THE RIGHT TO WATER AND CLIMATE CHANGE 2025 THE ARAB WATCH REPORT ON ECONOMIC AND SOCIAL RIGHTS

THE RIGHT TO WATER IN EGYPT

Scarcity and Abundance for whom?

Amena Sharaf

Environmental and climate justice researcher and activist

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Arab NGO Network for Development
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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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Amena Sharaf is a researcher and activist in the field of environmental and climate justice. She holds a master's degree in the social anthropology of disasters from the University of Kent in the United Kingdom. Amena is interested in intersectional and feminist issues, justice considerations, and their connection to neo-colonialism. She works in research, advocacy, and collective learning.

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INTRODUCTION

This report, "The Right to Water in Egypt," delves into the relationship between the state and citizens regarding water resources and reviews the challenges that hinder progress in ensuring Egyptians' right to access and benefit from these resources. Prevailing policies treat water as a scarce commodity or an economic resource that must be "rationalized" and "improved." However, it must be emphasized that water is a fundamental human right that must be guaranteed to all without discrimination.

The report builds on an analysis of available information and the views of human rights and environmental justice experts, researchers, and activists. It adopts a rights-based perspective that promotes the values of justice and intersectionality and takes into account the rights of peoples of the Global South.

Measuring this right in Egypt faces many challenges. They include the lack of official information and the many informal channels of access to water, which leads to discrepancies in data and difficulty verifying its accuracy. To mitigate this discrepancy, the focus was on the most reliable quantitative sources, such as data from the Central Agency for Public Mobilization and Statistics (CAPMAS) and the State Information Service (SIS), in addition to published official statements. The report also relies on qualitative analysis to provide a deeper understanding of the challenges, going beyond superficial readings of quantitative information.

Egypt is a water-scarce country, with an annual per capita water share of approximately 600 cubic meters, below the internationally recognized water poverty threshold of 1,000 cubic meters (الهيئة العامة للاستعلامات، 2022أ). Egypt's water resources are estimated at approximately 60 billion cubic meters annually, most of which comes from the Nile River, in addition to limited amounts of rainfall and deep groundwater in the deserts. By contrast, Egypt's water needs are almost 114 billion cubic meters annually (الهيئة العامة للاستعلامات، 2022أ). The "water poverty" metric, which sets the minimum at 1,000 cubic meters per capita per year, is a general tool used to calculate water availability, but it suffers from oversimplification and neglects local contexts. It treats countries and populations with a uniform approach, overlooking annual or seasonal variations and the difference in the amount of water actually available for human use compared to that which should be reserved for rivers and ecosystems. It also assumes similar demand patterns, ignoring the diversity of industrial, agricultural, and domestic needs. This renders the figure inaccurate in many contexts, leading to inequitable distribution and unequal access based

on social, geographical, and other considerations (Rockström et al., 2014).

In addition, the relationship between freshwater availability and access to safe drinking water remains vague. Official Egyptian authorities indicate near-universal coverage despite the low per capita share of water resources, according to the same official sources. Questions remain regarding quality and access, highlighting the role of infrastructure and governance, not just water quantity (Bartram et al., 2020). This limit also overlooks the significance of "virtual water," which contributes to food security in other countries despite the scarcity of local resources in Egypt. This represents a waste of water resources (Maroufpoor et al., 2021). The political use of the concept of "water poverty" in Egypt is facing criticism. Some argue that describing the situation as "water poverty" is a cover to justify privatization, commodification, and neoliberal policies (Chatterton, 2011). Moreover, this indicator ignores basic environmental requirements such as environmental flow and the balance between surface and groundwater, making it unsuitable for sustainable management. Therefore, to address water poverty and provide a more accurate picture, considerations of availability must be combined with social justice, economic capacity, and the quality of environmental management. Priorities must also be redrawn: from management efficiency to distributive justice, from institutional monopoly to accountability, and from a focus on economic growth to a focus on the right to access.

When discussing water, things can get complicated or simplified since there is only one primary source. The Nile River contributes more than 97% (الهيئة العامة للاستعلامات، 2022ب) of the water resources consumed. The Nile has been linked to life in Egypt since the dawn of history, a relationship that continues to manifest socially, culturally, and economically. Ancient Nubian songs and modern operettas praise the river and its bounty. The centrality of the river is reflected in the centrality of policies, as groundwater, for example, is ignored, even though many geographically marginalized and therefore politically marginalized communities depend primarily on groundwater. Renewable groundwater in Egypt is mainly extracted from the Nile Valley Aquifer and the Nile Delta Aquifer, which has a capacity of approximately 400 billion cubic meters. Data from the Groundwater Research Institute indicates that the total annual withdrawal from these aquifers amounts to approximately 7.2 billion cubic meters, the largest portion of which, at 6.1 billion cubic meters or 85% (Helmi et al., 2023), is extracted from the Nile Delta Aquifer. Non-renewable groundwater aquifers in Egypt are located at great depths in the Eastern Desert, the Western Desert, and the Sinai Peninsula. The Nubian Sandstone Aquifer is one of the largest and most important of these aquifers, located mostly in the Western Desert.

