TÜRKİYE and WATER

2025

TURKISH WATER INSTITUTE
SUEN
TÜRKİYE SU ENSTİTÜSÜ

About SUEN

By bridging science and policy, Turkish Water Institute (SUEN) works towards the development of sustainable water policies and strategies at the national and international levels.

SUEN works in cooperation with national and international water-related institutions in scientific research, policy advisory and capacity building to address local and global water issues.

Our vision

To be a leading research, training and think-tank organization in the field of water policies in the region and the world.

Our mission

To contribute to the development of Türkiye's sustainable water policies and strategies through activities at the national and international levels.

Our history

SUEN was established in 2011 building on the network and experience of the 5th World Water Forum Secretariat. The success of the Forum in 2009 in Istanbul elevated Türkiye's global role in water issues, and the knowledge gained formed the foundation of SUEN.

This publication is produced by SUEN in 2025.

Table of CONTENTS

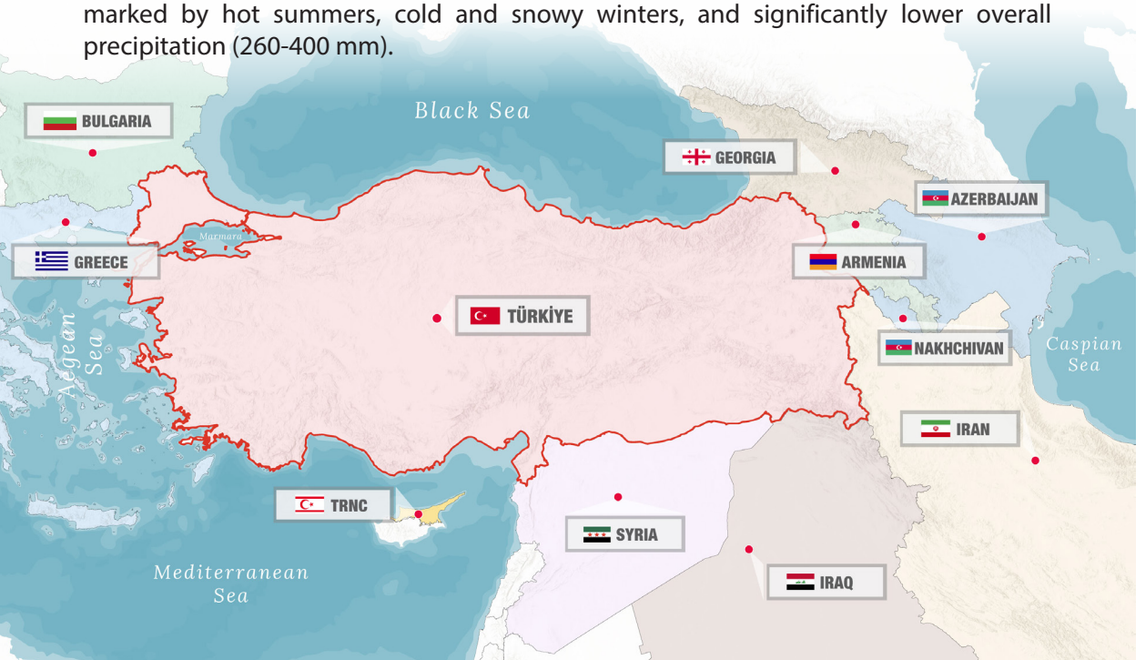
01. INTRODUCTION

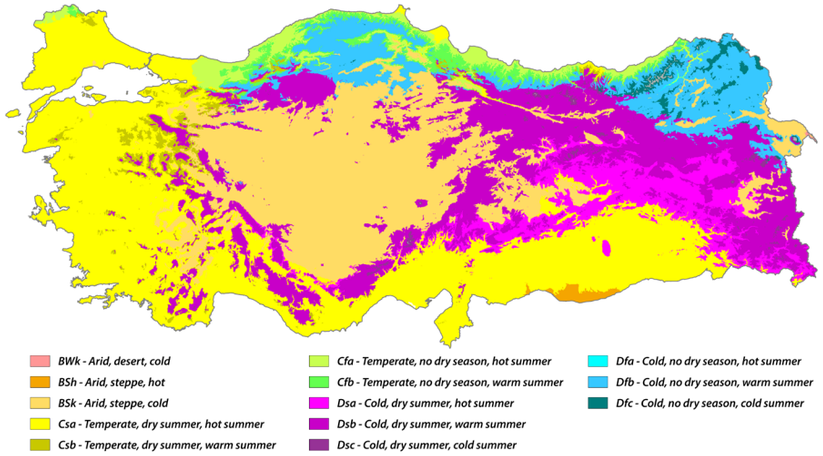
Geography and Climate

Türkiye, being at the crossroads of Europe and Asia, enjoys a unique geographical position. The country, extending for around 1650 km from west to the east and 650 km from north to the south, has a total surface area of 780 000 km^2. It is bounded by the Black Sea to the north, Iran, Georgia and Armenia to the east, Syria and Iraq to the southeast, Bulgaria and Greece to the northwest, and on the south and west is surrounded by the Mediterranean and Aegean Seas.

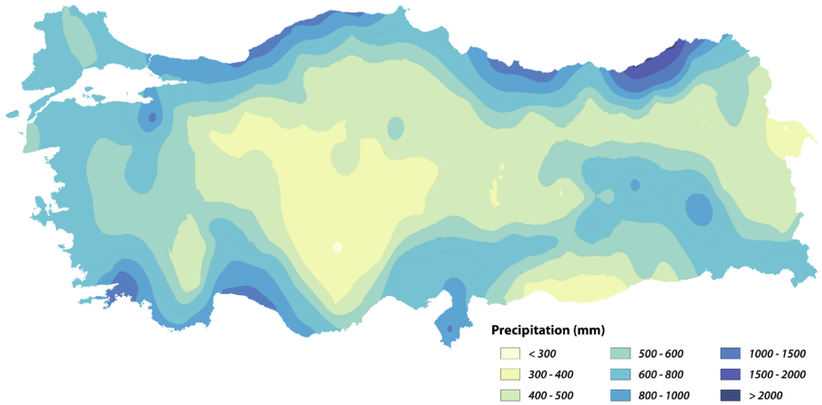
Türkiye exhibits a diverse climate, shaped by its geographical position and varied topography, resulting in the presence of thirteen different climate types. In general, the country experiences a semi-arid climate.

The Aegean and Mediterranean coasts have hot, dry summers and mild, wet winters, while the Black Sea coast is characterized by a temperate and humid climate, receiving the highest annual precipitation, ranging between 1200 and 2400 mm. In contrast, the interior regions, including Central and Eastern Anatolia, feature a continental climate, marked by hot summers, cold and snowy winters, and significantly lower overall precipitation (260-400 mm).





