

**Amman Center
for Human Rights Studies**

In Special consultative status
with U. N. ECOSOC
Honorary of the UN Human Rights
Prize 2023



مركز عمان
لدراسات حقوق الإنسان
حاصل على وضع استشاري خاص لدى
المجلس الاقتصادي والاجتماعي للأمم
المتحدة
وجائزة الأمم المتحدة لحقوق الإنسان لعام
2023

Call for Contributions

Mandate of the Special Rapporteur on the human rights to safe drinking water and sanitation

Thematic Report to the UN General Assembly 79th session:

“Water and food nexus: a human rights approach to water management in food systems”.

• Introduction

The Amman Center for Human Rights Studies recognizes the intersection of water rights with other human rights such as the right to social protection. As such, this is a response to the call for contribution from the Special Rapporteur on the human rights to safe drinking water and sanitation. Jordan is the second most water scarce nation in the world.¹ The rate of access to renewable freshwater in Jordan is 61m³ per person per year, which is significantly lower than the 500m³ threshold that is universally accepted as the absolute water scarcity line.² This number indicates sharp levels of water scarcity.

The Amman Center for Human Rights Studies (ACHRS) is a civil society organization that has participated in research and local and regional human rights initiatives on the right of groups to have safe access to food and water resources. The Center has participated in The International Conference on Food Justice from a Human Rights Perspective "Challenges of Reality and Future Stakes" in Doha, Qatar in 2024. The Center submitted a paper on taking a human rights perspective on global trade transactions with an emphasis on the right to food. The recommendations of the paper included integrating human rights regulations in trade practices, supporting initiatives that combat climate change through sustainability and circular farming initiatives, and supporting farmers and agricultural diversity. This highlights the organization's involvement in the right to food, and how water scarcity and farming are relevant areas in combating poverty in the region.

This response to the call for input aims to address the relationship between water scarcity and food security in light of the center's research and involvement with local groups and initiatives in

¹ UNICEF (n.d.). *Water, sanitation and hygiene*. [online] [www.unicef.org](https://www.unicef.org/jordan/water-sanitation-and-hygiene). Available at: <https://www.unicef.org/jordan/water-sanitation-and-hygiene>.

² The Ministry of Water and Irrigation (2023). *National Water Strategy 2023 - 2040 Summary*. [online] Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.mwi.gov.jo/EBV4.0/Root_Storage/AR/EB_Ticker/National_Water_Strategy_2023-2040_Summary-English_-ver2.pdf.

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Jordan. The response will entail a human rights review on the matter, assessing how the issue intersects with other human rights challenges in the country, such as the right to life and social protection.

1. Can you explain your personal or community experience fulfilling your human right to safe drinking water, sanitation, and the human right to food? Do you think they are linked? Explain what the main sources of food and water are, as well as the quality of food and water.

Jordan is highly impacted by water scarcity. In recent years, with trends of regional and local migration, water stress has been a recurring issue in groups' ability to access sanitation, agricultural and water services. From interviews, personal experiences and reports, groups, particularly marginalized workers, migrants and low-income groups, have been affected in different aspects of their lives due to their inability to access water; households have been struggling with managing water to clean their homes and farmers had to abandon their agricultural enterprises due to water shortages (Interviewee 1). As such, the right to access water intersects with the right to access sanitation and food in Jordan, endangering the wellbeing and livelihood of communities in the country.

For farmers, larger farms rely more on underground water resources, whereas smaller scale farming enterprises rely on treated water supplied by the water authority. In terms of quality of water, the salinity and the quality of water supplies determines the quality of food produced, it also determines what plants are farmers able to produce; if the supplied water used in irrigation has high levels of salinity or toxins, some plants cannot be cultivated. This adds to the limitations of what type of food could be produced in the country.

2. What are the main challenges to fulfilling your human rights to water and food? Are they linked to intensive agriculture, overdraft of wells, pollution, land, or water grabbing, deforestation, climate change, or others?

