

THE RIGHT TO WATER
AND CLIMATE CHANGE

2025

THE ARAB WATCH REPORT ON
ECONOMIC AND SOCIAL RIGHTS

THE RIGHT TO WATER IN JORDAN



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THE RIGHT TO WATER IN JORDAN

FROM A HUMAN RIGHTS PERSPECTIVE

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THE RIGHT TO WATER IN JORDAN

FROM MANAGING SCARCITY TO ACCOUNTABILITY POLICIES

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This report is published as part of the Arab NGO Network for Development's Arab Watch Report on Economic and Social Rights (AWR) series. The AWR is a periodic publication by the Network and each edition focuses on a specific right and on the national, regional and international policies and factors that lead to its violation. The AWR is developed through a participatory process which brings together relevant stakeholders, including civil society, experts in the field, academics, and representatives from the government in each of the countries represented in the report, as a means of increasing ownership among them and ensuring its localization and relevance to the context.

The seventh edition of the Arab Watch Report focuses on the right to water. It was developed to provide a comprehensive and critical analysis of the status of this right across the region, particularly in the context of climate change and its growing impacts. The information and analyses presented aim to serve as a platform for advocacy toward the realization of this fundamental right for all.

The views expressed in this publication are solely those of the author and do not necessarily reflect the positions of the Arab NGO Network for Development (ANND), Brot für die Welt, or Norwegian People's Aid.

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01

INTRODUCTION

Water is the foundation of life and a pillar of human existence. It is not merely a natural resource to be managed from an economic or engineering perspective, but an essential element in ensuring human rights and human dignity.

Since the beginning of the new millennium, the United Nations has affirmed that the right to water goes beyond being a biological need and constitutes a legal and human rights entitlement that states must respect, protect, and fulfill.

General Comment No. 15 of the Committee on Economic, Social and Cultural Rights, issued in 2002, established a clear conceptual framework that considers access to sufficient, safe, and acceptable water a prerequisite for the enjoyment of other rights, such as health, food, and adequate housing (UN CESCR, 2002).

Jordan represents a particular case in this context, as it is classified among the five most water-poor countries in the world. Official statistics indicate that annual per capita water availability does not exceed 100 cubic meters, while the global water poverty threshold set by the United Nations stands at 500 cubic meters per person per year (Ministry of Water and Irrigation, 2023).

This harsh reality has been accompanied by mounting pressures resulting from

rapid population growth, the hosting of large numbers of refugees, and climate change, which has led to declining rainfall levels, longer drought periods, and rising temperatures (World Bank, 2022).

The world is facing an escalating crisis of water scarcity as a result of the impacts of climate change and continued population growth. Estimates indicate that global demand for water will increase by 20% to 30% by 2050.

This increase will lead to a decline in per capita shares of renewable water resources, deepening the gap between supply and demand at the international level and creating unprecedented challenges for water security and sustainability (Jordan Strategy Forum, 2025).

As a result of all these factors, water scarcity in Jordan has become a multidimensional structural crisis, extending from the environmental sphere to the social, political, and human rights dimensions.

Successive Jordanian governments have sought to address this crisis through major projects, such as the Disi Water Conveyance Project, which began operating in 2013 to supply the capital, Amman, with water; the National Water Carrier Project, which aims to desalinate water in Aqaba and pump it to different regions of the Kingdom; and future plans to expand water desalination

using renewable energy (Muna Hindiye, 2024).

However, despite their importance, these projects have not addressed the root causes of the crisis, as structural challenges, including weak governance, the absence of equity in distribution, and increasing privatization, have continued to negatively affect the realization of the right to water.

From a socio-political perspective, Jordan's water crisis cannot be understood in isolation from the country's political structure and power balances.

A study issued by the London School of Economics (2023) indicated that water management in Jordan is shaped not only by supply and demand equations or environmental considerations, but also by calculations related to social stability, tribal influence, and pressure from international donors.

Water is sometimes managed as a political tool rather than as a human right that must be guaranteed on the basis of justice and equality.

In addition, religious and moral discourse gives the issue of water in Jordan an ethical and spiritual dimension.

The Holy Qur'an affirms in more than one verse that water is the origin of life: "And We made from water every living thing" (Al-Anbiya: 30).

The noble hadith also states: "Muslims are partners in three things: water, pasture, and fire."

These texts affirm the shared and public nature of water and establish a foundation for the principle of justice and participation in its distribution (Al-Hayajneh, 2025).

In light of the above, this report seeks to shed light on the reality of the right to water in Jordan from a human rights perspective, based on three main axes:

The first axis: the conceptual and legal framework, which clarifies the roots of this right in international human rights law and in Jordanian national legislation.

The second axis: structural challenges and existing gaps, including natural scarcity, weak governance, geographical and social disparities, and the impact of privatization and tribal customs.

The third axis: alternatives and recommendations, based on international and regional experiences, which set out a roadmap for strengthening water justice in Jordan through policy reform, the constitutional recognition of the right to water, and enhanced international cooperation.

This report does not merely describe the current reality; it also seeks to provide an in-depth critical analysis, drawing on national and international references, policy papers, and recent academic studies.

It also integrates environmental, social, legal, and religious dimensions within a comprehensive vision, making it a practical reference for researchers, policymakers, and civil society actors advocating for water justice.

02

CONCEPTUAL FRAMEWORK OF THE RIGHT TO WATER

DEFINITION OF THE RIGHT TO WATER

The right to water is defined as the right of every individual to have access to a sufficient, safe, acceptable, and affordable quantity of water for personal and domestic use.

This definition was adopted by the Com-

mittee on Economic, Social and Cultural Rights in General Comment No. 15 (UN CESCR), which affirms that: "Water is not merely an economic commodity but a fundamental right, and states bear legal obligations to protect and guarantee it."

CORE DIMENSIONS OF THE RIGHT TO WATER

The right to water is founded on five interrelated elements (General Comment No. 15, 2002), which constitute the conceptual framework of this right under international human rights law. This framework obliges states to ensure universal access to water and sanitation services without discrimination, while prioritizing those most in need. The Committee on Economic, Social and Cultural Rights and the Special Rapporteur on this right have identified these elements as follows:

1. **Availability:** The provision of sufficient and continuous water to meet personal and domestic needs, together with adequate sanitation facilities in homes and public spaces.
2. **Accessibility:** Ensuring that all individuals can safely access water and sanitation facilities, while taking into account the needs of vulnerable groups such as children, older persons, women, and persons with disabilities.
3. **Affordability:** Water and sanitation services must be affordable, and no individual should be deprived of access because of financial constraints.
4. **Quality and Safety:** Water must be free from chemical, biological, and radiological contaminants, and sanitation facilities must be safe.
5. **Acceptability:** Facilities must be culturally appropriate, respect privacy, and meet the needs of both genders and different age groups.

STATE OBLIGATIONS

States bear obligations at three levels to ensure the realization of this right (Gleick, 1998):

- **Respect:** Refrain from any arbitrary interference that deprives individuals of access to water.
- **Protect:** Prevent third parties (companies, individuals, well owners, etc.) from violating others' right to sufficient and safe water.
- **Fulfill:** Adopt legislative, policy, and investment measures to ensure the equitable and adequate provision of water for all members of society.

THE RIGHT TO WATER AS AN ENABLING RIGHT

The right to water is not only a standalone right but also an enabling right that is intrinsically linked to a range of other rights (UN General Assembly, 2010):

1. **The Right to Health:** The health of individuals cannot be guaranteed without safe drinking water and adequate sanitation.
2. **The Right to Adequate Housing:** Adequate housing includes access to essential services such as water and electricity.

THE ETHICAL AND CULTURAL DIMENSION

Within the Jordanian context, the right to water also carries religious and ethical dimensions. The Holy Qur'an affirms that water is the source of life: "And We made from water every living thing" (Al-Anbiya: 30). Likewise, the Prophet Muhammad (peace be upon him) stated: "Muslims are

partners in three things: water, pasture, and fire." These texts affirm the shared and public nature of water and establish a foundation for the principles of justice and collective stewardship in its distribution (Al-Hayajneh, 2025).

INDICATORS FOR MEASURING THE RIGHT TO WATER

To assess progress in realizing the right to water, international policy papers and institutions such as the Office of the United Nations High Commissioner for Human Rights and ESCWA have proposed a set of indicators, including (ESCWA, 2023):

1. The percentage of the population with access to safe drinking water.
2. The percentage of water losses within distribution networks.
3. The cost of water access as a proportion of household income.
4. The geographical coverage of water supply networks.
5. The percentage of the population with access to safely managed sanitation services.

These indicators are not limited to quantitative dimensions; they also incorporate principles of social justice and non-discrimination, in line with human rights approaches and the Sustainable Development Goals, particularly SDG 6 (Jordan SDG Report, 2024).

03

INTERNATIONAL LEGAL FRAMEWORK OF THE RIGHT TO WATER

THE RIGHT TO WATER IN INTERNATIONAL INSTRUMENTS, UNITED NATIONS RESOLUTIONS, AND HUMAN RIGHTS COUNCIL DECISIONS

Water is essential for life and health. The human right to water is indispensable for living a healthy and dignified life and constitutes a fundamental prerequisite for the realization of all other human rights.

This right is necessarily centered on three core dimensions: adequate quality, sufficient quantity, and affordable cost.

Although the right to water is not explicitly mentioned in all international human rights treaties, it is derived from a range of fundamental rights enshrined in these instruments.

For example, the United Nations, through its General Assembly and the United Nations Development Programme (UNDP), has been among the leading international actors recognizing the human right to water. UNDP has also contributed significantly to consolidating this right, considering it a new human right equal in importance to other internationally recog-

nized human rights.

- **UN General Assembly Resolution A/RES/64/292 (July 2010):** Formally recognizes that "the right to safe and clean drinking water and sanitation is a human right that is essential for the full enjoyment of life and all human rights."
- **Human Rights Council (2015):** Affirmed that the right to water and the right to sanitation are closely related but distinct human rights.
- **International Covenant on Economic, Social and Cultural Rights (ICESCR): Article 11** affirms the right of everyone to an adequate standard of living, which encompasses access to water.
- **General Comment No. 15 (2002):** Defines the right to water as "the right of everyone to sufficient, safe, acceptable, physically accessible, and affordable water for personal and domestic uses."

INTERNATIONAL CONVENTIONS AND TREATIES

1. **The 1992 Helsinki Convention:** Established a framework for cooperation

in the management of transboundary rivers and lakes and affirmed the

principles of equitable and reasonable utilization and the obligation not to cause significant harm to other states (UNECE, 1992).

2. **The 1992 Dublin Principles:** Recognized water as a finite resource with economic, social, and environmental value and called for the participation of local communities in water management.
3. **Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, 1979):** Emphasized the need to ensure women's access to essential resources, including water. Article 14 specifically affirms the right of women, particularly those living in rural areas, to benefit from adequate

water supply and sanitation services.

4. **Convention on the Rights of the Child (CRC, 1989):** Article 24 guarantees children's access to clean drinking water as an integral component of the right to health.
5. **Sustainable Development Goals (SDGs, 2015):** Goal 6 is dedicated to ensuring the availability and sustainable management of water and sanitation for all by 2030.
6. **Convention on the Rights of Persons with Disabilities (CRPD, 2006), Article 28:** Affirms the right of persons with disabilities to have access to safe water and sanitation services.

INTERNATIONAL JURISPRUDENCE

Several international courts and bodies have issued judgments and advisory opinions that reinforce the rights-based character of water. For example, the Inter-American Court of Human Rights, in a series of recent decisions (2020-2023), affirmed that the right to water is an integral component of the right to a healthy environment and gives rise to positive

obligations on the part of states (IACHR, 2020). Likewise, the International Court of Justice, in its advisory opinion issued in July 2025 on climate change, discussed states' obligations to ensure the sustainability of natural resources, including water, as part of protecting the rights of future generations (ICJ, 2025).

STATE OBLIGATIONS UNDER INTERNATIONAL LAW

Based on these international instruments and principles, states parties to international treaties are legally obligated to:

1. Ensure adequate access to water for all persons without discrimination.
2. Protect water resources from pollution and depletion.
3. Establish legislative frameworks and national policies consistent with their international obligations.
4. Cooperate with other states in the management of shared water resources.

GAPS AND CHALLENGES

Despite the growing recognition of the right to water, several challenges remain:

1. The absence of effective international enforcement mechanisms to hold states accountable for failures to uphold this right.
2. Tensions between national sovereignty and the requirements of international cooperation.
3. The lack of integration between the international legal framework governing water rights and environmental frameworks, such as the Paris Agreement, which has direct implications for water resources (UNFCCC, 2015).

04

LEGAL FRAMEWORK OF THE RIGHT TO WATER IN JORDAN

ABSENCE OF EXPLICIT CONSTITUTIONAL RECOGNITION

The Jordanian Constitution does not contain an explicit provision recognizing the right to water as a human right. This creates a significant legislative gap, particularly given that water is both a scarce and vital resource in Jordan. Although the Constitution contains general principles

concerning the protection of rights and freedoms, the inclusion of an explicit constitutional provision on the right to water would provide a strong legal foundation imposing clear obligations on both the legislature and the executive branch (Al-Hayajneh, 2025).

NATIONAL LEGISLATION

Despite the absence of constitutional recognition, several key laws have been enacted to regulate the water sector:

1. **Water Authority Law No. 18 of 1988:** Regulates the establishment, operation, and maintenance of water supply and sanitation networks. It grants the Water Authority broad powers, including monitoring consumption, issuing regulations and instructions, and setting tariffs and fees (Water Authority Law, 1988).
2. **Jordan Valley Authority Law No. 19 of 1988:** Focuses on the management of water resources in the Jordan Valley, while prioritizing their use for agriculture. This reflects the predominance of economic considerations in water management at the expense of a rights-based approach.
3. **Environmental Protection Law No. 6 of 2017:** Contains provisions aimed at protecting water resources from pollution and obliges the relevant authorities to undertake environmental monitoring and enforcement activities (Environmental Protection Law, 2017).

NATIONAL POLICIES AND STRATEGIES

In addition to legislation, Jordan has adopted a number of long- and medium-term strategies and plans:

1. **The National Water Strategy 2023-2040:** Focuses on ensuring access to clean water for all residents, reduc-

ing water losses, and improving distribution efficiency (Ministry of Water and Irrigation, 2023).

2. **The Ministry of Water and Irrigation Strategic Plan 2022-2024:** Aims to reform governance, upgrade infrastructure, and introduce modern technologies.
3. **The Jordan Valley Authority Strategic**

Plan 2024-2026: Focuses on improving irrigation water management and ensuring equitable distribution among agricultural regions.