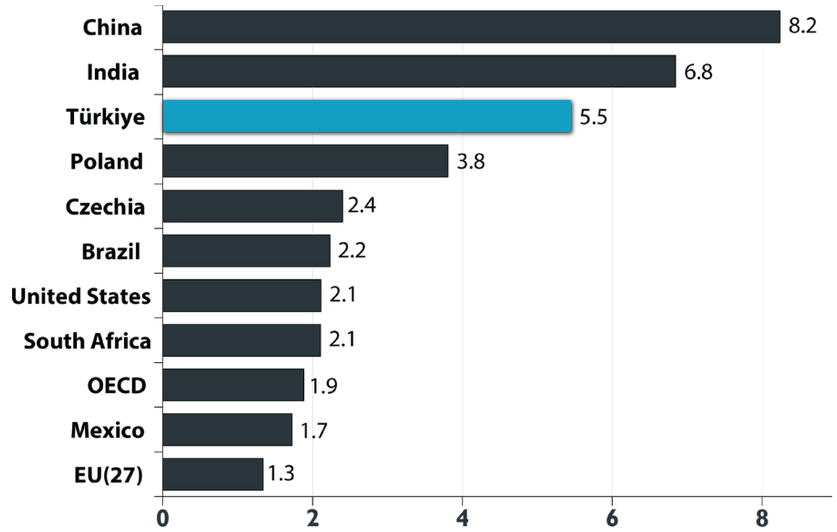
Köppen Climate Types of Türkiye (Beck, H.E. et al., 2023)



Türkiye's Precipitation Map

Economy

A sound macroeconomic strategy, prudent fiscal policies and major structural reforms in the recent past contributed to the steady growth of the Turkish economy. Türkiye is the 17th largest economy in the world with a Gross Domestic Product (GDP) of USD 1.32 trillion as of 2024. It is a member of the OECD and the G20 and an increasingly important donor of official development assistance (ODA). Türkiye has been one of the fastest-growing economies in the OECD over the past decades, with an average annual growth rate of 5.45%.



Annual Average Real GDP Growth Rates (%) (2003-2023)

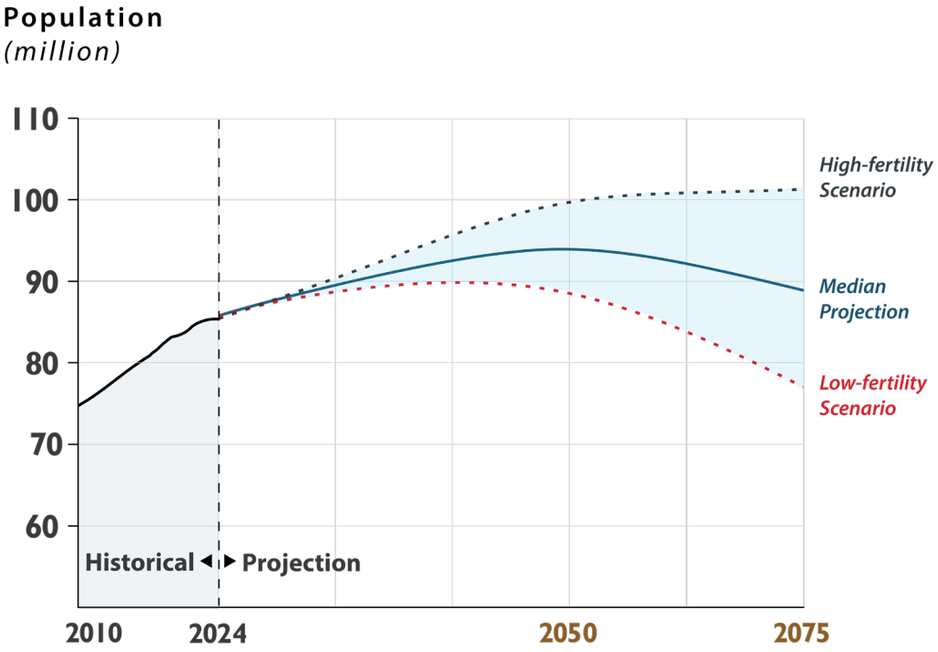
Türkiye's per capita income has exceeded $15 450 and total unemployment rate by the end of 2024 was 8.4%. Türkiye's economy is diversified, with the services sector accounting for about 57% of GDP, industry 26%, and agriculture 6%. Key industrial sectors include automotive, machinery, textiles, chemical, electronics, and construction.

Main Economic Indicators (2024)	
GDP	$1.32 trillion
GDP per capita	$15 461
Unemployment rate	8.4%
Total exports	$262 billion

TÜRKİYE'S ELECTRIC VEHICLE (TOGG) MANUFACTURING PLANT

Population

As of 2024, Türkiye's population exceeds 85.5 million, ranking it among the most populous countries in its region. The median age is about 34 years, indicating a relatively young demographic structure. The population was approximately 21 million in 1950. The country's population has been growing at an average annual rate of 1.3% between 1990 and 2024. By 2024, the nationwide population is 111 persons per square kilometer. Istanbul has the highest population density with 2934 persons per square kilometer.



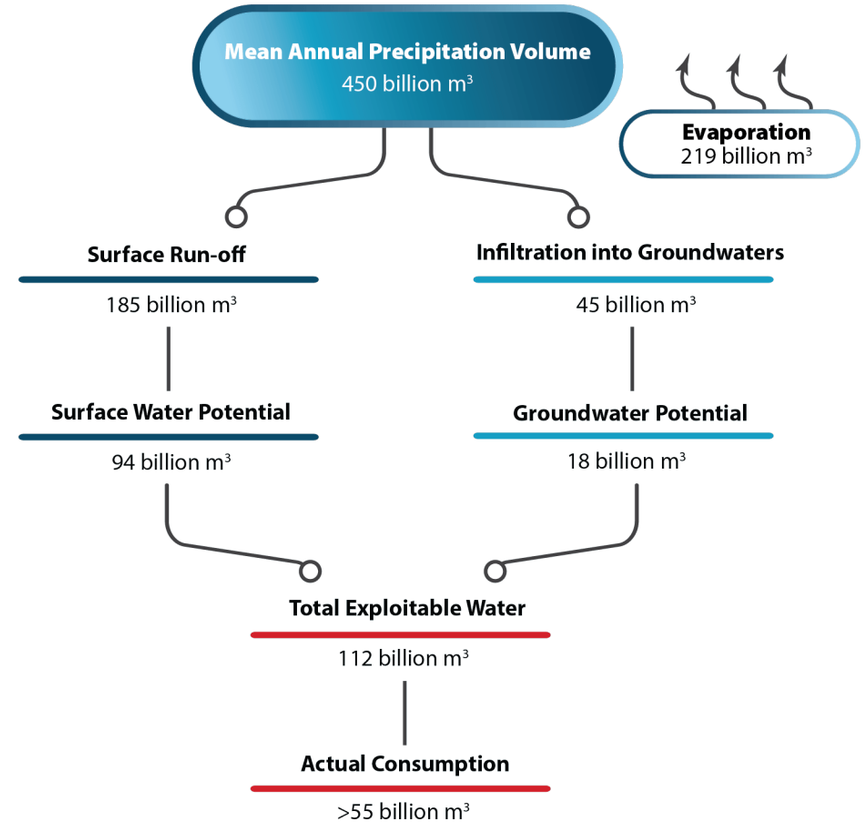
Population Projections (2024-2075)

Life expectancy at birth has exceeded 77 years, reflecting higher living standards. As birth rates are in decline and the median age of the population is on the rise, the population growth is projected to slow down in the coming decades. Even so, Türkiye's youth population, constituting 15.1% of the total, remains higher than the average among the 27 EU member states.

02. WATER RESOURCES

Türkiye's mean annual precipitation is 574 millimeters, amounting to 450 billion cubic meters of water. Of this amount, 219 billion m^3 evaporate, while 45 billion m^3 infiltrate into groundwater. 185 billion m^3 are joined with rivers and lakes as surface water resulting in Türkiye's gross water potential of 230 billion m^3.