In recent years, groundwater has contributed between 8-14% of total annual water use (جهاز التعبئة العامة والإحصاء، 2019) (اليوم السابع، 2023). Although this contribution could potentially increase, it remains limited due to an overemphasis on the Nile as the sole "central" resource, along with centralized policies that marginalize local governance and exclude communities from managing their resources. In recent decades, groundwater has returned to the forefront of neoliberal development discourse, where it is used to finance major desert agricultural projects such

as "Egypt's Future," often for the benefit of sovereign or investment entities, at the expense of environmental sustainability and citizens' right to access the resource. This trend reflects the politicization of groundwater as a tool for economic and symbolic domination, rather than as a shared resource subject to the principles of fair distribution and management.

Over the past decades, Egypt has faced numerous challenges that threaten citizens' right to access water resources. The intertwining of geopolitical conditions and climate change adds further obstacles to citizens' equitable and safe access to water. The state's water management policies are aligned with the challenges facing equitable distribution and access, aligned with neoliberal policies, which are fundamentally based on profit-driven approaches to resource management, both domestically and internationally. This is evident in the unequal distribution of water between residential neighborhoods within cities, between different governorates, and even in the management of transboundary resources. This disparity is most clearly evident in the reliance on foreign investments, which in turn follow the same unfair profit-driven approach, deepening imbalances in the distribution of resources on several levels. This reliance on the Nile River also raises questions about centralization, distribution, and infrastructure covering areas far removed from the river's course, as well as the neglect suffered by some geographically and legally marginalized communities.

The right to water goes beyond access; quality, cost, and quantity must be considered (WHO, 2011). Access to water directly impacts public health and various economic activities. Clean water contributes to reducing rates of infectious diseases such as diarrhea and cholera, improving the quality of life, and reducing the economic burden of healthcare. However, long-term consumption of contaminated water can lead to epidemics, deteriorating public health, and the consequent health costs.

On the other hand, World Bank reports indicate that the lack of safe water hinders economic growth, as unsafe water impacts productivity and incurs additional costs for countries due to diseases associated with contaminated water (WHO, 2023). Therefore, providing safe drinking water is a vital element in ensuring a degree of health stability for citizens and contributes significantly to improving quality of life. Challenges related to the availability of water for various activities and safe drinking water require a multifaceted response to ensure equitable access to this right.

02

WATER MANAGEMENT BODIES AND AGENCIES

Institutional fragmentation and the multiplicity of bodies responsible for water resource management are some of the most prominent structural challenges hindering the guarantee of the right to water in Egypt. Several ministries and government agencies share responsibility, and their roles and responsibilities overlap—such as the Ministry of Water Resources and Irrigation, the Ministry of Health, the Ministry of Environment, and the Ministry of Housing—without effective coordination or a unified vision.

The Ministry of Water Resources and Irrigation is the primary ministry responsible for water management in Egypt. It is supposed to oversee the country's water resources, including controlling the flow of the Nile, regulating water use for agriculture, drinking, and industry, as well as combating floods and reducing water pollution (Egyptian Ministry of Water Resources and Irrigation, 2025).

Meanwhile, the Ministry of Environment, specializes in protecting water from pollution, running water treatment plants and monitoring water quality in rivers and other water sources (Egyptian Ministry of Environment, 2025).

There is also the Ministry of Housing, Utilities, and Urban Communities, which is responsible for providing drinking water and sanitation to citizens and overseeing water and wastewater plant construction projects.

In addition to these ministries directly involved in water management, other ministries intersect with water resource management. For example, the Ministry of Industry and Trade provides and regulate various resources necessary for industrial processes, including water (Ministry of Industry and Trade, 2025). On the other hand, Egypt's Ministry of International Cooperation (MoIC) is responsible for development and investment projects related to water management implemented in cooperation with international financing organizations (MoIC, 2025).

This overlap does not only lead to policy conflicts. It also reveals a deeper flaw in the governance system, manifested in a lack of accountability, weak transparency, and the exclusion of local communities from decision-making circles (Ariffin et al., 2023). The issue of wastewater reuse highlights the divergence in institutional priorities: the Ministry of Irrigation seeks to recycle this water to address resource scarcity, while the Ministry of Environment is reluctant due to the associated health and environmental risks. Furthermore, the Ministry of Irrigation is responsible for water distribution and irrigation

management, while the Ministries of Health, Environment, and Housing are responsible for monitoring drinking water quality. There is no clear mechanism for unifying data or coordinating efforts. Water User Associations (WUAs) are another example of exclusion. Although formally established to enable farmers to participate in water management at the local level, their roles are actually exercised under the direct technical supervision of the Ministry of Irrigation, without real empowerment (Ménard, 2022).

