengthening of Agricultural Data Infrastructure, Expansion of the Capacity of Animal Health Institutes, Resource Efficiency, and Climate Resilience. Detailed doc-

uments and visuals of the project are available on the following web address. (<https://tucsap.tarimorman.gov.tr/>)



TÜRKİYE CLIMATE SMART AND COMPETITIVE AGRICULTURAL GROWTH PROJECT (TUCSAP) LAUNCH EVENT

ECO-RCCFS, the Regional Agricultural Research and Food Security Network (RCCFS) of the Economic Cooperation Organisation (ECO)

This network seeks to strengthen cooperation among ECO Member States in agricultural research, food security, and sustainable agriculture.

The organisation's environmental activities include projects and research that promote environmental sustainability in agriculture. In this context, significant efforts are being made in fields such as combating climate change, protecting soil and water resources, and managing biodiversity. ECO-RCCFS aims to contribute to the member countries' environmental sustainability goals by strengthening regional cooperation on these issues. Detailed documents and visuals can be accessed from the following web address.

Preserve Your Food, Protect Your Table Project

Food loss and waste (FLW) is a major global issue that wastes valuable resources and exacerbates the climate crisis by emitting greenhouse gases. FLW also deepens global problems such as poverty and hunger. Therefore, reducing FLW is vital for creating a more sustainable and equitable agriculture-food system. This will enhance food security, strengthen food chains, and reduce the environmental impact of food systems.

Reducing Food Loss and Food Waste Statistics:

- » According to projections, the world's population will exceed 9.7 billion by 2050, and food demand will increase by nearly 60%.
- » Approximately 735 million people were at risk of starvation in 2022.
- » Around 30% of the food produced worldwide is lost or wasted every year.
- » More than 20% of all food produced in Türkiye is lost or wasted every year. This amounts to almost 19 million tonnes of food.
- » "Reduction of Food Loss and Waste in Central Asia, Azerbaijan, and Türkiye" is a regional project under the FAO-Türkiye Partnership Programmes from November 2019 to April 2023. This project, funded by the Government of the Republic of Türkiye, contributed to the development of measures to reduce food loss and waste (FLW) in Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan, and Uzbekistan.

Reducing Food Loss and Food Waste

- » Five guides have been prepared for HoReCa (hotels, restaurants, and cafes), Logistics, Bulk Retailers, Consumers, and Composting.
- » The record for "Most Pledges Received for a Campaign" was registered with Guinness on January 26, 2022, with 881 thousand pledges through the "Pledge for the Record!" movement.
- » Draft legislation on Food Banks was prepared.
- » Activities such as waste-free kitchen workshops, volunteer final harvest events, and training activities continued throughout the year to raise consumer awareness of food loss and waste.
- » The "Cultivated to be Thrown Into Trash" photo exhibition has been opened in various parts of the country to raise public awareness of food waste.
- » The Regional Conference on Food Loss and Waste was hosted in Istanbul on October 5-6, 2022. "Regional Conference on Reducing Food Loss and Waste in Europe and Central Asia" was organised under the theme "Enabling the Change."

In addition to the activities listed under 2.11 of the Green Deal Action Plan, which aim to raise awareness of the EU Farm to Fork and Biodiversity Strategies, education and awareness-raising activities on biodiversity are actively carried out, and trainings are organised across the country. Within the scope of education activities carried out in cooperation with the regional directorates of the Ministry of Agriculture and Forestry and provincial directorates of national education, 53,631 students in 662 schools in the fourth quarter of 2021 and 110,537 students in 1771 schools by the end of 2021 were educated on biodiversity across Türkiye. In the third quarter of 2022, 120,825 students in 1,655 schools were provided with the education.



"CULTIVATED TO BE THROWN INTO TRASH" EXHIBITION, ANKARA

A seminar was organised to raise awareness, share information with sector stakeholders, and identify risks that may threaten seed security on "seed security and diversity," which is an important priority in ensuring sustainable food systems in the Farm to Fork Strategy.

Activities Conducted within the Framework of Climate Change

The project "Impact of climate change on fisheries stocks and determination of the distribution areas of invasive species in our seas" was initiated in 2022 with the support of the Ministry of Agriculture and Forestry's General Directorate of Agricultural Research and Policies (TAGEM) to monitor the impact of climate change on Türkiye's seas.

National Climate Change Action Plan (2024-2030)

The National Climate Change Action Plan (2024-2030) covers the headlines "Agriculture Sector" under the Reduction Strategy and Action Plan and "Agriculture and Food Security" in the Adaptation Strategy and Action Plan. The topics under these headings are as follows: limiting greenhouse gas reductions from the agricultural sector; in-

tegrating the adaptation approach to the impacts of climate change into the agricultural sector and food security policies; developing and disseminating R&D studies and scientific studies for determining the impacts of climate change in agriculture and ensuring adaptation to climate change; planning agricultural water use in a sustainable manner; protecting soil and agricultural biodiversity against the impacts of climate change; and improving institutional capacity and inter-institutional cooperation in Türkiye on adaptation options in agriculture. The Ministry units carry out R&D, practices, and activities in accordance with the targets set for agriculture in the Action Plan and develop strategies and policies based on the data.



Green Transportation

Green transportation is eliminating or minimising elements that may harm the environment in transportation activities and replacing them with sustainable energy utilisation, appropriate infrastructure and vehicles. Therefore, contributions are being made to matters such as reducing air pollution and carbon emissions, increasing energy efficiency, supporting sustainable development, and combating climate change. In this context, necessary infrastructure works and facilities, bicycle and pedestrian paths, solar energy platforms (solar systems), and electric vehicles are elements of green transportation.

The environmental advantages of green transportation are as follows:

- » It does not endanger human health or ecosystems in the short and long term,
- » The emissions and waste it causes are within the absorptive capacity of the planet,
- » It uses renewable resources,
- » It uses non-renewable resources either at or below the development rates of their renewable substitutes,
- » It minimises the impact on land use and noise generation.

As an important component of sectors such as industry, services, and tourism, the transportation sector is a determining factor in the production and consumption of clean energy. In this regard, the Ministry of Transport and Infrastructure pursues a perspective that puts environmental awareness at the centre of its activities. Thus, the paragraph “To ensure that transport, maritime, communication, and postal works and services are provided in a free, fair, and sustainable competitive environment in an economical, fast, convenient, safe, high quality, with the least adverse impact on the environment, and in a manner to protect the public interest” is included as part of the Ministry’s duties.

Several activities carried out by the Ministry on the subject are listed below:

Ministry of Transport and Infrastructure’s Green Transportation Activities

- » The “Greenhouse Gas Reduction in the Transportation Sector Project” was carried out between the Ministry and ITU from 2006 to 2009 under the TÜBİTAK Public Institutions Research and Development Projects Support Programme. With the project, research and training were carried out on determining greenhouse gas emissions from the transport sector in the 1990-2007 time series, prospective projection, public transport systems for mitigation, the effects of the Marmaray Project on greenhouse gas emissions, and biofuel and hybrid electric vehicles.
- » “Nationally Appropriate Mitigation Actions (NAMAs) Application Preparation Project” was carried out in 2012 under the auspices of the Ministry and with the contributions of the United Nations Development Programme (UNDP) in order to identify the actions and measures to be taken to reduce and control greenhouse gas emissions from the road, rail, aviation, and maritime sectors, to determine priorities, and to benefit from international financing support provided through the United Nations (UN) by designing these actions and measures. In this context, a NAMA proposal entitled “Türkiye’s Low Carbon Urban Mobility Nationally Appropriate Mitigation Action” (NAMA30) has been prepared. The NAMA proposal focusses on traffic volume, shifting to greener modes of transport, and improving energy and pollution standards across all Turkish cities. The NAMA proposal was submitted to the Sec-

retariat of the United Nations Framework Convention on Climate Change through the Ministry of Environment, Urbanisation, and Climate Change in December 2013.