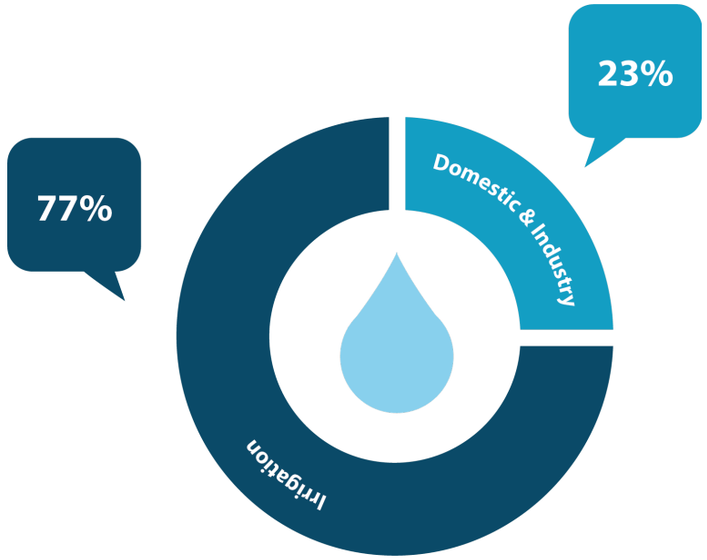
Considering the economic and physical constraints, the annual exploitable water potential, however, is estimated as 112 billion m^3 of which 94 billion is surface and 18 billion is groundwater. Türkiye uses roughly half of its exploitable water potential.



Overall Water Budget of Türkiye

Water Consumption

According to the 2024 results, a total of 57 billion m^3 of water is consumed for various purposes in Türkiye. The total water consumption in Türkiye corresponds to 51% of Türkiye's net water potential. Of this amount, 44 billion m^3 (77%) is used for agricultural irrigation purposes, while the remaining 13 billion m^3 (23%) is consumed to meet domestic and industrial water demands.



Sectoral Water Consumption in Türkiye

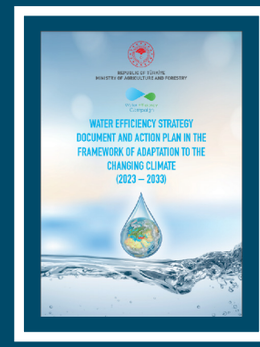
Water Per Capita

As of 2024, the population of Türkiye stands at 85 664 944, and the water availability is as such 1308 m^3 per capita per year. According to the Falkenmark Index, which classifies countries based on the amount of water potential per capita, Türkiye is currently categorized as a "water stressed country".

Per the population projections prepared by the Turkish Statistical Institute (TurkStat), Türkiye's population will reach nearly 90 million in 2030. Based on the projections, and considering the growing impacts of climate change on water resources together with continued population increase, Türkiye is at significant risk of transitioning into a "water-scarce country".

NATION-WIDE WATER EFFICIENCY INITIATIVE

The National Water Efficiency Campaign has been initiated, aiming to ensure the sustainable, equitable, and efficient use of water across all sectors. Within this framework, the "Water Efficiency Strategy Document and Action Plan (2023–2033)" was prepared to assess the current status of water use, evaluate national and international legislation and strategies, and incorporate global best practices. The document defines sector-specific strategies to enhance water efficiency in urban, agricultural, and industrial water use.



Urban Water Efficiency:

Focuses on reducing network losses, managing drinking and potable water systems efficiently, promoting wastewater reuse, and encouraging individual water-saving practices. In all municipalities, it is aimed to reduce the water loss rate to 25% by 2033, and 10% by 2040.

Agricultural Water Efficiency:

Aims to improve irrigation efficiency (60% by 2030 and 65% by 2050) to reduce water losses and promote climate-resilient practices and safeguard food security by adopting water-centric agricultural production planning approach (i.e. "agriculture per available water" model by Türkiye since 2023).

Industrial Water Efficiency:

Encourages cleaner production techniques and water efficiency measures to achieve up to 50% water savings in industrial operations, providing environmental, economic, and public health benefits.

Cross-Sectoral Measures:

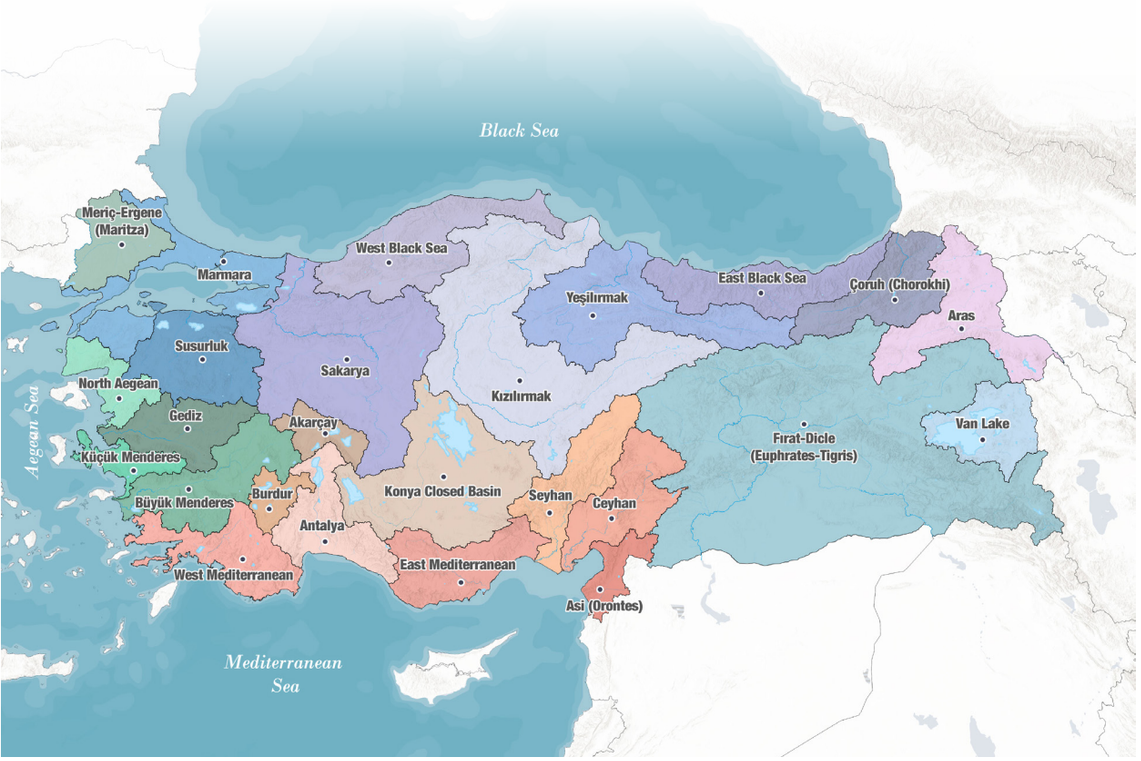
Includes the reuse of rainwater, greywater, and treated wastewater; measurement of water footprint; and basin-level monitoring and planning. These measures aim to optimize water use across sectors and adapt to the projected impacts of climate change on water resources.

The campaign represents a critical step toward transferring Türkiye's water resources to future generations in a sustainable and safe manner.

Surface Water

Türkiye is divided into 25 hydrological basins. The total annual average surface flow in the basins is 185 billion m^3 while 94 billion m^3 is in fact technically and economically exploitable of which more than 40.5 billion m^3 is utilized. Accounting for 30.4% of the country's total water potential, Euphrates-Tigris River Basin is the largest basin in terms of both surface area and water potential.

There is a downward trend observed in surface water flows driven by climate change. The total annual natural flow was 258 billion m^3 in 1988 whereas this amount dropped to 185 billion m^3 in recent years.



