SDG 6 and TURKEY

SUSTAINABLE DEVELOPMENT GOALS

TURKISH WATER INSTITUTE
SUEN
TÜRKİYE SU ENSTİTÜSÜ

Based on the listed sources in the last page, this publication is a compilation of the web-based literature related to Sustainable Development Goals and a reflection of Turkey's 2nd Voluntary National Review (VNR) Report.

March 2020

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Background on Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The objective was to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing our world.

The SDGs replaced the Millennium Development Goals (MDGs), which started a global effort in 2000 to tackle the indignity of poverty. The MDGs established measurable, universally-agreed objectives for tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all children, among other development priorities.

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

The 17 SDGs are integrated—that is, they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability.

Sustainable Development Goal 6: Clean Water and Sanitation for All

Water scarcity affects more than 40 percent of people, an alarming figure that is projected to rise as temperatures do. Although 2.1 billion people have improved water sanitation since 1990, dwindling drinking water supplies are affecting every continent.

More and more countries are experiencing water stress, and increasing drought and desertification is already worsening these trends. By 2050, it is projected that at least one in four people will suffer recurring water shortages.

With the recognition of SDG 6, it was the first time that a development goal dedicated exclusively to water and sanitation at the global level was achieved. SDG 6, in general, aims at "ensuring availability and sustainable management of water and sanitation for all". The goal has eight targets to be measured by eleven indicators (see Page 9 for details).

Safe and affordable drinking water for all by 2030 requires we invest in adequate infrastructure, provide sanitation facilities, and encourage hygiene. Protecting and restoring water-related ecosystems is essential.

Ensuring universal safe and affordable drinking water involves reaching over 800 million people who lack basic services and improving accessibility and safety of services for over two billion.

In 2015, 4.5 billion people lacked safely managed sanitation services (with adequately disposed or treated excreta) and 2.3 billion lacked even basic sanitation.

SDG 6-Related Global Facts and Figures

5.2 Billion

71 percent of the global population, 5.2 billion people, had safely-managed drinking water in 2015, but 844 million people still lacked even basic drinking water.

2.9 Billion

39 percent of the global population, 2.9 billion people, had safe sanitation in 2015, but 2.3 billion people still lacked basic sanitation. 892 million people practiced open defecation.

80%

80 percent of wastewater goes into waterways without adequate treatment.

2 Billion

Water stress affects more than 2 billion people, with this figure projected to increase.

80%

80 percent of countries have laid the foundations for integrated water resources management.

70%

The world has lost 70 percent of its natural wetlands over the last century.

Global SDG 6 Targets and Indicators

The global indicator framework was developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) and agreed to, as a practical starting point at the 47th session of the UN Statistical Commission held in March 2016. The report of the Commission, which included the global indicator framework, was then taken note of by UN Economic and Social Council (ECOSOC) at its 70th session in June 2016.

Targets		Indicators	
6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1	Proportion of population using safely managed drinking water services
6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2.1	Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.1	Proportion of wastewater safely treated
		6.3.2	Proportion of bodies of water with good ambient water quality
6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.1	Change in water-use efficiency over time
		6.4.2	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
6.5	By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	6.5.1	Degree of integrated water resources management implementation (0-100)
		6.5.2	Proportion of transboundary basin area with an operational arrangement for water cooperation
6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	6.6.1	Change in the extent of water-related ecosystems over time
6.A	By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	6.A.1	Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan
6.B	Support and strengthen the participation of local communities in improving water and sanitation management	6.B.1	Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management

Global Progress of SDG 6 in 2019

Despite progress, billions of people still lack safe water, sanitation and handwashing facilities. Data suggests that achieving universal access to even basic sanitation service by 2030 would require doubling the current annual rate of progress.