Institutional fragmentation also leads to administrative complexities, including limited data collection, sharing, and dissemination. This hinders integrated planning and leads to an unequal distribution of services between governorates and regions, particularly in rural areas and Upper Egypt (Ménard, 2022). This situation also complicates the ability of citizens, particularly marginalized groups, to claim their rights or even identify the responsible party for challenges such as interruptions or pollution, creating a fertile environment for the politicization of water distribution and deepening social inequalities. Therefore, ensuring the right to water cannot be achieved without fundamental reform of the water governance structure, including unifying institutional frameworks, enhancing transparency and accountability, and ensuring local community participation in decision-making (Zetland, 2024).

Alongside the ministries, numerous bodies and agencies are concerned with water management, including the Coastal Protection Authority, affiliated with the Ministry of Water Resources and Irrigation, which works to protect beaches and coastal areas from erosion resulting from climate change and urban expansion (Egyptian General Authority for Coastal Protection, 2025). The Egyptian Environmental Affairs Agency, affiliated with the Ministry of Environment and representing its executive arm is charged with monitoring drainage, pollution, and various environmental violations. It also reviews environmental impact studies (Ministry of Environment, 2025).

Groundwater management in Egypt falls under the authority of the Ministry of Water Resources and Irrigation, which is responsible for formulating general policies and managing the country's water resources, including groundwater, which has recently become a key component of the country's plans for agricultural and industrial expansion. The National Water Research Center plays a pivotal role through its research institutes, most notably the Groundwater Research Institute, which monitors and evaluates groundwater aquifers and develops strategies for their sustainable use. Despite this institutional structure, there is still a clear lack of effective mechanisms for local community participation in decision-making. The sector also suffers from weak coordination between the various agencies involved in the various sources of the resource. No steps have been taken to unify the visions of the various ministries responsible for the distribution and management of the resource, as well as with the Egyptian Ministry of Foreign Affairs, which is responsible for international treaties.

The most prominent and recent law issued by the Egyptian legislator for water management is Water Resources Law No. 147 of 2021, which regulates all matters related to water intakes and drain outlets in Egypt. The law stipulates that water intakes may not be established on the Nile River or any other waterway without obtaining a license from the Ministry of Water Resources and Irrigation, in

accordance with conditions determined by the ministry. The executive regulations, issued pursuant to Prime Ministerial Decree No. 81 of 2023, aim to organize and detail the provisions of the law, ensuring the implementation of policies and procedures related to water resource management. The law lacks strict compliance-monitoring mechanisms, raising concerns about their effective implementation in addressing environmental challenges. It also allows for numerous exceptions by requesting a license from the ministry and subject to the conditions it sets.

03

CLIMATE CHANGE

Egypt faces significant challenges in managing its water resources due to regional climate change. These changes include fluctuating rainfall and increasing evaporation rates, which means that water resources are becoming more vulnerable to depletion (Mostafa et al., 2021). This also raises crop water demand, increasing pressure on resources (Mostafa et al., 2021). In this context, ensuring the availability of clean and safe water for citizens becomes increasingly difficult. Furthermore, climate change exacerbates water management issues in Egypt. These changes also affect water distribution across different regions, increasing the challenges of achieving equitable water distribution between residential, agricultural, and industrial areas.

The Nile Delta is one of the regions most affected by climate change. Sea level rise is expected to submerge large parts of the delta (Omar et al., 2021). This rise not only affects coastal areas but also causes salinization of groundwater, which is a secondary source of water in Egypt, but a major source of freshwater in the affected areas (Mostafa et al., 2021). Increased salinity leads to the degradation of agricultural land, threatening agricultural production in the Nile Delta and thus posing significant risks to Egypt's food security.

The vulnerability of individuals facing these economic and social challenges must be taken into account (Omar et al., 2021). The vulnerability of some groups whose work is linked to ecosystem services increases when groundwater and well water conditions deteriorate due to climatic challenges such as evaporation, in addition to environmental challenges such as pollution and neglect (Omar et al., 2021). Agricultural workers are exposed to various challenges related to occupational hazards, such as exposure to fertilizer emissions, which increases the pressure on small farmers and thus makes them less able to adapt to climate change (Omar et al., 2021).

Thus, groundwater becomes a necessary resource to compensate for the shortage of water resources as a result of climate change, threatening to stress reservoirs, especially non-renewable ones (Badr et al., 2020). The state has attempted to adapt through early warning projects and expanding the use of groundwater in desert agriculture, but these responses remain insufficient as long as there is a lack of equity in distribution and accountability in exploitative investment.

Climate change poses a growing threat to groundwater in Egypt, and consequently to communities that rely primarily on this resource. With rising temperatures and declining rainfall, groundwater has become a necessary resource to compensate for the shortage, threatening to stress reservoirs, especially non-renewable ones. In 2012, the Egyptian Environmental Affairs

Agency issued a strategy to adapt to the impacts of climate change on the water sector (ECCRP, 2008). While the strategy highlighted the importance of climate considerations in development plans (ECCRP, 2008) due to the potential waste of resources resulting from mismanagement, subsequent years have demonstrated that these considerations have not been taken into account.