4. **The Economic Modernization Vision 2025:** Identifies water as a strategic priority and one of the key determinants of national security (Ministry of Planning, 2025).

INSTITUTIONAL AND ADMINISTRATIVE DIMENSIONS

Jordan's water sector is characterized by a multiplicity of governing bodies, including the Ministry of Water and Irrigation, the Water Authority of Jordan, the Jordan Valley Authority, municipalities, and, in emergency situations, the armed forces. This institutional overlap often results in

weak coordination and duplication of decision-making processes (World Bank, 2022). Moreover, the absence of an independent regulatory body limits opportunities for accountability in cases of misconduct or inequitable water distribution.

THE TURN TOWARD PRIVATIZATION

Since the beginning of the twenty-first century, Jordan's water sector has witnessed a gradual shift toward private-sector participation in the management of certain services, including operation and maintenance contracts in Amman and Zarqa. Although this approach has improved technical efficiency in some

cases, it has also generated controversy regarding social equity, as service costs have increased for certain low-income groups (LSE, 2023). Critics argue that, in the absence of strong regulatory safeguards, privatization has functioned more as a financial instrument than as a mechanism for advancing the right to water.

EXISTING GAPS

The main shortcomings of Jordan's legal framework can be summarized as follows:

1. **Absence of constitutional recognition:** The right to water remains unprotected at the highest legislative level.
2. **Administrative and technical orientation:** Water laws and policies are dominated by a technical management perspective rather than a rights-based approach grounded in principles of justice and equity.
3. **Weak accountability mechanisms:** There are no clear procedures for holding responsible entities accountable when they fail to ensure equitable water distribution.
4. **Tribal and political influences:** In certain areas, water allocation is influenced by local power structures and tribal considerations (Muna Hindiye, 2024).
5. **Insufficient inclusion of marginalized groups:** Existing strategies do not

adequately incorporate indicators relating to women, refugees, or persons with disabilities.

In light of these challenges, there is a pressing need for legislative and institutional reforms that would enshrine the right to water in the Constitution, establish an independent national body to over-

see the water sector, and more explicitly integrate a rights-based approach into all water-related policies and strategies. Such reforms should be founded on the principles of participation, transparency, and social justice, in line with Jordan's international obligations (OHCHR, 2014).

05

CHALLENGES AND GAPS IN THE REALIZATION OF THE RIGHT TO WATER IN JORDAN

Despite national, regional, and international efforts to improve the water sector, Jordan continues to face a complex set of

structural challenges and institutional and social gaps. These challenges can be categorized as follows:

NATURAL WATER SCARCITY

Jordan is among the most water-scarce countries in the world. According to data from the Ministry of Water and Irrigation, annual per capita water availability does not exceed 100 cubic meters, compared with the internationally recognized water poverty threshold of 500 cubic meters per capita (Ministry of Water and Irrigation, 2023). This scarcity is driven by natural factors, most notably the limited availability of surface water resources, uneven rainfall distribution, and rising temperatures.

Climate change has further aggravated

the situation, leading to a decline in rainfall levels of up to 20 percent over the past three decades and an increase in the frequency of drought years (World Bank, 2022). This has negatively affected both groundwater and surface water reserves, reducing the productivity of dams and aquifers.

Jordan relies on three principal sources to meet its water needs: groundwater, surface water, and treated wastewater (Jordan Strategy Forum, 2025).

■ 1. GROUNDWATER

- Groundwater constitutes the backbone of Jordan's water supply, accounting for approximately 58 percent of total water resources.

- This source is under severe pressure due to overexploitation, with withdrawals exceeding safe yield levels in most ground-

water basins.

- Major challenges include declining water tables, increasing salinity levels, and rising pumping costs.

■ 2. SURFACE WATER

- » Surface water accounts for approximately 26 percent of total water supplies.
- » It is mainly distributed among dams, rivers, and wadis, including King Talal Dam and the Yarmouk River.

» These resources face significant challenges, most notably climate variability, high evaporation rates, and pollution. By 2022, storage levels in Jordan's fourteen dams had reached only about 32 percent of their total capacity.

■ 3. TREATED WASTEWATER

- » Treated wastewater contributes approximately 15 percent of total water supplies and is reused mainly in the agricultural sector.

» It represents an important source for reducing pressure on conventional water resources, although its use remains limited in drinking water and industry.

OVEREXPLOITATION OF GROUNDWATER RESOURCES

Groundwater basins are being consumed at rates that exceed their natural recharge capacity. Some basins, such as the Disi and Yarmouk basins, are experiencing severe depletion, resulting in declining water levels and increasing salinity

(Muna Hindiye, 2024). This is due to intensive agricultural use and the spread of unlicensed wells. Despite government efforts to control these practices, tribal and political considerations often limit the effectiveness of oversight.

SDG 6 INDICATORS

The report titled Jordan and the Sustainable Development Goals: Small Steps and a Long Path (2024) shows that Jordan has achieved only limited progress toward SDG 6 on clean water and sanitation. Its global ranking declined from 124th in 2015 to 131st in 2023 (SDG Jordan Report, 2024).

The sub-indicators reveal deep gaps:

1. The percentage of the population with access to safe drinking water increased only slightly, from 73 percent in 2015 to 75 percent in 2020, remaining below the global average.
2. The percentage of the population with access to basic sanitation services remains below 70 percent in some rural areas.
3. The proportion of wastewater treated reached 80 percent in major cities, but remains much lower in villages and peripheral areas.
4. The proportion of water resources withdrawn from the total available resources exceeded 100 percent, meaning that Jordan consumes water at a rate higher than its annual renewal capacity.

This decline reflects a structural gap in water management despite national strategies and points to the need to link national policies more closely with international obligations.

WATER LOSSES

The rate of water loss in Jordan is among the highest in the world, exceeding 45 percent in some areas (World Bank, 2022). This is due to deteriorating infrastructure, leak-

ages, and illegal connections to water networks. Addressing this challenge requires major infrastructure investments exceeding USD 500 million over the next decade.

EQUITY IN DISTRIBUTION

Although the Constitution provides for equality among citizens, the reality reveals significant disparities in access to water. Residents of the capital, Amman, receive more regular weekly water supply compared with residents of the southern and eastern governorates, who may wait a

week or more (ESCWA, 2023).

Data indicate that 24 percent of rural households rely on tankers as their main source of water, compared with only 6 percent in major cities. This disparity reflects a failure of water justice and negatively affects vulnerable groups.

IMPACT OF REFUGEES

Jordan hosts more than 1.3 million refugees, placing additional pressure on water infrastructure. In Za'atari Camp, for example, average consumption does not exceed 35-40 liters per person per day, below the minimum recommended by the World

Health Organization of 50 liters (UNICEF, 2022). Despite international support, the situation remains fragile and affects Jordan's capacity to ensure water justice for both its citizens and refugees.

INSTITUTIONAL AND ADMINISTRATIVE CHALLENGES

Jordan's water sector is characterized by multiple governing bodies: the Ministry of Water and Irrigation, the Water Authority of Jordan, the Jordan Valley Authority, municipalities, and, at times, security agen-

cies. This overlap leads to weak coordination and duplication of decision-making (World Bank, 2022). The absence of an independent national body to monitor water distribution also weakens accountability.

PRIVATIZATION AND SERVICE MANAGEMENT

Since the beginning of the millennium, Jordan has moved toward involving the private sector in the management of water services. Although privatization has improved some technical aspects, it

has also increased the cost of services for some low-income groups (LSE, 2023). The absence of clear regulatory safeguards has further intensified these criticisms.

CULTURAL AND TRIBAL DIMENSIONS

Some studies indicate that water distribution in certain areas is influenced by tribal considerations and social influence,

resulting in disparities in the shares allocated to local communities. This cultural dimension poses an additional challenge

to the realization of the right to water in accordance with standards of equality (Al-Hayajneh, 2025).

WEAK LINKAGE BETWEEN WATER POLICIES AND HUMAN RIGHTS

Water policies in Jordan remain largely governed by technical and administrative considerations, without sufficient integration of a rights-based perspective. Reports issued by the Ministry of Water rarely refer to principles such as accountability or non-discrimination, reflecting a gap between international obligations and national realities (OHCHR, 2014).

06

INEQUALITIES IN ACCESS TO WATER AND MARGINALIZED GROUPS

Inequality in access to water represents one of the most prominent manifestations of water injustice in Jordan. This inequality is not limited to the geographical divide between the capital and peripheral regions; it also extends to vulnerable social groups, including women, children, refugees, and

persons with disabilities. This dimension is considered one of the key indicators for measuring progress in the realization of the right to water, as reflected in the Sustainable Development Goals, particularly SDG 6.

GEOGRAPHICAL DISPARITIES

Data from the Ministry of Water and Irrigation indicate that water supply in some southern governorates is limited to only one day per week, whereas residents of the capital, Amman, receive water twice a week (Ministry of Water and Irrigation, 2023). This disparity reflects shortcomings in planning and distribution and results in

significant differences in the cost of obtaining water. While urban residents rely primarily on formal water networks, rural and Bedouin communities often depend on water tankers, whose cost may reach up to 20 percent of a household's monthly income (ESCWA, 2023).

LOW-INCOME HOUSEHOLDS

A World Bank study indicates that poor households in Jordan spend a larger proportion of their income on water than wealthier households (World Bank, 2022). This creates an additional burden that limits their ability to meet other essential

needs, such as education and healthcare. Informal urban settlements also frequently suffer from inadequate water infrastructure, further widening the gap between rich and poor.

WOMEN AND GIRLS

Women bear additional burdens associated with the water crisis. In rural areas, women and girls are often required to travel long distances to collect water when

network supplies are interrupted, affecting their opportunities for education and employment (UNICEF, 2022). Water-related domestic responsibilities also increase

the physical and psychological burden on women, limiting their participation in pub-

lic life.

CHILDREN

Children are among the groups most affected by water shortages. In some schools, sanitation facilities lack a reliable water supply, adversely affecting students' personal hygiene and overall health

(OHCHR, 2014). Several studies have also documented cases of girls dropping out of school due to inadequate sanitation infrastructure in rural schools.

REFUGEES

Jordan hosts more than 1.3 million refugees, nearly half of whom live in camps such as Za'atari and Azraq. In these camps, households receive water through tanker deliveries in quantities that do not exceed 35-40 liters per person per day, below

the World Health Organization's recommended minimum of 50 liters (UNHCR, 2023). This shortage has implications for public health and contributes to tensions between refugees and host communities.

PERSONS WITH DISABILITIES

Jordan's water policies do not adequately address the needs of persons with disabilities. The lack of universal design in infrastructure often makes it difficult for them to access water points and sanita-

tion facilities. Furthermore, national data do not provide clear indicators relating to this group, limiting their ability to advocate effectively for their rights (ESCWA, 2023).

IMPACT OF INEQUALITY ON OTHER RIGHTS

These disparities contribute to the violation of a range of other fundamental rights:

1. The right to health: Water shortages are closely linked to the spread of waterborne diseases.
2. The right to education: Insufficient access to water affects school attendance and educational continuity, particularly for girls.
3. The right to work: Women bear additional burdens that reduce
4. The right to human dignity: Feelings of exclusion and discrimination among marginalized groups negatively affect social cohesion.

Water is fundamental to life and health. The human right to water is indispensable for living a healthy and dignified life and is a prerequisite for the realization of all other human rights.

DATA AND STATISTICAL GAPS

One of the most significant gaps is the absence of detailed data disaggregated by gender, economic status, and disability. As a result, it becomes difficult to design policies that effectively respond to the needs of marginalized groups. International reports

have recommended the development of a national statistical system that incorporates human rights-based indicators to measure water justice (SDG Jordan Report, 2024).

CONCLUSION

Inequality in access to water reveals that Jordan's water crisis is not merely an environmental or technical challenge; it is fundamentally a crisis of social justice. Addressing this crisis requires the integration of a human rights perspective into water policies and the development of targeted programs for vulnerable groups to ensure that no one is left behind.

These challenges exacerbate the principal constraints facing Jordan's water sector, which include water scarcity, the distance between water sources and centers of demand, high financial and

operational costs, limited funding, weak management efficiency, high levels of water losses, the challenges associated with intermittent supply, shortcomings in the legislative framework, and the need to review shared water agreements. As noted by some scholars in the context of the right to water (Al-Kilani, unpublished lecture), these constraints demonstrate that the challenges are not merely technical in nature but are fundamentally rights-based and institutional.



07

REGIONAL AND INTERNATIONAL COOPERATION IN ADVANCING THE RIGHT TO WATER

Given Jordan's geographical location and limited water resources, the right to water cannot be viewed solely as a domestic issue. Rather, this right is directly

affected by regional and international dynamics, whether through the sharing of transboundary water resources or through financing and technical cooperation.

COOPERATION WITH SYRIA – THE YARMOUK RIVER BASIN

The Yarmouk River Basin is one of Jordan's most important sources of surface water, contributing to the replenishment of Al-Wehda Dam and supplying water to the northern regions of the country. Over recent decades, however, the basin has been subject to extensive depletion due to the drilling of hundreds of unauthorized wells on the Syrian side, in addition to the construction of small dams that have

reduced water flows into Jordan (Muna Hindiye, 2024). In 2025, Jordanian-Syrian negotiations resulted in understandings aimed at halting the drilling of illegal wells and strengthening technical cooperation. While these arrangements represent a positive step forward, their effectiveness remains contingent upon the establishment of joint monitoring and oversight mechanisms.

RELATIONS WITH ISRAEL – THE JORDAN RIVER

Since the signing of the Wadi Araba Peace Treaty in 1994, the agreement has governed the sharing of the waters of the Jordan River and its tributaries between the two parties (LSE, 2023). Although the agreement has helped secure additional water quantities for Jordan, the Kingdom maintains that its allocated share remains insufficient to meet growing needs. From

a rights-based perspective, the agreement has been criticized for failing to provide Jordan with an equitable share commensurate with its population's needs, while reinforcing a form of water dependency that leaves the country vulnerable to political pressure.

THE NATIONAL CARRIER PROJECT AND DESALINATION

The National Water Carrier Project, which aims to desalinate Red Sea water in Aqaba and convey it to various regions of the Kingdom, is one of Jordan's most important strategic projects. It constitutes a direct response to the country's water scarcity crisis and growing urban demand, particularly in the capital, Amman. The project is managed under the authority of the Ministry of Water and Irrigation but relies on extensive international financing partnerships involving the World Bank, the European Union, the United States, and other donors. This dual character – national in terms of management and international in terms of financing – reflects Jordan's increasing reliance on external cooperation to fund major infrastructure investments.