- Globally, the proportion of population using safely managed drinking water services increased from 61 to 71 per cent between 2000 and 2015 and remained unchanged in 2017. An additional 19 per cent of the global population used basic drinking water services. This means that 785 million people still lacked even a basic drinking water service.
- The global population using safely managed sanitation services increased from 28 per cent in 2000 to 43 per cent in 2015 and to 45 per cent in 2017, with the greatest increases occurring in Latin America and the Caribbean, sub-Saharan Africa and East and South-East Asia. Between 2000 and 2017, the proportion lacking even a basic sanitation service decreased from 44 to 27 per cent, yet 701 million people still practiced open defecation in 2017.
- In 2017, some 60 per cent of people worldwide and only 38 per cent in least developed countries had a basic handwashing facility with soap and water at home, leaving an estimated 3 billion people without basic handwashing facilities at home.
- In 2016, one third of all primary schools lacked basic drinking water, sanitation and hygiene services, affecting the education of millions of schoolchildren, but particularly girls managing menstruation, and one in four health-care facilities worldwide lacked basic water services, affecting more than 2 billion people.
- Approximately one third of countries have medium or high levels of water stress. Almost all countries that have registered high water stress are located in North Africa and West Asia or in Central and South Asia, and these levels indicate serious water difficulties in the supply of freshwater, at least during parts of the year.
- Of 172 countries, 80 per cent have medium-low implementation or better of integrated water resources management. However, 60 per cent of countries are unlikely to reach the target of full implementation by 2030.
- Following several years of steady increases and after reaching $9 billion in 2016, ODA disbursements to the water sector declined by 2 per cent from 2016 to 2017. However, ODA commitments to the water sector jumped by 36 per cent between 2016 and 2017, indicating a renewed focus by donors on the sector.

TURKEY'S POLICY AND ACHIEVEMENTS IN SDG 6 TARGETS

Institutional Responsibility of SDG 6

The Presidency of Strategy and Budget under the Presidency of the Republic of Turkey is the national focal point for sustainable development in our country. The Turkish Statistical Institute (TurkStat) is in charge of coordination of data procurement and consolidation process concerning all SDG indicators.

The Ministry of Agriculture and Forestry is the national coordinating body with regard to SDG 6. Yet there are other supporting institutions for the goal.

SDG 6 Coordinator	**MINISTRY OF AGRICULTURE AND FORESTRY**
Responsible and Relevant Institutions	Presidency of Strategy and Budget
	Ministry of Environment and Urbanisation
	Ministry of Foreign Affairs
	Ministry of Treasury and Finance
	Ministry of Interior
	Ministry of Health
	Ministry of Agriculture and Forestry
	General Directorate of State Hydraulic Works (DSI)
	Bank of Provinces (ILBANK)
	Union of Municipalities of Turkey (TBB)
	Turkish Water Institute (SUEN)

Policies and Legislation for the Achievement of SDG 6

In addition to the National Development Plan and strategic plans of relevant public institutions, SDG 6 is supported by other key policy documents including the

- Basin Protection Action Plans,
- River Basin Management Plans,
- Basin Master Plans,
- Water Quality Action Plans,
- Drinking Water Basins Protection Action Plans,
- Climate Change Action Plan (2011-2023),
- Turkey's Climate Change Adaptation Strategy and Action Plan,
- Flood Management Action Plans,
- Drought Management Action Plans,
- Sectoral Water Allocation Plans,
- National Basin Management Strategy,
- Wastewater Action Plan,
- Drinking Water Conservation Plans and
- Action Plan for the Program on Enhancing Efficiency of Water Use in Agriculture.

The main policies in line with SDG 6 are as follows:

- Establishing an integrated water resource management model,
- Developing a national basin-scale classification system in a way that allows for the conservation and sustainable use of water resources,
- Identifying and monitoring the quantity and quality of water bodies (both the groundwater and surface water) as well as the protection and improvement of water resources, the prevention and control of water pollution,
- Securing the water supply system from source to tap for the entire urban and rural population, improve the water distribution networks to prevent water losses/leaks.
- Ensuring financial sustainability in the provision of drinking water and sanitation investment and services,
- Mainstreaming water treatment facilities and operate them in line with the standards based on the required environmental protection level and classification of water basins,
- Promoting the reuse of treated wastewater,
- Water savings in the basins by assessing the effects of climate change and all activities on water quality and quantity in basins.

