Briefing

Urban; Water

Key findings and recommendations from IIED research and action for donors, refugee-hosting governments and humanitarian agencies

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Invest in cities, not camps: improving refugee support

Water, sanitation and hygiene (WASH) support is vital for the health and wellbeing of refugees around the world. But an IIED-led project in Jordan found that investing in sustainable WASH provision in a refugee-hosting neighbourhood would cost less than half as much as similar investments in refugee camps, last up to three times as long and service more than three times as many people. We also found a lack of transparency and accountability within the United Nations (UN) system over how and where it spends humanitarian resources on refugees. This briefing calls on donors and refugee-hosting governments to move away from unsustainable encampment policies and instead help towns and cities absorb refugees by improving service provision for all. We also call on them and humanitarian agencies to be more transparent about how and where they invest resources.

Key points

A shift away from building refugee camps towards an 'urban first' approach that prioritises sustainable investments in towns and cities impacted by displacement would improve the quality of life of refugees and host communities.

Overhauling financial reporting on refugee support to include geographic location data for spending would improve transparency and accountability within the UN system.

Assessing the per capita costs of refugee camps and sharing these findings would enable a cost–benefit analysis of hosting refugees in camps compared to urban areas.

By helping us understand the potential dividend of urban refugee hosting, a cost–benefit analysis would aid negotiations over how and where to host future refugees and support a transition towards a more sustainable and dignified refugee response.

The 'Jordan urban refugee dividend' (JURD) project[1] was a shared endeavour between engineers and social scientists from UK and Jordanian research institutes and universities between 2021 and 2024. Focusing on Zaatari refugee camp in Mafraq governorate and Dahiyet Al-Malik Abdulla (Al-Dahiyyah for short), a refugee-hosting neighbourhood in Mafraq city, the project looked at what could have been achieved had similar levels of funding that was spent on WASH in camps been invested in sustainable urban WASH provision.

WASH facilities in Zaatari camp

As the number of refugees crossing the border from Syria grew exponentially, the UN and Jordanian government quickly built Zaatari camp in 2012. At its peak, it housed 200,000 people, but many refugees left the camp to settle in towns and cities and by 2014, the population had stabilised at around 80,000. A second, smaller camp, Azraq, was built in 2014. The UN Children's Fund (UNICEF) assumed the lead for WASH provision for refugees across Jordan in 2012, focusing mainly on camps, where most people depend on humanitarian assistance to meet their basic needs. But less than 20% of registered refugees in Jordan live in camps, and while the total number of registered Syrian refugees is currently around 535,000,[2] the total number of registered and unregistered Syrian refugees has previously been estimated to be as high as 1.3 million.[3]

At the start of the humanitarian response, the Jordanian government strongly resisted installing more permanent infrastructure in the camps, concerned that this would give the unpopular message that Syrians would be staying in the country for the long term. Temporary WASH solutions — which involved pumping water from boreholes outside the camp, trucking and distributing it within the camp, and trucking wastewater away — were expensive. This was particularly problematic in Jordan, one of the world's most water-scarce countries where fraud and corruption by private water companies is rife.[4] And the refugees in the camps, who considered

the UN-installed communal facilities inappropriate, dismantled these and dug their own unlined latrines instead. But Zaatari camp had been built over an aquifer, so this risked contaminating groundwater and required costly retrofitting.[5] The government eventually shifted its position and humanitarian actors designed and built WASH networks for the camp, significantly impacting the cost of WASH provision.

Refugees in Zaatari camp have always had access to minimum levels of water, as stipulated by international humanitarian standards. But those settling in Jordan's urban areas have experienced significant problems accessing WASH services. With water rationed across the country, some households with networked connections only receive water for a few hours each week and must find ways to collect and store it. At the same time, water networks do not always extend to the outskirts of towns and cities, where rents are cheaper and Syrian refugees are therefore often concentrated.

Our research in Al-Dahiyyah showed that some refugee households have no connection to mains water or sanitation, and therefore pay more for water from private vendors and experience public health risks from unsafe and poorly maintained septic tanks. We also found that refugees with networked connections often pay the higher tariffs meant for households with greater levels of water consumption, as landlords seek savings by installing a single water meter in buildings with multiple units.

