

# COMPLETION OF ICRC WATER PROGRAM

Host Communities and Syrian Refugees in Jordan  
2014-2023



ICRC

## EXECUTIVE SUMMARY

Over the past decade, the International Committee of the Red Cross (ICRC) has improved water access for host communities and Syrian refugees, particularly in the rural areas of northern governorates. Persistent challenges have been identified throughout this period, including the neglect of rural areas, concerns about the sustainability of water infrastructure due to inadequate Operation & Maintenance (O&M), and a need for stronger coordination among humanitarian and development actors.

ICRC's water program was initiated as a response to the Syrian conflict and the influx of refugees. The program evolved from emergency interventions in transit sites to addressing lack of water supply in local communities hosting refugees. The "Host Communities Critical Water Infrastructure Rehabilitation Program" intervened in 51 water facilities, benefiting 1.2 million Syrians and Jordanians. Key outcomes included the increase of water per capita share, reduction in non-revenue water and building resilience in the water system.

As Jordan experienced stabilization in terms of influx of refugees, the ICRC shifted its focus to sustainability, developing a capacity building program. A workshop building and training center was constructed in Hofa, Irbid Governorate aiming to enhance the operational capabilities and technical expertise of Yarmouk Water Company staff. Training sessions were designed and offered to O&M teams, focusing on good practices, corrective and preventive maintenance.

The implemented water program intervened in a geographical and technical area where water authorities, development actors and financial institutions co-exist. With humanitarian funding declining, the ICRC hopes that actors with long-term presence and objectives would increase their support to rural communities, invest in O & M to prevent collapse of water infrastructure, and improve coordination among them with an ultimate goal to serve communities affected by conflict, and 'leave no one behind'.



## PROTRACTED ISSUES & RECOMMENDATION

After a decade of implementing water projects in Jordan, the International Committee of the Red Cross (ICRC) seeks to highlight the following ongoing challenges to key stakeholders:

- In the northern governorates, rural host communities and Syrian refugees are often overlooked, with larger urban centers receiving more resources and attention.
- Water infrastructure in remote areas is at risk of deteriorating without improved Operation & Maintenance practices.
- The current level of coordination between development and humanitarian organizations is inadequate, hindering the effectiveness of their combined efforts.

The ICRC has significantly contributed to the resilience of the water system in Jordan's northern governorates and has laid the groundwork for enhancing Operation & Maintenance (O&M) capabilities. The water program has been active in regions where water authorities, developmental agencies, and financial institutions intersect. As humanitarian funding decreases, the ICRC wishes to present the following recommendations to actors with long-term commitments and goals in these areas.

### MINISTRY OF WATER AND IRRIGATION

- Allocate more funds for programs improving water infrastructure in rural areas of northern Jordan, primarily serving host communities and Syrian refugees.
- Increase investment in preventive maintenance of water infrastructure to decrease operational costs and extend the lifespan of these systems.
- Strengthen coordination efforts between development agencies and the humanitarian sector, to ensure more cohesive and complementary approaches to water projects.



## YARMOUK WATER COMPANY

- Increase focus on improving and maintaining water infrastructure in rural areas, ensuring equitable service to all residents, including host communities and Syrian refugees.
- Prioritize and intensify training programs for operators, with an emphasis on troubleshooting, good operational practices, and both corrective and preventive maintenance.
- Persist with the operator training programs initially established by the Water Authority Training Centre in collaboration with the ICRC.
- Ensure a consistent and reliable supply of high-quality spare parts and tools necessary for both corrective and preventive maintenance of water systems.
- Set up regular coordination meetings between local developmental and humanitarian actors to promote complementarity in efforts and avoid overlapping initiatives.