The Egyptian government issued a new Water Resources and Irrigation Law in 2021, aiming to improve water resource management and ensure equitable water distribution among all users (Egyptian Ministry of Water Resources and Irrigation, 2021). The law includes several measures aimed at enhancing local community participation in water management by establishing water user associations at various levels, contributing to effective and comprehensive local water resource management (Egyptian Ministry of Water Resources and Irrigation, 2021). However, climate change, in addition to neoliberal policies that continue to commodify water resources, threaten the effectiveness of these laws.

04

DISPARITIES IN EQUITABLE ACCESS AND RESOURCE QUALITY

From a domestic perspective, equitable water distribution in Egypt is one crisis facing the water resources sector. Water distribution relies on a network of canals, pools, and drains, leading to disparities in water access between different regions (10 طوبة، بدون تاريخ). Studies indicate that some areas, particularly in Upper Egypt, suffer from water shortages (2024 ،ملا وآخرون). We see that the "margins" suffer from limited access. For example, access rates are low in marginalized neighborhoods in the capital, Cairo, and Giza, the two largest governorates in Egypt. These areas suffer from limited access and poor service quality (10 طوبة، بدون تاريخ). Access rates and service quality vary within a single governorate depending on the region or center within the governorate (2024 ،ملا وآخرون).

Equitable water distribution between rural and urban areas in Egypt is a major challenge impacting the lives of citizens. Studies show disparities in water availability and quality between rural and urban areas. Some rural areas suffer from a shortage of potable water supplies, forcing residents to rely on unsafe sources. In contrast, urban areas, especially large ones, enjoy improved and higher-quality water supplies (Alternative Policy Solutions (APS), 2018).

Despite the significant water needs of rural areas to support agricultural production, many suffer from water scarcity due to the unequal distribution of water between rural and urban areas. Large quantities of water are directed to large cities and industrial areas to meet residential and industrial water demands (APS, 2018). Due to the use of water by large industries, rural areas are exposed to a shortage of water available for irrigating agricultural land.

Many rural areas in Egypt also suffer from weak infrastructure, hindering farmers and citizens' access to clean water. Despite government projects to improve water services in rural areas, many villages still lack an effective distribution network, raising questions about the construction of new cities and investment in their infrastructure. Meanwhile, rural Egypt, with its food security and job opportunities, suffers from deteriorating infrastructure (2023 ،المنظمة العربية للتنمية الزراعية).

For example, Kafr El-Sheikh Governorate in the Delta faces significant challenges in providing the necessary irrigation water for crops, negatively impacting productivity. The governorate suffers from deteriorating irrigation network infrastructure (أبو العينين، 2016), and farmers suffer from significant leaks in water distribution networks (2018 ،البانوبي), resulting in significant water

loss before it reaches agricultural lands. This deterioration exacerbates the water shortage crisis and affects the efficient use of water resources in the region (Alkhawaga et al., 2022).

Accessibility also varies among residential areas. For example, the New Urban Communities Authority in Egypt manages 61 new cities, with an estimated population of approximately 8 million (الهيئة العامة للاستعلامات، 2022), representing less than 8% of the population. However, according to a bulletin from CAPMAS, the neighborhoods under the authority consumed 23% of Egypt's total freshwater supply (جهاز التعبئة العامة والإحصاء، 2023). This percentage is not necessarily used directly by citizens; it may have been used in the construction of these cities. Meanwhile, informal settlements suffer from poor services despite their high population density in various governorates (طوبة، 10 بدون تاريخ).

In parallel with expanding groundwater use, challenges persist around equity considerations such as access and distribution. Agriculture accounts for approximately 85% of groundwater use, while drinking water accounts for only 6% (IGRAC, 2025), once again reflecting the philosophy of commercial exploitation at the expense of the population's right to water. Cities located far from the center and heavily dependent on groundwater, such as Arish, the capital of North Sinai Governorate, also face severe challenges in providing clean drinking water and irrigation (Alkhawaga et al., 2022). Given that agriculture consumes the largest proportion of groundwater, agricultural activities are linked to its availability as a major economic activity in the city (صدى البلد، 2022). This means that water shortages directly impact the economy of Arish's residents, not just accessibility. The lack of clean water also leads to the spread of waterborne diseases and limits citizens' ability to adapt to these resource- and health-related challenges.

Due to its geographical distance, Arish relies primarily on seawater desalination plants to provide water to its residents. The city suffers from frequent breakdowns in these plants, affecting its water supply. For example, the Kilo 17 water station ceased operations in 2024 for annual maintenance (صدى البلد، 2024), causing water outages in several neighborhoods. Despite the construction of new desalination plants in Arish, Sheikh Zuweid, and Bir al-Abd, in addition to well water desalination plants in Central Sinai (الشركة القابضة لمياه الشرب والصرف الصحي، 2022), there is a dire need for further maintenance and continued access.