River Basins in Türkiye

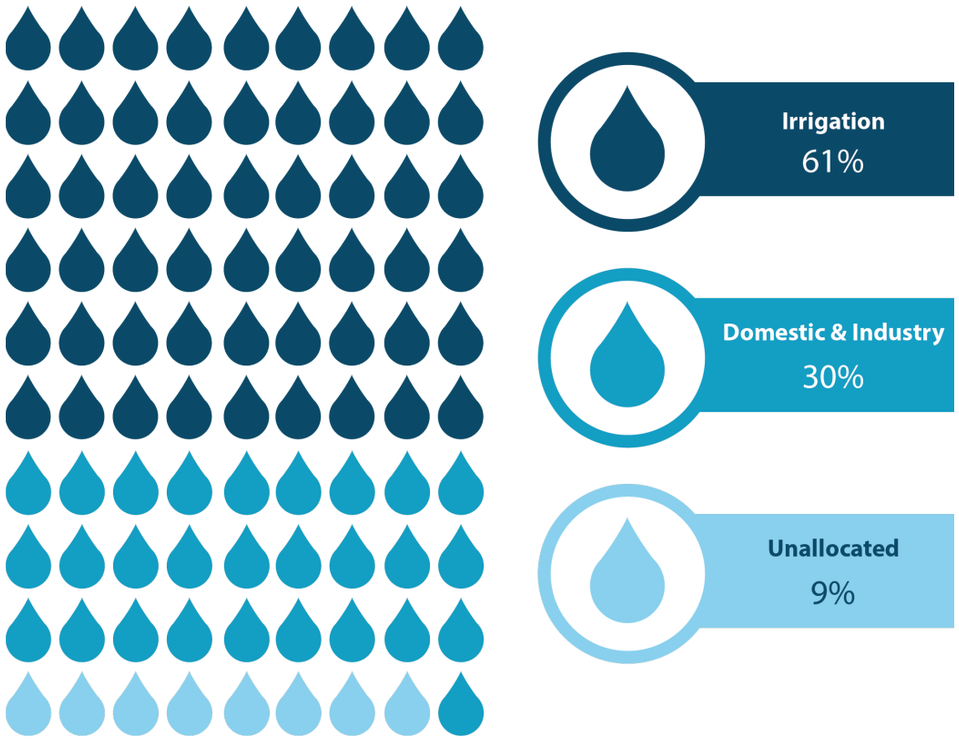
Catchment Areas and Annual Flow of Türkiye's Hydrological Basins

No	Name of the basin	Catchment area (km^2)	Mean annual flow (billion m^3)	Contribution to total (%)
01	Meriç Ergene (Maritza)	14 486	1.7	0.9
02	Marmara	23 074	7.4	4.0
03	Susurluk	24 319	5.0	2.7
04	North Aegean	9 861	2.0	1.1
05	Gediz	17 137	1.8	1.0
06	Küçük Menderes	6 963	0.6	0.3
07	Büyük Menderes	25 960	3.0	1.6
08	West Mediterranean	20 956	6.5	3.5
09	Antalya	20 249	12.9	7.0
10	Burdur Lakes	6 294	0.2	0.1
11	Akarçay	7 995	0.4	0.2
12	Sakarya	63 303	6.5	3.5
13	West Black Sea	28 855	10.8	5.8
14	Yeşilırmak	39 595	7.0	3.8
15	Kızılırmak	82 181	7.0	3.8
16	Konya Closed Basin	49 930	2.4	1.3
17	East Mediterranean	21 150	7.6	4.1
18	Seyhan	22 035	6.2	3.3
19	Asi (Orontes)	7 886	1.8	1.0
20	Ceyhan	21 391	7.7	4.2
21	Euphrates-Tigris (Fırat-Dicle)	176 143	56.3	30.4
22	East Black Sea	22 846	16.4	8.9
23	Çoruh (Chorokhi)	20 248	7.0	3.8
24	Aras (Araks)	27 775	4.5	2.4
25	Van Lake	17 861	2.6	1.4
Total		**778 493**	**185.4**	**100**

Groundwater

The total exploitable groundwater potential of Türkiye excluding the discharge of springs feeding surface water resources is 18 billion m^3. Groundwater resources are used in cases where surface water resources are not available in sufficient quantity or not economically feasible to be utilized. Of the total groundwater reserve, around 91% (16.5 billion m^3) is allocated and approximately 67% of the allocation is used for irrigation and the rest for domestic and industrial purposes.

The groundwater resources are legislated by the Groundwater Law enacted in 1962. As per the law, the groundwater resources are under the decree and disposition of the State. The protection, research, registration and use of these waters are also under the domain of the State. Any well drilled by citizens has to be licensed and registered. Strict regulations concerning groundwater extractions are in effect to prevent over abstraction and existence of unlicensed wells.



Sectoral Use of Groundwater Resources

03. WATER INFRASTRUCTURE

Irrigation

Türkiye is one of the leading agricultural producers in the world, ranking 7th globally with a total agricultural output of approximately $74 billion in 2024. Türkiye produces around 180 types of agricultural products and is largely self-sufficient in many of them. The agricultural sector accounts for about 6% of Türkiye's GDP and employs nearly 15% of the national workforce. With favorable climatic conditions and fertile lands, Türkiye is the world's top producer of nuts, apricots, figs, and cherries, while also ranking second in the production of melons, quinces, cucumbers, and poppy seeds.

The arable area in the country is about 24 million hectares, corresponding to approximately one-third of the total surface area. Considering available technology and economic constraints, 10.5 million hectares of Türkiye's arable land can potentially be irrigated, of which 7.1 million hectares are currently in operation.

Agricultural Use of Land Resources - Million Hectares

Türkiye's Surface Area	78.0
Arable Land*	24.0
Economically Irrigable Land	10.5
Irrigated Land (2023)	7.1

* Grassland and pastures are not included.

The Ministry of Agriculture and Forestry of Türkiye is in charge of developing national policies to ensure food security and steer sustainable agricultural production. State Hydraulic Works (DSI) under the Ministry of Agriculture and Forestry, is the main investment body for the development of irrigation infrastructures. To improve irrigation water use efficiency, DSI has shifted its policy from classical open channel distribution networks to modern pressurized irrigation systems. The share of pressurized piped irrigation networks has increased from 6% to 35% over the past 20 years and is expected to reach 45% by 2028. In addition, efforts are ongoing in Türkiye to expand the use of smart water management systems that enhance irrigation efficiency across the country.

The operation and maintenance (O&M) of the irrigation systems were carried out by governmental organizations until the early 1990s. In line with the decentralized water management policy, the majority of the systems have been transferred to the Irrigation Unions. In accordance with the Law on Irrigation Unions, these non-governmental organizations supervised by DSI collect payments from farmers primarily for O&M and administrative payback expenditures.

Ceylanpınar–Mardin Irrigation Canal within the Southeastern Anatolia Project (GAP)

- 221 km long, with a capacity of 200 m^3/s
- Water supply for an area of 213 770 hectares
- Additional employment for approximately 400 000 people

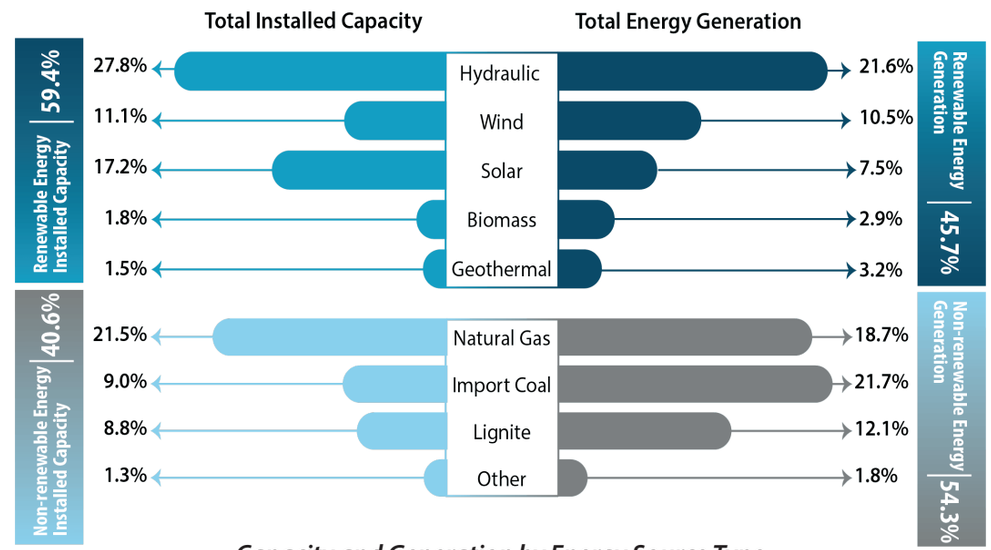
Hydropower

Türkiye has one of the fastest-growing energy demands among OECD countries over the last decades. Driven by the economic development and population growth, demand for electricity is surging, with annual net electricity consumption of approximately 3.4 MWh/person. Hydropower is the most instrumental national source of energy to lower Türkiye's foreign-source (primarily natural gas) dependency at the level of 68% by 2023.

