

# Water Supply for Syrian Refugees in Azraq Camp

## Jordan

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Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

### FACTS & FIGURES

#### Population of Azraq Camp

35,935 Syrian Refugees in Azraq Camp (UNHCR, 2<sup>nd</sup> May 2017)

#### Budget

CHF 2.21 million

#### Duration of Project:

January 2016 to June 2017

#### Implementation

SDC direct implementation

#### Partners

UNICEF; UNHCR; Ministry of Water and Irrigation

#### Objectives:

Improved health and wellbeing of Syrian refugees through providing safe and drinking water in sufficient quantities for up to 55,000 Syrian refugees in the camp.

#### Outputs (Results)

1. Sustainable water supply: the new borehole is fully equipped.
2. The main transmission line (5.45 km) is built between the boreholes and the storage reservoirs.
3. A secondary distribution ring pipeline (8 km) to the village networks is functional.
4. A telemetric groundwater monitoring system is in place and used for decisions on exploitations.
5. Technicians operating the system are trained.

**Switzerland's engagements in Jordan, Syria, Lebanon, Iraq and Turkey are coordinated by the Swiss Cooperation Office in Amman.**



Part of Azraq Refugee Camp, ©SDC

### Context

- Azraq refugee camp, the 2<sup>nd</sup> largest refugee camp in Jordan, was established in April 2014, hosting currently over 35'000 Syrian refugees. The Azraq camp, although well designed and structured, lacked water, infrastructure and services. Water had been provided through trucks, a solution, which is costly and causes water losses.
- In August 2015, a borehole (BH-2) located 2.5 km outside the camp was drilled, after which the transport of water from this borehole to the camp was carried out by trucks to the eight storage stations around the camp. Trucking costs remained high. Moreover, one borehole was considered inadequate to provide sufficient amounts of water according to existing standards, and risky because of reliance on one single source of water and the potential of contamination.
- The Swiss Agency for Development and Cooperation (SDC) decided in autumn 2015 to step in through its own water experts in collaboration with UNICEF and other relevant partners, contributing to a more reliable and sustainable water supply system in the Azraq refugee camp.

### Project elements

- The project consists of the construction of a main pipeline from the existing borehole (BH-2) to the camp and a ring pipeline to the eight storage stations around the camp. About 13 km of HDPE pipes, diameter 180 mm, 250 mm and DIP 300 mm were installed.
- A new borehole was drilled to increase the quantity of available water and to ensure a reliable supply with safe drinking water. The depth of the new borehole is around 440 meters whereas the static water table is about 160 meters deep. The achieved water quantity is 50'000 litres per hour. A chlorination system guarantees an optimal water quality till household level.
- A telemetric system allows monitoring the groundwater table and the relevant water quality parameters.
- By changing from eight storage stations to two reservoirs located at elevated points this allows a supply by gravity which means that no booster pumps will be needed anymore and operational costs will be reduced as less infrastructure is to maintain.
- In addition the project has developed a specific training for technicians to insure the adequate operation of the system. This was done through the enforcement of operational maintenance manuals and sound procedures to guarantee a cost-efficient exploitation of the system.
- The project is coordinated with ongoing improvement of water distribution systems within the villages (done by UNICEF and implementing partners).
- Inauguration by Federal Council Didier Burkhalter happened on 19<sup>th</sup> May 2017. – Afterwards SDC project was handed over to UNICEF and the Ministry of Water and Irrigation.
- Through this project the yearly costs of USD 500'000 for water trucking are eliminated.



**Pictures**



Drilling borehole, @SDC

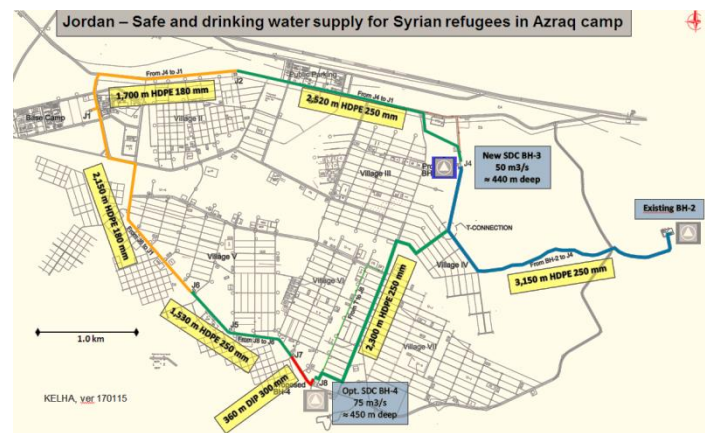
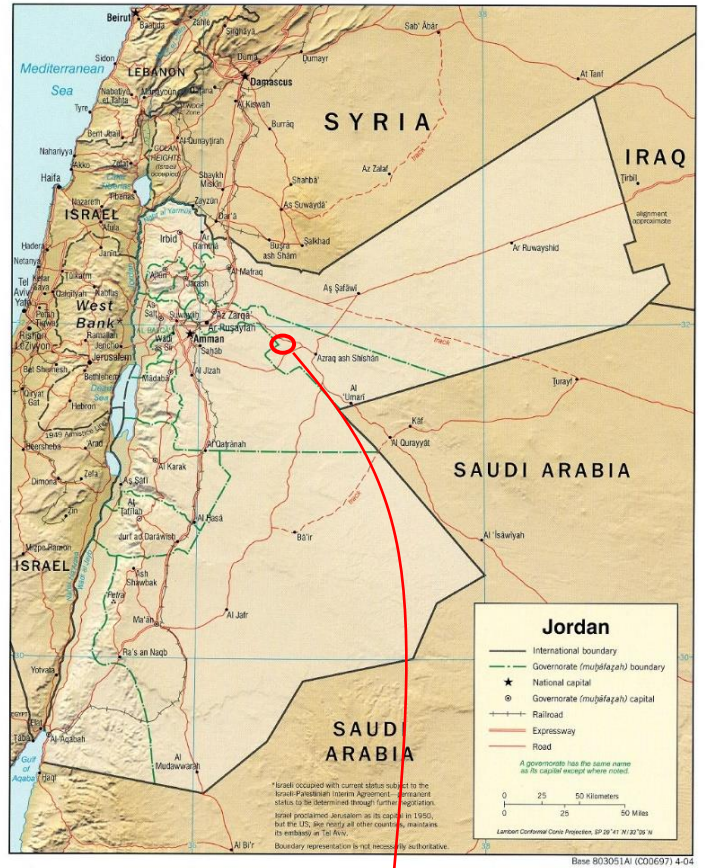


Pumping test, @SDC



Installation of 180 mm main water pipeline, @SDC

**Maps**



Azraq camp, SDC project

**Further information**

Regional Cooperation Office Amman - Jordan

Phone: +962 6 585 60 20

Fax: +962 6 581 59 56

E-mail: [amman@eda.admin.ch](mailto:amman@eda.admin.ch)

Website: [https://www.eda.admin.ch/Swiss\\_Cooperation\\_Amman](https://www.eda.admin.ch/Swiss_Cooperation_Amman)