A WHO report found that millions of Egyptians suffer from diseases associated with water pollution, increasing pressure on the health system and leading to increased healthcare costs. Furthermore, water pollution degrades the environment and aquatic ecosystems, negatively impacting biodiversity and natural resources, including potable water and agriculture, thereby jeopardizing fundamental human rights such as the right to life and health. In some areas suffering from a lack of clean water, citizens resort to polluted or untreated sources, increasing pressure on individual and state resources, resulting in epidemic diseases and various impacts on different groups, such as children's health. Water pollution contributes to reduced labor productivity and increased healthcare costs. It also directly impacts the agricultural sector, deteriorating the quality of water used for irrigation, limiting crop yields and increasing agricultural production costs. The executive regulations of the Environmental Law lack provisions to deter industrial facilities from polluting

the Nile water. Industrial facilities regularly resort to paying fines and "regularizing their status" due to the weak implementation of the law.

05

WATER AND GENDER

Water crises in Egypt pose a significant challenge, particularly affecting women, among other groups most affected by water scarcity (الشركة القابضة لمياه الشرب والصرف الصحي، 2022). Women in rural and desert areas bear the responsibility of collecting water from distant sources, which wastes significant time and effort and negatively impacts their health and well-being. Water scarcity also limits their educational and employment opportunities, increasing household burdens (الشركة القابضة لمياه الشرب والصرف الصحي، 2022). Furthermore, water scarcity exacerbates women's healthcare struggles, as clean water services become less readily available, exacerbating general and reproductive health problems (Lin et al., 2022). Furthermore, the deterioration of agricultural land conditions, due to climate change and poor infrastructure, leads men to migrate from rural areas and agricultural lands to urban areas in search of job opportunities, leaving women behind to care for the remaining agricultural lands and address the challenges posed by climate change in their surrounding environment.

06

NEOLIBERALISM AND COLONIAL INVESTMENTS

In line with World Bank policies that sees in privatization an effective means of improving efficiency, former [Egyptian] President Hosni Mubarak privatized the water sector, making financing, privatization, and debt go hand in hand. Egypt's decision to establish a holding company to manage irrigation and wastewater activities initiated a trend toward neoliberal policies and privatization in the water sector. The holding company sought to establish joint-stock companies and cooperate with individuals and public and private entities. It also manages a financial portfolio that includes stocks, bonds, and other financial assets (الشركة القابضة لمياه الشرب والصرف الصحي، 2004).

Following Presidential Decree No. 135 of 2004 (الشركة القابضة لمياه الشرب والصرف الصحي، 2004), new features emerged in the nature of popular protests related to water, which began to spread geographically. Popular reactions began with a rejection of the price increase decision following its announcement in 2004 (إيلاف، 2004), and protests expanded in the following years (Ismail, n.d.). In the summer of 2007, widespread protests erupted in Kafr El-Sheikh and Gharbia governorates. Residents blocked roads after drinking water was cut off for several days. The authorities sent water tankers in an attempt to calm the crisis, without offering permanent solutions (Morrow, 2007).

Similarly, residents of the village of Damantu in Gharbia organized a protest outside the governorate building, protesting the weeks-long water outage and the need to purchase water at high prices from vendors. The scene was repeated in another village in Gharbia in 2009 (Morrow, 2007), where more than three thousand citizens rallied to protest the water outage. Although the transformation of the entities into holding companies was supposed to contribute to improving service by increasing management efficiency and ensuring cost recovery, the reality proved otherwise, exacerbating popular tensions.

International financial institutions, such as the World Bank, are seeking to link water sustainability to water markets through market mechanisms (إسماعيل وآخرون، 2018). Along with the IMF, it is exerting pressure on governments through loans to amend legislation to promote the privatization of resources such as water (Chandra, 2024). This makes water a private commodity under the control of large corporations and increases the difficulty of access to water in areas suffering from water scarcity (Food and Water Watch, 2015).

World Bank and IMF financing to Egypt reflects a clear trend toward restructuring

the water and sanitation sector through legislative and regulatory tools that pave the way for private sector participation. Under the 2024 Development Policy Loan (DPL) financed by the World Bank, a $700 million loan statement indicated that one of its primary objectives was to "improve efficiency and financial sustainability in the electricity, water, and sanitation sectors" (MoIC, 2024). This change would be achieved through legislative and structural reforms, including strengthening the role of regulatory bodies and modernizing legal frameworks. In an official statement, MoIC confirmed that one of the loan conditions was submitting a new draft law to Parliament to regulate drinking water and sanitation facilities. This draft law includes reforms that empower the Water Regulatory Authority to enter into contracts with the private sector (المنصة، 2025) and implement tariffs that reflect the actual cost of the service, thus creating competitive pricing that encourages investment (Abdelhafez, 2025).

The official first tranche document of the program reveals that a prerequisite for activating the loan is legislative amendment to several laws regulating utilities, including the Public Utilities Law, to improve the legislative environment and make it more attractive to the private sector, whether through public-private partnerships or operation and maintenance contracts (World Bank, 2025). The document places these reforms within a broader framework of "strengthening governance and competition," where water is viewed as a sector that must be restructured according to market principles.

