

# 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 infrastructures**, such as schools and hospitals, and **road blockages**. The flood also **worsens sanitation and hygiene conditions** for residents within the camp.

To respond to these challenges, ACTED's technical specialists in collaboration with GIZ designed a **27 km long stormwater drainage network** for Za'atari Camp. ACTED is leading the construction of the drainage network in **9 of the 12 most affected districts**.

ACTED is also providing **temporary employment opportunities for camp residents** to carry out the construction works. Participants are identified through a fair selection process. **Over 2,400 individuals** have benefited from **income generation** through the construction of the drainage network.

The Cash for Work Water (C4WW) project implemented by "Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH" (GIZ), is part of the Federal Ministry of Economic Cooperation and Development, Germany (BMZ) Special Initiative 'Tackling the root causes of migration, stabilizing host regions, supporting refugees.'



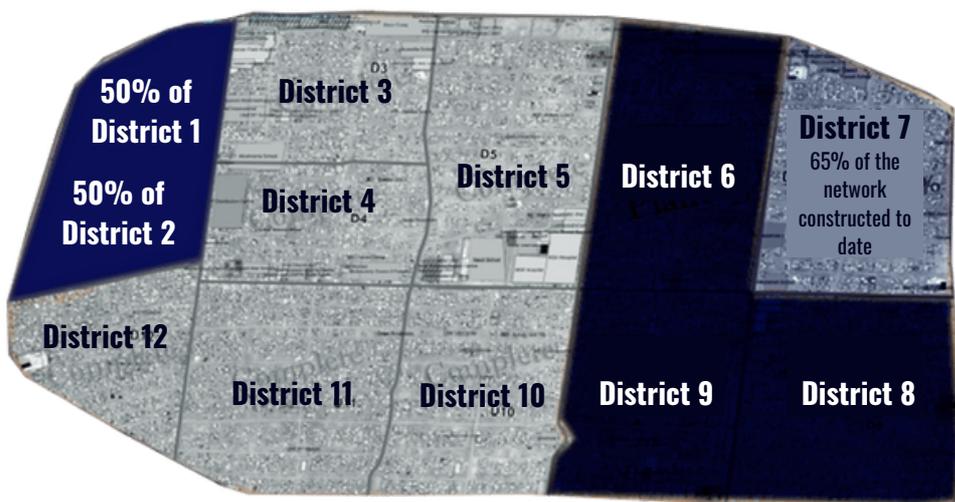
Za'atari camp flooded prior to construction, Winter 2017



Construction of the drainage system by camp residents, January 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



- Completed districts
- Ongoing districts under Phase IV
- Partially completed districts
- Planned districts for next phases

## 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 December 2022, **Districts 1, 2, 3, 4, 5, 7, 10, 11 and 12** will have been targeted under ACTED's intervention.

Specifically, **Phase IV** will cover 50% of both Districts 1 and 2, **identified as priority** based on consultations with UNHCR and GIZ.

# Our main achievements so far



## Disaster Mitigation

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



## Temporary employment opportunities

**2,451 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

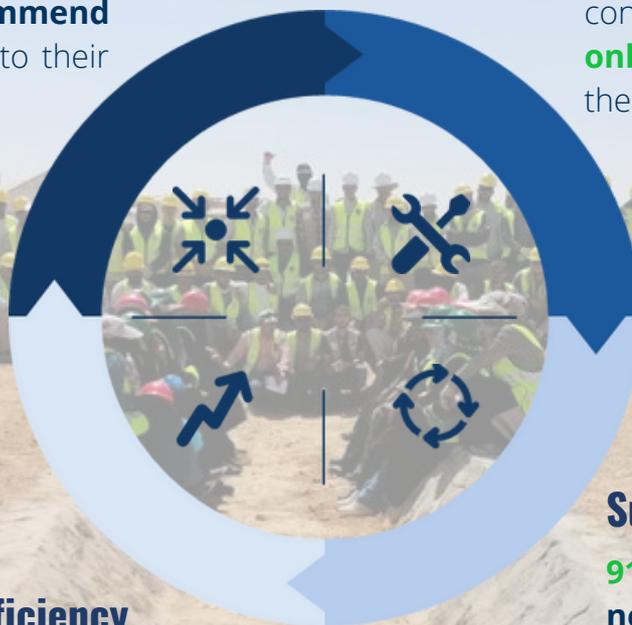
**90% of households** served with the network **do not recall any flooding** in their house nor surround streets since the construction, compared with **only 21% before** the start of the project.

## 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 before and after our intervention

## BEFORE



**District 5**, Block 21 near Saudi Schools, in **2019** before ACTED's intervention

## AFTER



**District 5**, Block 21 near Saudi Schools, in **2020**, and **January 2022**, after the rain

# Za'atari Refugee Camp before and after our intervention

## BEFORE



**District 4**, between Blocks 12 and 13, near the market street, in **2019** before ACTED's intervention

## AFTER



**District 4**, between Blocks 12 and 13, near the market street, in **February 2021** and **January 2022**, after the rain