Türkiye's gross hydropower potential is 433 billion kWh/year, with a technical potential of 216 billion kWh/year. The net potential that is technically, economically, environmentally, and socially viable amounts to 180 billion kWh/year. By the end of 2024, hydroelectric generation reached 74 882 GWh, corresponding to approximately 42% of this potential.

The current installed hydropower of more than 770 hydroelectric plants in operation is around 32 200 MW. As of the end of September 2025, 26.6% of Türkiye's installed power capacity is generated from hydropower sources. According to Türkiye's National Energy Plan, hydropower plants are projected to achieve an installed capacity of 35 100 MW in the medium to long term.

The hydroelectric power potential is not uniform in terms of topography and hydrology. The highest energy potential is found in Türkiye's major transboundary basin, Euphrates-Tigris Basin. With the completion of all hydropower projects in the basin, it will account for approximately 20% of the country's hydropower potential.



Capacity and Generation by Energy Source Type

Urban Water and Wastewater

In parallel to the global urbanization phenomenon, more than 90% of the Turkish population live in cities. The Law No. 2560 issued for the establishment of the Istanbul Water and Sewerage Administration (ISKI) in 1981 paved the way for the establishment of other Water and Sewerage Administrations to provide water and wastewater services to the citizens in the other metropolitan municipalities.

There are 30 metropolitan water and sewerage administrations in Türkiye, serving roughly 78% of the country's population. The remaining populations are served by water departments of the non-metropolitan municipalities and Special Provincial Administrations. As a government owned bank, the Bank of Provinces (İlbank), affiliated to the Ministry of Environment, Urbanization and Climate Change, meets the financing needs for investments of the local authorities. State Hydraulic Works (DSI) under the Ministry of Agriculture and Forestry plans and constructs large-scale water infrastructure (e.g. dams, transmission lines) as well as wastewater projects and transfers these to the Water and Sewerage Administrations for operation and maintenance.

99% of the municipal populations are connected to a water network while roughly 93% are served with sewage network systems in 2024. With more than 1300 wastewater treatment plants in the country, more than 75% of the population are served with wastewater treatment facilities. As semi-autonomous bodies under the 30 Metropolitan Municipalities, Water and Sewerage Administrations have played a critical role in the provision of urban water and wastewater services in the face of the rapid urbanization in the past decades. Given the large success of the administrations there are on-going discussions to form similar organizations in the non-metropolitan cities.

İstanbul Ambarlı WWTP

Konya Plain Project (KOP)

Konya Plain Project is an integrated development plan in the Konya Plain region situated in Central Anatolia. As one of the 5 main development axes, "the land and water resources development program" aims to meet the regional irrigation, domestic and industrial water needs, in order to prevent excess groundwater extraction, ensure balance in the groundwater table, raise agricultural yields, introduce modern irrigation systems, promote stock breeding, and protect the environment.

The stock of 3 million ha agricultural land in the region corresponds to 12.4% of that of the total country. The program includes 14 large irrigation network systems, 3 drinking water treatment plants and 1 hydropower plant. 1.1 million ha will be equipped with modern irrigation facilities.

To date, approximately 43% of irrigation projects have been completed. Upon full implementation, the KOP is projected to generate direct employment for more than 1.5 million people, and contribute approximately $3.12 billion annually to the national economy, including $2.75 billion from irrigation benefits, $300 million from energy savings, and $75 million from drinking water improvements.

Blue Tunnel Project - KOP

Photo: Anadolu Agency

04. WATER GOVERNANCE

As per Article No.168 of the Turkish Constitution, "natural wealth and resources" are under the control of and at the disposal of the state. The right to explore and exploit the natural resources is vested in the state. The government may, however, delegate its rights to legal and natural persons for a certain period of time.

Türkiye has taken major steps in the management of water resources. As a result of an institutional reform in 2011, the Ministry of Forestry and Water Affairs (reorganized in 2018 as Ministry of Agriculture and Forestry) was established as the competent authority to develop and coordinate Türkiye's water policy including adaptation of Turkish water legislation to the European Union acquis together with tasks as development, management and protection of water resources.

One of the mandates of the Ministry of Agriculture and Forestry, through the General Directorate of Water Management, is to conduct the necessary coordination for the generation and implementation of river basin management plans. Given that water is a cross-cutting issue, the Ministry of Agriculture and Forestry operates in cooperation with different ministries, public bodies and other stakeholders related to water management issues.

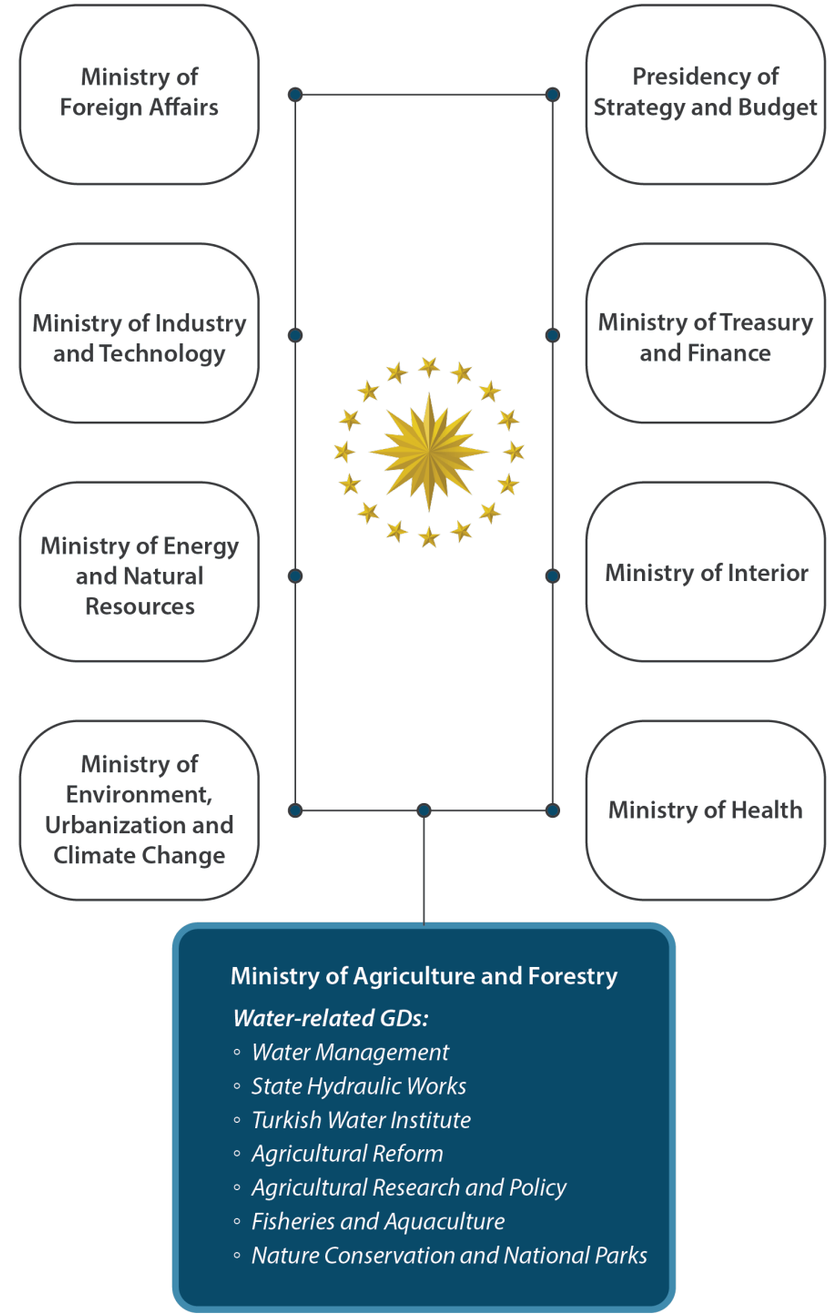
To create a platform for coordination at the highest level, the Water Management Coordination Committee (renamed in 2023 as National Water Board) was established in 2012 for the coordination and cooperation in water issues with the highest level of participation from relevant institutions. The Board presided by the Minister of Agriculture and Forestry in which other member ministries' vice ministers participate, plays an important role at the central level and steers national water policies.