On the other hand and within the framework of the 2022 Extended Fund Facility program, which it approved with a $3 billion loan, the IMF, imposed commitments on the Egyptian government to reduce the state's direct role in managing services and facilitate investor access to the water sector. This is to be achieved through revising public service laws and issuing a state ownership policy that identifies the sectors from which the state will gradually withdraw, including water services. All these measures reduce the state's responsibility and delegate operational and investment tasks to the private sector, gradually paving the way for transforming water from a guaranteed public service into a commodity managed according to market principles. This is further corroborated by independent research reports indicating that infrastructure privatization has become a key area of World Bank influence on the Egyptian urban environment (BIC, 2013).

Moreover, neoliberal policies encourage increased private investment in the water sector (BIC, 2013), leading to an inequitable distribution of resources. While private companies invest in high-yield urban areas, rural and impoverished regions are neglected, exacerbating the water availability gap between different segments of society (APS, 2018). These policies also lead to reduced government subsidies for the water sector (APS, 2018), placing a greater burden on citizens to bear the costs of water.

In March 2023, as the trend toward privatization accelerates,, the International Finance Corporation (IFC), the Sovereign Fund of Egypt, and the European Bank for Reconstruction and Development (EBRD) signed a partnership agreement to develop four desalination plants,. The plants would provide 335,000 cubic meters of water per day, with plans to expand to more than 650,000 cubic meters per day in the future (IFC, 2023). The Ministry of International Cooperation also signed agreements with international financing institutions (IFIs) on

sustainable water resource management, housing, and sanitation, totaling $1.7 billion between 2020 and 2023 (الهيئة العامة للاستعلامات، 2020). However, IFIs evade responsibility and accountability for human rights violations and negative impacts on access, availability, and cost through partnerships with the private sector (Food and Water Watch, 2015). Responsibility shifts to the private sector partners rather than the funding institutions, resulting in numerous violations in the sectors affected by these investments (Food and Water Watch, 2015).

Large-scale desert agriculture projects like the "Future of Egypt" project demonstrate that the neoliberal development vision is not limited to the Nile River; investment dominance and water colonialism extend to groundwater. Non-renewable groundwater in areas such as western Minya and the New Delta is being depleted without adequate environmental oversight, primarily for the benefit of corporations or sovereign entities, often excluding local populations from any real benefit (الهيئة العامة للاستعلامات، 2022). This model exacerbates class inequality and undermines communities' sovereignty over their natural resources.

07

VIRTUAL WATER

"Virtual water" refers to the water used to produce globally-traded goods and services. Water consumed throughout the production chain is considered part of the producing countries' water share (Zimmer & Renault, n.d.). Egypt imports the equivalent of 40 billion cubic meters of water annually through imports of various basic food commodities, such as wheat (عبد الحميد، 2024). Some studies estimate the annual virtual water exports in the Egyptian agricultural sector at approximately 6.69 billion cubic meters (El-Kholei, 2011).

Nonetheless, it helps to consider the type of imported and exported virtual water. Imported virtual water is usually rainwater, meaning that imported food commodities are irrigated with rainwater. This type of irrigation is more sustainable and has less impact on domestic water resources. This is the type of water used to irrigate wheat that Egypt imports from Russia and Ukraine (Barnes, 2023). In contrast, exported goods are produced through conventional irrigation from water bodies, making them less sustainable and placing greater pressure on local resources. Following the same approach of utilizing local resources for export and commercial purposes, given the limited resources available to citizens, Saudi Arabia launched the King Abdullah bin Abdulaziz Initiative for Food Security through investment in agricultural projects abroad. Similarly, the United Arab Emirates (UAE), facing its own water crisis, began investing in agricultural projects abroad, leading to their joint "Strategy of Resolve" to enhance food security (سكاي نيوز، 2025), which includes both agricultural and security investments.

In recent years, Egypt began attracting major investments. Gulf companies, such as Al Rajhi and Al Dahra, now control significant portions of land in projects like Toshka. Authorities have allocated one-tenth of Egypt's total share of Nile water, 5.5 billion cubic meters, to the project. A 250-megawatt pumping station was constructed to draw water from the Toshka Valley, which connects to Lake Nasser and fills with floodwater, to the Sheikh Zayed Canal, which then feeds four branches extending along the areas to be "reclaimed." This coincides with farmers being prohibited from cultivating certain crops, either due to their high water consumption or their rapid spoilage, and began imposing fines on those who do not comply. Meanwhile, financial incentives are being offered to large investors, with land being sold for as little as 50 Egyptian pounds (around 1 USD) per feddan [0.42 Ha].

The concept of virtual water in Egypt poses a challenge to local water resource management. Pressure on available water resources exacerbates water crises, and virtual water is often not adequately considered when formulating water

management policies. This contributes to the continued strain on local water resources amidst regional and climatic challenges that further increase water scarcity.

08

SHARING THE RIVER

Egypt's right to the Nile River's waters in modern history stems from a series of agreements and treaties. In particular, the 1959 Nile Basin Agreement (signed by Egypt and Sudan) which complemented the 1929 agreement. These agreements were concluded under political circumstances vastly different from those today in the three countries [along the river]. Egypt was then under British occupation, and Sudan had just witnessed an uprising against the Anglo-Egyptian Condominium, which Egyptians refer to as the "dual rule." The agreement allocated 55.5 billion cubic kilometers of water to Egypt out of the total flow, estimated at 84 billion square kilometers, representing more than 65% of the river's total flow. Egypt also inherited the right of veto from the British occupation, granting it the authority to reject dam construction projects on the Nile. This right was colonial in nature, as it was primarily intended to extend the British occupier's exploitation of the resources of the occupied territories.