- » “Workshop on Adaptation to Climate Change in the Transport Sector” was organised by the Ministry on March 20-21, 2014, by making use of the Technical Assistance and Information Exchange instrument of the European Union (TAIEX) for candidate countries in order to meet the need for information on the adaptation of the transport sector in Türkiye to the impacts of climate change and to increase the awareness and capacity of the public and private sectors.
- » The “Regulation on Procedures and Principles for Increasing Energy Efficiency in Transportation” was published and put into effect by the Ministry in 2008. The Regulation was revised according to the current conditions and published in the Official Gazette No. 30762 dated May 2, 2019. The Regulation sets out the procedures and principles regarding the reduction of unit fuel consumption of motor vehicles for the purpose of increasing energy efficiency in transport, raising efficiency standards in vehicles, encouraging the use of environmentally friendly alternative fuels, reducing air pollutants and greenhouse gas emissions, expanding public transport, effective implementation of intelligent transport systems, improving transport infrastructures in a sustainable manner, and preparing urban transport plans.
- » “National Intelligent Transport Systems Strategy Document and 2020-2023 Action Plan” prepared in line with the vision of “Human and environment-orientated transport system in Türkiye with advanced information technologies” and the mission of “Creating an efficient, safe, effective, innovative, dynamic, environmentally friendly, value-added, and sustainable smart transport network in Türkiye that is integrated to all modes of transport, uses up-to-date technologies, and benefits from domestic and national resources” was published in the Official Gazette No. 31204 dated August 5, 2020 with the Presidential Circular No. 2020/9. Within the framework of the action plan, with the aim of establishing the foundations of innovative and environment-orientated transport, the project titled “Driving Architecture for Autonomous Vehicles and Determination of Connected Vehicle Traffic Test Scenarios”

was carried out in order to support research, development, simulation, and testing efforts that will support the smooth use of connected and autonomous vehicles serving in the perspective of environmentally friendly, sustainable, safe, secure, and comfortable transport in Türkiye's transport infrastructure in public and private areas. In the scope of this project, research studies have been carried out for the realisation and implementation of the components related to the field of smart transport, such as national road networks and urban traffic management and control, travel information, ITS (Cooperative ITS), connected and autonomous vehicles, data management, road safety, emission reduction, communication technologies, mobility and accessibility, and smart cities.

Green Transportation Plans and Projects of the Ministry of Transport and Infrastructure

The Ministry's plans and projects aim to achieve a more balanced modal distribution and to pave the way for a more environmentally friendly transport system by both investing in the railway sector and shifting freight transport from road to railway.

National Transport Master Plan (2015-2017)

The National Transport Master Plan (NTSP) Project of the Republic of Türkiye, which started in October 2015 within the framework of the IPA (2007-2013) programme, was completed in December 2017 and presented to all project stakeholders and the public at the international closing conference held in March 2018. In light of changing conditions, the socio-economic environment, and expectations, there has been a need to update this plan by including the regulations related to the Türkiye Logistics Master Plan. Until 2035, infrastructure project proposals and policy measures envisaged to be realised needed to be re-evaluated. For this reason, the Eleventh Development Plan (2019-2023) and under the title "2.2.3.8 Logistics and Transport, Policies and Measures," Measure 514.1 of the 2020 Presidential Annual Programme states that "Türkiye Logistics Master Plan and National Transport Master Plan will be completed in coordination."

2053 Transport and Logistics Master Plan (2020-2022)

Preparations for the revision of the existing National Transport Master Plan, prepared in 2017 and projected for the year 2035, started in October 2020 in light of changing macro indicators with a holistic per-

spective by changing the target years by including the logistics sector within the framework of new expectations. The Project was later concluded and introduced to the public at the closing conference held in April 2022, with the wide participation of public institutions and organisations, NGOs, and private sector representatives.

The Transport and Logistics Master Plan is the leading policy document in terms of determining the priorities of the transport sector's investments until 2053, using more rational and mathematical models, serving as a guiding document for the sector's institutions and organisations, and being the result of collective work.

In accordance with the Plan, studies covering the road, railway, maritime, and airway sectors, as well as the Türkiye Logistics Master Plan (TLMP) Project, which was completed in 2018 under the abolished Directorate General of Railway Regulation, another central unit of the Ministry, were carried out.

During these studies, 2019 data was used, and problems and bottlenecks were identified with mathematical models in the Transport Planning Model. Subsequently, investment proposals were made based on transportation modes within the scope of the final scenario, the green scenario. The recommendations aim to establish a more environmentally friendly and comfortable transportation system by providing Türkiye with international connections, especially in the field of railways.

In line with Türkiye's 2053 Net-Zero Emission target, the Ministry considers reducing emissions from the transport sector a critical parameter in its forward-looking plans. In this context, the 2053 Transport and Logistics Master Plan is a supporting document for future infrastructure and transportation projects in Türkiye. Türkiye's transportation-related greenhouse gas emissions are mostly road-based. Based on this situation, the 2053 Transport and Logistics Master Plan includes objectives to reduce the greenhouse gas emissions of the country by adopting the Environmental (Sustainable) Scenario with the main aim of shifting road-dominated passenger and freight transport to railways and to ensure decarbonisation of the transport sector in particular.

The 2053 Transport and Logistics Master Plan aims to achieve a modal shift from road transport in terms of both passenger and freight by focusing on railway infrastructure projects. In this context, Türkiye's

railway infrastructure is planned to increase from 13,919 km in 2023 to 17,011 km in 2028 and 28,590 km in 2053. Given the objectives and investments envisioned in the 2053 Transport and Logistics Master Plan, the number of railway passengers is expected to increase from 25 million to 270 million by 2053, the number of provinces connected by high-speed trains from 11 to 52, and annual freight transport from 32 million tonnes to 448 million tonnes. Accordingly, important projects such as Ankara-Sivas High-Speed Train and Konya-Karaman High-Speed Train within the scope of the 2053 Transport and Logistics Master Plan have been put into service, and the construction for 3,776 km of railway projects, especially İzmir-Ankara, Mersin-Adana-Gaziantep, and Halkalı-Kapıkule High-Speed Train projects, continues. In addition to expanding the railway network, the 2053 Transport and Logistics Master Plan also aims to increase the number of logistics centres, which are important for intermodal transport activities, from 12 to 28, as well as the number of transmission line connections to ports, organised industrial zones, mining sites, and logistics centres, in order to develop railway freight transport. The Ministry of Transport and Infrastructure is conducting the necessary international dialogues to strengthen rail transport and decarbonise international freight transport also in international corridors (Development Road, Central Corridor) and prioritises railway projects integrated into the international railway network.

Strengthening Intermodal Transport Services in the Turkish Railway Sector (U-IMT) Project (2022-2025)

The Consultancy Service Procurement Contract for the Strengthening Intermodal Transport Services in the Turkish Railway Sector Project, which is being implemented with the European Union (EU) IPA funding, was signed with WEGlobal NTU-TYPSA Joint Venture on 27 July 2022 and the project works started on 24 October 2022. The project is expected to be completed in the first half of 2025. The Project's overall objective is to shift freight transport towards a safer, environmentally friendly transport system (in favour of rail), reflecting a more balanced modal split, and to facilitate the market share expansion of rail transport in Türkiye.

Green Transformation in the Medium-Term Programme

Green transformation targets have been included in the Medium-Term Programme. The Medium Term Programme (2024–2026) announced on September 6, 2023, by the Presidency included an article on “Green

Transformation: Policies and Measures” on the transformation of R&D infrastructure and technology under the heading “Macroeconomic Targets and Policies.”

In this context, R&D and innovation activities for the development of technologies such as energy storage, hydrogen and carbon capture, utilisation and storage, micro-grid management, and digitalisation that support energy transition within the scope of the Carbon Border Adjustment Mechanism and the 2053 net-zero emission target will be supported.

Article 40, paragraph 2, of Decree-Law No. 655 on Certain Regulations Regarding the Field of Transportation and Infrastructure was amended, and legislation was introduced for “Green Technology Projects.” The regulation aims to support various projects that will contribute to Türkiye’s “Green Development Vision” and “2053 Net-Zero Emission Target.”

Support for Combined Transportation

Within the scope of the Paris Agreement, to which Türkiye is a party, country parties have the responsibility to prepare, communicate, and maintain the national contribution target in the fight against climate change. Türkiye’s national contribution declaration anticipates a decrease of up to 21% in greenhouse gas emissions in 2030 compared to the baseline scenario. At the 27th Conference of the Parties to the UN Framework Convention on Climate Change, held on November 6-18, 2022, Türkiye increased its national contribution to 41%.

As an extension of the Paris Agreement, on December 11, 2019, the European Union unveiled the European Green Deal (EGD), which prioritises climate change and environmental concerns. The EGD sets out a number of policy measures to achieve the target of a 55% reduction in greenhouse gas emissions by 2030 compared to 1990. The scope of the emissions trading system (ETS), which went into effect in accordance with the Kyoto Protocol, has also been expanded under the EGD. In addition, on January 1, 2021, the EU Commission adopted the Carbon Border Adjustment Mechanism (CBAM) to prevent “carbon leakage.”