The Basin Water Boards and the Provincial Water Boards composed of local bodies of the ministries, water and sewerage administrations, irrigation unions and other relevant stakeholders (including NGOs and academia) ensure coordination for water issues at the basin and provincial levels.

As an EU accession country, Türkiye has largely aligned its national legislation with EU water-related directives.

A draft Water Law is being prepared by the Ministry of Agriculture and Forestry aimed at establishing a comprehensive legal framework to clarify roles and responsibilities in water management. The law is to set out overarching principles and norms, addressing key issues such as basin-scale water management and allocation, full cost recovery, reuse of treated wastewater, and coordination mechanisms in water governance.

Key Ministries in Water Management



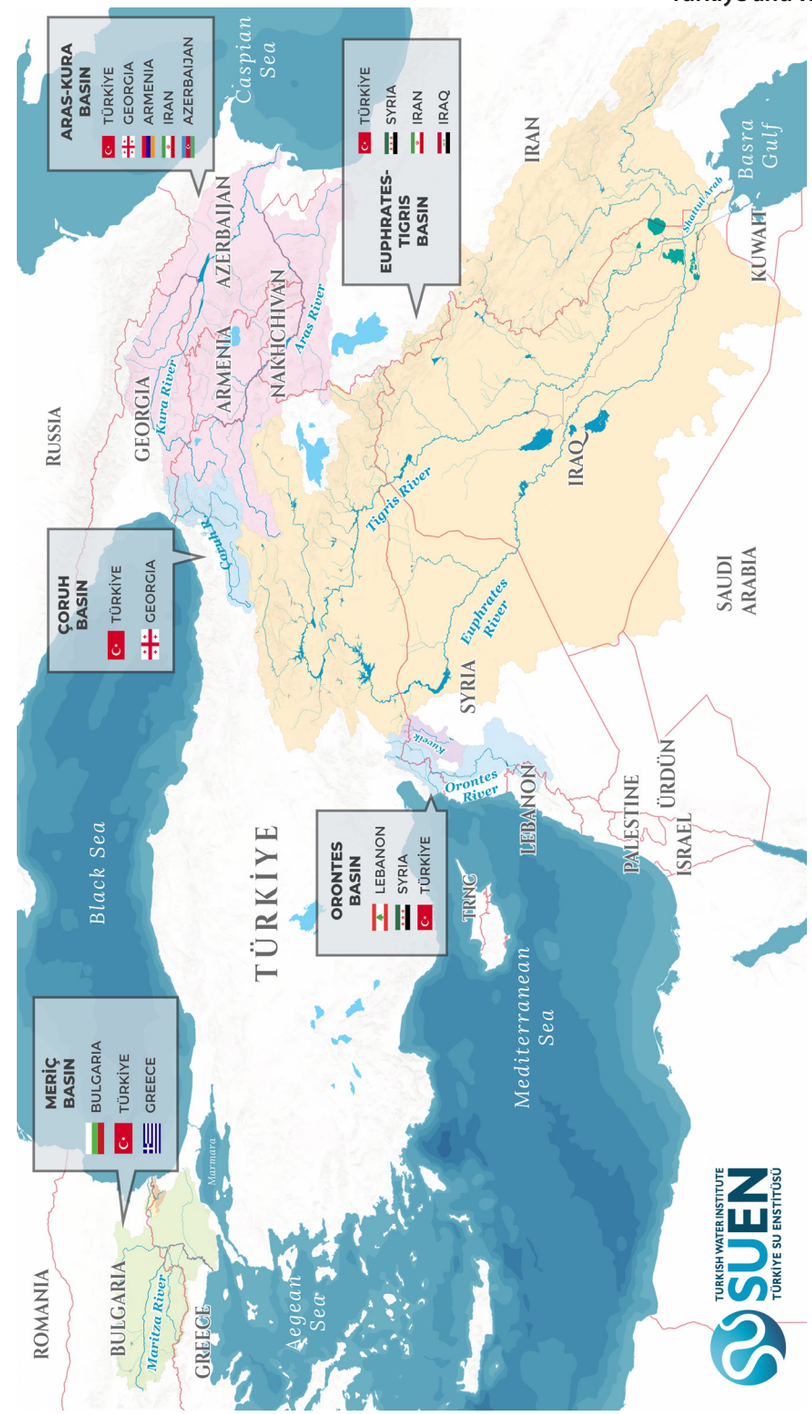
05. TRANSBOUNDARY WATERS

Türkiye has 5 transboundary river basins. North to the south, these are Çoruh (Chorokhi) River Basin, Aras-Kura River Basin, Euphrates-Tigris (Fırat-Dicle) River Basin, Orontes (Asi) River Basin; and in the west, Meriç (Maritza) River Basin. 38.4% of Türkiye's water potential is of transboundary nature.

Transboundary Waters: A Source of Cooperation

Türkiye's policy regarding the use of transboundary rivers is based on the following principles:

- First and foremost, Türkiye views water as a catalyst for cooperation.
- Each riparian state of a transboundary river system has the sovereign right to make use of the water in its territory without giving "significant harm" to other riparians.
- Transboundary waters should be used in an equitable, reasonable and optimum manner.
- Equitable use does not mean the equal distribution of waters of a transboundary river among riparian states.
- Economic development and spreading of prosperity to all people in the region will be the most effective means of creating a climate of peace and good neighborly relations in the Middle East.
- The looming water shortage at global level can only be addressed through a holistic approach and with technical and financial support by the developed countries, regional and international organizations and financial institutions.



Çoruh (Chorokhi) Basin

The Çoruh River Basin is located in the northeastern part of Türkiye, extending into Georgia before discharging into the Black Sea at Batumi. The overall length of the Çoruh River, originating from the Mescit Mountain in Türkiye, is around 434 km, of which 410 km is within Turkish borders. After leaving the Turkish territories, the river flows along the Türkiye–Georgia border, then continues within Georgia for 24 km before reaching the Black Sea in Batum. The basin is characterized by rich biodiversity, high ecological value, and significant potential for hydropower generation.