The Grand Ethiopian Renaissance Dam (GERD) project has raised significant concerns in Egypt and Sudan due to its potential to reduce their water share. Its implications on the political dominance of whoever controls the largest share of the Nile's water are undeniable. The change occurs as multinational corporations, supported by IFIs like the World Bank, seek to control water resources. This raises questions about whether the new situation represents a form of neo-colonialism, using resources as tools for economic and political control.

It is worthwhile to revisit previous agreements to ensure they have evolved to reflect changes in the river's flow and the political landscape, especially given their colonial origins and complex political nature. However, it must be acknowledged that external interference hinders negotiations between neighboring countries, as it seeks to gain access to resources and economic opportunities. The Egyptian and Ethiopian governments' approaches to the dam negotiations are evident in their highly charged statements. Estimates suggest that the GERD could reduce the amount of water flowing into Egypt by between 0.2 billion and 5 billion cubic kilometers. These estimates also depend on evaporation and seepage rates. Given the progress of filling the Grand Ethiopian Renaissance Dam (GERD) reservoir, with the fifth filling completed in September 2024, Egypt's water share is not yet considered to have been affected. Furthermore, Egypt has a water reserve in Lake Nasser, with a capacity of approximately 160 billion cubic meters.

The Entebbe Agreement, signed in 2010 by several Nile Basin countries, represents an attempt to redistribute water shares more equitably among the Nile Basin

countries, moving away from historical agreements that favored Egypt and Sudan. From a rights perspective, the agreement represents a step towards establishing the principle of equitable and reasonable utilization of shared water resources, which supports the right of upstream countries' populations to fair access to water for development and a decent standard of living. However, the dispute surrounding the agreement, and Egypt and Sudan's refusal to sign it, raises questions about the balance between historical rights and modern principles of water justice. This state of tension has impacted the guarantee of water rights in all Nile Basin countries, as political disputes continue to hinder reaching a comprehensive agreement that respects the developmental and human rights of all the basin's peoples.

The right of peoples to utilize their resources in a manner that does not harm neighboring countries must be acknowledged. However, the history of dams is marred by numerous environmental disasters. They have negatively impacted water quality and agricultural land, altered ecosystems wherever they are built, and often lead to forced displacement. Many environmental and water experts believe that the real obstacle to cooperation on the Nile Basin's waters is the lack of political will, not technical difficulties. The following sections will examine the use of dams to manipulate public opinion and revive nationalist sentiments.

09

EGYPTIAN PROPAGANDA NARRATIVES

As the number of refugees from neighboring countries, fleeing political conflicts and genocide, increased, the Egyptian government began speaking about their impact on resource consumption. For example, the Minister of Water Resources and Irrigation, Dr. Hani Sweilem, stated that Egypt hosts approximately 9 million refugees, constituting 8.7% of the total population, requiring the provision of 9 billion cubic meters of water annually to meet their needs (نصار، 2023). However, as previously discussed, the water management challenges in Egypt extend beyond quantities. Many experts agree that the presence of refugees is not a significant burden on Egypt; rather, it may contribute to stimulating the local economy (محسن، 2024). The Egyptian government uses these narratives to increase international cooperation in several areas. It calls for increased support from European donors and countries receiving migrants, given the additional burdens Egypt bears due to the presence of refugees on its territory (علیوة، 2025). Similarly, the narratives surrounding dam construction are used to stir national sentiment and shape public opinion, and this applies to both Egyptian and Ethiopian national narratives. The discourse surrounding the dam oscillates between defiance, alarmism, and outright dismissal, posing a challenge to developing effective cooperation plans and policies (Seide & Fantini, 2023).

10

COMMUNITY-BASED WATER ORGANIZING

In a complex and uncoordinated institutional landscape, and with worsening deficiencies in water governance, citizens are compelled to devise alternative solutions to address the consequences. The lack of a unified vision among stakeholders, weak transparency, and the disregard for local community voices propels individuals to single-handedly secure their water rights. This dynamic is reflected in the emergence of community initiatives and individual efforts seeking to bridge the gaps left by institutional shortcomings, through organizing access to water in marginalized areas and resorting to legal avenues to hold public policies accountable. The gap between official policies and the daily realities of citizens keeps growing. Citizens resort to various community-based solutions due to inadequate infrastructure and a lack of equitable distribution. For example, in El Arish, a city suffering from weak infrastructure and unreliable access, some residents set up a social media page to announce water pumping schedules, gather information on outages and station operations from various sources, and inform the local community (Facebook, 2025). Research has also documented "self-help initiatives" in various Cairo neighborhoods, reflecting their diverse social structures and the methods they employ to mitigate the effects of water scarcity and limited access (Wahby, 2021).