Measures for the sustainable management of water resources in order to protect and develop the potential of groundwater and surface water, prevent pollution as well as access to safe drinking water and sanitation services are regulated in detail in our legislation. In general, legislative standards regarding water pollution and water quality are in line with the EU standards.

MAJOR DEVELOPMENTS AND ACHIEVEMENTS IN SDG 6

With the integrated water management approach, SDG 6 is assessed on three focus areas:

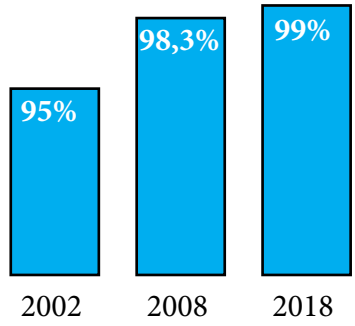
i) Access to drinking water and sanitation services;

ii) Effective management of water resources;

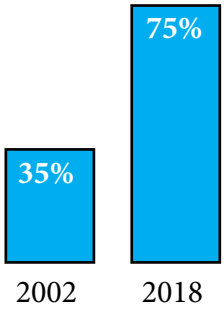
iii) Preventing water pollution and improving water quantity and quality.

SDG 6.1, SDG 6.2 & SDG 6.3

In terms of access to drinking water and sanitation services, a very large portion of the population is served through the central and local governments' investments. While the population using safely managed drinking water services was 95% in 2002, this rate reached 99% in 2018 (SDG 6 Indicator 6.1.1).



Share of population using safely managed drinking water services



Proportion of wastewater safely treated

In the same period, the rate of municipality population using safely managed wastewater and sanitation systems increased from 83% to 90%, the number of domestic wastewater treatment facilities reached from 126 to 881 and the rate of municipality population using the services increased from 35% to 75 % (SDG 6 Indicator 6.3.1).

Water and sanitation infrastructure projects are carried out by local administrations with the contribution of central government across Turkey. Under the Water and Sewer Infrastructure Program (SUKAP) launched in 2011, investments by local administrations are supported with the funds transferred from the central budget. Water and sanitation infrastructure projects are outlined hereafter.

WATER AND SEWER INFRASTRUCTURE PROGRAM (SUKAP)	
SDG Targets	6.1 - 6.2 - 6.3 - 6.4
Executing Entity	ILBANK
Start & End Dates	2011-Ongoing
The Program provides grants covering the half of project cost from the central budget to the municipalities with a population of 25,000 or less for drinking water and sanitation services. The Program also ensures the improvement of the quality of drinking water, which directly affects human health in the municipalities and commissioning of new water resources. Further, effective, efficient, and environmentally sensitive city infrastructure facilities are established by addressing the need for sewer infrastructure and wastewater treatment plants. To date, 1,289 works have been initiated with a total project amounted of 8.6 billion TL (at 2019 prices) (3.14 billion USD). For these projects, 3.4 billion TL (at 2019 prices) (1.24 billion USD) in grants and 5.2 billion TL (1.9 billion USD) loan financing were allocated. 892 projects were completed and 397 projects are underway.	

To minimise the development disparities between provinces and regions, the project Supporting Village Infrastructure (KÖYDES) was launched. Under this project, 49,259 facilities were built in 2005-2017 to provide clean water to a rural population of 16,746,473 with no or with limited access to clean water. Further, 1,377 septic tanks or treatment facilities were built serving 132,158 people. Besides, 2,079 small-scale irrigation facilities were commissioned under this project. Additional investments were required as municipal infrastructure facilities such as provision of clean water capacity especially in the provinces affected by the Syrian refugees living under temporary protection due to the Syrian Crisis that started in 2011. Below Box covers some of the major investments made in this regard.

Clean Water Investments for Syrians

In order to meet the drinking water demand, which doubled due to the migration to Kilis, water was urgently supplied from a new source. However, due to its insufficiency, the construction of the Afrin Dam initiated in 2013 was completed in 2018. While drinking water in Gaziantep is predicted to be sufficient until 2023, due to the increased population, the construction of Düzbag Dam with a cost of 2.2 billion TL (400 million USD) was moved to an earlier date and thus the project was launched in 2016. Due to the insufficient water resources in all districts of Şanlıurfa province, drinking water projects with a total portfolio of 530.7 million TL (96.5 million USD) were launched in the districts of Siverek, Suruç, Hilvan, Birecik-Halfeti, and Viranşehir. Since the available drinking water supply capacity of Hatay was not sufficient to meet the demand, the construction of the ongoing Büyük Karaçaya Dam was accelerated and the dam construction completed. The municipalities made use of approximately 2.9 billion TL (521 million USD) loans from JICA for drinking water and sanitation infrastructure through ILBANK.