Yusufeli Dam and Hydroelectric Power Plant

The Çoruh River, among the fastest-flowing rivers in the world, has great hydropower potential. Türkiye has constructed large-scale dams and hydropower stations on the river, generating billions of kWh of electricity annually. Among these projects, the Yusufeli Dam stands out as a remarkable example of engineering and renewable energy utilization. Located in the Çoruh Basin, the Yusufeli Dam is Türkiye's tallest dam at 275 meters and ranks fifth worldwide among dams of the double-curvature concrete arch type.

Completed in 2022, the Yusufeli Dam and Hydroelectric Power Plant has an installed capacity enabling an average annual energy production of approximately 1.9 billion kilowatt-hours, contributing approximately 2.5% of Türkiye's overall hydroelectric power generation.

Aras (Araks)-Kura Basin

Both the Aras and Kura rivers originate in Türkiye, flow through and are fed by tributaries from several countries, merge in Azerbaijan, and eventually reach the Caspian Sea. The Aras River, with a total length of 1027 km, flows for 337 km within Türkiye, then forms the borders of Türkiye-Armenia, Türkiye-Nakhchivan, Iran-Nakhchivan, Iran-Armenia, and Iran-Azerbaijan, before finally joining the Kura River in Azerbaijan. The Kura River has a total length of 1290 km, of which 178 km flows within Türkiye, then continues through Georgia and Azerbaijan.

The Aras-Kura River Basin covers about 190 000 km^2, including the territories of Türkiye, Georgia, Armenia, Iran and Azerbaijan. It is the most important basin in the South Caucasus region in terms of surface area, water potential, and socio-economic impact. The total water potential of the basin is 26 billion m^3, with 9 billion m^3 (35%) contributed by the Aras River and 17 billion m^3 (65%) by the Kura River. As the flow of the rivers is highly variable, navigation is very limited. Agriculture and livestock play an important economic role within the Turkish part of the basin. The Arpaçay Dam, located on the Arpaçay River, a tributary of the Aras River on the Türkiye-Armenia border, has been jointly operated by both countries since 1985.

Euphrates-Tigris (Fırat-Dicle) Basin

Among the 263 transboundary lakes and rivers worldwide, the Euphrates-Tigris Basin stands out as one of the most outstanding in the world. The combined water potential of the rivers including all tributaries is around 110 billion cubic meter.

- The Euphrates River is formed by the confluence of the Karasu River originating from the mountainous terrain in Erzurum and the Murat River which rises in the Diyadin/Ağrı. The Euphrates flows about 480 kilometers in Türkiye, around 550 kilometers in Syria, and then about 1120 kilometers in Iraq.
- The Tigris River, on the other hand, is sourced from Lake Hazar in Elazığ and fed by tributaries arising from the mountainous terrain of Türkiye's Eastern Anatolia Region and the Zagros Mountains in Iran. It is approximately 1900 kilometers long, with about 480 kilometers of it within Türkiye, around 50 kilometers forming part of the Türkiye-Syria border and the remainder flowing through Iraq.
- In Al-Qurna, both rivers merge to form the Shatt al-Arab, approximately 200 kilometers before discharging into the gulf.

The part of Euphrates-Tigris Basin located in Türkiye account for about one-third of Türkiye's total water potential. Türkiye contributes to more than 95% of the average annual flow of the Euphrates; the remaining comes from Syria. As for the Tigris, about 45% of the total average flow comes from Türkiye while Iran and Iraq contribute to the rest.

Southeastern Anatolian Project (GAP)

The Southeastern Anatolia Project (GAP as Turkish acronym) was at the very outset perceived as a program to develop land and water resources in the region. GAP aims to reduce the development gap between the Southeast Anatolia Region and other regions by raising the income level and life standard of the people in this region; and to contribute to national development goals such as social stability and economic growth by increasing employment opportunities in rural areas.

The project was initially planned as a package of projects related to irrigation and energy production on the Euphrates-Tigris Basin. Altogether, these projects envisage the construction of 22 dams, 19 hydraulic power plants (HPP) and irrigation networks for an area of circa 1.8 million hectares. The GAP has over the time transformed into an integrated regional development project now also encompassing infrastructure development in industry, transportation, education, health and urban and rural facilities to reduce regional disparities and contribute to the country's economic and social development.

Orontes (Asi) Basin

Türkiye is a downstream country in the Orontes River (known as the Asi River in Turkish). The northwards flowing river originates from the Bekaa Valley in Lebanon, and passes through Syria and Türkiye before reaching the Mediterranean Sea. The river joins its major tributaries, the Karasu and Afrin streams, and ultimately discharges into the Mediterranean Sea in Türkiye. The Afrin River, an important tributary, originates in Türkiye, crosses into Syria, and re-enters Türkiye before joining the Orontes. Another significant tributary, the Karasu River, also originates in Türkiye, forming part of the Türkiye–Syria border.

The Orontes River has a total length of 420 km, of which 55 km lie in Lebanon, 303 km in Syria and along the Türkiye–Syria border, and 2 km in Türkiye. Türkiye and Syria had reached an agreement in 2009 to build a friendship dam on the river to prevent flooding and better utilize the river water potential. Although the foundation was laid down, the project had to be stopped due to the instability in Syria.

Meriç (Maritza) Basin

The Meriç River forming a border between Türkiye and Greece originates from the Rila Mountain ranges in Bulgaria. The river flows 320 km long through the Bulgarian territories, 13 km through Turkish territories and constitutes an approximately 200 km long border between Türkiye and Greece eventually flowing into the Aegean Sea. Major transboundary tributaries include the Arda (Bulgaria, Greece and Türkiye), Tunca (Bulgaria, Türkiye) and Biala/Erithropotamos (Bulgaria, Greece). The Ergene River is another important tributary located in Türkiye.

The lands are highly fertile in the basin with high potential of agricultural production. The main problems that Türkiye faces in the Meriç River Basin are floods and pollution as well as droughts during summer periods.

The delta of the Meriç River, shared by Greece and Türkiye with 150 km^2 out of its 188 km^2 located within Greek territory is of major ecological significance and stands as one of the most important wintering areas for birds in the Mediterranean.