The scale of investment required in Jordan's ageing WASH network was already huge before the arrival of Syrian refugees added pressure on its systems. And although some of the international development donors that were already working with the government increased their investments in the WASH sector after 2012, this has not been enough to meet the increased need. The humanitarian sector has also struggled to operate in urban areas for several reasons, instead focusing its attention and resources on camps.

Our search for data on costs

To understand what could have been achieved by investing humanitarian aid in sustainable WASH provision in a refugee-hosting urban neighbourhood rather than refugee camps, and to explore WASH solutions for Jordan's refugee-hosting towns and cities, we needed to know how much had been invested in WASH in Zaatari camp since 2012.

To start, we asked UNICEF, the lead agency for humanitarian WASH in Jordan, for interviews with staff in the country, regional and international offices. One staff member agreed to speak with us, but was not permitted to share data on costs for Zaatari. There is doubt, however, whether UNICEF has access to financial data disaggregated by geographic location. An independent evaluation of its Jordan WASH response noted that "Neither UNICEF Jordan nor the WASH programme track expenditures for management purposes. The evaluation team could not obtain documentation that demonstrated expenditure by year, activity, programme component, or beneficiary group".[6] As such, the evaluation team could not assess the UNICEF WASH programme's use of resources between 2012 and 2017, or the extent to which it optimised WASH service delivery costs.

Having drawn a blank with UNICEF, we approached Jordan's Ministry of Planning and International Cooperation to ask for basic information on humanitarian spending on Zaatari or a high-level overview of expenditure in camps compared with urban areas. But ministry representatives made it clear that, while providing such data was theoretically possible, it would require considerable analytical work, which was neither being done nor expected to be done anytime soon.

Next, we undertook an extensive review of literature on Zaatari, looking for cost data and to build a timeline of the evolution of WASH infrastructure within the camp. We found that, while reports published online provide details of budget lines and funding requirements, they do not provide information on actual costs and expenditure. We also found inconsistencies in the reporting on camp activities and projects in the publicly available information. This was not limited to variances between academic and grey literature, as minutes from meetings of UN teams working in the camp show inconsistencies in the follow-up of topics, in dates and even in units of measurement, as well as the renaming of documents at different points in time.

Official documents are similarly unreliable sources for calculating expenditure. Since 2015, the Jordanian government, in collaboration with the UN, has regularly issued Jordan Response Plans, which reflect both 'resilience needs' in the country as a whole and 'refugee needs' in camps and host communities. But although these plans are set out by sector and include costs for water, wastewater and hygiene promotion, they do not reflect expenditure or reliably disaggregate costs between camps.

A lack of transparency

As a final resort, the team turned to the International Aid Transparency Initiative (IATI)

portal, which was designed to provide a common standard for publishing information on how aid money is spent and to establish an online data registry. But, while scrutiny of the information on the portal revealed a great deal about UNICEF reporting standards and transparency, it did not shed any light on costs.

We filtered the IATI data to find all UNICEF WASH projects in Jordan between 2008 and 2019. Each project has a contract award document, but these are in PDF format, which is unwieldy for analysis. So, we converted them into a plain text CSV format dataset, manually tagging each budget line item, if it was sufficiently descriptive, by:

- **Type of cost:** operational expenditure, capital expenditure, staff, communications, other or unknown
- **Nature of cost:** water, sanitation, both or unknown
- **Nature of cost subcategories:** water trucking, water boreholes, wastewater treatment, and so on, and
- **Location of project or spending:** Zaatari, Azraq, other or unknown.

We then used this tagged dataset to produce spending breakdowns for UNICEF Jordan and then for Zaatari only (where it had been identified). A final analysis gave the spread of how many small line items were uploaded to the IATI portal and how many large items had no disaggregation or 'taggable information'. Information from two external evaluations of UNICEF's WASH programming in Jordan[7] suggest that it had a minimum value of US$494 million between 2012 and 2019; but we could only find US$90 million of spending in the IATI portal.