Access to water and food is impacted by numerous factors in Jordan. The results and findings of this research on the challenges to accessing water and food will be reflected in the sections below:

- Climate Change

In the case of Jordan, climate change has had an immediate impact on managing water and hydraulic infrastructures, water quality, and the availability of freshwater resources in the country. Governmental reports highlight the impacts of climate change in several forms,³ firstly, climate

³ The Ministry of Water and Irrigation (2023). *National Water Strategy 2023 - 2040 Summary*. [online] Available at: chrome-

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change has led to seasonal changes and irregularities in rainfall. This makes it challenging to set trajectories on how to plan gathering surface level water from infrastructures such as dams. Moreover, irregular fluctuations between drought and flooding makes water infrastructure more challenging to maintain, as this makes infrastructures more vulnerable to damage. This immediately relates to the availability of freshwater to rural areas and farming communities. Hot dry weather also increases water stress, as farmers would need more freshwater for irrigation. Weather fluctuations could influence the recurrence of dry heat waves, increasing the level of deficit in water demand. Governmental reports also identify that by 2040, there would be a 15% reduction in groundwater recharge. This is attributed to predictions of low precipitation over the next two decades. While this impacts the availability of water, it also impacts the quality of freshwater; research shows that the depletion of groundwater, and high temperature would increase the salinity of water, making it less suitable for irrigation.⁴

In an interview with a resident and a farmer in one of Jordan's refugee camps, climate change was identified as a key contributor to drought, which amplified water stress in vulnerable farming areas such as camps (Interviewee 1). It was noted that during the summer, their consumption of water in farming is significantly higher than during the winter where rainfall covers irrigation needs. Refugees already struggle to access water relative to the rest of the country, and extreme weather fluctuations affect them at a higher rate.

- Intensive Agriculture and Unsustainable Farming Practices

Agriculture uses 51% of freshwater resources in Jordan.⁵ This indicates that farmers intensively use water resources to cultivate crops using unsustainable irrigation means. Moreover, farmers choose to cultivate water-intensive crops such as bananas and citrus. Furthermore, due to environmental changes and unsustainable farming practices, there has been a larger reliance on

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⁴ Akbari, M., Najafi Alamdarlo, H. and Mosavi, S.H. (2020). The effects of climate change and groundwater salinity on farmers' income risk. *Ecological Indicators*, [online] 110, p.105893. doi:https://doi.org/10.1016/j.ecolind.2019.105893.

⁵ UNICEF Jordan and Economist Impact (2022). *Tapped out: The costs of water stress in Jordan*. [online] UNICEF. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.unicef.org/jordan/media/11356/file/water%20stress%20in%20Jordan%20report.pdf.

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irrigation rather than rainwater. In a report by the FAO, the percentage of crops that rely on irrigation rose from 35% in the mid-1990s to 46% 2016.⁶ This is projected to increase in the next two decades. Water-intensive farming practices depletes the country's water reserves and increases water stress. Such practices impact the availability of water for agriculture, affecting food security.

Moreover, from interviews with farmers in the country, it was noted that part of managing water sustainably is through the implementation of circular water management including the reuse of water, and selecting crops that demand less water, and are more adjustable to the climate (interviewees 1 and 2). Interviewees also identified a need to enhance infrastructures to avoid accidents in water supply pipes that would lead to the depletion of water (Interviewees 1, 2, 3, 4).

- Pollution

Jordan's natural water sources such as streams and underground aquifers are exposed to the dumping of pollutants, such as fertilizers, industrial chemicals and the illegal dumping of sewage.⁷ This made natural sources of water such as Zarqa and the Jordan river unsuitable for farming uses, threatening food security in the country. Note that 91% of treated water is used in agriculture in Jordan.⁸ However, from interviews gathered, and from reports,⁹ the level of treatment of water in Jordan is inadequate to obtain usable and healthy crops (Interviewees 1 and 2). Farmers interviews reported that water supplied from the water authorities for irrigation typically 'smells polluted', and yields crops that they do not feel usable, particularly when they are irrigating plants with low filtration levels.

- Transboundary Water Sources and Geopolitical Tensions

Jordan's geopolitical context is turbulent, subsequent conflicts and tensions in surrounding countries have impacted the ability of the country to manage shared water resources. As such, control of water is another aspect of the geopolitics of the region. Jordan shares the Jordan river and the Yarmouk streams with Israel to the west. After the peace talks with Israel, Jordan was

⁶ Food and Agriculture Organization of the UN (2015). *Jordan: Water along the food chain, An analytical brief of selected food chains from a water perspective*. FAO.

⁷ Fanack Water (2022). *Water Quality in Jordan*. [online] Fanack Water. Available at: <https://water.fanack.com/jordan/water-quality-in-jordan/>.