## FINANCIAL INSTITUTIONS/ DONORS

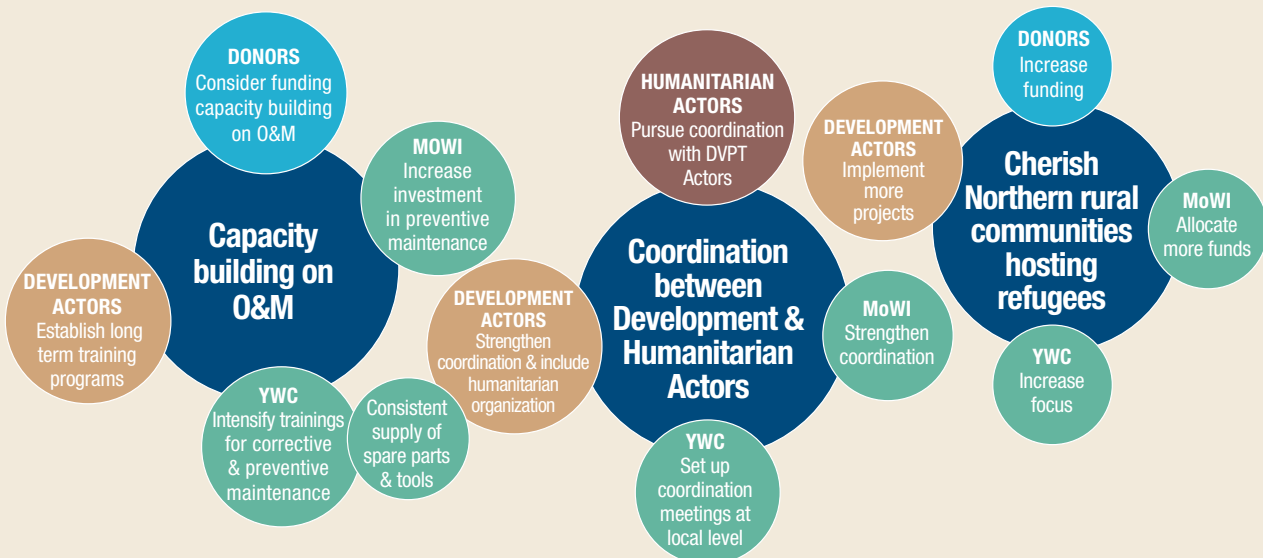
- Maintain and potentially increase funding for the northern governorates, with a focus on rural areas that are prone to neglect and less visibility.
- Consider funding programs related to capacity building on O&M to sustain investments in water infrastructure.

## DEVELOPMENT ACTORS

- Implement more water projects in northern governorates, targeting both host communities and Syrian refugees, with a particular focus on rural areas.
- Develop and establish long-term training programs in O&M to enhance local capacities for managing and maintaining water infrastructure.
- Strengthen coordination with other development agencies, humanitarian organizations, and local authorities for shared goals and efficient program implementation.

## HUMANITARIAN ACTORS

- Pursue regular dialogue and coordination with development actors and water authorities on water related issues integrating humanitarian concerns.
- Advocate for equitable access to safe and adequate water for people displaced by conflict.



