

WHAT PROGRESS LOOKS LIKE

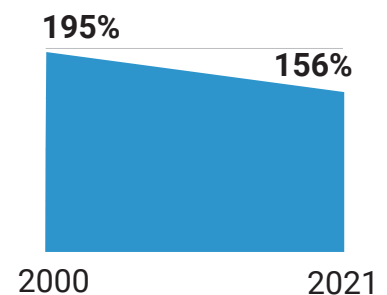
BAHRAIN – SUSTAINABLE WATER USE

(SDG TARGET 6.4)



Progress indicator: SDG 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
Level of impact: : National (1.46 million people, 785 km² land area and \$72 billion in gross domestic product)
Result: Water stress levels were reduced by a fifth and the reliance on non-renewable freshwater resources fell accordingly, while the use of non-conventional water sources such as desalinated seawater and treated wastewater increased, especially in agriculture.

Progress 2000–2021:



SITUATION

The Kingdom of Bahrain is an archipelago of 40 islands located in the Arabian Gulf; only 9 per cent of the country's total surface area is land (the rest is ocean). The largest island, Bahrain Island with the capital Manama, accounts for about 85 per cent of the country's land area and 80 per cent of its population. Bahrain has both a high population density (among the 10 highest in the world) and a high gross domestic product per capita (among the 25 highest in the world).

The country is located in a tropical region and has a dry climate, with very hot summers and only 80 mm of rainfall per year, which is why dry and salty sand dunes dominate the landscape. The northern and north-western coast of Bahrain Island is characterized by fertile and agricultural land, thanks to natural springs and freshwater springs in the sea. This is also where government facilities and business incubators are concentrated.

Bahrain suffers from water resource scarcity, and groundwater and surface water are complemented with non-conventional water resources, such as desalinated

seawater, in order for the country's drinking water needs to be met. Treated wastewater is also used to meet the requirements of the agricultural and municipal sectors. In 2019, the agricultural sector accounted for 33 per cent of surface water withdrawals and more than 70 per cent of groundwater withdrawals, despite representing only a small portion (0.2 per cent) of the country's gross domestic product. The whole population is connected to water and wastewater networks.

Bahrain is making progress towards sustainable development through its development strategy Economic Vision 2030 for Bahrain, which was launched in 2008 and later translated into the comprehensive National Economic Strategy 2009–2014. Both initiatives are aligned with the 2030 Agenda for Sustainable Development, which has also resulted in the adoption of the short-term Government Action Plan 2015–2018, and the establishment of a National Information Committee.

PROGRESS MADE

To track progress made towards SDG 6, Bahrain has established the Bahrain Water Resources Database



which contains 440 statistical variables and data, ranging from water quality, groundwater levels and water demand management to climate and socioeconomic parameters. To facilitate analysis and reporting to support decision-making processes, the database is linked to geographical information systems and application models.

In 2000, Bahrain was withdrawing 195 per cent of its renewable freshwater resources, and thus relying on non-renewable sources that will eventually run dry. By 2021, the water stress level had dropped to 156 per cent, which, although still a critical level of water stress, indicates that the country managed to reduce its freshwater withdrawals by a fifth in two decades. In the same period, water-use efficiency increased by 80 per cent, from \$44 in gross value added for each cubic metre of water used in 2000, to \$79 in 2019.

This reduction in water stress was possible thanks to a growing supply of non-conventional water resources, mainly desalinated seawater and treated wastewater. At the same time, the agricultural sector widely adopted greenhouses, hydroponic systems and modern irrigation technologies, allowing for more efficient use of existing water resources. Bahrain has also seen an overall decline in its agricultural sector, not only in terms of farmers and cultivated land but also its relative importance for the economy. This decline, propelled by an increasingly dry climate as well as the loss of agricultural land to urban growth, is also likely to have eased the pressure put on existing freshwater resources.

KEY SUCCESS FACTORS

- Increase in the use of non-conventional water resources such as desalinated seawater and treated wastewater
- Adoption of efficient irrigation technologies
- Switch to less water-intensive economic sectors

LEARN MORE

- [SDG 6 monitoring in the Kingdom of Bahrain, 2020](#)
- [The Kingdom of Bahrain's First Voluntary National Review on the implementation of the 2030 Agenda, 2018](#)
- Annual Statistical Book – Water Statistics in the Kingdom of Bahrain 2022, forthcoming in 2023
- [FAO's Global Information System on Water and Agriculture \(AQUASTAT\)](#)
- [Overall progress on SDG 6 in Bahrain](#)

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Water data from sources listed under 'Learn more' (2000–2021)

[Socioeconomic data from World Bank \(2021\)](#)

Gross domestic product in constant 2017 international \$ using purchasing power parity rates