Technically, the project is based on reverse osmosis technology and is expected to desalinate approximately 300 million cubic meters of Red Sea water annually, covering nearly 40 percent of Jordan's drinking water needs once operations begin, currently projected for 2031. The project has also been linked to renewable energy sources through the establishment of a 281-megawatt solar power plant expected to meet approximately 27 percent of its operational energy requirements. This reflects a strategic effort to integrate water management with energy transition policies.

From a governance perspective, the government has adopted a Build-Operate-Transfer (BOT) model through a concession agreement with a consortium led by Meridiam and Suez. Under this arrangement, the consortium is responsible for financing, designing, constructing, operating, and maintaining the project for a concession period of up to 26 years, after which ownership will revert to the state. This model reflects the government's pol-

icy of promoting public-private partnerships. At the same time, it raises questions regarding the state's ability to regulate tariffs and protect consumers, particularly low-income groups, in the event of rising operating costs or accumulated financial obligations.

Economically, the project's cost is estimated at more than 4 billion Jordanian dinars, including construction expenses, loans, and interest payments. By mid-2025, approximately USD 816 million had been secured through grants and loans, including USD 350 million in government contributions and a USD 300 million grant from the United States, in addition to contributions from the European Union, Germany, the Netherlands, Italy, and France. Nevertheless, the tariff structure per cubic meter remains under study, with final costs to be determined during the financial close stage. This raises an important water justice concern, as excessively high tariffs could reinforce social inequalities in access to water unless support mechanisms are adopted to protect low-income households.

Construction is scheduled to begin in 2026 and continue for four years, with water delivery expected to commence by 2031. This extended timeframe reflects the scale and complexity of large infrastructure projects, including land acquisition requirements, design modifications, and the completion of preliminary geological and engineering studies.

In addition, the project is viewed as a complementary component of other strategies within Jordan's water sector, such as the Water Loss Reduction Program, which aims to reduce non-revenue water by 2 percent annually. The integration of these two initiatives could help alleviate pressure on groundwater resources and enhance the

sustainability of water supplies. However, their success depends on the effectiveness of institutional and regulatory oversight mechanisms.

Overall, the National Water Carrier Project reflects a complex intersection of technology, international financing, local governance, and social justice. It represents a strategic opportunity for Jordan

to secure a sustainable long-term water source, while at the same time raising fundamental questions regarding its cost, its impact on vulnerable groups, and the possibility of becoming a financial burden if not managed within a balanced framework that simultaneously takes into account both rights-based and economic considerations.

ACCESSION TO INTERNATIONAL LEGAL FRAMEWORKS

Jordan has expressed interest in acceding to the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UNECE, 1992). Accession to this conven-

tion would strengthen Jordan's legal position in the management of its shared water resources and place the country within an international network that facilitates cooperation and the exchange of expertise.

THE ROLE OF INTERNATIONAL INSTITUTIONS

Jordan receives technical and financial support from a number of international partners:

1. **United States Agency for International Development (USAID):** financing projects aimed at reducing water losses and improving water networks.
2. **The World Bank:** supporting governance reforms and policy development.
3. **The European Union:** promoting sustainable water management and

encouraging transparency.

4. **UNICEF:** focusing on the provision of water and sanitation services in schools and refugee camps.

These partnerships have contributed to improvements in infrastructure and service delivery. However, civil society organizations have criticized them for often prioritizing technical solutions over social justice considerations.

REGIONAL CIVIL SOCIETY

A number of regional initiatives have brought together Jordanian organizations and Arab and international partners to advance water justice. These include training workshops on water as a human right and projects for the management of shared groundwater resources (ESCWA,

2023). Such initiatives contribute to raising awareness and strengthening pressure on governments to adopt more equitable water policies.

THE WATER-ENERGY-FOOD NEXUS APPROACH

Addressing Jordan's water crisis requires the adoption of an integrated approach linking water, energy, and food (Muna Hindiye, 2025). For example, desalination projects should not be viewed solely as water projects but as initiatives that integrate:

1. **Water:** through the provision of additional drinking water supplies.
2. **Energy:** through the use of renewable

energy sources such as solar and wind power.

3. **Food:** through the use of treated wastewater to support the agricultural sector.

This approach reflects a more comprehensive understanding of the right to water and links it to other economic and social rights.

CHALLENGES FACING INTERNATIONAL COOPERATION

Despite the importance of these efforts, Jordan faces several significant challenges:

1. **Lack of long-term commitment:** some agreements remain vulnerable to political changes.
2. **Conflicting priorities:** tensions may arise between national needs and regional considerations.
3. **Dependence on external financing:** making policies susceptible to donor conditions.
4. **Weak integration between legal frameworks:** there remains insufficient linkage between water agreements and environmental and climate agreements (ICJ, 2025).

08

WATER GOVERNANCE AND WATER DIPLOMACY FROM A HUMAN RIGHTS PERSPECTIVE

Jordan's water crisis cannot be fully understood, nor can sustainable solutions be developed, without addressing two interrelated dimensions: water governance and water diplomacy. The first concerns the internal mechanisms through which resources are managed and justice and transparency are ensured, while the second

relates to Jordan's regional and international relations with neighboring countries and the broader international community. From a human rights perspective, these two dimensions together constitute a crucial tool for realizing the right to water at both the national and international levels.

WATER GOVERNANCE IN JORDAN

Water governance refers to the set of institutions, policies, laws, and processes through which water resources are managed. In Jordan, governance is characterized by several features:

1. **Multiple authorities:** including the Ministry of Water and Irrigation, the Water Authority of Jordan, the Jordan Valley Authority, municipalities, and occasionally other entities. This multiplicity contributes to weak coordination (World Bank, 2022).
2. **Limited transparency:** information related to consumption, water losses, and distribution is not always publicly available, restricting accountability.
3. **Lack of effective accountability:** there is no independent body capable of monitoring the performance of water institutions.
4. **Insufficient public participation:** civil society organizations and local communities are often excluded from decision-making processes (ESCWA, 2023).

THE HUMAN RIGHTS DIMENSION OF GOVERNANCE

From a human rights perspective, water governance entails:

1. **Transparency:** ensuring the public's right to access information.
2. **Accountability:** holding institutions responsible when they fail to guarantee equitable water distribution.
3. **Participation:** involving women, low-income groups, refugees, and persons with disabilities in planning and implementation processes.
4. **Equity:** distributing water on the basis of equality and non-discrimination (OHCHR, 2014).

WATER DIPLOMACY: CONCEPT AND SIGNIFICANCE

Water diplomacy refers to the use of political and diplomatic tools to manage shared water resources between states. In Jordan's case, water diplomacy is an existential issue due to the country's heavy reliance on transboundary water resources such as the Jordan River and the Yarmouk River.

From a human rights perspective, water

diplomacy is not limited to the allocation of water quantities; it also encompasses:

1. Ensuring the **equitable and reasonable** use of resources (UNECE, 1992).
2. Adhering to the principle of **preventing significant harm** to other states.
3. Assuming a **shared responsibility** toward future generations (ICJ, 2025).

JORDAN AND WATER DIPLOMACY

1. **With Syria:** Recent understandings regarding the Yarmouk Basin have included measures to halt the unlawful depletion of water resources, thereby contributing to the protection of the right to water for communities in northern Jordan (Muna Hindiye, 2024).
2. **With Israel:** The 1994 Wadi Araba Treaty established arrangements for sharing the waters of the Jordan River. However, from a rights-based perspective, Jordan's allocated share remains insufficient, limiting the state's ability to guarantee its citizens' right to water (LSE, 2023).
3. **With the International Community:** Jordan relies heavily on international assistance to support its water sector. This dependence raises questions regarding sovereignty and sustainability, particularly where water justice principles are not adequately integrated into cooperation agreements.

THE INTERSECTION OF GOVERNANCE AND DIPLOMACY

1. **Internally:** Rights-based governance strengthens trust between the state and society and helps ensure equitable water distribution.
2. **Externally:** Rights-based diplomacy provides Jordan with a stronger legal and moral foundation in negotiations over shared resources.

3. **Common Objective:** Both dimensions ultimately translate into a single commitment: ensuring the right to water as an indivisible human right.

PROPOSALS FOR STRENGTHENING BOTH DIMENSIONS

1. **Incorporating the right to water into the Jordanian Constitution** as a foundation for good governance and effective water diplomacy.
2. **Establishing an independent national water governance authority** accountable to Parliament.
3. **Increasing transparency** in international water agreements by publishing their details and involving civil society in discussions.
4. **Adopting the Water-Energy-Food Nexus approach** in regional negotiations to enhance sustainability.
5. **Drawing on international experiences** that have successfully integrated human rights principles into water governance, such as those of Morocco and South Africa.

09

RECOMMENDATIONS: ADVANCING THE RIGHT TO WATER IN JORDAN

Based on the analysis presented in this report, the recommendations may be grouped into three main categories: **legal,**

administrative/institutional, and **policy/strategic recommendations.**

LEGAL RECOMMENDATIONS

1. Explicitly recognize the right to water in national legislation, including the Constitution and relevant laws.
2. Align national legislation with international standards, particularly General Comment No. 15 and United Nations General Assembly Resolution 64/292.
3. Enact legislation obliging the state to monitor water quality and ensure regular access to water for all residents.
4. Incorporate safeguards for the right to water into contracts with private-sector operators.
5. Establish a national accountability mechanism that includes citizen complaints procedures and obliges competent authorities to respond.
6. Adopt a dedicated water law.

ADMINISTRATIVE AND INSTITUTIONAL RECOMMENDATIONS

1. Strengthen coordination among institutions responsible for the water sector.
2. Enhance technical and administrative capacities in water demand management and water loss reduction.
3. Improve transparency through the regular publication of water distribution data.
4. Strengthen governance and transparency through the adoption of water justice indicators.
5. Develop complaint and grievance mechanisms that are accessible to all.
6. Improve water quality monitoring, particularly in peripheral areas.

POLICY AND STRATEGIC RECOMMENDATIONS

1. Integrate human rights principles into the National Water Strategy.
2. Adopt equitable water pricing policies that take into account the needs of low-income groups.
3. Accede to the 1992 Helsinki Convention.
4. Invest in desalination and renewable energy.
5. Expand community awareness programs on the right to water.
6. Encourage partnerships with international organizations.
7. Integrate water policy with food and health security within a comprehensive framework.
8. Introduce measurable indicators to monitor progress in the realization of the right to water.
9. Develop agricultural and pricing policies that promote equality and non-discrimination.
10. Transform technical reforms, including water loss reduction, desalination, and water reuse, into rights-based commitments.
11. Link water security to the international dimension by advocating for equitable water allocations as a sovereign right.
12. Strengthen the diplomatic dimension of efforts to secure fair shares of shared water resources.

10

CONCLUSION

This report demonstrates that the issue of water in Jordan is no longer merely a sectoral or technical challenge; it has become, above all, a human rights issue in which environmental, social, political, and legal dimensions are deeply intertwined. Despite the tangible progress achieved through the adoption of ambitious national strategies aimed at improving the water sector, legal gaps, inequalities in distribution, and persistent environmental and institutional challenges continue to hinder the full and equitable realization of this fundamental right. To entrench the right to water and transform water from a mere natural resource into an effectively guaranteed human right, a set of interconnected measures is required at both the legislative and policy levels. At the core of these measures must be a strong political commitment that places water at the forefront of national priorities as a prerequisite for human dignity and sustainable development. Such efforts also require the alignment of domestic legislation with international obligations, ensuring that the right to water is incorporated into the national legal framework as a clear and enforceable constitutional right. Equally important is the meaningful participation of local communities and marginalized groups, including women, refugees, and persons with disabilities, in the formulation and implementation of water policies in order to promote equity and inclusive representation. Furthermore, the princi-

ples of justice, transparency, and accountability must be embedded within national strategies to ensure the sound governance of water resources and strengthen trust between the state and society.



REFERENCES

- ESCWA. Water and Sanitation in the Arab Region: SDG6 Progress Report. Beirut: ESCWA, 2023. Available at: [Link](#).
- Gleick, Peter. "The Human Right to Water." Water Policy 1, no. 5 (1998): 487–503. Available at: [Link](#).
- ICJ. Advisory Opinion on Climate Change and Human Rights. The Hague: International Court of Justice, 2025. Available at: [Link](#).
- IACHR. Advisory Opinion on Environment and Human Rights. San José: Inter-American Court of Human Rights, 2020. Available at: [Link](#).
- LSE. Politics of Water in Jordan. London: London School of Economics, 2023. Available at: [Link](#).
- OHCHR. Realizing the Human Rights to Water and Sanitation: A Handbook. Geneva: United Nations, 2014. Available at: [Link](#).
- UN CESCR. General Comment No. 15: The Right to Water. Geneva: United Nations, 2002. Available at: [Link](#).
- UN General Assembly. Resolution 64/292: The Human Right to Water and Sanitation. New York: United Nations, 2010. Available at: [Link](#).
- UN General Assembly. Resolution 68/157: The Human Right to Safe Drinking Water and Sanitation. New York: United Nations, 2013. Available at: [Link](#).
- UN General Assembly. Resolution 70/169: Human Rights to Safe Drinking Water and Sanitation. New York: United Nations, 2015. Available at: [Link](#).
- UN Human Rights Council. Resolution 15/9: Human Rights and Access to Safe Drinking Water and Sanitation. Geneva: United Nations, 2010. Available at: [Link](#).
- UNECE. Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki Convention). Geneva: United Nations, 1992. Available at: [Link](#).
- UNICEF. Water, Sanitation and Hygiene in Jordan. Amman: UNICEF, 2022. Available at: [Link](#).
- UNHCR. WASH in Refugee Camps in Jordan. Geneva: UNHCR, 2023. Available at: [Link](#).
- UNFCCC. Paris Agreement. Bonn: UNFCCC, 2015. Available at: [Link](#).
- World Bank. Jordan Country Climate and Development Report. Washington, DC: World Bank, 2022. Available at: [Link](#).
- World Bank. Jordan: Water Sector Support Project. Washington, DC: World Bank, 2022. Available at: [Link](#).
- Ministry of Water and Irrigation (MWI). National Carrier Project Factsheet. Amman: MWI, 2025. Available at: [Link](#).
- Kingdom of Jordan – Ministry of Water and Irrigation. BOT Agreement for the National Carrier Project. Amman: MWI, 2025. Available at: [Link](#).
- UN General Assembly. Universal Declaration of Human Rights. 1948, Article 25. Available at: [Link](#).
- International Covenant on Economic, Social and Cultural Rights (ICESCR). 1966, Articles 11–12. Available at: [Link](#).
- Office of the High Commissioner for Human Rights (OHCHR), UN-Habitat, and World Health Organization (WHO). The Right to Water (Fact Sheet No. 35). 2010. Available at: [Link](#).