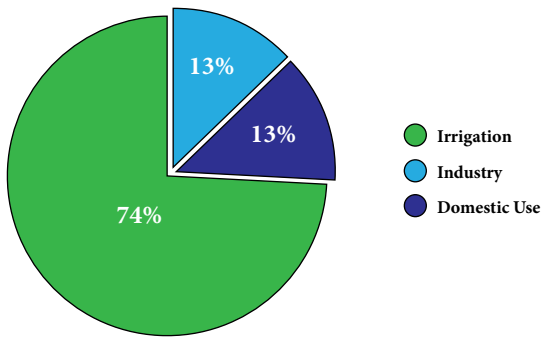
ATATÜRK DAM

SDG 6.4, SDG 6.5, SDG 6.6 & SDG 6.B

For the effective management of water resources, master plans for 25 basins were completed; and work is underway for river basin management plans. These action plans are currently being transformed into River Basin Management Plans to ensure the full provision of basin management in line with the EU Water Framework Directive. Works were completed in 6 basins and is underway for 5 basins. With the River Basin Management Plans, which will be completed and put into practice by 2023, the integrated water resources management is planned with protection and use principle.

The Central Board of Basin Management was formed to formulate strategies and plans, take measures to ensure coordination and cooperation among sectors, adopt an integrated basin management approach, achieve national objectives and fulfil international commitments. Participation by civil society organisations, universities, irrigation unions, organised industrial areas etc. areas are ensured to have a say through committees and boards established at basin and provincial levels.

As for the sectoral distribution of water use, approximately 74% is consumed for agricultural irrigation, leaving industrial and domestic use at relatively low levels of 13% each.



With the sectoral water allocation plans, water needs of each sector in the basin and sectoral sub-basin are analysed in terms of economic, social and environmental aspects by also taking into account the drought factor. To date, water allocation plans have been completed for 3 basins, and work is underway for 2 basins and planned to complete for all basins by 2023. Under the Climate Change Impacts on Water Resources and Adaptation Project, temperature, precipitation, water potential, water deficit/surplus projections were prepared for each basin until 2100; groundwater potential and surface water level changes were identified, water budget was modelled and the impact of water for human consumption, agriculture and industry main sectors were analysed. Considering the quantities of water distributed and drawn from source by municipalities in 2016, the rate of theft and loss, in other words non-revenue water, was estimated at 36% as of 2017. Some municipalities implemented several practices to reduce non-revenue water, yet the non-revenue water rate has not improved to the desired levels, and the reduction of this rate is still important.

Accordingly, with the regulation passed in 2014, standards and measures regarding the control of water loss in the supply and distribution systems have been determined in order to effectively use drinking water and to prevent losses. With this regulation, municipalities and water administrations aim to reduce the rate of water losses, to a highest of 25% by 2023.

The Priority Transformation Program on Enhancing Efficiency of Water Use in Agriculture improved modernization of irrigation infrastructure, efficiency of institutional structures, strengthened the links between irrigation investments and agricultural production and improved the cooperation between institutions and efficient water usage. With the program, it is aimed to lower the share of agricultural use from the current 74% to 64% by the year of 2023.

Due to water scarcity, agriculture production is planned through water-basin models. In addition, efficient irrigation systems for efficient use of water is promoted through subsidies.