It is anticipated that in the future, sustainability will become the standard for all products placed on the EU market. In regards to product legislation covered by the Customs Union, the protection/acquisition of Türkiye’s rights to free movement of goods requires alignment with this legislation.

In 2022, the Combined Transport Regulation was made public in order to support the logistics sector and ensure its voluntary contribution to the green transformation it is expected to undergo; to offer incentives and support to create an integrated, balanced, sustainable, and environmentally friendly transport system; and to expand the combined transport practices in Türkiye. The concept of combined transport is a step towards ensuring that the transport sector adapts to this green transformation process. It seeks to provide environmental and economic benefits through the efficient use of the road mode over short distances.

The Regulation defines combined freight transport as intermodal transport, where road transport is used for the initial and final stages involving the shortest possible distance and rail, inland waterway, or maritime services for the majority of the transport operations. In this context, in order to promote green transformation within the industry, Turkish transport businesses that meet the conditions set out in the Combined Transport Regulation receive a “Green Logistics Certificate” free of charge. Within the certificate’s validity period, the Ministry offers various forms of support to companies eligible to receive a Green Logistics Certificate. The transport operations and green logistics activities of these companies are periodically reviewed every year to ensure sustainability.

The support provided under the Regulation aims to promote the green transformation of the logistics sector by encouraging Ro-Ro, Ro-La, and maritime and railway intermodal transport; to expand the use of low-emission transport modes like railway transport; to contribute to the reduction of congestion at land border gates; and to prevent carbon emissions from long-term road transport and reduce various traffic problems caused by road transport. The first applications under the Combined Transportation Regulation were received in 2023. As of 2024, 30 transport operators were eligible to receive the Green Logistics Certificate. Furthermore, the Ministry presents “Green Logistics Awards” every two years. To be nominated for these awards, green logistics certificate holders must have been carrying out green logistics activities for at least two years.

Supporting Low-Emission Road Vehicles

Some amendments have been made to the Road Transport Regulation, as a result of which:

- » The use of electric tow trucks, trucks, buses, minibuses, automobiles, motorcycles, or mopeds (including 3-wheelers) is also permitted.

- » The entry requirements for those who will enter the sector with electric vehicles have been simplified. (Electric vehicles shall be considered to have 25% more capacity in the minimum capacity calculation. The minimum capacity rate of 25% applicable to privately-owned electric cars with a “Domestic Goods Certificate” within the framework of the regulations issued/to be issued by the Ministry of Industry and Technology shall be considered as 50%.)
- » Opportunities for contractual use of electric vehicles have been facilitated. (Opportunities for contractual use of electric vehicles shall be applied with a 50% increase for vehicles of the same type.)
- » The use of green vehicles in international road transport is encouraged, and as of 2025, all UBAK permits will be allocated to EURO 6 vehicles, the most environmentally friendly vehicles under current conditions.

Replacing Old Model Road Vehicles

For the purposes of regulating road transport in an economical, rapid, convenient, safe, efficient, high-quality manner, with minimal negative impact on the environment and in the public interest, increasing the safety of life and property, reducing environmental pollution, and creating a healthy transport market by reducing the existing idle capacity, the project on withdrawal of certain commercial motorised road vehicles that are at the end of their economic and technical life from the market was initiated under Communiqué No. 49 dated November 17, 2007 in accordance with Article 33 of the Road Transport Law No. 4925.

By virtue of Article 35 of Law No. 6639 on Amendments to Certain Laws and Decree-Laws, published in the Official Gazette No. 29327 dated April 15, 2015, which reads, “Paragraphs five and six of Article 33 of the Road Transport Law No. 4925 dated July 10, 2003, are repealed,” the legal basis of the project was removed from the Road Transport Law No. 4925. The same provision was incorporated into Decree-Law No. 655 on the Organisation and Duties of the Ministry of Transport, Maritime Affairs, and Communications, Article 21, paragraph 4, subparagraph (b-1) as “(The Minister) ..., to the extent of the financial means of the Ministry’s Revolving Fund Management, is authorised to take over the buses, minibuses, vans, pickup trucks, tractors, lorries, tankers and tractors used for commercial transport of passengers and goods, which are above the age limit prescribed by the relevant legislation, and to have payments made to the owners of the vehicles taken over.”

This provision is a precautionary one aiming at the effects of the age limits implemented/to be implemented under the Road Transport Regulation. It covers only vehicles used in commercial transport of passengers and goods.

Activities of Related and Coordinated Organisations

General Directorate of State Airports Authority (DHMI) Activities

The DHMI initiated the “Carbon-Free Airport Project” in order to control the environmental impacts of airport activities and ensure sustainable airport management in addition to meeting the requirements of national legislation on carbon dioxide (greenhouse gas), natural resource use, air pollution, noise, waste and wastewater, and chemicals management.

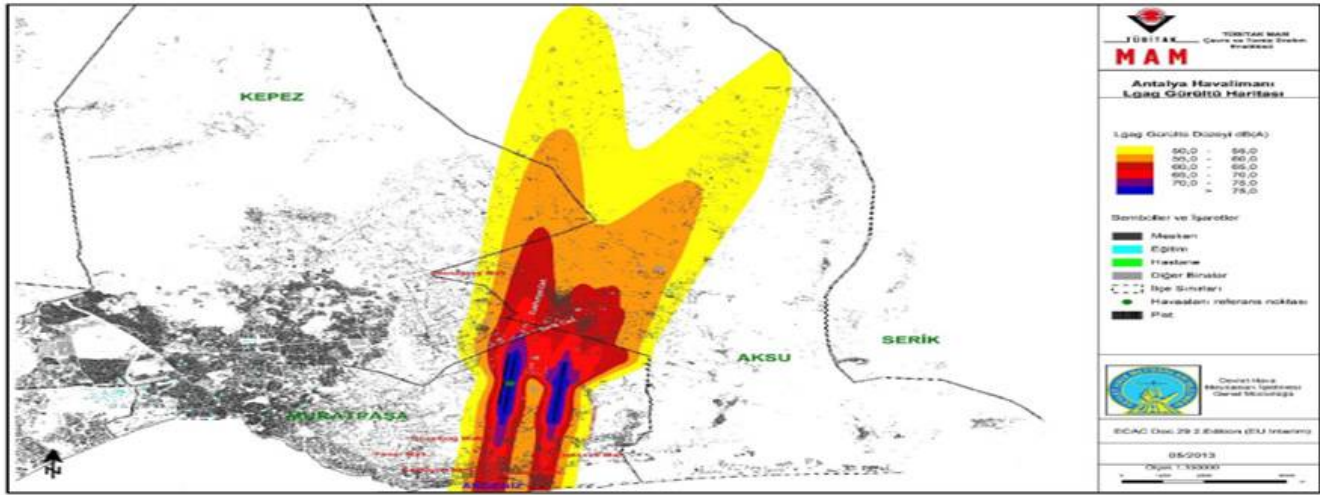
Within the project’s framework, 50 airports have already been certified under the ACA (Airport Carbon Accreditation) Program conducted by ACI (Airports Council International) on an international scale. A total of 553 airports in 86 countries around the world are included in the programme. The DHMI has become the airport operator with the highest number of ACA certificates globally, with a total of 50 airports. Türkiye has the second highest number of certificates after France.

The DHMI has also committed to the ACI European Airport Industry’s Net Zero CO₂ Emissions (Scope 1 & 2) Pledge by 2050 and become a party to the “Toulouse Declaration” approved by the Council of the European Union on February 4, 2022, which is the first public-private initiative supporting “European Aviation’s goal of achieving net zero CO₂ emissions by 2050.”

“Preparation of Climate Change Strategies Project” was carried out with TÜBİTAK-MAM to determine the amount of carbon emissions and emission-intensive areas generated within the scope of activities carried out at Gaziantep, Erzurum, Ordu-Giresun, and Milas Bodrum airports, to reveal the expected impacts of climate change in the region, to determine the areas that will be most affected by climate change in terms of airport activities, to carry out vulnerability analysis for these areas, to determine mitigation and adaptation measures, and to carry out cost-benefit analyses of possible investments. It is planned to expand the project to other airports in the future.

The DHMİ and TÜBİTAK MAM Environment and Cleaner Production Institute jointly prepared strategic noise maps for 49 airports, and their updates are monitored.

The ANMS (Airport Noise Management System), currently installed at Ankara Esenboğa, İzmir Adnan Menderes, and Antalya airports to measure aircraft noise levels at airports serving over 50,000 flights annually, has undergone a revision and modernisation process with new domestic and national software and is actively operational.