Furthermore, as the state gradually transforms into a regulatory body, paving the way for the private sector, citizens find themselves bearing the brunt of neoliberal policies that seek to commodify essential resources, particularly water. Rising prices and declining service quality diminishes the ability of vulnerable groups to access safe and affordable water. In the absence of effective safety nets, individual and community initiatives have intensified to bridge the widening gap between need and access. Citizens' self-initiated efforts have become a form of silent resistance to the privatization of services and a struggle to secure the right to water as a public right, not a privilege subject to market forces.

A human rights lawyer challenged the decision to increase water tariffs, citing "several legal and constitutional violations in the government's decision to set the water tariff." Firstly, the constitutionality of the decision pertains to protecting water resources and citizens' rights to a healthy and clean environment. The decision violated Article 44 of the Egyptian Constitution, which stipulates the protection of the Nile River and groundwater. The challenger also cited violations of consumer protection laws, including the Consumer Protection Law, which guarantees citizens the right to clear and transparent information regarding prices and services. Law No. 136 of 2004, which regulates the work of the Drinking Water and Sanitation Regulatory Authority, was also reviewed, emphasizing

that any tariff adjustments must be based on clear studies and guarantee consumer rights. Furthermore, the challenger argued that the decision violated the right to access services at reasonable prices, as sufficient justifications for the increases were not provided, and citizens were not involved in the decision-making process. The appeal was based on several legal points, including that the increase was not justified legally or practically, as well as the lack of transparency in determining the criteria for the increase and its potential impact on consumers

11

RECOMMENDATIONS

Include the right to water in the Egyptian Constitution as an independent right: Although the 2014 Egyptian Constitution (amended in 2019) includes references to the right to water, its treatment of this right is partial and limited from a human rights perspective. "Clean water" is mentioned in Article 79 within the context of the right to food, without a separate provision defining the right to water as an independent human right. While Article 44 stipulates the state's obligation to protect the Nile River and prevent its pollution, it focuses primarily on protecting the natural resource from encroachment, rather than guaranteeing equitable and fair access to water for all individuals. Instead of adopting an approach that guarantees this right for marginalized groups and obligates the state to implement clear measures to ensure availability, quality, and affordability, the absence of an explicit and independent constitutional provision recognizing the right to water poses challenges to its implementation in policies, legislation, and practices, and weakens individuals' ability to legally claim it.

Knowledge Production and Accessibility: Rigorous research and data monitoring are fundamental to achieving various policy strategies and enhancing infrastructure efficiency. Therefore, more research is needed to investigate the applicability, effectiveness, alternatives, and implications of all decisions and policies related to water management. Furthermore, a robust system for monitoring, providing, and making data available to researchers must be established, along with coordination between policymakers and researchers specializing in water technology, resource management, and environmental justice.

Reconsider Privatization and Neoliberal Policies: Privatization and neoliberal policies must be reconsidered in light of the increasing human rights violations they entail in many essential services. These policies primarily focus on maximizing profits, leading to the reduction of public services such as health, education, and housing, and exacerbating inequalities in access to services. Furthermore, the privatization of essential sectors exposes vulnerable groups to exploitation by large corporations that prioritize their own interests over human well-being. This extends to policies for protecting the environment from industrial exploitation and abuse, including accountability and curbing the unsustainable exploitation of resources.

Increase Public Investment in Infrastructure: Increasing public investment in infrastructure, rather than relying on private investment, is a crucial step towards realizing the right to water. The state is responsible for providing essential services, ensuring their accessibility

to all segments of society without discrimination. By focusing on public infrastructure, the sustainability of projects can be guaranteed, independent of private interests, and numerous solutions exist for providing financial support.

Reconsider the Diplomatic Approach to the Grand Ethiopian Renaissance Dam (GERD) Crisis: Both Egypt and Ethiopia suffer from the effects of neo-colonialism and the exploitation of resources by multinational corporations and international investments with unfair terms, in addition to the sharing of natural resources. Cooperation between countries that share the same natural resources is vital to ensuring their sustainability and achieving mutual benefit. Such cooperation can help reduce conflicts and protect the environment. Cooperation among developing countries also presents an opportunity to break free from the dominance of the developing world over resources and interference in the economic policies of nations.

Develop Social Protection Systems: Social protection is a fundamental in adapting to climate change and ensuring the social well-being of individuals and communities. As the impacts of climate change intensify in countries suffering from declining human rights and social protection, citizens become increasingly vulnerable to its direct and indirect harms. Social safety nets, such as financial support, healthcare, and education, can offer a degree of resilience that enhances communities' ability to adapt to environmental changes and challenges.

Supporting community initiatives and environmental citizenship: Environmental citizenship means that individuals have a right to and a responsibility towards the natural environment. It includes awareness of the importance of biodiversity, pollution reduction, and energy and water conservation. It also involves integrating citizens into decision-making processes and empowering citizens affected by resource scarcity and the impacts of climate change to create local initiatives and community solutions with state support. Furthermore, a unique, locally-driven approach to community participation is essential regarding groundwater, given the specific conditions under which it is used.

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