

# Water and Waste Water under Control

## Water Supply and Sanitation Services for Dohuk Governorate

### The challenge

Approximately 1.3 million people live in the Dohuk governorate in the Kurdistan Region of Iraq. Since the onset of the Syrian crisis and the advance of the so-called 'Islamic State', about 750,000 internally displaced persons (IDPs) and 100,000 Syrians have sought refuge here. One of the major challenges resulting from the influx of IDPs and refugees is the adequate supply of drinking water and provision of safe sanitation services. The authorities of the Dohuk governorate are not able to provide essential infrastructure without the assistance of aid agencies, as the government lacks the necessary funds to supply vital spare parts for the maintenance and repair of infrastructure or chemicals for water treatment. Until now there is still no comprehensive strategy for the water supply sector.

### Our approach

The project team and water authorities have been implementing water supply interventions to address critical infrastructure gaps identified as priorities in order to ensure a more reliable supply of drinking water to IDP/refugee camps and host communities. Such projects include the rehabilitation and extension of water infrastructure, the supply of spare parts and chemicals to water treatment facilities and the improvement of existing sanitation facilities in order to mitigate the risk of drinking water contamination. These activities address the needs of the population in the interim before a new water supply system becomes operational in areas in need, such as in the Faida sub-district.

Based on a feasibility study and in collaboration with local partners, the most appropriate solution for Faida's water supply has been defined. With the new system the longer-term water infrastructure needs of a growing population in the sub-district will be met. More than 210,000 persons will benefit from the new facilities.

The project team utilises refugees' and internally displaced persons' skills and labour capacities, thereby contributing to their opportunities to earn a temporary income, while employed for construction measures.

In order to ensure the sustainability of the new water system, the entire design and development process is conducted in close collaboration with the local authorities and especially with the directorates of water, which will be responsible for maintaining and operating the system at the end of the project. Technicians, operating and management staff receive training that builds upon their existing knowledge and skills, and will allow them to operate and maintain the existing and new infrastructure.

In cooperation with relevant water and sewerage directorates, as well as the Board of Relief and Humanitarian Assistance (BRHA), the project team has developed a proposal for institutional set-up, the water and sanitation strategy for Dohuk governorate, as well as scenarios for the Water and Sanitation Sector in Dohuk governorate. The documents and activities aiming at the improvement of water supply and the reduction of water losses give long-term perspectives and directions on measures to be taken to improve the currently inefficient and unstructured water and sanitation sector in this area of the Kurdistan Region of Iraq.

Project Name	Stabilization of Water Supply and Sanitation Services for IDPs, Refugees and Host Communities in the Governorate Dohuk (SWSS)
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Project Region	Dohuk
National Partner	Ministry of Planning, Kurdistan Region of Iraq
Duration	05/2016 – 04/2021



Photo left: Construction of the water treatment plant for the Faida water network.

Photo right: Regular checks of the water quality at the laboratory at the Ministry of Environment.



Photo left: Families in Faida benefit from an improved water supply.

Photo right: Construction of a high-level water tank in Domiz.

## Impact

Since 2016, a number of priority measures have been jointly selected by the project team, the relevant water and sanitation directorates and the BRHA and implemented in Dohuk governorate.

Priority measures provide quick assistance and improve the drinking water supply and access to sanitation. In cooperation with our partners World Vision International, the Danish Refugee Council, KURDS, the Barzani Charity Foundation and ACTED, new wells were built, water pumps and dilapidated water tanks repaired or replaced, water networks rehabilitated and extended, septic tanks rehabilitated and insulated, a new wastewater treatment plant constructed in the Faida sub-district, as well as water and sanitation facilities in camps maintained. Water quality has been improved with the provided chemicals and is being tested on a regular basis in cooperation with the Directorate of Environment in Dohuk.

In Zakho District, filters were cleaned and repaired to make an old water treatment plant operational again in 2017. In addition, the chlorination system has been replaced in 2019, ensuring the supply of safe drinking water to the inhabitants of Zakho.

Local authorities in Erbil and Dohuk have been provided with water and sewage trucks for rapid and flexible deployment. As an emergency response, 600 water tanks were installed for the population displaced from Mosul.

In total, priority measures have stabilised the drinking water supply and improved access to sanitation for more than 1.5 million people.

With the newly built drinking water supply system in Faida, over 210,000 people will benefit from an increased water supply (more than 100 litres per person per day) from mid 2020 onwards. The project team has been conducting mass communication

campaigns to raise awareness of the dramatic water shortage and the economical usage of water since early 2017. These campaigns aim to sensitise residents on the efficient handling of this valuable resource for the long term.

A proposal for institutional set-up, a water and sanitation strategy for Dohuk Governorate, as well as scenarios for the water and sanitation sector in Dohuk Governorate have been developed and shared with relevant stakeholders including the Ministry for Municipalities and Tourism. They indicate the direction in which the water and sanitation sector should develop in the future.

## Case Study – Monitoring of water quality in Dohuk

June 2018: How is the water quality in Dohuk? Not bad, replies Hassan Mohammed, Chemical Engineer at the Directorate of Environment. Since March 2018, the water supply programme has been supporting the laboratory at the Directorate of Environment in comprehensively monitoring the water quality in the Dohuk Governorate. The main objectives are to monitor residual chlorine and contamination proportions in the water, and to strengthen preparedness and rapid response to potential contamination outbreaks. Contamination derives from various sources and places, such as industries and factories, including Qashi and its dump site, the Dohuk Dam, where residents discharge their sewage directly into the lake, pesticide use in the agricultural sector, oil oozing from private generators into a small river in Zakho, and, finally, the overall lack of awareness for environmental issues among the people. Water quality is better in urban areas than in rural ones, owing to a higher level of maintenance and a better handling of chlorine disinfection devices, explains Hassan Mohammed.

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