Currently, the TS EN ISO 14001 on Environmental Management System is in place at all airports. The standard's requirements are fulfilled, implemented, and monitored.

Projects have been implemented to use renewable energy sources to meet the electrical energy needs of airports and navigation stations (radar, aviation stations, airport special lighting systems, towers, etc.). 1MWe Erzincan Airport, 500 KWe Gaziantep Airport, and 500 KWe Van Ferit Melen Airport SPP facilities were installed in order to supply power. In 2024, a 1MWe SPP facility will be installed at Sivas Nuri Demirağ Airport, and SPP facilities are scheduled to be installed at other airports managed by the DHMİ.

The DHMİ has initiated the process of replacing fossil-fuelled follow-me apron vehicles with electric vehicles, which are currently in service at numerous airports. To date, a total of 61 TOGG vehicles have been procured through the State Supply Office (DMO). Further procurement is anticipated in the future. Additionally, electric baggage-handling vehicles are employed in baggage-handling areas at all airports.



Works are underway to convert heating and cooling systems to natural gas-powered systems (LNG, LPG, and CNG) with lower emissions.

Additionally, as part of its activities, the DHMI is engaged in various projects and works aimed at environmental protection and pollution prevention. This includes preparing necessary Environmental Impact Assessment (EIA) reports and obtaining permits in accordance with the relevant EIA Regulation for new airport projects, as well as implementing all activities undertaken in the EIA reports (such as the preparation of monitoring and inspection reports, tracking bird migration patterns,

signing protocols with relevant institutions, etc.). It also involves applying appropriate methods for the disposal of all types of waste and wastewater in construction projects (including solid waste facilities for the separate collection of all kinds of waste, wastewater treatment plants, separate collection of de-icing wastewater, etc.), developing treatment systems to utilise rainwater and grey wastewater for irrigation, and ensuring that airport landscape projects are permanent and sustainable by considering the geographical and climatic characteristics of the airport. Furthermore, innovative projects are being developed to maximise the use of natural light and natural air conditioning methods in projects that necessitate electrical and thermal energy consumption, such as lighting and air conditioning in airport terminal buildings and other technical and administrative buildings, while also striving for cost savings through the use of smart devices and equipment.

Directorate General of Coastal Safety (KGEM) Activities

On October 17, 2012, the KGEM began implementing the TS EN ISO 14001:2004 on Environmental Management System as part of its efforts to address the national/global environment and environmental problems after 2000. On January 1, 2022, the implementation of TS EN ISO 14001:2015 on the Environmental Management System was extended to cover all KGEM activities.

The “Law on the Principles of Emergency Response and Compensation for Damages in the Pollution of the Marine Environment by Oil and Other Harmful Substances” (Law No. 5312) entered into force in 2005.

The KGEM is one of the five primary members of the Damage Assessment Commission as defined in Article 38 of the implementing regulation of the law mentioned above and serves on damage assessment commissions to be formed following sea cleaning in cases of first, second, and third-level marine pollution.

The Implementing Regulation of the Law on the Principles of Emergency Response and Compensation of Damages in the Pollution of the Marine Environment by Oil and Other Harmful Substances entered into force on October 21, 2006.

The use of renewable energy sources in the provision of navigational aids such as lighthouses, buoys, etc., which are under the responsibility of the KGEM and established for navigation safety and security on the Turkish coasts, has materialised as 83.23%, and services are provided as part of Green Energy policies.

Activities of General Directorate of Post and Telegraph Organisation (PTT)

The e-notification service was introduced in 2015 for optional use over the Registered Electronic Mail (KEP), with the aim of contributing to the environment. As of January 1, 2019, the National Electronic Notification System (UETS) was initiated, saving approximately 8,202 tonnes of paper and preventing the cutting down of 139,429 trees. Furthermore, the “environmental management system” has been implemented in PTT workplaces since 2018. Accordingly, the following activities are carried out:

- » Identifying and managing the environmental risks associated with the activities carried out and products and services offered at PTT workplaces, such as hazardous and non-hazardous wastes that may interact with the environment and consumption of natural resources;
- » In order to mitigate the identified environmental risks and environmental pollution, recording, monitoring and controlling the data on natural resources (paper, electricity, water, natural gas, coal, wood, etc.) consumed at PTT workplaces, setting annual targets and keeping consumption under control;
- » Lessening the negative impacts on the environment by reducing the waste produced by the activities at the source, sorting, storing, collecting, recycling, or, when recycling is not applicable, disposing of it according to its characteristics and types;
- » Protecting the environment, preventing pollution, and raising awareness about solutions to environmental problems, etc.

Furthermore, following the publication of the Zero Waste Regulation in Official Gazette No. 30829 dated 12.07.2019, activities were initiated to implement the procedures at PTT workplaces within the scope of the Regulation. Waste collection equipment was provided to ensure that waste generated at PTT workplaces is collected separately and recycled in accordance with the zero-waste principle. The zero-waste management system installation was completed.



Five-Category Collection System (Paper, Plastic, Metal, Glass, Non-Recyclable)

As a result, PTT has a policy committed to protecting the environment by using natural resources in the most efficient way, managing waste with a zero-waste approach, and mitigating the effects of climate change. In this context, the requirements of the environmental management system are fulfilled, environmental impacts are minimised through continuous improvement of the system, and environmental protection activities are maintained.

Activities of TCDD Transport Corp., a subsidiary of the Turkish State Railways (TCDD)

Intercity High-Speed Railway Passenger Transport

The High-Speed Train (YHT) operations in Türkiye, which started on a single route between Ankara and Eskişehir in 2009, have since expanded to a total of 9 routes, with the latest Ankara-Sivas line being put into operation in April 2023 (in order of their respective launch dates: Ankara-Eskişehir, Ankara-Konya, Ankara-İstanbul, Konya-İstanbul, İstanbul-Karaman, Ankara-Karaman, Eskişehir-İstanbul, Ankara-Sivas, İstanbul-Sivas).

With the YHT operations carried out on totally new, double-tracked, signalised, and electrified railway routes, travel times have short-

ened compared to land and conventional railways, and the number of flights, bus and private car trips on these routes has decreased. Furthermore, the YHT operations are integrated with urban rail systems.

The shift from aeroplane, bus, and private car journeys to the YHT operations has decreased fossil fuel use and emissions due to the electrification of railways and reduced travel times.

From its inception in 2009 to July 31, 2024, the YHTs transported approximately 89 million passengers, with an average daily passenger count reaching 35 thousand.

The number of passengers transported by the YHTs has been significantly increasing every year, with the objective of reaching 12 million 400 thousand by 2024, surpassing 11 million 900 thousand in 2023.

The YHT routes are designed to be integrated with bus services for Bursa, Antalya, Mersin, and Adana, as well as conventional mainline and regional trains for Afyonkarahisar, Denizli, İzmir, Kütahya, and Malatya, creating combined transportation opportunities. Travel times to those provinces have been shortened, and road vehicle use has been reduced.

Urban Railway Passenger Transport

The suburban lines run by TCDD Transport Corp. on the national railway network are the main axes of urban transport in Istanbul and Ankara, the two most populated cities in Türkiye. Suburban operations, conducted with exclusively electric train sets, significantly contribute to keeping the air clean by decreasing greenhouse gas emissions and traffic congestion by reducing private vehicle use in urban areas.

The aforementioned suburban transport routes have been modernised with investments made since 2002 and integrated with the YHT, mainline, and regional railway transport, as well as other urban transport modes.

From its inception in 2013 to July 31, 2024, Marmaray has transported an estimated 1,157 billion passengers, with a daily average count reaching 600,000. The transport figure is expected to rise from 207 million 900 thousand in 2023 to approximately 219 million in 2024.

From its inception in 2018 to July 31, 2024, Başkentray has transported an estimated 96 million passengers, with a daily average of over

65,000. The transport figure is expected to rise from 21 million 900 thousand in 2023 to 25 million 250 thousand in 2024.

A pedestrian-oriented new-generation transport project, the Sirkeci-Kazlıçeşme Rail Line, was inaugurated in February 2024. It upgraded the inactive surface railway line and provided a significant transport alternative in addition to pedestrian and bicycle paths. From its inauguration to July 31, 2024, the Sirkeci-Kazlıçeşme Line transported 1 million 500 thousand passengers, with a daily average count reaching 10 thousand.

Green Transport and Seas

International Conventions

The decision on Türkiye becoming a party to the OPRC 90 International Convention on Oil Pollution Preparedness, Response and Co-operation was published in the Official Gazette dated 18/09/2003 and the decision on Türkiye becoming a party to the OPRC-HNS 2000 protocol was published in the Official Gazette dated 27/06/2013.