⁸ WANA Institute (2019). *Water and Agriculture in Jordan: Understanding Current Water and Agricultural Priorities and Futures*.

⁹ Ibid

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allocated 50 million cubic meters of water in the Jordan valley.¹⁰ However, Israel has since been accused by NGOs and international observers of over-pumping shared water resources.¹¹ Moreover, lately, with Israel's attempt to illegally annex the Jordan valley in the West Bank, Israel is reducing the flow of water to Jordan, and using it as a political tool to pressure Jordan into accepting Israel's illegal occupation of the West Bank.¹² Such weaponization of water resources for political objectives has harmed farmers in the Jordan valley, by reducing their access to water resources.

3. If there is intensive agricultural or livestock production or any industry linked to food in your community, can you explain if it affects your rights or the rights of others to food, water, or both? If it does, can you explain how? Provide as many details as possible.

In interviews with large farms enterprises and owners, they reflected on how surrounding intensive farming projects have impacted the availability of water in underground aquifers (Interviewees 2, 4). Since their primary source of water is wells and underground aquifers, intensive extraction of water from the same aquifer has depleted water resources for farmers in the area. Some wells in the area were no longer adequate to supply the needed quantities of water to irrigate existing plants. This has exacerbated water stress, making it harder to cultivate crops.

For smaller farmers who rely on water supplied by the water authorities, they have reflected on how wasteful management of water has affected their water rights (Interviewees 1,3). Small farmers have been affected by how larger farms in the area demand larger quantities of water, making it harder for the authorities to supply water for smaller enterprises. An interviewed farmer recommended that larger farms follow circular management of water in order for regional water supplies to be adequate for all enterprises.

¹⁰ Pernot, P. (2023). *Why water is at the centre of Jordan-Israel tensions*. [online] <https://www.newarab.com/>. Available at: <https://www.newarab.com/analysis/why-water-centre-jordan-israel-tensions> [Accessed 8 Mar. 2024].

¹¹ Arab Group for the Protection of Nature (2023). *APN contributes two papers on violence and the right to food in Jordan and Palestine, published on the website of the UN Special Rapporteur on the right to food*. [online] The Arab Group for the Protection of Nature. Available at: <https://www.apnature.org/en/media/news/apn-contributes-two-papers-violence-and-right-food-jordan-and-palestine-published> [Accessed 8 Mar. 2024].

¹² Duyar, M. (2021). *ANALYSIS: Israel's most powerful tool in persuading Jordan: 'water problem'*. [online] www.aa.com.tr. Available at: <https://www.aa.com.tr/en/analysis/analysis-israel-s-most-powerful-tool-in-persuading-jordan-water-problem-/2267024> [Accessed 19 Jun. 2022].

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4. Communities are usually heterogeneous; are any groups in your community facing more challenges in fulfilling their human right to food and/or water? Can you explain who and why?

There is a socioeconomic aspect to water security in Jordan. Refugees are structurally at a disadvantage in Jordan due to having an incomplete legal status, which places them on the margins economically and politically¹³. Water inequality affects refugees the most as the government prioritizes Jordanian localities over camps, which are areas significantly more impoverished in terms of infrastructural provisions. In an interview with a farmer managing a rooftop garden in a refugee camp, it was noted that refugees typically get their water through the water authority supply system, once every month or 40 days (Interviewee 1). After campaigning for more water, the authorities agreed to supply water once every 21 days, however it was noted that the authorities do not abide by that.

Jordanian localities get their water once a week, which is significantly more than refugee camps. This inequality in the supply of water makes refugees the most affected by water scarcity, and hence food security, as food cannot be cultivated locally with low quantities of water. Moreover, people in Jordan typically resort to buying water tanks from private distributors if supplied water is not enough. However, low-income groups, such as refugees, cannot afford to buy that to cover their needs.

In interviewing larger farms, it was noted that using larger sources of water, such as underground aquifers, is associated with significant costs for digging the well, extracting the water, and maintenance (Interviewee 2). Poorer farmers cannot maintain such costs, which forces many farmers, particularly in relatively dry areas, to abandon their enterprises. Apart from the socioeconomic impacts of losing a source of income, this indicates the loss of food resources because of water scarcity, which has negative implications on food security in deprived areas.

¹³ UNICEF Jordan and Economist Impact (2022). *Tapped out: The costs of water stress in Jordan*. [online] UNICEF. Available at: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.unicef.org/jordan/media/11356/file/water%20stress%20in%20Jordan%20report.pdf>.