Our analysis also revealed that, despite UNICEF taking over WASH provision in Jordan in 2012, there were no data in the IATI portal for 2011–2014. And, although there are some figures for 2015–2020, there were many line items (totalling US$5.7 million) we could not tag by type, and many others (totalling US$60 million) that had no location data. Almost no spending on sanitation was recorded or identifiable as such and, although some line items were provided for fuel or energy — for example, for trucking or pumping — this was not consistently recorded. We also found that UNICEF data itemised trivial amounts spent on ring binders or posters for donor visits but contained no breakdowns for large construction tenders or framework agreements. This suggests that the organisation is capable of keeping records, but either does not do so or does not provide them to the IATI.

We concluded that it was not possible to determine what has been spent in total on the WASH response in Zaatari camp through information in the public domain. So, by extension, it is not possible to undertake a cost–benefit analysis comparing the hosting of refugees in camps and other areas, such as towns and cities. This has implications for refugee response generally. This lack of transparency and failure to account for expenditure in ways that would allow for this type of analysis mean that lessons from Zaatari — either technical or strategic — are unlikely to be learned.

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Missed opportunities

Our research on the cost of camps did uncover one reliable data point: the cost of building the WASH network in Zaatari. Installed in the camp in two phases between 2014 and 2019, a press release from UNICEF states that it cost €51 million.[8] One of the main donors, the UK's then Department for International Development, reports that Phase I cost US$26 million and Phase II US$30 million, including operation and maintenance costs for 12 months, but provides little detail.[9] Taking fluctuations in exchange rates into account, we assume that the network cost roughly US$55 million to complete.

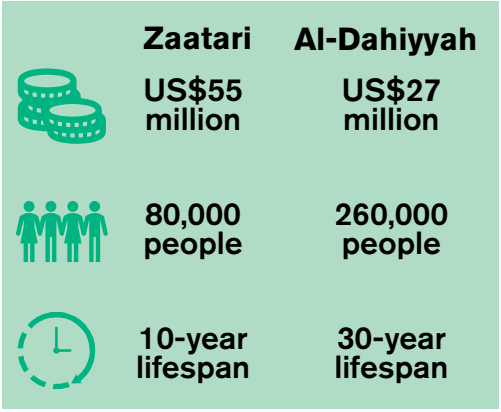
While establishing these costs, the research team was also working in Al-Dahiyyah. This understudied neighbourhood on the outskirts of Mafraq city has received significant numbers of Syrian refugees since 2012. Indeed, at the time of the last census in 2015, nearly 7,600 refugees and migrants lived there, making up 44.5% of the neighbourhood's then 16,000 residents. But unlike Mafraq's more central neighbourhoods, Al-Dahiyyah is partially disconnected from water, sanitation and other networks and services.

Two engineers on our team[10] designed a rehabilitated WASH network for Al-Dahiyyah that, if constructed, would guarantee universal WASH access for all residents, including its vulnerable refugees. This infrastructure would cost approximately US$27 million* and, based on their 30-year projections of population growth, would support Al-Dahiyyah's population as it increases from an estimated 30,000 inhabitants today to 260,000 residents by 2054. By comparison, the Zaatari system cost around US$55 million for

* The projected costs for an entirely new water and sanitation network are estimated to be around US$31 million, accounting for inflation. However, it is anticipated that some existing infrastructure could be rehabilitated and reused to reduce waste, bringing the costs down to around US$27 million.

80,000 people and has an assumed 10-year lifespan.[11] This means that completely rehabilitating the existing WASH system in Al-Dahiyyah and expanding it to account for population growth over 30 years would cost less than half as much as the Zaatari network, last up to three times as long and serve a population more than three times the size. And modifying the scope of these plans to implement them today to serve the current population of Al-Dahiyyah would cost just US$4.8 million — a small proportion of the cost of the Zaatari network.