Türkiye acceded to the CLC 92 International Convention on Civil Liability for Oil Pollution Damage as well as the CLC FUND 2003 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage with the decisions published in the Official Gazette dated 24.07.2001 and 18.07.2001, respectively.

The decision on accession to the International Convention on the Control and Management of Ship Ballast Water and Sediments (BWM 2004) was published in the Official Gazette dated 28 August 2014 and numbered 29102.

The declaration regarding the “2010 Protocol to the 1996 International Convention on Liability and Compensation for Damage Arising from the Carriage of Dangerous and Hazardous Substances by Sea” (HNS Protocol 2010), which was approved for ratification by Law No. 6949 dated 08.03.2017, was decided by the Council of Ministers on 03.07.2017 and published in the Official Gazette on 31.07.2017.

Practices and Legislation on Marine Pollution Response

Law No. 5312 on the Principles of Emergency Response and Compensation of Damages in the Pollution of the Marine Environment by Oil and Other Harmful Substances entered into force after being published in the Official Gazette No. 25752 dated 11.3.2005. The purpose

of this Law is to establish the principles of response and preparedness to eliminate, reduce, contain, and remedy pollution risks arising from ships and coastal facilities during emergencies, taking into account the rights and obligations under international and domestic law regarding maritime safety and the prevention of marine pollution. It also aims to determine the principles for assessing and compensating damages resulting from incidents, fulfilling international obligations, and specifying the authorities, duties, and responsibilities of the persons, institutions, organisations, ships, and facilities covered by the Law, as well as the relevant parties mentioned therein.

In accordance with Law No. 5312, the Implementing Regulation of the Law, the Regulation on the Procurement of Goods and Services during Emergencies under Law No. 5312, and the Communiqué on the Selection of Institutions/Organisations Authorised to Respond in Emergencies Involving Pollution of the Marine Environment by Oil and Other Harmful Substances, efforts are undertaken to address marine pollution caused by oil and other harmful substances. The relevant institutions and organisations coordinate their activities, respond to pollution incidents, procure necessary goods and services, and carry out compensation processes.

The “Directive on the Inspection of Sulphur Content in Marine Fuels” was issued on June 14, 2022, with the aim of limiting sulphur emissions (SO_x) from ships, reducing the negative impacts of air pollution on human health and the environment, and promoting a cleaner environment. In the said Directive, the sulphur limit for fuel used by ships not utilising an approved pollution reduction method is set at 0.5%, while in Sulphur Emission Control Areas (SECA), the limit is 0.1%. Ships anchoring or docking at coastal facilities within the administrative jurisdiction of port authorities must immediately switch to marine fuels with a sulphur content not exceeding 0.1% by mass. In 2023, inspections were conducted on 346 ships to verify compliance with the sulphur content of the fuel used, and no non-compliance was detected.

The “Communiqué on the Selection of Institutions/Organisations Authorised to Respond in Emergencies Involving Pollution of the Marine Environment by Oil and Other Harmful Substances,” which outlines the working procedures of coastal facilities and emergency response companies in dealing with oil and other harmful substance spills at sea, was issued in 2009 and updated in 2011. The minimum standards for firms authorised to conduct emergency response under the legislation, as well as the duties and responsibilities of coastal facilities and

emergency response companies, are defined and inspected. Furthermore, all related activities are also coordinated. As of 2024, the Ministry has authorised 12 emergency response companies. Authorised emergency response companies are prepared to respond to and clean up in the event of potential pollution.

Additionally, the “Circular on the Procedures and Principles of Training Seminars and Drill Programmes on Preparedness and Response to Pollution Caused by Oil and Other Hazardous Substances”, published on 09.04.2020 and numbered 2010/4, was updated in 2022. The Circular authorises the preparation of training seminars and drill programmes against pollution caused by oil and other hazardous substances. The Ministry performs both planned and unplanned drills and monitors training and exercise programmes on-site.

“Circular on the Preparation and Implementation Principles of Coastal Facility Emergency Response Plans,” which outlines the procedures for conducting risk assessments of coastal facilities and the minimum qualifications of emergency response equipment that should be present, was published in 2007 and updated in 2009. The emergency response plans of coastal facilities are reviewed under the legislation, and they are required to maintain equipment that meets the minimum standards.

Directorate of National Maritime Safety (UDEB)

To fulfil the requirements of Law No. 5312 on “Principles of Emergency Response and Compensation for Pollution of the Marine Environment by Oil and Other Harmful Substances,” which came into effect in 2005, and international treaties, the Ministry has completed the “Establishment of Emergency Response Centres and Assessment of the Current Situation in Our Seas Project.”

The project aimed to establish emergency response stations for marine pollution across all Turkish coastlines and to coordinate these efforts from a central location, focusing on preparedness and emergency response measures for marine pollution.



For this purpose, the National Maritime Safety Authority (UDEB) has established the largest Emergency Response Centre in Europe in Tekirdağ. It is located in the northwestern part of the Sea of Marmara, which is the most high-risk area in terms of ship traffic and has extensive logistical facilities. UDEB serves as the Ministry of Transport and Infrastructure's decision-support system, providing personnel, equipment, hardware, software, and all necessary infrastructure facilities to perform various tasks, including preparedness, planning, coordination, and response in the context of maritime safety in our maritime jurisdictions.

The UDEB, which is the most crucial component of the project and the centre for all emergency response operations, serves as the brain and coordination hub for Türkiye's response to marine pollution, ensuring that coastal stations and the seas are protected at the highest level.

The UDEB Maritime Simulators Center is an integrated simulator system consisting of a Bridge Simulator, VTS Simulator, Tugboat Simulator, and Pollution and Emergency Response Simulator. All simulators operate jointly within the same virtual environment.

Green Port Project

Prominent ports in industrialised nations worldwide embrace, execute, and integrate the "Green Port" initiative as a symbol of prestige. The European Sea Ports Organisation (ESPO) is implementing the ECO PORTS programme in European Union ports as part of the "green port" concept, and 114 port facilities have participated in the programme.

The "Green Port Policy" framework was developed in 2014 as a long-term plan to adopt sustainable practices and guide the future development and operations of ports in Türkiye.

In this regard, the Ministry's "Regulation on Issuing Green Port Certificates to Coastal Facilities" was published in the Official Gazette on 18.11.2023 and numbered 32373.

In this context, in order to be considered a "Green port";

- » Energy identity certificates will be obtained for buildings.
- » At least 5% of energy consumption will be met from renewable energy sources.

- » At least 50% of the main handling equipment or the total energy consumed will be supplied by electrical energy.
- » Exhaust emission measurements of vehicles will be conducted annually, and measures will be taken to ensure that any increase in emissions does not fall below the initial measurement levels.
- » Electrical connection on at least one terminal/dock/jetty will be provided for ships.
- » Zero Waste Management System will be established.
- » Water-oil separators will be installed at water discharge points, and rainwater collected from building roofs will be gathered and utilised.
- » The facility will stock at least 50% more barriers and oil-absorbent materials than the quantity required under the Emergency Response Plan.
- » A memorial forest will be created on behalf of the coastal facility.
- » At least two rubbish traps for collecting sea surface debris will be placed in a location that does not restrict maritime traffic in the port.
- » At least two beaches, to be determined by the coastal facility, will be cleaned every year.
- » No less than two vehicle charging units will be installed in the coastal facility parking lot.

Decarbonisation of the Maritime Sector Project

In alignment with the goal of reducing greenhouse gas emissions and achieving net-zero targets, a project titled “Reduction of Greenhouse Gas Emissions from the Maritime Sector and Support for Green Shipping” (Maritime Decarbonization and Green Shipping) was submitted by the Ministry to the European Commission under the EU Pre-Accession Assistance (IPA) program for inclusion in the 2021-2022 program. The project has been approved.

The project’s objective is to provide a financial support system for cutting-edge technology applicable to eco-friendly, sustainable, and secure transportation in ships and ports. Furthermore, the project encompasses initiatives aimed at identifying legal gaps in the marine

industry to facilitate the adoption of innovative technology, enhance capabilities, and form public opinion on green maritime practices. The mechanism to be established will provide approximately €20 million in grants and €50 million in long-term, cost-effective loan support from the European Bank for Reconstruction and Development (EBRD) to eligible port facilities.