- United Nations. Transforming Our World: The 2030 Agenda for Sustainable Development. UN Doc. A/RES/70/1, 2015. Available at: [Link](#).
- Constitution of the Republic of South Africa. 1996, Section 27. Available at: [Link](#).
- U.S. International Development Finance Corporation (DFC). Jordan National Water Carrier: Financial Support. Washington, DC: DFC, 2024. Available at: [Link](#).

- الهياجنة، عبد الناصر. التشريعات البيئية في الأردن في ضوء القانون الدولي البيئي. عّان: دار وائل، 2025.
- منتدى الاستراتيجيات الأردني. ورقة سياسات بعنوان "المياه: خيارات الأردن أمام أزمة الإمدادات والاستخدامات"، 2025.
- منى هندية. مقوّمات استدامة الأمن المائي الأردني. عّان: جماعة عّان لحوارات المستقبل، 2024. (جماعة عّان لحوارات المستقبل، متاح على: [الرابط](#)).
- قناة المملكة. "تصريحات مدير وحدة إدارة مشروع الناقل الوطني صدام خليفات"، 2025. متاح على: [الرابط](#).
- وزارة المياه والري. الاستراتيجية الوطنية للمياه 2023-2040. عّان: وزارة المياه والري، 2023. متاح على: [الرابط](#).
- وزارة المياه والري. الخطة الاستراتيجية لوزارة المياه والري 2022-2024. عّان: وزارة المياه والري، 2022. متاح على: [الرابط](#).
- وزارة المياه والري. قانون سلطة المياه رقم 18 لسنة 1988 وتعديلاته. الجريدة الرسمية، عّان. متاح على: [الرابط](#).
- وزارة البيئة. قانون حماية البيئة رقم 6 لسنة 2017. الجريدة الرسمية، عّان. متاح على: [الرابط](#).
- منى هندية، مؤسّسة شومان. ورقة سياسات: نحو نهج تكاملي في إدارة الموارد الطبيعية. عّان: مؤسّسة شومان، 2025. متاح على: [الرابط](#).
- منتدى الاستراتيجيات الأردني. الأردن وأهداف التنمية المستدامة: خطوات صغيرة ومسار طويل. عّان: منتدى الاستراتيجيات الأردني، 2024. متاح على: [الرابط](#).
- القرآن الكريم. سورة الأنبياء، الآية 30. متاح على: [الرابط](#).
- أبو داود. سنن أبي داود. حديث "المسلمون شركاء في ثلاث: في الكلاً والماء والنار". متاح على: [الرابط](#).
- سوزان الكيلاني. الحق في المياه. محاضرة غير منشورة.



THE RIGHT TO WATER
AND CLIMATE CHANGE

2025

THE ARAB WATCH REPORT ON
ECONOMIC AND SOCIAL RIGHTS

THE RIGHT TO WATER IN JORDAN

FROM MANAGING SCARCITY TO ACCOUNTABILITY POLICIES

Hala Murad

Activist



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01

INTRODUCTION TO THE REPORT AND ITS METHODOLOGY

THE RIGHT TO WATER IN JORDAN: CONTEXT OF THE REPORT, ITS ASSUMPTIONS, AND METHODOLOGY

■ WHY THE RIGHT TO WATER?

This report is based on the premise that water is a fundamental human right, indispensable for the realization of a range of other rights, including the rights to health, food, adequate housing, and a dignified life. The discourse on water is no longer limited to its available quantity alone but encompasses interconnected elements that constitute the core of the right as recognized by international standards, particularly General Comment No. 15 of the Committee on Economic, Social and Cultural Rights: availability, quality, continuity, affordability, and non-discrimination²³.

The analysis shows that measuring failures cannot be limited to conventional indicators such as rising demand or declining natural resources; it must be linked to the extent to which public policies ensure these five elements for all individuals with-

out exception. In the context of chronic scarcity, water is not managed merely as a natural resource but as a political decision concerning how burdens and benefits are distributed. In this context, one expert, during interventions in the national consultative sessions (9/1/2025; 10/7/2025), noted that "scarcity in Jordan is not a sudden event but a structural condition known for decades, making the test of policies one of how this scarcity is managed, not justified."

Within this framework, water shifts from an operational issue to a matter of obligations, policies, and accountability, and any failure to ensure the rights-based elements of water becomes a test of the governance system's capacity to fulfill its rights-based obligations, rather than merely a technical malfunction in the networks.

■ WHY JORDAN?

Jordan constitutes a paradigmatic case within the Arab region for examining the intersections of water scarcity with governance and social justice. Data from FAO AQUASTAT²⁴ indicate that the renewable

water resources available per capita in Jordan fall below 100 cubic meters annually, a level classified within the category of "absolute scarcity," compared to the international benchmark for water poverty

of 500 cubic meters per capita per year. The National Water Strategy 2023–2040²⁵ further indicates that the actual per capita share is approximately 61 cubic meters annually, with projections suggesting a decline to around 35 cubic meters by 2040 should current patterns of demand and management persist²⁶.

These figures place Jordan among the three most water-scarce countries in the Arab region, alongside Palestine and Qatar, with levels comparable to those of Saudi Arabia. However, there is a divergence in the structure of resource dependence: Saudi Arabia relies extensively on desalination, whereas Jordan depends primarily on depleted groundwater resources, with

desalination remaining relatively limited.

The Arab comparison indicates that Jordan's per capita share amounts to less than 15% of that in Lebanon, less than 20% of its counterpart in Egypt, and less than 16% of that in Morocco. However, the purpose of this comparison is not to reaffirm Jordan's water poverty—this is already well established—but rather to underscore that managing a resource situated within a condition of chronic absolute scarcity necessitates an exceptional governance model grounded in equity and prudent allocation, as any administrative imbalance at this level of scarcity translates directly into tangible deprivation.

■ THE CONTEXT OF WATER SCARCITY AND COMPLEX CHALLENGES

In addition to the limitations of natural resources, Jordan faces mounting pressures arising from climate change. Estimates from national and international climate reports indicate a likely decline in precipitation rates by approximately 10–15% over the coming decades, coupled with rising temperatures and increased evaporation rates. This, in effect, reduces the efficiency of available resources and weakens the recharge of groundwater basins²⁷.

Rapid population growth and the hosting of large numbers of refugees have also intensified pressure on water infrastructure, particularly in the northern and central governorates²⁸. However, the report distin-

guishes between “demographic pressure” as an amplifying factor and “management choices” as the decisive determinant in distributing the impact of this pressure. Natural scarcity alone does not account for disparities in the regularity of supply or in the effective cost of water across regions.

Accordingly, the crisis in Jordan does not stem solely from the paucity of resources, but rather from a complex interaction between structural scarcity, high-cost production choices, unbalanced patterns of use, and governance frameworks that have not integrated rights-based considerations into the core of allocation and distribution policies.

■ REPORT METHODOLOGY

This report adopts a qualitative analytical monitoring methodology grounded in a rights-based, accountability-oriented approach, drawing on the framework of the right to water as articulated in international standards, particularly General

Comment No. (15). The analysis is based on a review of legislation and regulatory frameworks governing the water sector, an examination of national strategies, and the use of official data and international reports. It also incorporates the documen-

tation and analysis of national dialogue sessions held on 9/1/2025 and 10/7/2025, in which legal experts, water management specialists, and representatives of civil society participated.

These sessions provided a critical perspective on the gap between formally articulated texts and policies on the one hand, and the lived experiences of citizens on the other—particularly with regard to intermittent supply, the management of water losses, and the absence of transpar-

ent criteria for resource allocation.

The report does not seek to generate new quantitative data; rather, it aims to analyze the implications of existing policies from a rights-based perspective and to identify the gap between declared commitments and actual outcomes. In doing so, the analysis shifts from the question of “how much water is available?” to that of “how is water managed, for whose benefit, and through what mechanisms of accountability?”

REPORT SCOPE AND LIMITATIONS

This report focuses on the legal, institutional, and policy framework governing water management in Jordan, and its impact on the five elements of the right to water: availability, quality, continuity, affordability, and non-discrimination. It does not address detailed technical aspects related to the engineering design of networks or operational models, except to the extent that they serve the rights-based analysis.

The report does not conduct new field-based statistical surveys; rather, it relies on the analysis of policies, official documents, and national and international sources, as well as the content of consultative sessions. The limited availability of certain detailed data—particularly those relating to the true cost of production or service distribution—constitutes, in itself, an indicator of a transparency gap, which reinforces the importance of the adopted monitoring approach.

Despite these limitations, it offers an analytical framework that links scarcity, policy, and governance, situating the Jordanian case within a broader Arab context in which structural scarcity intersects with

administrative imbalances.

With this methodological framing, the report does not merely describe the state of water in Jordan; rather, it repositions the right to water at the center of the policy debate, as a legally binding obligation subject to implementation, rather than an administrative option open to postponement.

➤ Jordan vs other Arab countries in terms of per capita water availability²⁹

Country	Share per capita (m3/year)	Water classification
Lebanon	~800 - 1000	Above the water poverty threshold
Morocco	~600	Slightly above the water poverty threshold
Egypt	~560	At the water poverty threshold
Tunisia	~400	Severe water scarcity
Kingdom of Saudi Arabia	~90	Absolute scarcity
Palestine	~80 - 90	Absolute scarcity
Jordan	~90	Absolute scarcity
Qatar	~30	Very severe absolute scarcity

■ INTERNATIONAL REFERENCES LIMITATIONS:

- Water poverty threshold: 500 m³ per person per year
- Absolute scarcity: 100 m³ per person per year

■ WHAT DOES THE COMPARISON REVEAL?

1. Jordan ranks among the three most water-scarce countries in the Arab region (along with Palestine and Qatar).
2. Jordan's per capita water availability is lower than:
 - 15% of Lebanon's per capita water availability
 - Approximately 16% of Morocco's per capita water availability
3. Jordan is very close to Saudi Arabia in terms of water scarcity; however:
 - Less than 20% of Egypt's per capita water availability
 - Saudi Arabia relies heavily on desalination
 - Jordan depends on overexploited groundwater resources and future planned desalination projects

MONITORING METHODOLOGY AND INFORMATION SOURCES

This report adopts a qualitative analytical monitoring methodology grounded in a rights-based approach, based on the integration of legal and institutional analysis, the review of public policies, and the deconstruction of their practical impact

on affected groups. The methodology is anchored in the framework of the right to water as established by international human rights standards, in particular General Comment No. (15) of the Committee on Economic, Social and Cultural Rights,

which defines the elements of the right to water as availability, quality, accessibility, affordability, and non-discrimination.

The report is based on a combination of primary and secondary sources, including

- Review of the legislation and regulatory frameworks governing the water sector in Jordan, foremost among which are the Water Authority Law No. (18) of 1988 and its amendments, the Jordan Valley Authority Law No. (19) of 1988, the Water Protection Regulation No. (85) of 2002, the Water Regulation No. (4) of 2018, and other relevant instructions.
- Analysis of official strategies, plans, and policies, including the National Water Strategy 2023–2040, the National Climate Change Adaptation Plan, the Nationally Determined Contributions (NDCs), and the annual reports of the Ministry of Water and Irrigation.
- Review of relevant national and international reports on the right to water, including reports from the World Bank, FAO AQUASTAT, UNICEF, and reports of the Special Rapporteurs on the human rights to safe drinking water and sanitation.
- Transcription and analysis of national dialogue sessions held on 9/1/2025

and 10/7/2025, in which legal experts, water management specialists, representatives of civil society organizations, and actors in the fields of environment and climate justice participated. The content was qualitatively analyzed in order to extract key trends and gaps.

- Statements and available reports from civil society organizations and local human rights bodies, particularly those monitoring the impact of water policies on vulnerable groups and peripheral areas.

The report does not aim to generate new quantitative data or conduct field-based statistical surveys; rather, it seeks to analyze the implications of existing policies from a rights-based perspective and to identify the gap between legal texts and their implementation, as well as between declared commitments and actual realities. The monitoring focuses on holding policies and governance structures to account, rather than on re-describing the water crisis from a purely technical perspective.

The value of this methodology lies in shifting the discussion from the question of “how much water do we have?” to that of “how is water managed, for whose benefit, and through what mechanisms of accountability?”, which constitutes the core of the Arab Monitor’s approach to analyzing the right to water.

REPORT SCOPE AND LIMITATIONS

This report focuses on monitoring and analyzing the legal, institutional, and policy framework governing water management in Jordan, and its direct impact on the realization of the right to water in accordance with its five elements: availability, quality, continuity, affordability, and non-discrimination. It pays particular attention to gaps in governance, accountability, and equity

in the distribution of water resources, as these are the most influential factors in translating theoretical commitments into practical reality.

The report does not address detailed technical aspects related to water engineering, network design, or specialized operational models, except to the extent

necessary to understand their human rights and social implications. Nor does it undertake a comprehensive financial assessment of major infrastructure projects or a macroeconomic analysis of the water sector, except insofar as this serves the purpose of holding policies accountable from a right-to-water perspective.

Likewise, the report does not claim to encompass all dimensions of the water crisis in Jordan, nor does it provide new field-based statistical surveys. Rather, it relies on the analysis of policies and official documents, national and international sources, and the content of consultative sessions to extract the most influential structural trends. Accordingly, its scope is analytical-evaluative, rather than technical-operational.

The report's limitations also include the fact that some data related to water quality, the actual cost of production, or the detailed distribution of services may not be regularly or comprehensively available to the public. This, in itself, constitutes an indicator of a transparency gap and reinforces the importance of the adopted monitoring approach.

Despite these limitations, the report provides a coherent analytical framework that enables an understanding of the relationship between scarcity, policies, and governance, and allows for its use as a basis for monitoring, follow-up, and advocacy efforts, whether at the national level or within the regional context of Arab Monitor reports.

Based on this methodological framing, the report does not merely describe the state of water in Jordan; rather, it adopts an accountability-based approach that recentres the right to water within policy and institutional analysis. This chapter lays the groundwork for this approach by out-

lining the report's context, assumptions, methodology, and limitations, as the foundation upon which the subsequent monitoring and analytical chapters are built.