Ilısu Dam and Hydroelectric Power Plant

TRNC WATER SUPPLY PROJECT

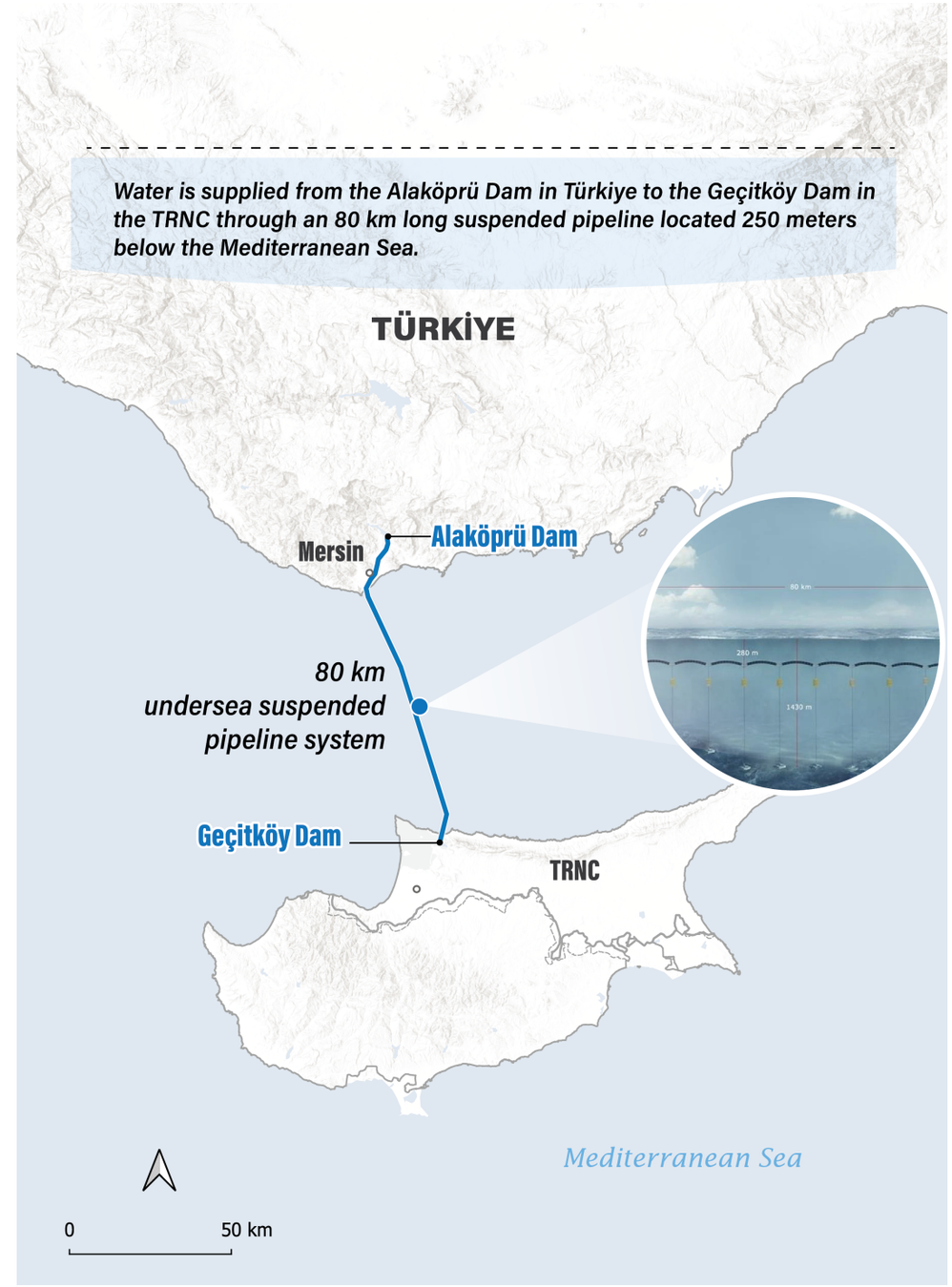
As an island in the Mediterranean Sea, Cyprus has very limited water resources. Nearly all water needs were met with groundwater resources putting grave pressure on water quality and quantity. "The Turkish Republic of Northern Cyprus (TRNC) Water Supply Project" was launched in 2015 to alleviate the long-term water demand of the TRNC by supplying municipal and irrigation water from south Türkiye to Northern Cyprus via a suspended pipeline across the Mediterranean Sea.

The project, also coined as "the project of the century", has an annual water supply capacity of 75 million m^3 through a total length of 106.3 km pipeline. With the accomplishment of the project, completed by State Hydraulic Works (DSI) under the Ministry of Agriculture and Forestry of Türkiye, TRNC is enabled to meet the water demand for the next 50 years. The transmitted water will be used for drinking, industrial and irrigation purposes and will be a significant contribution to the economic development of the region enabling irrigation of an area of 4824 ha and increase in crop efficiency by 2.5 times.

The project, opened with a grand ceremony in 2015, is technologically unique in that such a long-distance transmission line with approximately 80 km distance of sea transition is a first in the world. Sea transition was implemented by a very special 1.6-meter diameter polyethylene pipe hanging in 250 m depth from sea level by tying the pipe with anchoring cables every 500 m to the sea bottom.

The project, with a total cost of more than 500 million USD, included 4 main components: Turkish territories, sea crossing, TRNC territories and TRNC distribution networks encompassing the construction of concrete face rock-fill Alaköprü Dam (storage capacity of 130.5 million m^3) in Türkiye and Geçitköy Dam (storage capacity of 26.5 million m^3) in TRNC, a water treatment plant in TRNC and pumping stations, balancing tanks and transmission lines in both countries.

Between 2015 and 2024, a total of 236 million m^3 of water has been transferred to the TRNC through the project, with a significant portion meeting drinking water needs. Most recently, the agricultural component of the project was also put into operation, and farmland in Güzelyurt has begun to be irrigated from the Geçitköy Dam.



06. INTERNATIONAL WATER AID ACTIVITIES

Today's global challenges, including climate change, conflict, and forced migration, continue to intensify humanitarian needs across the world, necessitating urgent and coordinated responses. Ranking among the most generous countries in terms of aid relative to national income, Türkiye remains one of the world's leading contributors to development aid.

In the field of water, Türkiye has sustained extensive humanitarian and development efforts both in-country and abroad. As of 2024, Türkiye remained among the top refugee-hosting countries globally, with approximately 3.1 million refugees, predominantly from Syria. The majority of refugees live in urban and rural areas under temporary protection status, where uninterrupted water supply and sanitation services are ensured thanks to significant infrastructural investments. Türkiye has allocated over $40 billion to support Syrians under temporary protection since 2011. It is estimated that around 4–5% of this amount (~$1.6–2 billion) has been directly or indirectly used for water, sanitation, and hygiene (WASH) services.

Türkiye provides technical assistance, including feasibility studies, advisory services, and equipment grants to various countries, primarily in Africa. A notable example is the Ambouli Dam in Djibouti, a flagship project completed in 2021 at a cost of €11 million, aimed at enhancing flood resilience and water storage capacity. In addition, Türkiye supports clean water access by drilling wells and laying water pipelines, while also responding to urgent humanitarian needs such as shelter and food in disaster-affected regions. Since 2005, the State Hydraulic Works (DSİ) has delivered clean and safe drinking water to nearly 2 million people in 15 African countries.

Türkiye also shares its knowledge and experience through capacity-building programs tailored to address water and sanitation challenges. For instance, as an international knowledge hub, SUEN has delivered training programs to more than 2500 professionals from over 55 countries in various fields of water and wastewater management.

Waterwell Drilling Activities in Africa

Ambouli Friendship Dam, Djibouti

Sources

Beck, H.E., T.R. McVicar, N. Vergopolan, A. Berg, N.J. Lutsko, A. Dufour, Z. Zeng, X. Jiang, A.I.J.M. van Dijk, D.G. Miralles. High-resolution (1 km) Köppen-Geiger maps for 1901–2099 based on constrained CMIP6 projections. Scientific Data 10, 724, doi:10.1038/s41597-023–02549 6, 2023.

Development Initiatives, Global Humanitarian Assistance Report, 2023.

DSI, Annual Activity Report, 2023.

DSI, Annual Activity Report, 2024.

DSI, Water Resource Statistics, 2024.

DSİ, Strategic Plan (2024-2028), 2024.

Turkish State Meteorological Service, 2024.

Republic of Türkiye Ministry of Energy and Natural Resources, Annual Activity Report, 2024.

Republic of Türkiye Ministry of Energy and Natural Resources, National Energy Plan, 2022.

Republic of Türkiye Ministry of Agriculture and Forestry, Water Efficiency Strategy Document and Action Plan within the Framework of Adaptation to the Changing Climate (2023 – 2033), 2023.

Sustainable Food Systems Country Report Türkiye, 2021.

Turkish Statistical Institute (TURKSTAT) Database (www.turksat.gov.tr), 2024 & 2025.

Türkiye / Energy Market Regulatory Authority (EMRA), 2024.

UNHCR, Global Report, 2024.

UNHCR, Republic of Türkiye Annual Results Report, 2024.

World Bank, World Development Indicators, 2025.

For your notes

Libadiye Cad. No: 52/1
Küçükçamlıca - Üsküdar 34696 İstanbul
www.**suen**.gov.tr