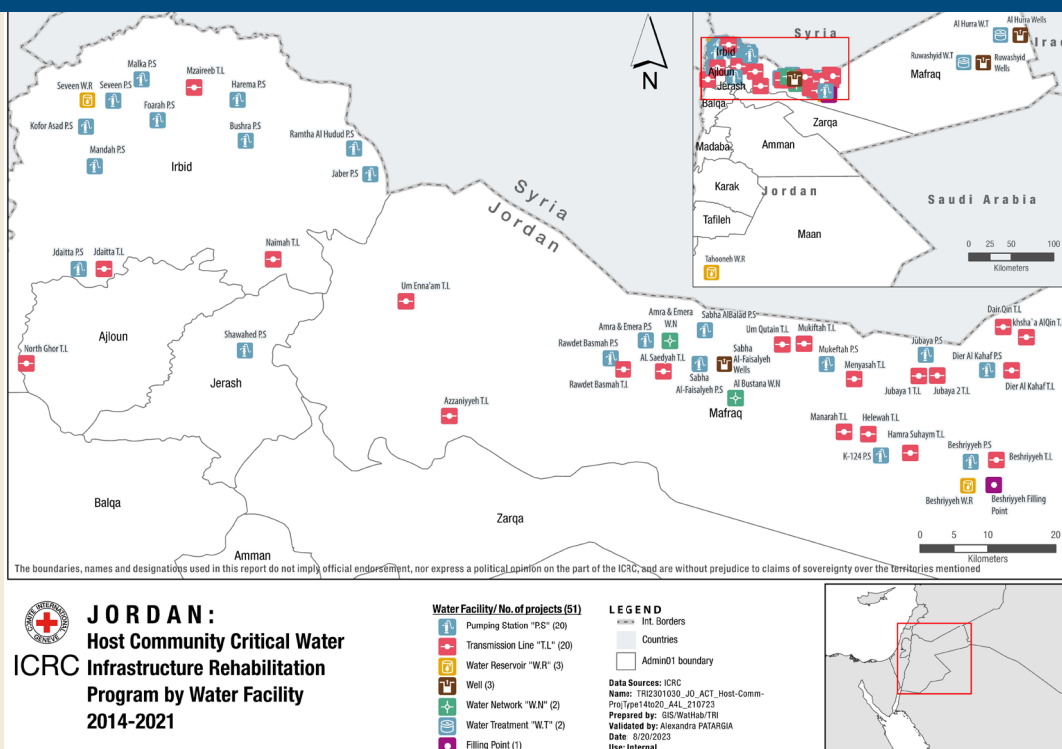
# INFLUX OF REFUGEES INTO JORDAN AND WATER INFRASTRUCTURE PROGRAM 2014-2022

In response to the Syrian conflict and the resulting influx of refugees into Jordan, in 2014 the ICRC initiated urgent relief measures at transit sites near the Syria-Jordan border, including Matwi, Rukban, Bustana, Hadalat, K 124, and Ruwaishid. These interventions focused on meeting immediate humanitarian needs by providing water, shelter in prefabricated caravans, sanitation facilities, and healthcare clinics. This effort ensured that those displaced by the conflict had access to basic needs and essential services.

As the population transitioned from temporary housing to more permanent solutions and settled within local communities, the ICRC accordingly shaped its programming towards addressing the increasing water demand in a country already facing shortages. The “Host Communities Critical Water Infrastructure Rehabilitation Program” was launched in 2014, aiming to enhance the availability of safe and adequate water primarily in the northern governorates of Irbid and Mafraq.

With the majority (80%) of refugees residing outside camps and within local communities, the ICRC focused its efforts on this demographic. Jordan, with a population of 11 million, hosts approximately 645,000 registered Syrian refugees and asylum seekers since 2011, with an estimated total, including unregistered individuals, of around 1.3 million. This situation has exerted considerable strain on Jordan’s water system, especially in Irbid and Mafraq governorates, which have a significant refugee population and already struggled with aged water infrastructure, especially in remote areas. In close collaboration with the Ministry of Water and Irrigation, the ICRC concentrated on improving water systems in rural areas with deteriorating infrastructure. As a result, around 1.2 million Syrians and Jordanians in Irbid and Mafraq have benefited from these improvements.

Over the course of the eight-year program, 43 water projects were implemented at a total cost of 26.7 million CHF (approximately 29.5 million USD), targeting 51 water facilities as shown in the map below.



Around 80% (40 / 51) of the targeted facilities were water pumping stations and transmission lines as illustrated in the following chart.

### WATER FACILITIES

Pumping stations	20
Transmission lines	20
Water reservoir	3
Well	3
Water network	2
Water treatment plant	2
Filling point	1



 **67** km

of aged transmission lines replaced contributing to reduction of non-revenue water.

 **14**

pumping stations fully reconstructed & 2 newly built creating resilience to the water system.

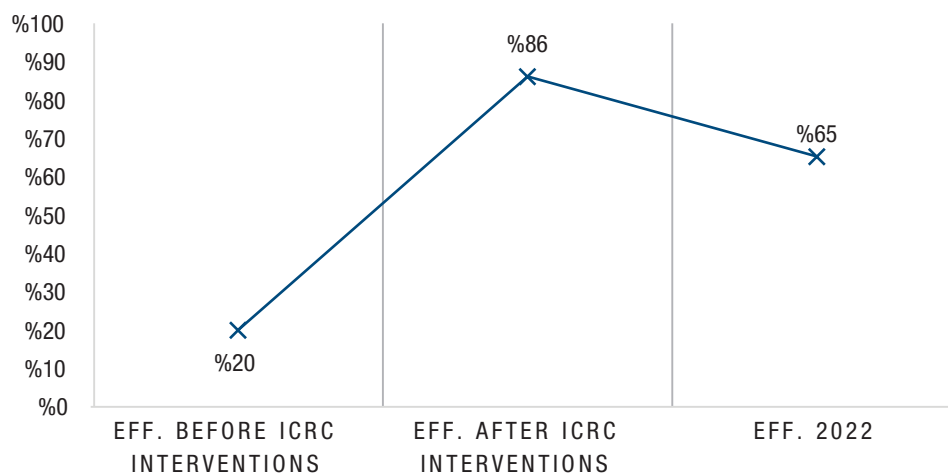
The 'Host Communities Critical Water Infrastructure Rehabilitation Program' concluded in 2021 and underwent an evaluation in 2022 by an external consultant. This evaluation employed a three-track timeframe approach, examining conditions 'before' and 'after' the ICRC's interventions, and then again in the year of the report, 2022. Key findings from the report include:



## WATER SYSTEM

- Operational efficiency of pumping stations improved from 20% to 86% immediately post-intervention but decreased to 65% in 2022 due to maintenance issues and lack of supply of genuine spare parts.
- Staffing challenges, including lack of skills and knowledge, contributed to this decline in efficiency.

### TREND IN WATER PUMP STATIONS OPERATIONAL EFF.



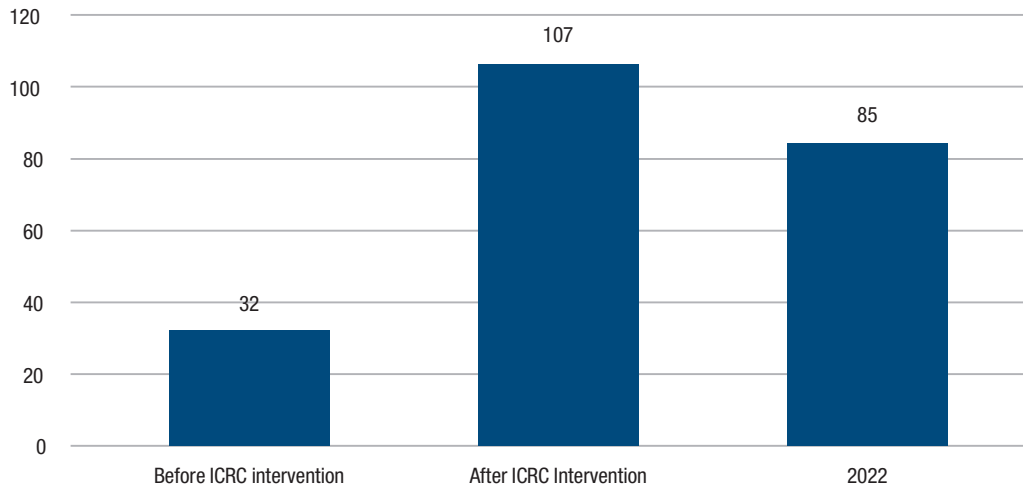
- Physical losses in transmission lines were notably reduced from 70% to 0% in many instances following the intervention.
- Water supply system became more reliable, and the frequency of interrupted supply significantly dropped.



## IMPACT ON HOUSEHOLDS

- Water availability per capita increased from 32 to 107 liters per capita per day (LPCD) after intervention, then slightly decreased to 85 LPCD in 2022.

### DAILY PER CAPITA FROM PUBLIC NETWORK



- The number of individuals receiving less than 20 LPCD decreased from 26,000 to 6,000, a reduction of 77%.
- Although the tension between the Syrian refugees and Jordanians related to water supply was/is not a major issue in the opinion of most of the interviewees, a slight decline had been observed.

## VALUE FOR MONEY

- The program realized a 102% gain on investment through cost savings in household water trucking and operational costs for Yarmouk Water Company (YWC) from 2014 to 2021.

**In summary, the program successfully met its goal of providing equitable access to safe and adequate water for both Syrian refugees and Jordanians, significantly improving the region's water infrastructure.**

## STABILIZATION AND CAPACITY BUILDING PROGRAM 2023

Over the past years, Jordan experienced a stabilization phase, reflected in reduced humanitarian funding and a shift in the nature of implemented projects. In 2023, the ICRC completed its water infrastructure rehabilitation cycle, enhancing the resilience of the water system and handing over upgraded facilities to local authorities. In response to the evaluation report, which highlighted a decline in the operational efficiency of water facilities, the ICRC pivoted towards sustainability. This new phase emphasized on improving the O&M capabilities of YWC. While major repair and maintenance tasks are outsourced to the private sector, the ICRC recognized the importance of bolstering the in-house capacity of YWC for handling smaller-scale repairs. To this end, the ICRC initiated two projects aiming at enhancing YWC's O&M expertise.