02

THE NATIONAL WATER CONTEXT IN JORDAN

WATER SCARCITY BETWEEN NATURAL REALITY AND POLICY CHOICES

■ STRUCTURAL WATER SCARCITY IN JORDAN

Jordan is classified among the most water-poor countries in the world, with per capita renewable water resources falling below 100 cubic meters per year, according to data from the Food and Agriculture Organization³⁰ and the World Bank³¹. This is less than 20% of the global water poverty threshold of 500 cubic meters per capita per year, placing the country within the category of "absolute scarcity."

The National Water Strategy 2023–2040 indicates that the actual per capita share is approximately 61 cubic meters per year, with projections suggesting a decline to around 35 cubic meters by 2040 if current patterns of demand and management persist³². The historical trajectory of water resources reveals that per capita availability exceeded 3,000 cubic meters annually in the 1960s, before declining sharply as a result of a more than tenfold increase in population, against a relatively stable level of renewable resources³³.

Available annual water resources amount to approximately one billion cubic meters, while total demand exceeds 1.4 billion cubic meters, resulting in an annual deficit estimated at between 350 and 400

million cubic meters. Water losses in the network have also reached around 42% of the total water pumped in recent years, despite gradual improvements in reducing them³⁴.

These indicators confirm that scarcity in Jordan is not a temporary condition, but rather a structural feature that has been stable for decades. However, the analysis presented in the national sessions cautions against transforming "natural scarcity" into a discourse that justifies administrative failures. Scarcity, as noted, "is not a surprise to be treated as an emergency crisis, but a known fact that should have necessitated a different distributive planning approach."

In other words, the persistence of limited resources alone does not account for disparities in the regularity of supply or in the actual cost of water across governorates. Where structural scarcity intersects with non-transparent distribution policies or weak demand regulation, it shifts from an environmental challenge into a governance pattern that reproduces its impacts in an uneven manner.

■ CLIMATE CHANGE AS A CRISIS MULTIPLIER FACTOR

In addition to structural scarcity, Jordan is facing increasing impacts from climate change. The National Adaptation Plan³⁵ and the Sixth Assessment Report of the Intergovernmental Panel on Climate Change³⁶ indicate a potential decline in precipitation levels ranging between 10% and 20% by mid-century, alongside a temperature increase of 1.5–2.5°C. This would lead to higher evaporation rates and reduced effectiveness of both surface and groundwater resources.

This has been reflected in the variability of rainy seasons and in the decline of dam filling rates in some years to very low levels, in addition to increasing pressure on groundwater basins³⁷. World Bank reports indicate that Jordan faces one of the highest levels of water stress in the world, with abstraction rates from renewable

resources exceeding 100% in some basins, implying ongoing depletion of groundwater reserves³⁸.

However, the impacts of climate change are not evenly distributed. Areas that rely on less regular water supply are disproportionately affected when water deliveries decline. Likewise, low-income households are less able to bear the cost of alternatives, such as purchasing water from tanker trucks, which transforms climate shocks into unequal social impacts³⁹.

In the absence of an explicit integration of climate justice principles within water policies, adaptation measures remain closer to technical and financial solutions rather than instruments of social protection targeting the most vulnerable groups.

■ POLLUTION AND THE DECLINE IN WATER RESOURCE QUALITY

The crisis is not limited to available quantities, but extends to the quality of resources. Reports from the Ministry of Water and Irrigation indicate that a number of groundwater basins are experiencing extraction rates exceeding safe recharge levels, leading to deterioration in water quality and increased salinity in some areas⁴⁰. Some wells also record nitrate concentrations exceeding 50 mg/L, which is the World Health Organization's guideline threshold for drinking water⁴¹.

The Jordan Valley serves as an example of compounded pressures, where intensive use of agricultural fertilizers and, at times, unregulated discharge contribute to increased pollutant loads⁴². The World Bank also notes that rapid urban expansion and rising volumes of wastewater place additional strain on treatment plants, particularly when their design capacity is exceeded⁴³.

Although Jordan is considered a regional leader in the reuse of treated wastewater in agriculture, the quality of treatment and the efficiency of its utilization remain dependent on operational and investment capacities⁴⁴. This means that part of the "theoretically available resources" cannot be safely used without additional treatment, thereby effectively reducing the volume of safe water available to the population.

From a human rights perspective, the deterioration of water quality constitutes a direct violation of the safety element and leads to imposing additional costs on households for treatment or for purchasing alternative sources, a burden that is disproportionately borne by low-income groups.

■ FROM SCARCITY TO WATER VULNERABILITY

When structural scarcity intersects with climate change, pollution, and inequitable policy choices, what can be described as “water vulnerability” emerges. The crisis is not measured solely by the volume of available resources—which is less than 100 m³ per capita annually⁴⁵—but also by the extent to which individuals are able to access safe, continuous water at an affordable cost.

The reality shows that supply in most areas of the Kingdom is provided on average once per week, with clear disparities between governorates (Ministry of Water and Irrigation, Operational Reports 2022). As noted earlier, water losses are also significant, meaning that a substantial portion of the limited resources does not reach end users.

In this context, scarcity is no longer merely a natural challenge, but a test of the institutional system’s capacity to man-

age it efficiently and equitably. When scarcity is accompanied by weak transparency, unequal distribution, and high effective costs for certain groups, it shifts from an environmental problem into an issue of social justice and human rights.

Water vulnerability, therefore, is not solely the outcome of limited resources, but rather the result of their interaction with allocation and distribution policies that do not embed rights-based considerations at the core of decision-making. From this perspective, moving from describing scarcity to scrutinizing policies becomes an essential analytical step for understanding how resources are managed, for whose benefit, and through what mechanisms of accountability.

03

WATER PRODUCTION, USES, AND INEQUALITIES IN ACCESS

HOW IS WATER MANAGED? AND FOR WHOM IS IT AVAILABLE?

■ WATER PRODUCTION POLICIES AND THEIR SOCIAL COSTS

Water policies in Jordan over recent decades have moved toward expanding water supply through high-cost technical solutions, including the expansion of non-conventional sources, the transfer of water over long distances between basins, increased reliance on groundwater pumping, and a growing push toward large-scale desalination projects. The National Water Strategy 2023–2040 highlights Jordan's reliance on a mix of surface water, groundwater, and treated wastewater, with a gradual expansion of desalination through major projects, most notably the "National Water Carrier," as a strategic option to strengthen supply⁴⁶.

However, this expansion of production has been accompanied by a significant increase in both operational and capital costs, particularly when accounting for the costs of energy, transportation, and treatment. The World Bank indicates that the cost of producing a cubic meter of water in Jordan may in some cases exceed the subsidized domestic selling price, resulting in a chronic financial gap between the cost of service provision and its revenues⁴⁷. In the same context, national energy data confirm that the water sector is among the

most energy-intensive sectors in the Kingdom, consuming approximately 14–15% of total national electricity due to pumping, long-distance conveyance, and geographical elevation differences⁴⁸. Accordingly, "cost" here is not merely a financial item, but a structural determinant that shapes policy choices and the manner in which the burdens of scarcity are distributed.

This trajectory is further exacerbated when groundwater reserves are used as a production lever to offset deficits, as Ministry of Water and Irrigation reports indicate that some basins are being depleted at rates exceeding natural recharge, in certain cases beyond safe pumping limits. This means that part of the "increase in production" is effectively achieved through the depletion of a non-renewable natural capital, raising questions of sustainability and intergenerational equity as a distinctly rights-based concern, rather than a purely technical trade-off.

From a human rights perspective, the issue does not lie in production expansion per se, but in the absence of systematic assessments of its impact on social equity and on the elements of the right to water.

The costs generated by a high-energy and long-distance supply model do not remain confined to institutional budgets; rather, they are gradually transferred to society through tariff policies or through the “parallel costs” borne by households in practice. In this context, official reports indicate that the sector faces an annual financial deficit amounting to hundreds of millions of dinars, which has contributed to recurring tariff reform measures as one of the tools for managing this deficit⁴⁹. Expert discussions have further highlighted that the “financial trajectory” has effectively become one of the drivers of water policy decisions, whereby addressing the deficit sometimes takes precedence over the establishment of clear social safeguards to protect vulnerable groups. This places the element of “affordability” at the core of a rights-based evaluation of policies.

■ PATTERNS OF MISUSE AND DEMAND MANAGEMENT IMBALANCES

Water production policies cannot be separated from patterns of use that effectively determine where scarce resources are allocated and how their priorities are distributed. FAO AQUASTAT data indicate that the agricultural sector accounts for approximately 50–52% of total water resources in Jordan, compared to about 45% for municipal uses, and a limited share for the industrial sector⁵¹. While agriculture is essential for food security and livelihoods, this allocation pattern becomes more sensitive in a context of severe water stress, where trade-offs between uses must be managed within a clear framework that prioritizes basic domestic needs from a rights-based perspective.

This reveals a dual imbalance: on the one hand, households are subjected to strict rationing measures in the form of weekly supply schedules and interruptions, rendering “continuity” an effectively unreliable

Although the official tariff for lower consumption brackets appears relatively low on paper, the actual cost borne by households in intermittently supplied areas is significantly higher due to reliance on market alternatives or the forced investment in storage solutions. UNICEF reports in Jordan estimate that the cost of tanker-supplied water in some areas can reach three to five times the standard tariff⁵⁰. Accordingly, increases in production—when not accompanied by equitable distribution policies, targeted subsidies, or social protection mechanisms—shift from being a tool for enhancing water security to a pressure factor on the right to water, as the ultimate impact is not measured by the volume of water produced, but by who receives it, with what regularity, and at what cost.

element at the national level. On the other hand, intensive patterns of use persist in certain agricultural or industrial activities within a regulatory and pricing environment that does not always reflect the true environmental and economic cost of the resource. Several participants in the consultative sessions emphasized that demand management remains a “postponed solution,” with a tendency to address deficits through supply expansion or cost shifting, rather than through the development of a fair and transparent demand policy that tackles structural imbalances in allocation.

This imbalance is further exacerbated by the issue of water losses, meaning that a substantial portion of water produced at equally high cost does not actually reach end users (Ministry of Water and Irrigation, 2022). This is not merely a technical issue, but one of governance and demand management: every cubic meter lost deepens

the deficit, increases the need for additional high-cost production, prolongs supply interruptions, and ultimately places pressure on tariffs and households.

The imbalance in demand management is also linked to weak enforcement of legislation related to unlicensed well drilling and encroachments on water resources, as official data indicate the existence of thousands of unlicensed wells in the Kingdom⁵². This figure cannot be read as a neutral administrative fact, but rather as an indication that the enforcement of rules—the “rules of the game”—is neither uniform in its impact nor in its application. This opens the door to inequitable management of scarce resources and indirectly undermines the element of “non-discrimination,” as those who possess means of informal

access or alternatives effectively bear lower practical costs.

Accordingly, misuse cannot be explained solely by user behavior, but rather by a broader system of historical policies and weak incentives, including untargeted subsidies or the absence of sufficient incentives to adopt more efficient irrigation technologies, as well as limited oversight of encroachments and of network efficiency. From a right-to-water perspective, equity is not concerned with production volumes alone, but with how scarce resources are allocated according to clear rights-based priorities, and with who bears the burden of “austerity” when the root causes of demand and losses are not addressed.

■ INTERMITTENT SUPPLY AND THE ACTUAL COST OF WATER

Intermittent supply is the predominant feature of domestic water management in Jordan, where most households rely on weekly distribution schedules, and in some areas every 10–14 days, according to Ministry of Water and Irrigation data⁵³. Continuous daily supply is limited to a restricted number of urban areas. Accordingly, regular access, as one of the elements of the right to water, is not effectively guaranteed at the national level, and the “rotation system” becomes an operational mechanism that produces daily disparities in lived water experience.

This pattern does not only result in instability of supply, but also generates a parallel cost system that is not reflected in the official tariff. Intermittent supply compels households to make mandatory investments in storage, increases reliance on pumping systems, raises energy consumption to pump water once it becomes available, and creates a recurring need to resort to private water tankers when deliv-

ery is delayed or quantities are insufficient. UNICEF estimates indicate that a significant proportion of households, particularly in areas with less regular supply, rely on purchasing water from private tankers at least once a year⁵⁴.

Available data indicate that the cost of a cubic meter of water supplied via tanker trucks may range between 5 and 8 Jordanian dinars in some areas, compared to a significantly lower regulated domestic tariff for lower consumption brackets (Ministry of Water and Irrigation, 2022). Accordingly, the actual cost is not measured by the bill price alone, but by the total burden borne by households to ensure continuity of access. The World Bank confirms that low-income households may spend a considerable share of their income on water, directly or indirectly, when tanker costs, energy, and storage are considered⁵⁵.

In this context, the ability to afford alternative options becomes an implicit

condition for ensuring effective “continuity.” Higher-income households are able to absorb the shock by installing larger storage tanks or purchasing tanker water when needed without a severe impact on their budgets, whereas poorer households are confronted with difficult trade-offs between water and other basic needs. In this way, intermittent supply becomes a mechanism that reproduces inequality within a system that appears formally neu-

tral, yet is not neutral in its effects.

From the perspective of the elements of the right to water, intermittent supply directly affects continuity, undermines affordability, and erodes non-discrimination when households’ capacity to cope with interruptions varies.

■ GEOGRAPHIC AND SOCIAL INEQUALITIES IN ACCESS

The distribution data reveal disparities among governorates and regions in the duration of supply cycles, their volume, and the quality of service, including network pressure, the stability of supply, and, in certain locations⁵⁶, water quality. This disparity assumes a rights-based dimension when it is not managed in accordance with transparent, publicly articulated standards for determining pumping and distribution priorities. The absence of clear and comprehensible criteria governing supply schedules renders these gaps ostensibly “technical” or “natural,” whereas, in practice, they are the outcome of operational decisions and allocation policies that are subject to accountability.

National and international reports further indicate that densely populated areas, encompassing both refugees and host communities, experience additional strain on networks and infrastructure, which is reflected in diminished regularity of supply⁵⁷. However, the impact of this strain is not evenly distributed; communities with more limited capacity to invest in storage solutions or procure alternatives are rendered more vulnerable. Thus, “demand pressure” becomes a social factor that exacerbates inequality, rather than merely a demographic variable.

This is also linked to the issue of losses;

in areas with weaker infrastructure, losses may be higher, effectively reducing the quantity available to consumers and prolonging interruption periods, even where overall production indicators remain stable. Accordingly, loss management is not merely a matter of network improvement, but a distributive justice decision, as its direct impact falls on the regularity of service and the effective cost borne by households.