- » Financial support will be provided for project such as the construction of new vessels operating on low-emission alternative fuels, the retrofitting of existing vessels using conventional fuels,
- » the establishment of infrastructure at port facilities, including port electricity for sustainable energy use,
- » the setup of fueling stations for LNG, Bio-LNG, Methanol, Green Hydrogen,, and Ammonia.

Renewal of the Merchant Navy

Within the scope of efforts to reduce harmful emissions from the maritime sector and support green maritime, the “Regulation on the Incentives for the Construction of New Vessels to Replace Scrapped Turkish-Flagged Ships” was published in the Official Gazette dated 28.04.2021 and numbered 31468. Pursuant to the regulation above, the incentive amount for a vessel to be scrapped is calculated by multiplying the vessel’s lightship weight by the current scrap price. For new conventional vessels constructed to replace scrapped ships, the incentive will be 1.5 times the scrap value per ton. For vessels using alternative, environmentally friendly energy sources, including LNG and hybrid systems, the grant amount will be 2.5 times the scrap value per ton. Ship owners who convert their existing vessels’ main engines from fossil fuels to alternative, environmentally friendly energy sources will receive a grant covering 25% of the conversion costs from the Ministry of Transport and Infrastructure’s budget.

Transfer of Road Cargo to Maritime Transport

The “Regulation on Supporting the Transfer of Road Cargo to Maritime Transport,” which was published in the Official Gazette on 09.08.2022, is designed to increase the frequency of regular services between Turkish ports and ports of other countries, enhancing the use of ports with more competitive pricing to boost maritime exports and reducing congestion at road border crossings to shorten waiting times, thereby aiming to decrease emissions.

Symposium on Measures to Reduce Greenhouse Gas Emissions from Maritime Transportation

To achieve GHG reduction targets, the Ministry of Transport and Infrastructure continues to take steps to reduce emissions by supporting the maritime sector and promoting innovative green technologies for environmentally friendly, sustainable, and safe transportation in ships and ports. The Ministry held the “Symposium on Measures to Reduce Greenhouse Gas Emissions from Maritime Transport” on February 6, 2023, at the Directorate of National Maritime Safety (UDEB), Tekirdağ. The symposium focused on measures to reduce greenhouse gas emissions from maritime transportation, the effects of emissions on the global and Turkish Merchant Navy, and alternative green marine fuels.



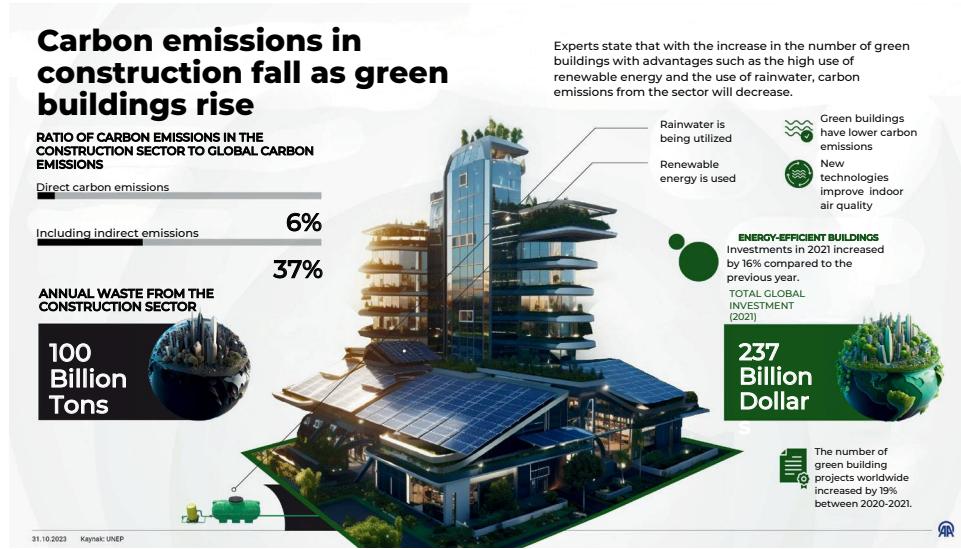
Green Healthcare Services

The catastrophic effects of climate change, which emerged as a consequence of global warming, are increasingly experienced in the world and in Türkiye. Global warming is the term used to describe the substantial increase in the average surface temperature that has occurred as a result of economic growth, expansion of transport networks, energy production, agricultural activities, and fossil fuel use following the Industrial Revolution. This increase is attributed to the impact of greenhouse gases.

Numerous ecological and climatic adverse events have occurred as a consequence of global warming, including forest fires, the depletion of water resources, the erosion of coastlines, the rise in sea level due to the melting of glaciers, and climate change. These events demonstrate the necessity of fostering awareness and responsibility to be green in the construction industry and all other fields.

Green Buildings

The concept of “green building,” referred to as environmentally friendly buildings, has emerged as a part of this responsibility. Green buildings are defined as buildings that respect nature, are ecological, and reduce energy consumption.



Green buildings are designed to use water, energy, and natural resources efficiently to reduce the built environment's negative effects on human and environmental health, minimise environmental damage by reducing all kinds of waste and pollution, and thus improve human health.

The first seeds of “green building” were sown in the early 19th century, when passive systems such as underground air cooling boxes and roof fans were introduced to regulate the indoor temperature of the British Palace at the first world exhibition held in Milan.

In 2014, the then Ministry of Environment and Urbanisation published the “Regulation on Certification of Sustainable Green Buildings and Sustainable Settlements.” This marked the first step towards the widespread adoption of eco-friendly buildings with a unique brand value in Türkiye.

Selected in 2014 as an “Exemplary Building” with the support of the United Nations Development Programme (UNDP) Global Environment Facility (GEF), the Ankara Sincan-Etimesgut Directorate of Land Registry and Cadastre Building was built as one of Türkiye's first green public buildings.

The National Green Certification System (YeS-TR), the first domestic application prepared for the certification of green buildings, was implemented within the scope of the “Regulation on Green Certification for Buildings and Settlements” published in the Official Gazette in June 2022. The Regulation allows for the inspection of buildings and

settlements upon application to see whether they comply with green building criteria. Under the system where the Turkish Environment Agency (TÜÇA) serves as the evaluating body, all stages of a building—from design to use—are assessed environmentally, socially, and economically to determine whether they meet green building criteria. Voluntary certificate applications aim to increase the number of energy-efficient buildings.

Green Hospitals

Green healthcare services are defined as the combination of environment-friendly practices and healthcare services.

The concept of a green hospital refers to facilities that are environmentally friendly and sustainable from the construction phase till the operation, offer recycling options, use recycled materials, produce less waste, and provide cleaner ventilation conditions.

In hospitals, the green concept is expressed as ensuring more efficient use of energy and water, eliminating all waste, and making a positive contribution to public health through environmentally friendly building designs.

The World Health Organisation (WHO) classifies the characteristics of green hospitals as follows:

- » Reducing hospitals' energy consumption and costs through efficiency and conservation measures,
- » Building hospitals that reduce energy and resource demands and are sensitive to regional climate conditions,
- » Generating and/or consuming clean, renewable energy to ensure reliable and flexible operation,
- » Ensuring the sustainability of the production and consumption of green foods native to that region for health personnel and patients,
- » Developing alternatives to incineration and reducing the amount of waste.

Among green buildings, a number of green hospital certification systems have been developed for green hospitals that incorporate sustainable design and construction requirements. These are Health Care Without Harm, Practice Greenhealth, BREEAM For Healthcare, LEED

For Healthcare and Australian Green Star certification systems. BREEAM For Healthcare, LEED For Healthcare and Australian Green Star certification systems are more widely used internationally.

Introduced in 1998, the LEED certification system is an environmentally friendly building certification system developed by the US Green Building Council (USGBC). The LEED system encompasses a range of issues involving multiple disciplines, from the design process to the completion of the building. The distinct categories of the LEED system that are currently in place and under development, suitable for different building types, are: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation, and regional priority. Projects are awarded Certified, Silver, Gold, or Platinum levels based on the scores they have in these categories.

LEED categories assess and score various aspects, including promoting public and alternative transportation systems, implementing water conservation and efficiency measures, enhancing energy efficiency through design and system choices, improving and controlling indoor air quality, preventing and removing harmful volatile compounds and cigarette smoke, and maximising the use of natural daylight.

Launched in 1990 in the UK, the Green Building Certificate BREEAM (Building Research Establishment Environmental Assessment Method) sets best practice standards for building environmental performance through design, specification, construction, and operation. Although “BREEAM” forms the basis of many green building certification systems, it was developed specifically for the UK and has not become widespread worldwide like the LEED Certificate.

