



Developing Institutional Capacities to Create an Enabling Environment for Water Demand Management in Bahrain

Ongoing



Duration

4 July 2021 - 31 December 2023



Beneficiaries

Bahrain's residents and citizens



Objectives

To strengthen the capacity of the Water Resources Council (WRC) of the Kingdom of Bahrain to deliver on its mandate. This includes enhancing coordination and collaboration capacity across and among all government departments, institutions and agencies responsible for or contributing to water management. A key entry point of capacity development is equipping the relevant institutions with the means to:

- I. conduct water resources monitoring and assessments;
- II. generate information and knowledge using relevant analytical tools and models;
- III. provide evidence to support decision-making processes.



SDGs



Countries

Kingdom of Bahrain



Funders

Water Resources Management Unit of the Ministry of Oil (MOO), Kingdom of Bahrain



Funding

135,994 USD



The Kingdom of Bahrain has the least freshwater resources endowment in the world.

Background

The Kingdom of Bahrain, through the Ministry of Oil, implemented a **Green Climate Fund**-financed project to develop a climate-resilient water sector. The project scope included developing capacity on **integrated water resources management (IWRM)** as part of efforts to create an enabling environment for water

demand management. The country is currently water-stressed. Its freshwater resources endowment is the least in the world, with no perennial surface water bodies. Average annual rainfall is reported to be 83 mm, while average annual evapotranspiration is 1,850 mm (FAO, 2020).

These conditions create a high deficit in the water budget that underlies the absence of perennial surface water systems. The rate of groundwater abstraction for agricultural and municipal demands is currently estimated at twice the recommended safe yield. Consequently, natural springs have ceased to flow due to a severe decline in the water level. The level of salinity is also rising, leading to fears that it will soon reach that of seawater or the underlying brine zones. Freshwater availability has been reduced by a combination of factors that include rapid population and economic growth; social transformation; and climate change impacts.

To militate against the constraints to development that water poverty poses, the country is investing heavily into developing and utilizing non-conventional water resources. However, use of **non-conventional water resources** as a supply-side solution is by itself neither sufficient nor sustainable over the long term. The financial and energy requirements, coupled with the environmental



ICBA supported national efforts to strengthen the Water Resources Council.



The Kingdom of Bahrain continues to implement major initiatives to enhance climate resilience in the water sector.

externalities, are key drivers of the country's ongoing action to improve water accountability, efficiency and conservation.

Activities

ICBA provided support to strengthen the **Water Resources Council** by: assessing the scope of the required capacity development; formulating a capacity development plan; and supporting the MOO to implement the capacity development plan. ICBA carried out an assessment to identify both the capacity of the government departments to implement IWRM, and related gaps in the institutional framework. Then, the center conducted a policy and legal review of the functionality of the policy and technical organs of the Water Resources Council, including the Technical Advisory Committee and sub-committees.

Once these tasks were completed, ICBA prepared an IWRM capacity development plan and provided related training activities for the Water Resources Council and relevant government bodies. Recommendations for strengthening the Water Resources Council were then developed, together with a strategy document for the Water Resources Council and its organs.

ICBA is currently preparing three training courses to fill the identified institutional and individual capacity gaps for implementing IWRM.

Outcomes

Through this intervention, ICBA supported the Water Resources Council in creating **an enabling environment for water accountability, efficiency and conservation in all sectors**; the assigned mandates and functions of the organs of the Water Resources Council were updated, including its role in policy formulation; climate risk management; and wastewater recycling, treatment and reuse. This will help the Water Resources Council deliver on the goals of the **National Water Strategy 2030**, with the aim of protecting and developing water resources for current use and future generations.

Future Directions

In cooperation with the Green Climate Fund, the Kingdom of Bahrain is implementing major initiatives aimed at enhancing climate resilience for the water sector, including modeling the impacts of climate change on freshwater resources, guidelines for rainwater harvesting and for utilizing gray water, procedures for water-saving practices and techniques in homes and farms, and establishing a climate and water platform that serves all water-related sectors and government institutions in the country, among others.

ICBA is ready to enhance this collaboration under the Green Climate Fund umbrella, and open opportunities to support similar efforts of other Gulf Cooperation Council countries in responding to the challenges of climate change.

ICBA remains committed to contributing to ensuring water security in the region and beyond and joining forces with various partners to achieve this goal.

About ICBA

The International Center for Biosaline Agriculture (ICBA) is a unique applied agricultural research center in the world with a focus on marginal areas where an estimated 1.7 billion people live. It identifies, tests and introduces resource-efficient, climate-smart crops and technologies that are best suited to different regions affected by salinity, water scarcity and drought. Through its work, ICBA helps to improve food security and livelihoods for some of the poorest rural communities around the world.