From the perspective of the right to water, this reality constitutes a breach of the principle of non-discrimination, as the experience of access varies according to geographic location, income, and the capacity to bear costs. When such disparities are left to be managed through individual solutions—such as tanker deliveries, storage tanks, and private networks—the system reproduces inequality rather than addressing it, and water, in lived experience, becomes a right contingent upon the ability to pay and adapt.

CHAPTER SUMMARY

An analysis of water production, its uses, and supply patterns indicates that the crisis in Jordan lies not solely in the quantities available, but in the manner in which these quantities are managed and the costs and impacts distributed. Increasing production through high-cost solutions, alongside persistently elevated losses, imbalances in demand management, and a broad reliance on intermittent supply, yields a system in which the most vulnerable groups bear the greatest burden.

Thus, water—across the five normative elements of the right, namely availability, quality, continuity, affordability, and non-discrimination—shifts from a right presumed to be guaranteed into a differentiated service, accessible to varying degrees depending on location, income, and the capacity to adapt. Accordingly, the realization of the right to water requires a reorientation of policy away from an exclusive focus on technical production toward an equitable management of demand and distribution—one that addresses losses, establishes clear rights-based priorities for essential uses, and ensures that scarcity does not become a mechanism for the inequitable redistribution of burdens.

This chapter demonstrates that imbalances in production, use, and supply are not merely operational in nature, but are the direct result of a legal and institutional framework that governs the sector without explicit rights-based guarantees or an effective system of accountability. The report therefore turns, in the following chapter, to an analysis of the legal and institutional framework governing the water sector in Jordan.

04

THE LEGAL AND INSTITUTIONAL FRAMEWORK FOR WATER IN JORDAN

SECTOR REGULATION AND THE LIMITS OF LEGAL PROTECTION OF THE RIGHT TO WATER

The water sector in Jordan is governed by a complex legal and institutional framework composed of laws, regulations, and specialized entities responsible for resource management and service provision. However, this legislative and institutional plurality has not translated into explicit legal protection of the right to water as a human right subject to realization; rather, it has remained grounded in a logic of administration and regulation. This is clearly reflected in the absence of explicit recognition of the right to water in the Jordanian Constitution or in a dedicated national law of a rights-based character, notwithstanding Jordan's ratification of the International Covenant on Economic, Social and Cultural Rights, which constitutes the principal reference for obligations related to the realization of economic and social rights, including the right to water as elaborated in General

Comment No. 15 of the Committee on Economic, Social and Cultural Rights^{58 59}.

This gap in recognition is reflected in the limited capacity to hold the state accountable when it fails to ensure equitable and sustainable access to water. When water is managed as a purely regulatory service rather than as a rights-based obligation, interruptions and disparities in service come to be perceived as an "operational reality" rather than as a failure subject to accountability. This dimension acquires heightened significance in the context of pressing operational indicators, such as the persistence of high levels of water loss according to official metrics⁶⁰, underscoring that the effectiveness of the regulatory framework is measured not merely by its existence, but by its capacity to safeguard the elements of the right in practice through traceable outcomes.

WATER LEGAL FRAMEWORK: REGULATION WITHOUT RECOGNITION OF THE RIGHT TO WATER

The legislative framework governing water in Jordan is characterized by a technical-administrative nature, focusing on regulating use, managing supply, and

collecting fees, without incorporating the elements of the right to water—availability, quality, continuity, affordability, and non-discrimination—as binding legal obli-

gations defined by clear minimum standards. Law No. (18) of 1988 on the Water Authority and its amendments constitutes the principal basis for the management of drinking water and sanitation, granting the Water Authority extensive powers to operate networks, regulate supply, and impose fees⁶¹. However, these broad powers are not accompanied, within the legal text itself, by measurable rights-based service standards or defined avenues of redress in cases of failure to ensure minimum levels of availability, continuity, or quality.

This administrative character is further reinforced by Water Regulation No. (4) of 2018, which governs the relationship between service providers and consumers and sets out tariff provisions, subscription procedures, and certain violations. However, it treats water as a service managed within regulatory and procedural conditions, rather than within a rights-based framework that ensures the protection of

vulnerable groups or establishes minimum service obligations and effective grievance mechanisms in cases of supply interruptions or deterioration in water quality.

Although Jordan has acknowledged, in international forums, the status of the right to water in the context of the United Nations General Assembly's recognition of the human right to water and sanitation under Resolution 64/292 (2010), this recognition has not been translated into binding national legislation that directly links water policies to the five elements of the right as performance and accountability benchmarks. Consequently, the relationship between individuals and service providers is governed by a regulatory logic shaped by executive decisions, which weakens the state's accountability when interruptions or disparities are rendered an administratively "acceptable" reality rather than a rights-based failure requiring remedy.

INSTITUTIONAL STRUCTURE AND DISTRIBUTION OF ROLES

The institutional structure of the water sector constitutes a decisive determinant of how the resource is managed and distributed. The Ministry of Water and Irrigation assumes the highest policy-making role through the development of national strategies and the setting of general priorities, including the National Water Strategy 2023–2040⁶². However, an examination of these strategies reveals that rights-based indicators for measuring availability, distributive equity, or affordability remain limited in comparison with indicators of production, efficiency, and financing, reflecting the continued predominance of an "administrative management" perspective over a rights-based implementation approach.

At the executive level, the Water Author-

ity, pursuant to its establishing law, is responsible for managing drinking water and sanitation services, operating networks, regulating supply, and collecting fees (Water Authority Law No. 18 of 1988). Official documents indicate that total water demand exceeds annual renewable resources, with continued reliance in certain basins on over-abstraction of groundwater to cover supply deficits (Ministry of Water and Irrigation). This implies that the balance between sustainability and day-to-day supply is managed through acute operational and financial trade-offs, without a clear rights-based framework that defines priority setting or regulates the impact of such trade-offs on the most vulnerable groups.

In contrast, irrigation and agricultural

development water in the Jordan Valley is managed under the Jordan Valley Authority Law No. (19) of 1988, thereby entrenching an institutional duality between the management of drinking water and irrigation water (Jordan Valley Authority Law No. 19 of 1988). This duality assumes particular significance given that the agricultural sector consumes approximately 50–52% of total annual available water, according to official sources and FAO AQUASTAT data (2022) (Ministry of Water and Irrigation,

2022).

Here a structural paradox emerges: whereas domestic consumption is managed through intermittent supply and austerity measures, substantial pressure from agricultural uses persists, without a unified framework that transparently balances economic priorities with the requirements of the right to water, understood as a right that should accord normative priority to essential household uses.

LOCAL SERVICE PROVISION AND DISPARITY

At the level of daily supply, regional water companies such as “Miyahuna,” “Yarmouk Water Company,” and “Aqaba Water,” along with certain municipalities in specific contexts, are responsible for water distribution, fee collection, and aspects of local operational management. Performance varies among these entities in terms of technical efficiency, levels of water loss, and the regularity of supply, which is directly reflected in people’s lived experience of water as a right, rather than merely a service.

Official indicators show that total water losses are approximately 42%, as previously noted, a figure which effectively means that a substantial proportion of produced water does not reach consumers, whether due to technical leakages, illegal connections to networks, or administrative inefficiencies (Ministry of Water and Irrigation, 2022). In a context of absolute scarcity, such losses become a factor that determines not only the efficiency of the network but also the equity of service provision, as their ultimate impact is reflected in longer supply interruptions and reduced quantities available to consumers.

Operational reports indicate that the regularity of supply typically ranges from

once per week, and may extend to once every 10–14 days in some areas. The rights-based impact of this disparity is heightened in the absence of transparent and publicly stated criteria clarifying the basis for setting pumping priorities and allocating distribution cycles among regions⁶³. The lack of such standards not only impedes public understanding, but also weakens the foundation of accountability; citizens cannot effectively question what they are unable to measure or verify as reasonable.

Water Regulation No. (4) of 2018 remains governed by a logic that regulates the administrative relationship more than it provides a protective framework for vulnerable groups in cases of supply interruption or irregular provision. Moreover, grievance mechanisms, where they exist administratively, are not typically managed through an independent, accessible process with assured outcomes that can deliver traceable remedies. In this way, disparities in the capacities of water companies and municipalities translate into actual variations in service levels, thereby deepening geographic inequality and undermining the principle of distributive justice in water allocation.

LEGAL PROTECTION OF WATER SOURCES AND INSTITUTIONAL OVERLAP

The protection of water resources and the prevention of their pollution are governed by Water Protection Regulation No. (85) of 2002 and its amendments, which criminalizes encroachments on both groundwater and surface water, designates protection zones, and prohibits polluting activities within specified areas (Water Protection Regulation No. 85 of 2002). However, the effectiveness of this framework is not measured by the existence of the legal text alone, but by the consistency and transparency of its enforcement, as well as its capacity to deter violations and to disclose enforcement outcomes to the public.

Official data indicate the continued existence of unlicensed or non-compliant wells in recent years, alongside repeated enforcement campaigns involving inspections, closures, and confiscations. This reflects a widening compliance gap and increasing enforcement costs under conditions of demand pressure and scarcity (Ministry of Water and Irrigation, 2022). The rights-based impact is directly evident: each unrestrained encroachment on the source or network is not merely an “administrative violation,” but an actual reduction of a scarce resource intended to meet basic needs, thereby affecting availability, continuity, and non-discrimination simultaneously.

With regard to resource quality, national and international reports indicate that certain groundwater basins are experiencing increased salinity or signs of contamination—such as elevated nitrate levels—resulting from the intensity of agricultural activities and weaknesses in wastewater management in some contexts. This effectively reduces the volume of usable water, even where water is physically

available. From a right to water perspective, quantitative availability is insufficient if water quality is unsafe or requires treatment costs or alternative sources that place a burden on lower-income households, as this simultaneously affects both the quality and affordability dimensions of the right.

The situation is further complicated by institutional overlap. In addition to the roles of the Ministry of Water and Irrigation, the Water Authority, and the Jordan Valley Authority, Environmental Protection Law No. (6) of 2017 grants the Ministry of Environment regulatory powers to safeguard natural resources, while the Local Administration Law assigns municipalities responsibilities in managing services and practices that affect water sources (Environmental Protection Law No. 6 of 2017). However, this overlap is often not accompanied by binding institutional coordination mechanisms or a shared accountability system. As a result, issues such as pollution, encroachments, and over-abstraction are managed through parallel tracks, dispersing responsibility and rendering the question of “who is accountable” in cases of failure an unresolved issue rather than a clearly defined process.

In a context of absolute water scarcity, where per capita availability falls below 100 cubic meters per year, any additional loss in quantity or quality due to pollution or depletion is not merely an “operational” loss, but a strategic loss that directly affects the right itself. It therefore calls for governance to be guided by a logic of rights protection, rather than the protection of the resource in isolation from its social impact.

ABSENCE OF AN INDEPENDENT REGULATORY AUTHORITY AND ACCOUNTABILITY GAPS

The absence of an independent regulatory authority for the water sector constitutes a central weakness in the existing institutional framework, as the current model combines—at varying degrees—policy-making, implementation, and service provision within a single system. This conflation generates a structural conflict of interest that limits the existence of impartial oversight capable of independently assessing service providers' performance, reviewing tariff policies and burden distribution, monitoring geographic equity in supply, and issuing transparent periodic reports on service quality and regularity.

The significance of this absence becomes more apparent when compared with other sectors in Jordan, such as energy and telecommunications, where independent regulatory authorities operate with clearly defined oversight mandates. In the water sector, by contrast, oversight remains

largely internal or overlapping in nature, which weakens both parliamentary and public scrutiny, particularly in light of limited availability of disaggregated data on water quality, distribution criteria, and actual performance by region.

This deficiency is directly reflected in the difficulty of attributing responsibility in cases of failure, whether in relation to intermittent supply, the persistence of high levels of water loss, or disparities in service quality between different areas. It also constrains citizens' ability—particularly marginalized groups—to access redress mechanisms that are independent of the service provider itself, thereby rendering complaints in many cases an administratively limited process with minimal impact, rather than a rights-based pathway governed by clear standards and enforceable outcomes.

IMPACT OF THE LEGAL AND INSTITUTIONAL FRAMEWORK ON THE REALIZATION OF THE RIGHT TO WATER

This fragmented legal and institutional framework has a direct impact on the realization of the right to water. When service delivery is governed by an administrative and operational logic without the explicit incorporation of rights-based obligations, the five elements of the right are affected in an interrelated manner: availability is undermined by intermittent supply and variations in quantities; quality is affected by challenges of pollution and rising salinity in certain basins; continuity is compromised by high water losses and climate-related pressures; affordability is strained by the transfer of part of high production costs directly to households or through market-based alternatives; while non-discrimi-

nation is reflected in geographic and social disparities that shape the regularity of service and the capacity to adapt to it.

In this context, the absence of a comprehensive water law that explicitly recognizes the right to water and translates international standards into enforceable national obligations constitutes a decisive factor in explaining the limited nature of accountability. Jordan's compliance with its international obligations under the International Covenant on Economic, Social and Cultural Rights—as interpreted by the Committee in General Comment No. 15—thus remains largely at the level of general acknowledgment, rather than being operationalized as

a domestic system of obligations incorporating clear standards and effective reme-

dial mechanisms^{64 65}.

ANALYTICAL SUMMARY

This chapter demonstrates that the challenge in Jordan's water sector does not lie in a shortage of laws or institutions, but in their orientation and scope: the existing framework regulates the sector from the perspective of resource management and service delivery, rather than from the perspective of rights protection. In a context of absolute scarcity, water losses exceeding 40%, and increasing pressures from climate change and pollution, the absence of explicit recognition of the right to water, the lack of an independent regulatory authority, and the fragmentation of responsibilities become factors that exacerbate the system's vulnerability rather than strengthening its resilience (Ministry of Water and Irrigation).

Accordingly, any meaningful reform requires a realignment of the legal and institutional framework within a compre-

hensive rights-based perspective, beginning with the legislative recognition of the right to water, strengthening the consistent and transparent enforcement of the Water Protection Regulation, establishing an independent regulatory body—or an equivalent independent regulatory function—with clear standards, developing binding coordination mechanisms among environmental, water, and local authorities, and linking performance indicators to the five elements of the right as a measure of success rather than a merely rhetorical addition. Such a shift would pave the way for understanding the governance and accountability gaps addressed in the following chapter as a direct consequence of the nature and limitations of this framework.