Australian Green Star is an assessment system developed by the Green Building Council of Australia (GBCA) in 2003 for the environmental design and construction of buildings. It measures the environmental potential of a building's design, construction, and management processes under ideal conditions.

The “Energy Efficiency in Health (SEVER) Project” was initiated by the Ministry of Health to be an important step in transforming all public and private hospitals into green hospitals and to carry out energy efficiency studies effectively. Within the scope of this project, the “Public and Private Sector Together for Energy Efficiency” Project was launched under the coordination of the Ministry of Health and the

Ministry of Environment and Urbanisation with the support of the Ministry of Energy and Natural Resources.

As part of the project, “Workshop on Energy Efficiency and Resource Development in Health” was organised in 2012. Alternative energy supply methods, fuel/heating systems, cooling/air conditioning ventilation systems, thermal insulation systems, electrical and lighting systems, energy efficiency in medical devices, green building applications, use of renewable energy sources (solar, wind, etc.), oxygen production with medical oxygen concentrator devices, and medical waste management topics were discussed at the workshop. Within the framework of the project, Trabzon Ahi Evren Thoracic and Cardiovascular Training and Research Hospital has been determined to be the hospital where the pilot application will be carried out. A workshop was organised in Trabzon on August 22, 2013, to announce the Project to the public.

A circular was also issued based on the project’s findings to promote more effective energy resource management in our health facilities.

On 30.12.2012, the Ministry of Health made LEED, the international green building certification system, mandatory for all hospitals with a capacity of 200 beds or more in accordance with Article 33 of the “Circular on Minimum Technical Standards to be Complied with in Existing and New Health Facilities,” and the “Green Hospital” era began in Türkiye.

Turgutlu State Hospital in Manisa is the first example of a green hospital among public hospitals. Inaugurated in 2012, the hospital’s “Tri-generation System” aims to generate electricity using natural gas and meet the hospital’s entire electricity, heat, and partial cooling needs.



MANİSA TURGUTLU STATE HOSPITAL

Renovated Kartal Dr. Lütü Kırdar Training and Research Hospital is entitled to receive the LEED Gold Certificate, which is a green building certificate, along with an EDGE certificate following the evaluations of water efficiency, energy efficiency, sustainability, indoor air quality, innovative design, and regional precaution criteria. It is also Türkiye's first and the world's largest EDGE Green Building-certified hospital.



OPENING CEREMONY OF THE NEW BUILDING OF KARTAL DR. LÜTFİ KIRDAR TRAINING AND RESEARCH HOSPITAL

The Erzurum City Hospital, which opened in 2020, has earned LEED Gold certification due to its environmentally friendly design, including 2,000 seismic isolators for earthquake resistance, standards allowing surgeries to be performed during an earthquake, rainwater collection systems on the terraces—especially the crescent terrace—for garden irrigation, solar panels for generating its own electricity, and other advanced technological features.



ERZURUM CITY HOSPITAL

The US Green Building Council (USGBC) awarded Gaziantep City Hospital, Yozgat City Hospital, and Erzurum City Hospital LEED Gold Certification. Adana City Hospital was also awarded LEED Gold certification in the LEED-Healthcare v2009 category.

Moreover, Başakşehir Çam and Sakura City Hospital, which is “the World’s Largest Seismically Isolated Building” against earthquakes, won the “Best Healthcare Complex” award at the International Real Estate Fair (MIPIM) 2022 and became the first project of Türkiye to receive an award in this category. At the hospital, rainwater is collected in a 3,600-square-meter tank and used to irrigate 171,842 square meters of landscape area. The energy collected through the solar panels on top of the buildings meets the electricity needs of the hot water of the storeys and landscape lighting.

In addition to public hospitals, private hospitals have also taken important steps towards becoming green hospitals and have been awarded internationally prestigious certificates. The most notable of these are listed as follows: The American Hospital was the first hospital in Türkiye and the second in the world to receive the “LEED EBOM Platinum” certificate. Istanbul Florence Nightingale Hospital, which was built as a smart hospital, became Türkiye’s first “Green Hospital Building” with the TUV Hessen Green Building certificate. Built with an environmentally conscious approach, Memorial Bahçelievler Hospital

was the first fully equipped hospital in the world to receive the “LEED Platinum” certificate, the most prestigious high green building certificate awarded to institutions that are leaders in environment-friendly and energy-friendly design.



GAZİANTEP CITY HOSPITAL



YOZGAT CITY HOSPITAL

Regulations on the Impacts of Climate Change on Health

National Programme and Action Plan for Mitigating the Negative Impacts of Climate Change on Health



ADANA CITY HOSPITAL

In 2015, the Ministry of Health published the “National Programme and Action Plan for Mitigating the Negative Impacts of Climate Change on Health” in order to protect the public from the adverse effects of climate change in Türkiye, to take necessary measures for disaster situations, and to prepare the necessary infrastructure and human resources.

The action plan has 7 main goals:

- » Alleviating the impact of extreme weather events (heavy rainfall, extreme hot and cold weather, air pollution) and the resulting natural disasters (floods, fires, etc.) on human health,
- » Strengthening institutional infrastructure and enhancing intra- and inter-organisation collaboration for monitoring diseases emerging and/or increasing in Türkiye as a result of climate change.
- » Ensuring water and food security, combating water and food-borne diseases,
- » Undertaking necessary actions to ensure vulnerable groups are not affected by the adversities of climate change,
- » Reducing the negative contributions of health institutions to climate change,

- » Raising public awareness for more effective protection against the negative impacts of climate change on health,
- » Monitoring and evaluation

Updates to the action plan have included new sections on 'Migration and Mental Health' in light of national and international developments related to climate change.

Carbon Monoxide Poisoning Prevention Programme and Action Plan

Each year, a large number of people in Türkiye are poisoned by carbon monoxide (CO) gas from stoves, water heaters, combi boilers and chimneys used for heating. Citizens' misuse and negligence of these tools cause poisoning to reach dangerous levels, especially in low-pressure weather.

The "Program and Action Plan for the Prevention of Carbon Monoxide Poisoning" was prepared by the Department of Environmental Health of the Ministry of Health's General Directorate of Public Health in 2015. 180 physicians were trained in the diagnosis and treatment of carbon monoxide poisoning. Environmental health units are working to reduce the number of poisoning and death cases and raise public awareness by collaborating with local authorities to send posters, brochures, and flyers to provincial health directorates. Trainings are given on the measures to be taken to prevent carbon monoxide poisoning in public places such as schools, coffee houses, mosques, associations, Qur'an courses, and public education centres.

Carbon monoxide poisoning death cases are monitored through the Ministry of Health's Death Information System, while CO case numbers are tracked via the Decision Support System. Collaborative efforts are being carried out with the 81 provincial health directorates, as well as other institutions, organisations, and NGOs.

Climate Change Adaptation Strategy and Action Plan (2024-2030)

The Ministry of Health's duties include "strengthening institutional capacity and enhancing inter-institutional cooperation to identify and mitigate the impact of climate change on health." In this context, the Ministry of Environment, Urbanisation, and Climate Change, along with relevant institutions, has prepared the 'Climate Change Adaptation Strategy and Action Plan (2024-2030),' under which the Ministry of Health continues its efforts in line with the 'Public Health' chapter.

Ministry of Health Strategic Plan (2024-2028)

Objective 2.7 in the Ministry of Health's Strategic Plan (2024-2028) is defined as, "increasing the capacity of environmental health services to reduce the negative impacts of environmental hazards and climate change on health."

To achieve the goals of the strategic plan, the General Directorate of Public Health of the Ministry of Health submitted a project proposal titled 'Strengthening the Capacity of the Ministry of Health to Reduce the Effects of Climate Change on Health' under the IPA-III 2023 Programming, which has been accepted by the EU Commission.

The main actions of the project are listed as follows:

- » Improving environmental health services and environmental health response capacity in adaptation to climate change,
- » Improving policy-making capacity to combat vector-borne diseases and strengthen the system of diagnosis, treatment and surveillance of vector-borne diseases,
- » Enhancing the capacity of healthcare personnel to conduct Health Impact Assessments (HIAs) to determine the effects of climate change on health.
- » Raising public awareness of the negative health impacts of climate change.

Türkiye Health and Climate Change Country Profile

"Türkiye Health and Climate Change Country Profile" was prepared in 2022 in cooperation with the Ministry of Health's General Directorate of Public Health and the World Health Organisation.

The health and climate change country profile provides information on climate hazard predictions, current and future health risks associated with climate change, and potential health benefits of mitigating climate change.