## ENABLING ENVIRONMENT: CONSTRUCTION OF NEW WORKSHOP BUILDING AND TRAINING CENTER IN HOFA, IRBID

The first project focused on creating an enabling environment by constructing a new workshop and training center in Hofa, Irbid. This facility, slated for completion by the end of December 2023, is being built to serve the northern governorates. It is a result of a collaborative design process with YWC staff and covers a total area of 357 square meters. The center will feature a variety of specialized workshops for mechanical and pipeline works, instruments, chlorine, and electrical panels, along with a meeting and training room that can accommodate up to 20 trainees. This new space is specifically designed for the maintenance and hands-on training of YWC staff, thereby significantly boosting their operational and technical skills.

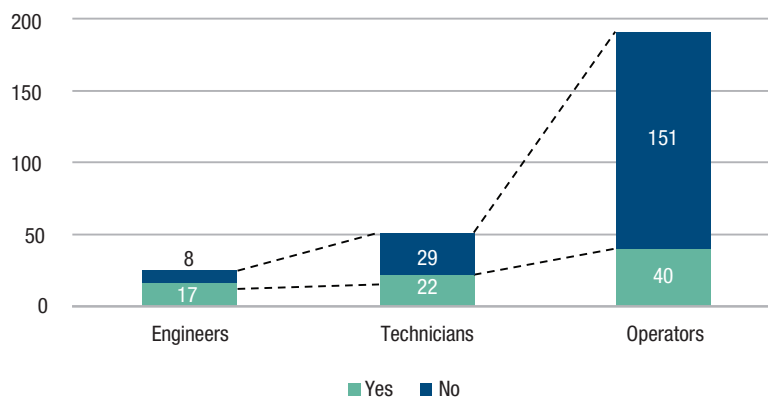


## WELL TRAINED TECHNICAL STAFF: TRAININGS FOR O&M TEAMS OF YWC

The second project involves a training program, tailored to meet the specific needs identified in a needs assessment report and aligned with the National Training Plan priorities for 2022-2026. This training initiative was developed in collaboration with YWC, consulting with other key stakeholders in the field, such as GIZ and USAID-WGA, to ensure a complementary approach and avoid overlapping efforts.

Operators of pumping stations were given priority due to their low participation in trainings and their crucial role in maintenance and troubleshooting as indicated by the findings of the needs assessment report.

### NUMBER OF SURVEYED STAFF PARTICIPATED IN TRAINING COURSES IN THE PAST 5 YEARS



In response to this gap, the ICRC launched training sessions in November 2023, emphasizing good operational practices and both corrective and preventive maintenance. These courses, conducted by the Water Authority Training Centre, successfully trained 40 operators from Irbid, Mafraq, Ajloun and Jerash governorates by the end of 2023.



# CONCLUSION

The ICRC's water program in Jordan, concluding in 2023, marks a significant step in addressing the critical water needs in the northern governorates, particularly for rural host communities and Syrian refugees. Since 2014, the program has focused on improving water infrastructure and shifting towards sustainable practices in O&M. While these efforts have made a difference, the challenges in these regions remain substantial, particularly in areas often overshadowed by larger urban centers.

The path forward now lies largely with water authorities and development actors. Continuous investment in water infrastructure, regular maintenance, and ongoing O&M training are essential to maintain and build upon the work started and the progress achieved. Additionally, improving coordination between development and humanitarian organizations is crucial to ensure that efforts are not duplicated, and resources are used effectively.

The foundation laid by the ICRC for capacity building in O&M is just an initial step. Due to the limitations inherent in the mandate of humanitarian organizations, including temporary presence and scope of operations, the responsibility for sustaining and expanding these initiatives now falls to local and national stakeholders. Their engagement is vital in ensuring that the needs of all communities in the northern governorates, particularly the most vulnerable, are met and sustained over time.