05

TRANSBOUNDARY WATER MANAGEMENT AND WATER DIPLOMACY: BETWEEN GEOPOLITICAL CONSTRAINTS AND OPPORTUNITIES FOR WATER JUSTICE

The transboundary dimension constitutes one of the key determinants of the water situation in Jordan, as a significant proportion of its water resources depends on shared sources with neighboring countries, including the Yarmouk and Jordan Rivers, in addition to certain transboundary groundwater basins. This reality renders water management in Jordan a matter that cannot be understood in isolation from the regional context, where environmental considerations intersect with political balances, directly affecting the quantities of water available and the feasibility of their sustainable planning⁶⁶.

Over the past decades, Jordan has faced persistent challenges in securing its water shares from these shared resources, as a result of a combination of geopolitical and institutional factors. The flows of the Yarmouk River have been significantly affected by upstream uses within the basin, while Jordan's share of the Jordan River is governed by bilateral arrangements that reflect imbalances in power relations, thereby limiting Jordan's ability to access its full water entitlements⁶⁷. Moreover, the absence of effective regional frameworks

for the management of shared basins contributes to the entrenchment of unilateral approaches to resource utilization and weakens prospects for cooperation based on benefit-sharing⁶⁸.

The imbalance in water allocation is clearly evident in the cases of the Jordan and Yarmouk Rivers, which constitute illustrative examples of unequal access to shared resources. In the Jordan River basin, Jordan's share is governed by bilateral arrangements that do not necessarily reflect the severity of the water scarcity it faces, while river flows are significantly affected by upstream uses, thereby reducing the actual quantities available⁶⁹. In the Yarmouk basin, flows have witnessed a marked decline over past decades as a result of the expansion of dam projects and water uses on the Syrian side, which has directly affected Jordan's water share and reduced the expected reliability of this source^{70 71}.

This reality reflects a pattern of unequal allocation of shared resources, whereby water is not distributed in accordance with the principles of equitable and reasonable utilization, but rather under unilateral polit-

ical considerations that limit Jordan's ability to access stable and guaranteed shares. This, in turn, shifts part of the burden of scarcity inward, as the state is compelled to compensate for the deficit through more costly sources, such as over-abstraction of groundwater or the expansion of desalination projects, thereby exacerbating the economic and environmental challenges associated with the water sector.

This reflects a clear imbalance in the application of the principles of international water law, as existing allocations do not correspond to the acute levels of scarcity faced by Jordan, thereby transforming shared resources from an opportunity for cooperation into a factor that exacerbates the crisis. In the case of Jordan, which is classified among the most water-scarce countries globally, this imbalance constitutes an additional aggravating factor, limiting the effectiveness of national policies, regardless of their efficiency, unless accompanied by improvements in the management of shared water resources⁷².

In this context, Jordan's accession on 6 February 2026 to the United Nations Water Convention of 1992 (the Helsinki Convention) is of particular significance, as it represents a step toward strengthening its position within the international water governance framework⁷³. The Convention provides a legal framework that enshrines the principles of equitable and reasonable utilization, the obligation not to cause significant harm, and the duty of cooperation and data exchange among riparian states, thereby contributing to the reduction of disputes and the promotion of sustainable water management⁷⁴.

This accession represents a strategic opportunity for Jordan to revitalize water diplomacy on clearer legal foundations, as the Convention's principles can be used as a reference for advocating fair shares of

shared water resources and for strengthening dialogue and negotiation mechanisms with neighboring countries. It also enables access to international platforms for technical cooperation, capacity-building, and the exchange of expertise in the management of shared basins, thereby enhancing Jordan's ability to adapt to the challenges of climate change and increasing scarcity^{75 76}.

However, activating this pathway is not limited to the external dimension; it also requires alignment with domestic governance policies. Strengthening Jordan's negotiating position in transboundary water issues is closely linked to its ability to manage its water resources efficiently and equitably at the internal level, including reducing water losses, improving efficiency of use, and enhancing transparency in sector management. Weaknesses in domestic governance may undermine negotiating arguments and limit the ability to claim additional water rights⁷⁷.

From a right to water perspective, transboundary water issues introduce an additional dimension that extends beyond the boundaries of the state, as the realization of this right in Jordan is partially dependent on factors outside the direct control of national policies. This implies that ensuring equitable and sustainable access to water requires not only domestic reforms, but also a more just and cooperative regional environment. In this regard, water diplomacy can be seen as a key instrument for enabling the state to fulfil its human rights obligations, rather than merely as a tool for managing external relations⁷⁸.

Accordingly, the management of transboundary water resources represents an intersection of politics, environment, and human rights, and constitutes both a challenge and an opportunity for Jordan. While current constraints reflect the

limits of water sovereignty within a complex regional context, engagement with international frameworks such as the Helsinki Convention offers the possibility of reshaping this reality toward greater cooperation and equity. The main challenge, however, lies in translating this accession into practical policies that strengthen Jordan's negotiating position while simultaneously ensuring the realization of the right to water for all residents on the basis of equity and sustainability.

06

WATER GOVERNANCE AND ACCOUNTABILITY GAPS

FROM TECHNICAL MANAGEMENT TO RIGHTS-BASED RESPONSIBILITY

An analysis of water governance in Jordan leads to the conclusion that the water crisis cannot be reduced to resource scarcity or limited technical capacity, but is instead closely linked to the nature of the governance model that manages this resource. In a context of absolute scarcity, where per capita availability falls below 100 cubic meters per year according to data from the Food and Agriculture Organization and the

World Bank, sound governance becomes a fundamental prerequisite for ensuring distributive justice, rather than merely an administrative improvement. Despite the multiplicity of institutions, legislation, and strategies, the existing framework has not evolved into an effective accountability system that ensures the realization of the right to water as a legally enforceable obligation.

THE RECOGNITION GAP IN THE RIGHT TO WATER AS A BASIS FOR ACCOUNTABILITY

The first structural gap lies in the absence of explicit recognition of the right to water in the Jordanian Constitution or in binding national legislation of a rights-based nature. Despite Jordan's ratification of the International Covenant on Economic, Social and Cultural Rights and its publication in the Official Gazette (Official Gazette, 2006), and despite the affirmation by the Committee on Economic, Social and Cultural Rights in its General Comment

No. 15 regarding the elements of the right to water, this commitment has not been translated into domestic legal provisions that define a guaranteed minimum level of service or link failure to clear judicial remedies. As a result, the relationship between the state and users remains an administrative one governed by executive decisions, rather than a rights-based relationship grounded in obligation and accountability.

CENTRALIZED DECISION-MAKING AND FRAGMENTATED IMPLEMENTATION

The water sector is characterized by a high degree of centralization in policymak-

ing through the Ministry of Water and Irrigation, counterbalanced by fragmentation in implementation among the Water Authority, the Jordan Valley Authority, regional water companies, and municipalities. The effects of this fragmentation are evident in the persistence of high levels of water loss, disparities in the regularity of supply between governorates, and the continued over-abstraction of groundwater in certain basins beyond natural recharge rates.

The problem does not lie in the mul-

tiplicity of entities per se, but rather in the absence of clarity regarding ultimate responsibility for outcomes. It becomes difficult to identify the responsible authority in cases of supply interruptions, deterioration in quality, or increased costs, resulting in a structural accountability gap that undermines public trust in sector governance and transforms failures into normalized occurrences rather than matters subject to accountability.

STRATEGIES BETWEEN LONG-TERM PLANNING AND THE NEED FOR MEASUREMENT

The National Water Strategy 2023–2040 outlines a long-term orientation aimed at strengthening water security through large-scale projects, including the expansion of desalination and demand management. However, a long planning horizon does not negate the need for clear performance indicators, a defined baseline, and periodic review mechanisms that measure actual progress in quantitative terms. The

World Bank notes that the effectiveness of reforms in the water sector is closely linked to the clarity of performance indicators and the transparency of periodic reporting. In the absence of a systematic linkage between objectives and outcomes, such strategies become guiding documents rather than instruments of accountability.

ABSENCE OF INDEPENDENT REGULATION AND OVERLAPPING ROLES

There is no independent regulatory authority for the water sector in Jordan with clearly defined oversight powers, comparable to regulatory bodies in the energy or telecommunications sectors. The consolidation of policy-making, implementation, and service provision within a single system creates a structural conflict of interest that weakens impartial oversight. The World Bank's report on water sector governance and financing in Jordan has noted

that the absence of independent regulation limits transparency and complicates the accountability of service providers.

In this context, the review of tariff policies and the assessment of geographic equity in supply remain within the same administrative framework, without an independent body publishing periodic, objective reports on service quality, regularity, and its social impact.

TRANSPARENCY AND ACCESS TO INFORMATION

Transparency is a fundamental prerequisite for effective accountability. Despite

the publication of some general indicators in annual reports, detailed data concern-

ing water quality at the regional level, criteria for determining pumping schedules, the actual costs of production and transmission, or the distribution of tariff burdens remain neither regularly available nor readily comprehensible to the public.

This lack of transparency limits the ability of parliament, civil society, and the media to exercise evidence-based oversight, and undermines the principle of informed participation in decision-making.

GRIEVANCE AND REDRESS MECHANISMS

The current framework lacks an independent and accessible mechanism enabling individuals to challenge decisions related to water supply, tariffs, or service quality. Complaints are generally handled through internal administrative channels within the service provider itself, raising concerns regarding impartiality and effectiveness. In light of the standards of the

right to water, which emphasize the necessity of providing effective remedies in cases of failure to uphold the essential elements of the right, the absence of an independent mechanism constitutes an institutional shortcoming that limits individuals'—particularly vulnerable groups'—ability to claim their rights.

ENFORCEMENT OF LAWS AND PROTECTION OF WATER SOURCES

Despite the existence of Water Protection Regulation No. (85) of 2002 and the continued enforcement campaigns targeting unlicensed wells and network violations, reports from the Ministry of Water and Irrigation indicate the persistence of infractions that affect supply efficiency and the sustainability of water sources. Furthermore, FAO and World Bank data show

that certain groundwater aquifers are being depleted at rates exceeding natural recharge, thereby threatening the long-term sustainability of the resource. The impact of weak enforcement is not limited to the reduction of available resources; it also undermines confidence in the rule of law and contributes to the normalization of violations.

GOVERNANCE FAILURES' IMPACT ON HUMAN RIGHTS

These gaps are directly reflected in the five elements of the right as defined in General Comment No. 15. Availability is affected by distribution disparities and the persistence of intermittent supply; quality is affected by pollution and aquifer depletion; continuity is undermined by service interruptions and increased water losses; affordability is affected by the transfer of

part of high production costs to users in the context of chronic sectoral financial deficits; and non-discrimination is impacted by geographic and social disparities in service regularity. In the absence of effective accountability, these imbalances are transformed into a "natural reality" rather than being recognized as failures subject to monitoring and remediation.

CHAPTER SUMMARY

Water governance in Jordan reveals a clear gap between the existing institu-

tional framework and the requirements of managing a vital resource as a human

right. The problem does not lie in the absence of institutions or strategies, but in the nature of their organization, the limits of their accountability, and the absence of an overarching framework that links planning to implementation and to measurable outcomes. In a context of absolute scarcity and accelerating climate change, water cannot be managed through a purely technical approach. Strengthening the legal recognition of the right, clarifying responsibilities, establishing an independent regulatory authority, enhancing transparency, and ensuring equitable enforcement constitute essential conditions for addressing governance gaps and paving the way toward practical accountability pathways that restore the right to water to the center of sector management.

07

MARGINALIZED GROUPS AND THE RIGHT TO WATER

INEQUALITY IN IMPACT AND POLICY FAILURES

The experience of marginalized groups in Jordan reveals that the water crisis does not produce a uniform impact, but rather redistributes risks and burdens in an unequal manner. In a context of absolute scarcity, where per capita annual availability falls below 100 cubic meters according to

FAO AQUASTAT and World Bank data^{79 80}, the issue is not merely one of "resource shortage," but a question of distributive justice in terms of impact. As scarcity intensifies, the effects of any governance or distribution failure increasingly fall on those least able to adapt.

WATER POVERTY AND THE ACTUAL COST OF ACCESS

Water poverty in Jordan is not measured by monetary income alone, but by the extent of households' ability to bear the actual cost of water under a system of intermittent supply. Although the official tariffs for lower domestic consumption brackets remain relatively low within the established tariff structure⁸¹, the real cost borne by households in areas with irregular supply far exceeds the regulated price per cubic meter.

UNICEF reports in Jordan indicate that a significant proportion of households, particularly in areas with longer water supply cycles, are compelled to purchase water from private tanker trucks at least once a year, with some relying on them repeatedly during the summer months⁸². The cost per cubic meter delivered by tankers may range between 5 and 8 Jordanian dinars in certain areas, which can amount to sev-

eral times the official tariff for basic consumption blocks. When accounting for additional expenses such as storage, water pumps, and electricity required for pumping, the gap between the official tariff and the actual cost becomes a structural disparity.

From the perspective of the right to water as articulated in General Comment No. 15 of the Committee on Economic, Social and Cultural Rights⁸³, the element of "affordability" is not assessed solely on the basis of the price of the service itself, but on the total financial burden associated with accessing it. When tariff policies are designed without accounting for these indirect costs, water poverty becomes a direct consequence of policy choices that do not take into consideration the vulnerability of certain groups.

WOMEN AND THE INVISIBLE BURDEN OF WATER MANAGEMENT

In the context of intermittent water supply, women in many households bear responsibility for domestic water management, including monitoring pumping schedules, organizing storage, allocating daily use, and coping with water shortages or declining quality. Studies and development programs in Jordan indicate that women spend additional time managing household water-related tasks, particularly in rural areas or in locations with irregular supply⁸⁴.

This invisible burden is not accounted for in social impact assessments of projects or in water adaptation policies, despite its direct implications for women's time, health, and capacity to engage in work and public life. The absence of a gender perspective in water policies constitutes a violation of the non-discrimination principle and contributes to the reproduction of traditional roles that increase women's vulnerability in the context of scarcity.

Peripheral Areas and Geographic Disparities

Data from the Ministry of Water and Irrigation indicate clear disparities in the regularity of water supply between governorates and regions, where the supply cycle in some areas may extend to once every 10–14 days, compared with other areas that benefit from relatively better regularity. In the context of water losses of approximately 42% of pumped water, regions with weaker infrastructure are disproportionately affected, as leakage, network violations, and low pressure effectively reduce the quantities available.

