

Preventing floods in Za'atari Camp through the construction of a stormwater drainage network

Za'atari Refugee Camp, Mafraq Governorate, Jordan - November 2018 to December 2022

Every year, **Za'atari Refugee Camp** receives heavy rainfall between November and April, resulting in flooding. The lack of a stormwater drainage network causes **devastating damage to key infrastructure and worsens sanitation and hygiene conditions** for camp residents.

To respond to these challenges, ACTED's technical specialists in collaboration with GIZ designed a **23,628 metre long stormwater drainage network** within 9 of the 12 most affected districts in Za'atari Camp.

ACTED also provided **temporary employment opportunities for camp residents** to carry out the construction works with an estimated **11,945 individuals** benefiting from **income generation**.



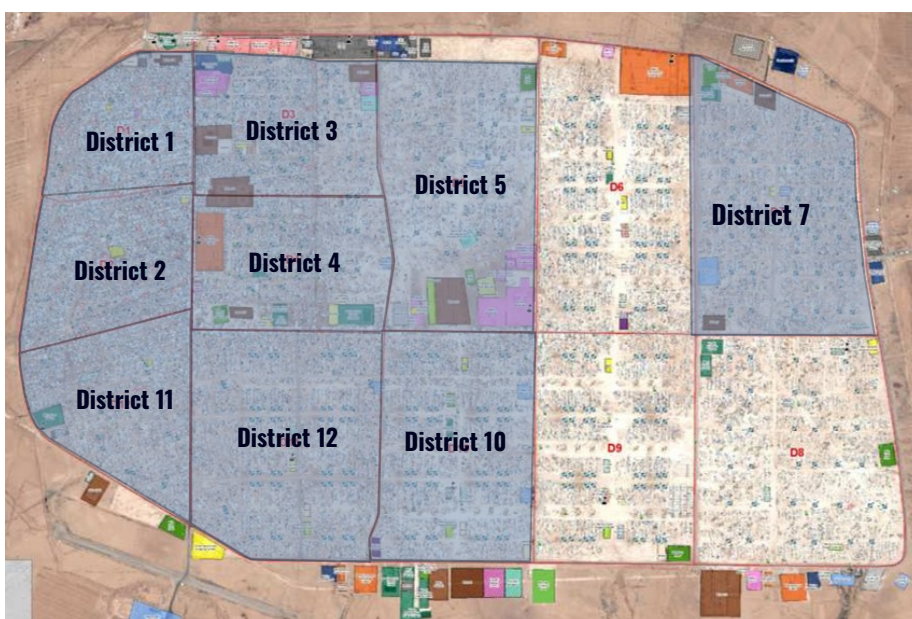
Za'atari camp flooded prior to construction, Winter 2017



Construction of the drainage system by camp residents, September 2020

Objective

Improving sanitation, hygiene and living standards of the approximate 80,000 refugees in Za'atari camp by constructing a stormwater drainage network through employment intensive measures



● Districts targeted by the intervention

Za'atari Camp map

With the support of **GIZ**, the ACTED-constructed stormwater drainage network has served **80,046 refugees** residing in the camp. By the completion of the project in December 2022, **Districts 1, 2, 3, 4, 5, 7, 10, 11 and 12** were targeted under ACTED's intervention.

Our main achievements



Disaster Mitigation

The 2019/2020 rainy season was the **first time key infrastructures in targeted districts have not been flooded** since the establishment of the camp.



Temporary employment opportunities

2,389 persons benefited to date from income generating opportunities, as well as technical, skill development for future employment.



Sustainable Infrastructure

The construction of the drainage network aligns with national and international standards and has a **minimum lifespan of 20 years**.

Impact

Following the construction of the network, living standards have improved for **93% of beneficiaries** and **99% of workers** would recommend this job opportunity to their friends and relatives

Effectiveness

90% of households served with the network do not recall any flooding in their house nor surround streets since the construction, compared with **only 21% before** the start of the project.



Efficiency

81% of beneficiaries feel very safe moving around the district during rainfall events due to reduced flooding in the streets and common areas.

Sustainability

91% of beneficiaries have not experienced an event where the network clogged and since the onset of the project, **UNCHR** received close to no complaints regarding flood incidents in areas of intervention.

Za'atari Refugee Camp throughout our intervention

BEFORE ◦



Flooding in District 4 before the intervention, January 2019

◦ DURING ◦



Works during Phase 2 of Construction, March 2020 - January 2021



Construction works during August, 2022

○ AFTER



Stormwater drainage channeling runoff after heavy winter rain