Figure 1. A comparison of estimated WASH network investment costs and their capacity



A new way forward: urbanising the refugee response

Jordan's initial decision to build the refugee camps, combined with political sensitivities within its government, have limited the space available for discussing the long-term needs of urban areas that are impacted by the arrival of large numbers of refugees. The encampment policies pursued by the government and implemented by the UN have absorbed the focus, efforts and funding of humanitarian actors, but have not met the needs of urban refugees, with significant impacts on their wellbeing.[12]

The situation in Jordan is characterised by entrenched inequalities and unsustainable camp-based responses. Most refugees in urban areas — and many households in host communities — need support. And our research shows a clear need to transition towards long-term support and investment in WASH and other services in Jordanian cities, their authorities, service providers and low-income neighbourhoods.

Beyond Jordan, our findings have important lessons for the international community in responding to future refugee crises. Displacement around the world is overwhelmingly urban and increasingly protracted.[13] Camps, intended as temporary solutions, often remain for decades, absorbing huge amounts of humanitarian attention and funding,[14] while urban refugees and the cities that host them rarely receive humanitarian assistance.

A shift in humanitarian action away from the wasteful construction of refugee camps towards an 'urban first' approach[15] would meet the challenges of the urbanisation of displacement. As well as prioritising existing urban areas as places of refuge, it would establish partnerships with municipal leaders and service providers to help them absorb additional populations while also maintaining long-term residents' quality of life.

It is also time for a reckoning on the cost of camps. To ensure it is transparent and financially accountable, the UN system must make serious efforts to facilitate cost–benefit analyses of the different forms of refugee hosting. Establishing and sharing information on the cost of camps can help us understand the potential dividend of urban refugee hosting. Not only would this contribute to negotiations over how and where to host refugees in future crises; it could also support a transition from unsustainable encampment policies towards a more enlightened approach that supports towns and cities to absorb refugees while improving service provision for all.

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Notes

[1] For more information, see: www.iied.org/rethinking-humanitarian-aid-for-refugees-investment-urban-water-sanitation / [2] UNHCR Operational Data Portal (May 2025) External Statistical Report on UNHCR Registered Refugees and Asylum-Seekers Jordan. / [3] UNHCR Inter Sector Working Group Jordan (2024) Refugee Response and Resilience Strategy 2024–2025. / [4] Farishta, A (2014) The Impact of Syrian Refugees on Jordan's Water Resources and Water Management Planning. Master's thesis, Columbia University. / [5] Kerttula, A (no date) Jordan is on the edge of a water disaster – the home of Jordanians and Arab refugees could run out of fresh water in the next few decades. Crisis and Environment. / [6] International Solutions Group (2019) Evaluation of UNICEF's response to the Water, Sanitation and Hygiene Needs in Jordan as a result of the Syrian refugee crisis (July 2012 to July 2017): Final Evaluation Report. / [7] See note 6; IQVIA (2022) Evaluation of the WASH Humanitarian Response in Jordan (2018–2021) Final Evaluation Report. / [8] UNICEF (3 May 2018) Environment friendly and cost efficient water and sanitation network in Za'atari camp. Press release. / [9] These figures come from DFID (2018) Business case and (2020) Project completion review for the 'Support to Syrian refugees and Jordanian host communities in Jordan and life-saving aid for people at the 'berm' via UNICEF 2017–2019' project. / [10] Ghada Balaw and Ala'a Omoush. / [11] While the ten-year life cycle is not explicitly stated in any document, the research team was able to access financial analysis of cost savings in Zaatari Water Network Technical Working Group (8 May 2014) Water Network studies for Zaatari Camp, which demonstrates that they are assuming a ten-year life span for the network. / [12] Alhaj Hasan, S, Garcia Amado, P, Betawi, Y, Dajani, D, Brown, A and Earle, L (2024) Syrian refugees in Jordan: reevaluating responses to protracted displacement. IIED, London. / [13] Earle, L (2023) Why the international community is failing urban refugees: four myths about protracted displacement. IIED, London. / [14] See note 13. / [15] Earle, L and Brown, A (2024) Realigning responses to protracted displacement: putting "urban first" in a "world without camps", *Environment & Urbanization*, 36(2).

Knowledge Products

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FIND OUT MORE

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