It also provides a summary of the current national health interventions in response to climate variability and change. The country profile aims to raise awareness of the threat of climate change to public health and health systems and to support decision-makers in identifying the next critical steps for creating climate-resilient and environmentally sustainable health systems.



Green Tourism

Green tourism is a type of tourism shaped in line with the principles of environmental awareness and sustainable development. This approach to tourism aims to protect nature, keep ecosystems in balance, and preserve local cultures. Unlike traditional tourism activities, green tourism emphasises the conservation of natural resources, energy and water savings, waste management, and reduction of carbon footprints. In this context, green tourism promotes a nature-friendly vacation approach and aims to improve the economic and social well-being of local communities. Türkiye, with its rich biodiversity, unique natural beauty, and deep cultural heritage, has great potential for the development of green tourism. In recent years, Türkiye has adopted policies promoting sustainable tourism and has been implementing environmentally conscious tourism projects and infrastructure investments. In particular, projects such as ecological villages, trekking routes, organic farms, and nature-friendly accommodation facilities are examples of Türkiye's efforts to support green tourism. These efforts are crucial to protecting Türkiye's natural and cultural heritage and supporting local economies. In this way, Türkiye aims to become a global example of sustainable tourism and offers visitors a unique travel experience.

Sustainable Tourism Programme

Türkiye aims to benefit from the natural, cultural and social elements that are the supply resources of tourism by taking into account the balance of conservation and utilisation and to ensure the development and global recognition of these elements. To this end, it develops national sustainable tourism standards in cooperation with national and international stakeholders. Türkiye Sustainable Tourism Industry Criteria (TR-I) were laid out in order to ensure the sustainable growth of the Turkish tourism sector and develop a common approach to Turkish tourism with the participation of all tourism stakeholders. TR-I was prepared to be implemented for accommodation facilities and tour operators. In this context, TR-I incorporates globally accepted sustainable tourism criteria and criteria that are suitable for Türkiye's social and cultural structure. TR-I was developed to align with the criteria of the Global Sustainable Tourism Council (GSTC), a key body that sets international standards for sustainability in the tourism sector. In this framework, all GSTC criteria have been adopted by TR-I without modification. The TR-I is reviewed and revised every 3 to 5 years, in accordance with the update period of the GSTC criteria. Information about the revision plans and how to register in advance for public participation in future revisions can be found on the website tga.gov.tr. The website also contains information about the criteria development and its historical development.



The GSTC represents the highest standard for sustainable tourism worldwide and has decades of experience and expertise. Türkiye's Sustainable Tourism Programme, which consists of 42 criteria, is the first programme in the world to be developed at the government level in collaboration with the GSTC.

Ecotourism

Ecotourism is a subtype of tourism that refers to a sustainable tourism activity that is in harmony with natural life and natural resources. Ecotourism, a new concept at national and international levels, has started to be included in policy, management, and legal texts.

On the international stage, ecotourism gained global attention at the Quebec Ecotourism Summit in 2002, where decisions were announced through the Ecotourism Declaration. This declaration is described as the foundation and constitution of ecotourism.

The diverse flora and fauna, rich ecosystems, and biodiversity of Türkiye's forests make them highly attractive for ecotourism activities. Travel agencies and tour operators experienced in mass and heritage tourism, forestry institutions specialising in natural resource management, and the folkloric and cultural richness of local communities all contribute to enhancing ecotourism's importance. Türkiye's geographical location, tourism potential, ecotourism advantages, and protected areas offer significant opportunities. The increasing demand for ecotourism worldwide and in Türkiye, along with Türkiye's geographical advantages and high mass tourism potential, give Türkiye a considerable advantage in this field. For local people struggling with rural poverty, ecotourism can create new job opportunities and sources of income. In addition, factors such as the possibility of raising local, national, and global awareness in protected areas and other natural areas point to significant opportunities for Türkiye to leverage through ecotourism.

In recent years, climate change and increasing interest in natural resources have led to the preference for nature-based tourism areas. Türkiye has an important position in terms of ecotourism infrastructure and resource diversity. Geographically located at the crossroads of Asia, Africa, Europe, Russia and the Mediterranean, Türkiye is a strategic bridge in ecotourism. There are various ecological and geographical boundaries in different parts of Anatolia, which makes Türkiye attractive for ecotourism.

Türkiye is home to approximately 80,000 plant and animal species, including 11,000 plant species, which is close to the total number of plant species in Europe. One-third of the plant species found in Anatolia are endemic. Türkiye is also rich in forests, with 29% of the country's surface area covered by forests. Increasing demand for ecotourism highlights the need for sustainable planning and management of forests and ecosystems.

The concept of ecotourism was first officially mentioned in Türkiye in the Eighth Five-Year Development Plan (2001-2005). The concept of ecotourism was also brought to the agenda at the April 12–14, 2002 Tourism Council Environmental Planning and Infrastructure Commission, and decisions were taken for its development. In addition, the Ministry of Agriculture and Forestry organized an ecotourism workshop in Antalya from 9 to 10 April 2019.

Two of the three major bird migration routes pass through Türkiye. This offers great potential for ecotourism. The Ministry of Culture and Tourism has designated the Black Sea, Mediterranean and GAP (Southeastern Anatolian) regions as priority areas for ecotourism as part of its 2023 goals. These regions are rich in biodiversity and offer important opportunities for ecotourism development. For instance, one of the notable trekking routes in Europe, the “St. Paul Trail” is located in the Western Mediterranean Region.

The European Ecotourism Labelling Standard (EETLS), used by the European Union countries and the European ecotourism network, is applied in many ecotourism areas in Türkiye. Places such as Izmit Kartepe, Yalova Termal, Bursa Oylat, and Adana Aladağ have been identified as ecotourism destinations that meet these standards. These areas are equipped with various facilities for the public nature-friendly tourism experiences.

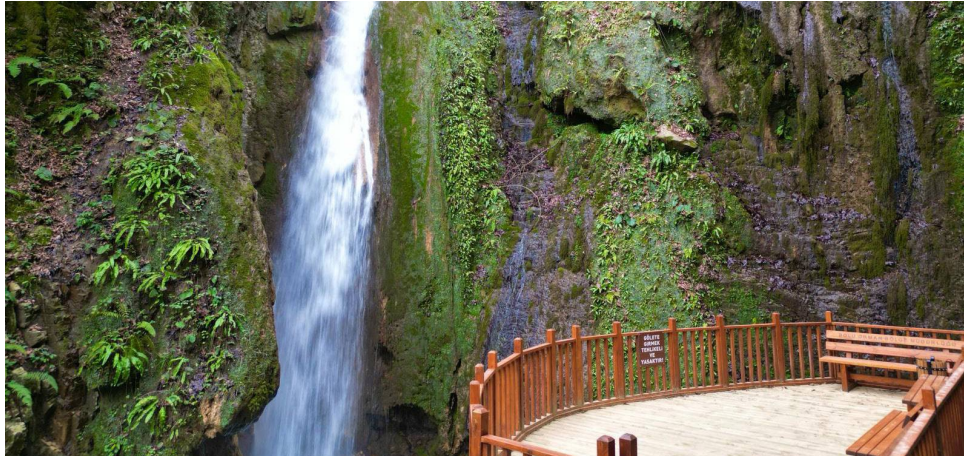
Türkiye plans to continue taking important steps in the upcoming years to achieve the sustainable development goals in ecotourism. These steps aim to diversify tourism while preserving the country's natural and cultural riches, increase environmentally friendly tourism activities, broaden the reach of ecotourism, and contribute to economic development. The objectives also include developing ecotourism, especially in areas with high biodiversity, supporting the economic development of local communities, and promoting the conservation of natural resources. With the implementation of the Ecotourism Ac-

tion Plan in 2021, the goal of establishing 110 ecotourism routes has largely been achieved as of early 2024. By 2028, there are plans to increase the number of ecotourism areas to 200.

The Ecotourism Action Plan's end year is 2025. With the new "Ecotourism Management Plan and Practices," the country plans to diversify and increase the tourism opportunities of ecotourism areas and contribute 2 billion Turkish Liras annually to the country's tourism destinations.



'ROSE ROAD' PROJECT ON THE EDGE OF LAKE BURDUR WITHIN THE SCOPE OF ECOTOURISM



AKÇAKOCA AKTAŞ WATERFALL, DÜZCE



ARAS BIRD SANCTUARY, IĞDIR



SARIKAMIŞ ECOTOURISM DESTINATION, KARS



ÇORUH ECOTOURISM ROUTE, ARTVİN