These disparities are not governed by transparent and publicly stated criteria that set priorities on a clear rights-based basis, thereby weakening the element of equitable availability. When such inequality is left to be addressed through individual solutions—such as investing in larger storage tanks or purchasing additional tanker deliveries—equity in access is transformed into a matter of financial capacity rather than an institutional obligation to guarantee a minimum standard for all.

REFUGEES AND DEMAND PRESSURES

Jordan has hosted more than 1.3 million Syrian refugees since 2011, in addition to earlier waves of displacement, which has increased pressure on water networks in the northern and central governorates. World Bank reports indicate that this sudden population increase has exacerbated pressure on existing infrastructure, which was already constrained by limited resources⁸⁵.

However, monitoring indicates that these pressures are often addressed through externally funded projects or short-term interventions, without the sustainable integration of the rights of refugees and host

communities into long-term planning. The discourse of "population pressure" is sometimes used to explain deeper structural imbalances in demand and distribution management, despite the fact that Jordan's water scarcity predates the current refugee situation by decades. From a right to water perspective, responses to population pressure must be governed within a framework of non-discrimination and the guarantee of a minimum standard for all, rather than being used as a justification for declining service regularity.

PERSONS WITH DISABILITIES AND ACCESSIBILITY

Data from the Department of Statistics indicate that persons with disabilities in Jordan constitute more than 10% of the population. Nevertheless, considerations of universal accessibility are rarely incorporated into the design of networks, supply points, or complaint mechanisms. In the context of intermittent supply, access to water becomes more complex for persons with disabilities, particularly when it requires repeated access to rooftop tanks or the handling of pumps and storage

equipment.

The absence of disaggregated data that captures the impact of intermittent supply on this group also reflects a clear gap in the integration of the principle of inclusivity. From a right to water perspective, the element of "availability" is not limited to the existence of a network, but also encompasses actual, safe, and independent accessibility.

THE RIGHTS-BASED IMPACT OF INEQUALITY

The analysis shows that the five elements of the right are unevenly affected across different groups. Availability varies geographically according to the regularity of supply; quality differs depending on infrastructure conditions and local pressures; continuity is weaker in peripheral areas; affordability is significantly constrained for low-income households; and non-discrimination is undermined in the absence of

effective integration of gender and disability considerations into policies.

In the absence of effective accountability that places these disparities at the core of policy analysis, scarcity becomes a mechanism for redistributing burdens onto the most vulnerable.

CHAPTER SUMMARY

Monitoring the conditions of marginalized groups reveals that the water crisis in Jordan is not merely an environmental or technical challenge, but a matter of social justice. In a context of absolute scarcity, any failure in distribution or adaptive capacity has a magnified impact on those least able to absorb shocks. When scarcity is managed without a clear rights-based framework, it becomes a mechanism for the reproduction of inequality.

Shifting marginalized groups from the position of passive recipients of impacts to rights-holders requires the integration of social and climate justice at the core of water policies, and the linkage of the five

elements of the right to measurable and accountable performance indicators. Only in this way can water management be transformed from an operational response to scarcity into an institutional obligation to protect rights in a resource-constrained context.

08

ACCOUNTABILITY PATHWAYS FOR THE REALIZATION OF THE RIGHT TO WATER IN JORDAN

FROM GENERAL RECOMMENDATIONS TO POLICY CHANGE INSTRUMENTS

■ WHY PATHWAYS RATHER THAN RECOMMENDATIONS?

The chapters of this report have shown that the water crisis in Jordan is not solely the result of resource scarcity, but rather the cumulative outcome of policy choices and governance models that have not incorporated the right to water as a legally enforceable obligation. In this context, general recommendations such as “improving management” or “enhancing efficiency” are insufficient, as they obscure responsibilities, do not identify accountable actors, and do not establish mechanisms for monitoring or accountability.

This chapter is based on the principle that monitoring without accountability remains an incomplete diagnosis. Accordingly, the report translates its findings into

clear accountability pathways that address the fundamental questions:

- Who is responsible?
- What is the required instrument?
- What is the legal, institutional or policy-level intervention?
- How can implementation be monitored?

In this sense, this chapter does not present general recommendations, but rather a practical framework that enables civil society and human rights actors to transform the report into a tool for monitoring, advocacy, and change.

PATH ONE: THE LEGISLATIVE AND CONSTITUTIONAL TRACK

■ LEGALLY RE-ESTABLISHING THE RIGHT TO WATER

Monitoring has revealed a fundamental gap consisting of the absence of explicit recognition of the right to water in the constitutional and legislative framework,

despite Jordan’s international obligations. This absence limits the ability to hold the state accountable in cases of failure to ensure availability, quality, continuity, or

affordability.

■ PROPOSED ACCOUNTABILITY PATH:

- Explicitly enshrine the right to water within the constitutional framework or through a dedicated rights-based legislative instrument of binding nature.
- Align the Water Authority Law and the Water Regulation with international standards, ensuring that the five elements of the right are incorporated as binding provisions rather than merely guiding principles.
- Require the competent authorities to conduct a human rights impact assessment prior to the approval of any major water policy or project, particularly as Jordan is preparing to launch the first phase of the National Water Carrier Project, with an estimated cost of approximately USD 5 billion.
- Strengthen parliamentary oversight of water policies from a rights-based perspective, rather than a purely operational one

PATH TWO: THE INSTITUTIONAL AND REGULATORY TRACK

■ FROM MULTIPLE ACTORS TO CLEAR ACCOUNTABILITY

The report has shown that the multiplicity of institutions and the overlap of mandates generate ambiguity in responsibility and weaken accountability.

■ PROPOSED ACCOUNTABILITY PATH:

- Establish an independent regulatory authority for the water sector with clearly defined oversight powers.
- Separate policy-making functions from implementation and regulatory roles in order to reduce conflicts of interest.
- Develop rights-based performance indicators linked to availability and distributive equity, rather than relying solely on technical metrics.
- Publish regular public reports on service quality, water losses, and the fairness of allocation.

PATH THREE: THE ECONOMIC AND TARIFF TRACK

■ COST JUSTICE AS A CONDITION FOR REALIZING THE RIGHT

Monitoring has shown that the actual cost of water, particularly under conditions of intermittent supply, imposes a disproportionate burden on low-income households.

■ PROPOSED ACCOUNTABILITY PATH:

- Review the tariff system to ensure protection of the basic minimum level of domestic consumption, particularly following the shift to a monthly tariff structure.
- Adopt targeted support for vulnerable groups instead of universal subsidies that do not address inequality, with higher support levels than those currently applied

- Subject any tariff adjustment or private-sector partnership to a prior social and human rights impact assessment, particularly in the context of major projects such as the National Water Carrier Project
- Include indirect costs (tankers, storage, energy) in assessments of affordability and equity

PATH FOUR: THE SOCIAL AND COMMUNITY TRACK

■ FROM BENEFICIARIES TO RIGHTS-HOLDERS

The report has highlighted weak community participation and the absence of disaggregated data, which constrains social accountability.

■ PROPOSED ACCOUNTABILITY PATH:

- Integrate binding community participation mechanisms into water project planning.
- Develop disaggregated data systems broken down by gender, geographic location, and disability.
- Support independent monitoring by civil society organizations.
- Involve affected communities in setting allocation priorities.

PATH FIVE: THE CLIMATE AND ENVIRONMENTAL TRACK

■ PLACING CLIMATE JUSTICE AT THE CORE OF WATER POLICIES

Water policies have generally treated climate change as an external factor, rather than as a framework that redefines equity in the distribution of resources.

■ PROPOSED ACCOUNTABILITY PATH:

- Integrate climate justice into the National Water Strategy, particularly in updates to Nationally Determined Contributions and national and local adaptation plans.
- Ensure that adaptation policies do not transfer costs to the most vulnerable groups.
- Link climate finance to measurable rights-based indicators.
- Strengthen source protection within a long-term sustainability framework based on climate modelling.

PATH SIX: THE REGIONAL AND INTERNATIONAL TRACK

■ WATER DIPLOMACY FROM A RIGHTS-BASED PERSPECTIVE

The regional dimension of water is often managed through a logic of volumetric allocation, without the explicit integration of human rights obligations.

■ **PROPOSED ACCOUNTABILITY PATH:**

- Operationalize Jordan's accession to the United Nations Water Convention as a legal framework for claiming equitable water shares
- Develop a water diplomacy strategy that links external negotiations with internal resource management
- Integrate principles of regional water equity into national policies

REFERENCES

- ²³ CESCR. (2002). General Comment No. 15: The Right to Water.
- ²⁴ FAO AQUASTAT. (2022). Jordan Water Resources Profile.
- ²⁵ [Link](#).
- ²⁶ Ministry of Water and Irrigation (MWI). (2022 - 2023). Annual Water Sector Reports.
- ²⁷ World Bank. (2018). Beyond Scarcity: Water Security in the Middle East and North Africa.
- ²⁸ UNICEF Jordan. (2022 - 2023). Water, Sanitation and Hygiene Reports.
- ²⁹ FAO AQUASTAT - Renewable Water Resources per Capita (2022)
- ³⁰ FAO AQUASTAT (2022). Renewable Water Resources per Capita.
- ³¹ World Bank (2021 - 2022). World Development Indicators; Water Sector Governance in Jordan.
- ³² Ministry of Water and Irrigation (2022–2023). Annual Reports; National Water Strategy 2023–2040.
- ³³ FAO AQUASTAT (2022). Renewable Water Resources per Capita.
- ³⁴ Ministry of Water and Irrigation, Annual Performance Report 2022
- ³⁵ Ministry of Environment (2021). National Adaptation Plan.
- ³⁶ IPCC (2022). Sixth Assessment Report.
- ³⁷ Ministry of Water and Irrigation, Annual Dam Bulletins, 2022
- ³⁸ World Bank (2021 - 2022). World Development Indicators; Water Sector Governance in Jordan.
- ³⁹ UNICEF Jordan (2022). WASH Reports.
- ⁴⁰ Ministry of Water and Irrigation (2022–2023). Annual Reports.
- ⁴¹ WHO (2017). Guidelines for Drinking-water Quality.
- ⁴² FAO (2021). Irrigation and Water Management in Jordan.
- ⁴³ World Bank (2021 - 2022). World Development Indicators; Water Sector Governance in Jordan.
- ⁴⁴ Ministry of Water and Irrigation (2022–2023). Annual Reports.
- ⁴⁵ FAO AQUASTAT (2022). Renewable Water Resources per Capita.
- ⁴⁶ Ministry of Water and Irrigation (2022–2023): Annual Reports; National Water Strategy 2023–2040; Operational Reports.
- ⁴⁷ World Bank (2021): Water Sector Governance and Finance in Jordan.
- ⁴⁸ Ministry of Energy and Mineral Resources (2022): National Energy Statistics.
- ⁴⁹ Ministry of Water and Irrigation (2022–2023). Annual Reports.
- ⁵⁰ UNICEF Jordan (2022): WASH Assessment Reports.
- ⁵¹ FAO AQUASTAT (2022): Water Use by Sector - Jordan.
- ⁵² Ministry of Water and Irrigation (2022–2023). Annual Reports.
- ⁵³ Ministry of Water and Irrigation (2022–2023). Annual Reports.

- ⁵⁴ UNICEF Jordan (2022): WASH Assessment Reports.
- ⁵⁵ World Bank (2021): Water Sector Governance and Finance in Jordan.
- ⁵⁶ Ministry of Water and Irrigation (2022–2023). Annual Reports; National Water Strategy 2023–2040; Operational Reports.
- ⁵⁷ UNDP (2020): Reports related to demand pressures in host and refugee communities (as cited).
- ⁵⁸ CESCR (2002), General Comment No. 15: The Right to Water.
- ⁵⁹ Official Gazette (2006). Publication/ratification instruments related to the International Covenant on Economic, Social and Cultural Rights.
- ⁶⁰ Ministry of Water and Irrigation (2022). Annual Reports / Loss and Operational Indicators.
- ⁶¹ Official Gazette (1988). Water Authority Law No. (18) of 1988 and its amendments.
- ⁶² Ministry of Water and Irrigation (2023). National Water Strategy 2023–2040.
- ⁶³ UNDP (2020). Reports related to resource quality and population pressures.
- ⁶⁴ World Bank (2018). Water stress and water scarcity indicators/reports (as cited).
- ⁶⁵ Official Gazette (2006). Publication/ratification of instruments related to the International Covenant on Economic, Social and Cultural Rights.
- ⁶⁶ FAO: AQUASTAT – Jordan Water Resources Profile
- ⁶⁷ World Bank: (2018) Beyond Scarcity: Water Security in the Middle East and North Africa
- ⁶⁸ UNESCO: World Water Development Report – Transboundary Waters
- ⁶⁹ World Bank: (2018) Beyond Scarcity: Water Security in the Middle East and North Africa
- ⁷⁰ FAO: AQUASTAT – Jordan Water Resources Profile
- ⁷¹ UNESCO: World Water Development Report – Transboundary Waters
- ⁷² UNDP: (2020) Climate Change Adaptation and Water Governance in Jordan
- ⁷³ UNECE: 1992 Convention on the Protection and Use of Transboundary Watercourses
- ⁷⁴ UNECE: 1992 Convention on the Protection and Use of Transboundary Watercourses
- ⁷⁵ UNESCO: World Water Development Report – Transboundary Waters
- ⁷⁶ UNECE: 1992 Convention on the Protection and Use of Transboundary Watercourses
- ⁷⁷ UNDP: (2020) Climate Change Adaptation and Water Governance in Jordan
- ⁷⁸ CESCR: (2002) General Comment No. 15: The Right to Water
- ⁷⁹ FAO AQUASTAT (2022). Renewable Water Resources per Capita - Jordan Country Profile. Food and Agriculture Organization of the United Nations.
- ⁸⁰ World Bank (2018). Jordan - Economic and Social Impact of the Syrian Crisis. Washington, DC.
- ⁸¹ Ministry of Water and Irrigation (2022). Annual Report of the Water Sector. Amman, Jordan.
- ⁸² UNICEF Jordan (2022). Water, Sanitation and Hygiene (WASH) Assessment Reports. Amman.
- ⁸³ CESCR (2002). General Comment No. 15: The Right to Water (Articles 11 and 12 of the International Covenant on Economic, Social and Cultural Rights). Committee on Economic, Social and Cultural Rights, United Nations.
- ⁸⁴ UNDP (2020). Gender and Water Governance in Jordan. United Nations Development Programme.
- ⁸⁵ World Bank (2018). Jordan - Economic and Social Impact of the Syrian Crisis. Washington, DC.



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