With regard to prevent pollution, preventing water pollution and improving water quality and quantity legal regulations, policies, and practices are developed to preserve and improve groundwater and surface water resources in terms of quality and quantity. In line with the work on developing the National Monitoring Network, Basin Monitoring Programs were established for each basin. The said programs allow monitoring for general chemical and physico-chemical parameters, priority substances, known contaminants, biological quality components and hydro-morphological quality components at 2,877 monitoring points in rivers, lakes, passage, and coastal waters. The Wastewater Treatment Action Plan that encompasses the necessary investments and improvements for wastewater treatment facilities and sanitation systems were updated for 2017-2023. With the ultimate goal to achieve rates of 100% for safely managed wastewater systems and treatment of wastewaters for the municipal population, the Action Plan foresees a total investment of ~7.5 billion USD for the mentioned period.

To preserve water resources on a basin-scale, pollution prevention action plans were prepared for 8 river basins, along with the treatment sludge management plan for Ergene and Gediz River Basins. Work is ongoing to scale up these plans across the country.

To manage the wastewater treatment facilities in an environmentally-sensitive manner, energy incentive payments are offered up to 50% of the energy expenses of these facilities.

The basic policy objective is to reduce water quantity per production unit and prevent pollution. In this context, there are sector-specific works in progress. For example, Clean Production Plans were approved for 136 textile facilities in 2017 to promote clean production in the textile sector. These practices provided savings of approximately 2695 m^3/day in water and 7035 kWh/ton-fabric in energy.

An inventory was made of all existing hazardous chemicals at water resources for all sectors for monitoring purposes. The work was completed in 2014, and Environmental Quality Standards were defined for 250 substances.

In all water basins, vulnerable areas in terms of urban water pollution in surface waters as well as zones vulnerable to nitrates were identified; water quality objectives and measures to improve water quality were defined.

Reducing human settlement pressures at river basins, treatment of urban and industrial wastewaters, the control of the agricultural pesticides and manure use still maintain their importance for the sustainability of water resources.

SDG 6.A

In the context of international cooperation to increase access to clean drinking water and sanitation, projects have recently been undertaken in Mauritania, Djibouti, Niger, Ethiopia, Sudan, Mali, Somalia, Burkina Faso, Syria and so on. Turkey provides approximately 5 million USD development aid on the average annually.

As examples, Turkish State Hydraulic Works (DSI) have many aid activities in Africa and Middle East from drilling well to dam construction. DSI has supplied water to more than 1.5 million people in Africa thanks to the bore drilling activities. One of the many aid works is presented in below.

Friendship Dam in Djibouti

The Turkish Government through the State Hyrdraulic Works (DSI) under the Ministry of Agriculture and Forestry completed the construction works of a dam on the Ambouli river in order to provide domestic water to the capital city of Djibouti and protect the city from the potential floods.

The rock-fill type dam project, with a talveg height of 38 m and total reservoir volume of 14,37 hm^3, was commissioned in the year of 2019. The total project cost of €16 million was fully financed by the Turkish Government.

Ambouli Dam, Djibouti

Through its capacity building programs, Turkish Water Institute (SUEN) contributes also to the capacity development of many countries in water and sanitation. Between the years, 2012-2019, more than 1,200 experts from 33 countries benefitted from the training programs in various water and sanitation related subjects implemented by SUEN.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NEXT STEPS FOR THE FUTURE

Turkey has scored 82.1 out of 100 for SDG 6 in the Sustainable Development Index and Dashboard prepared in 2019 which presents a revised and updated assessment of countries' distance to achieving the SDGs. Turkey as expected considers this score not sufficient and has planned major steps to the goal of achieving a full score.

The following policies will be implemented in the upcoming years to achieve SDG 6:

- Preparing a National Water Plan that ensures sustainable management of water resources, in terms of both quality and quantity, as well as with an approach in which a balance is sought between conservation and development.
- Continuously developing safe and clean drinking water services across all urban and rural populations.
- Combating water violations/losses more effectively through the enforceable penalties and incentive systems.
- Developing affordable and sustainable financing models, including public-private partnerships in investment and management of drinking water and sanitation services.
- Continuing to support efficient irrigation methods in agriculture.
- Modernising irrigation infrastructure to reduce water losses.
- Strengthening coordination among public agencies for effective management of water resources.
- Improving the monitoring and control of marine pollution and increase sanctioning efforts.
- Raising awareness of agricultural producers to use water efficiently.

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