5. Can you list good practices on the intersection of the water-food nexus? Please explain; these can include food-related practices in areas facing droughts and water management practices in areas prone to extreme climatic events such as droughts or flooding. These practices can also involve collective action to ensure everyone can access food and water; please explain.

There are local initiatives that utilize sustainable farming and water management strategies and benefit the local community in addressing the dangers of water scarcity on food security. Sama Gaza is a local initiative in Jerash Refugee Camp that aims to provide the youth with vocational and professional training. Refugee camps face severe impacts as a result of drought and water scarcity. One of the activities of the initiative is a roof-top garden that utilizes water management practices that are renewable. In an interview with the farmer managing the garden, several promising practices were addressed (Interviewee 1); reusing water through planting in barrels and containers that gather wasted water for reuse is an example of how local communities could implement sustainable farming practices. The farmer also advocated for raising awareness of good farming practices, and in avoiding intensive farming. The roof-top garden managed to help more than 30 families in the camp in supporting them with food that is needed daily. Such local initiatives should be empowered so that their impacts could help marginalized communities address the harms of food insecurity and water security.

6. Do you have access to legal mechanisms that protect your human rights to water and to food (accessibility, availability, affordability, and adequacy)? If yes, detail which ones work or not; if not, what are the main issues you face, and what actions are required?

International law calls for governments to implement a human rights approach to granting water and sanitation to citizens as per article 11(1) of the International Covenant on Economic, Social and Political Rights¹⁴. This involves providing equal access to safe water that is affordable to low-income segments of society. Jordan's water strategy for 2023-2040 aims to meet the economic, sanitary and social demands for water¹⁵. Moreover, the water laws in Jordan dictate that the water authorities are responsible for maintaining water infrastructure, preventing pollution and theft of

¹⁴ United Nations (n.d.). *OHCHR / About water and sanitation*. [online] OHCHR. Available at: <https://www.ohchr.org/en/water-and-sanitation/about-water-and-sanitation>.

¹⁵ The Ministry of Water and Irrigation (2023). *National Water Strategy 2023 - 2040 Summary*. [online] Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.mwi.gov.jo/EBV4.0/Root_Storage/AR/EB_Ticker/National_Water_Strategy_2023-2040_Summary-English_-ver2.pdf.



water resources¹⁶. However, the strategy is lacking in taking a human rights approach to the subject; for instance, the question of discriminatory distribution of water is not addressed in the strategy. This echoes the recommendations given by UN experts previously, urging the government to take a human rights approach to address water scarcity in Jordan¹⁷. This leaves locals in Jordan in need of accessible and concrete legal mechanisms that would address their water needs. In interviews with farmers, they reflected on ways to file complaints or recommendations to the water authorities. Despite having a section that addresses public complaints, the water authorities are viewed as unresponsive to people's needs and demands as mentioned in interviews (Interviewees 1, 2, 3, 4). This reiterates the need for a more human rights-based approach to water management in Jordan, as it responds to public needs and works to address challenges facing vulnerable groups in the country.

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¹⁶ Jordanian Law (2020). *قانون سلطة المياه Translation: Water Authorities Law*. [online] <https://jordanianlaw.com/%D8%A7%D9%84%D9%82%D9%88%D8%A7%D9%86%D9%8A%D9%86/%D9%82%D8%A7%D9%86%D9%88%D9%86-%D8%B3%D9%84%D8%B7%D8%A9-%D8%A7%D9%84%D9%85%D9%8A%D8%A7%D9%87/> [Accessed 11 Mar. 2024].

¹⁷ UN News (2014). *UN expert urges long-term, rights-based approach to water crisis in Jordan | UN News*. [online] news.un.org. Available at: <https://news.un.org/en/story/2014/03/464022> [Accessed 11 Mar. 2024].

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Appendix

The Following table describes the structured interviews carried out for the purpose of this report.

Table 1: Interview Details

Label	Interviewee	Region	Size of Enterprise	Crops Used	Primary Water Source
1	Rooftop Garden manager	Jarash Camp	Small	Vegetables	Supplied by the water authorities
2	Farmer	Mafraq	Large	Olives	Underground Aquifer
3	Manager of a farming business	Ajloun	Small	Vegetables	Buys Water Tanks
4	Owner of a Farm	Mafraq	Large	Olives	Underground Aquifers