



General Assembly

Distr.: General
9 July 2026

Original: English

Human Rights Council

Sixty-third session

7 September–9 October 2026

Agenda item 3

**Promotion and protection of all human rights, civil,
political, economic, social and cultural rights,
including the right to development**

Visit to Egypt

Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, Pedro Arrojo Agudo*

Summary

The Special Rapporteur on the human rights to safe drinking water and sanitation, Pedro Arrojo Agudo, visited Egypt from 7 to 18 February 2026. The present report contains his findings and recommendations to Egypt.

* The summary of the report is being circulated in all official languages. The report itself, which is annexed to the summary, is being circulated in the language of submission and Arabic only.



Annex

Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, Pedro Arrojo Agudo, on his visit to Egypt

I. Introduction

1. The Special Rapporteur on the human rights to safe drinking water and sanitation visited Egypt from 7 to 18 February 2026. The Special Rapporteur expresses his sincere appreciation to the Government of Egypt for the cooperation and hospitality extended throughout the visit. He held meetings in Cairo and undertook field visits to the Governorates of Kafr Elsheikh, Al-Fayyum, Aswan and Qena. He met with representatives of ministries, public institutions, United Nations agencies, the European Union, academic experts, and civil society organizations working on human rights, environmental protection, and social development. The Special Rapporteur warmly thanks particularly civil society actors, community members and all interlocutors who generously shared their time, insights, and experiences, which greatly contributed to the depth and accuracy of this report.

2. This was the first visit to the country by a special procedure mandate holder since 2018. The Special Rapporteur also welcomes the enhanced engagement of Egypt with the international human rights system as member of the Human Rights Council. The Special Rapporteur encourages all stakeholders to build upon these achievements for the realization of the human rights to safe drinking water and sanitation of all people in Egypt.

II. General overview

3. Egypt has its roots in an ancient civilization shaped by the River Nile, which continues to define its demographic, cultural and economic life. It is the most populous State in the Arab region and one of the largest in Africa. The fact that this enormous population and all its activity is concentrated in the Nile corridor and its Delta, with immense desert territories on either side, generates enormous structural challenges on water availability and quality that will be analysed in this report.

A. Territorial and climatic characteristics

4. Egypt comprises six principal geographical regions: the Nile Valley (Upper Egypt), the Nile Delta (Lower Egypt), the Western Desert, which covers a large share of the national territory, the Eastern Desert extending towards the Red Sea, the Sinai Peninsula and the coastal zones along both the Mediterranean and Red Sea.

5. Rainfall is extremely limited across most of Egypt, with the northern Mediterranean coast receiving the highest levels of precipitation, typically up to 200 millimetres annually, while the remainder of the country receives minimal or negligible rainfall.¹ Temperatures are markedly high, especially in Upper Egypt, where summer temperatures frequently exceed 40°C, driving substantial water losses through evaporation and evapotranspiration in agricultural areas.² These climatic characteristics and its large population place Egypt among the countries with the lowest availability of fresh water per capita in the world.³

¹ International Federation of Red Cross and Red Crescent Societies, Red Cross Climate Centre, “Egypt: Climate Fact Sheet 2024”. Available at https://www.climatecentre.org/wp-content/uploads/RCCC-Country-profiles-Egypt_2024_final.pdf.

² Ibid.

³ See <https://www.unep.org/technical-highlight/unep-nile-basin-initiative-partners-strive-better-monitor-pollution-rivers>.

6. Climate change exacerbates these problems by intensifying the rise in temperatures and the rates of evaporation and evapotranspiration, thus drastically increasing irrigation requirements, especially in newly irrigated desert areas. But undoubtedly, the most devastating risks stemming from climate change fall on the Delta and its enormous population, due to rising sea levels, subsidence caused by a lack of sediment, the drastic reduction in water flows reaching the sea that hinders marine intrusion, and the resulting salinization of aquifers and land; problems that are recognized in Egypt's National Adaptation Plan and in climate risk assessments.

B. Population structure

7. According to United Nations demographic estimates, the country has a population of over 120 million people in 2026.⁴ The Nile River forms a narrow, fertile corridor where some 110 million people live, almost half of whom reside in the Delta. This represents barely 5% of the country's territory, yet it is home to 95% of the population and their diverse activities, of which irrigation is undoubtedly the most water-intensive. The longitudinal concentration of population and productive activities, along with the corresponding water withdrawals and accumulative polluting runoff along the 1,000 km stretch, from the Aswan Dam to the Nile's mouth, create enormous structural challenges in water management.

8. Greater Cairo, the metropolitan area that includes the capital, has at present 23 million inhabitants.⁵ Despite this huge metropolitan concentration, and other cities with significant populations such as Alexandria (5.5 million), 58% of the population reside in rural areas.⁶

III. Legal, policy and institutional framework

A. Legal and regulatory framework

9. In addition to ratifying the International Covenant on Economic, Social and Cultural Rights in 1982, Egypt has ratified or acceded to the vast majority of the main international human rights treaties. However, it has not yet ratified the Optional Protocol thereto, which would allow individuals to submit complaints concerning violations of Covenant rights. Egypt previously received a country visit in 2009 by the then independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation.⁷

10. Article 79 of the Constitution states that "Each citizen has the right to healthy, sufficient amounts of food and clean water". Despite this, the Special Rapporteur notes that it does not fully correspond to the normative content of the human rights to safe drinking water and sanitation as detailed in the general comment No. 15 (2002) of the Committee on Economic, Social and Cultural Rights. Furthermore, it does not extend the right to non-citizens who may find themselves in the country.

11. It is further noted that, under article 44, the State has committed to protecting the Nile River, maintaining historic rights thereto, rationalizing and maximizing its benefits, not wasting its water or polluting it. It has also committed to protecting its groundwater, to adopting methods appropriate to achieve water safety and to supporting scientific research in this field.

12. The Special Rapporteur further noted the recent adoption of Law No. 172 of 2025, which aims to: enhance the efficiency and quality of water and sanitation services and ensure their continuity; protect consumer rights and reinforce principles of transparency and equality in service provision; and encourage investment in the water and wastewater sector while preserving public interest.

⁴ See <https://www.worldometers.info/world-population/egypt-population/?referrer=grok.com>.

⁵ See <https://www.macrotrends.net/global-metrics/cities/22812/cairo/population>.

⁶ See <https://www.worldometers.info/world-population/egypt-population/>.

⁷ A/HRC/15/31/Add.3.

B. Policies and programmes

13. The National Human Rights Strategy (2021–2026) identifies the right to safe drinking water and sanitation as part of the economic, social and cultural rights addressed under its thematic pillars.

14. Egypt has developed strategic planning instruments for water governance, namely the National Water Resources Plan 2017–2037 and the Strategic Framework for Water Availability 2025. Official documentation concerning this Plan outlines four pillars for integrated water management – creating an enabling environment, developing water resources, enhancing water quality and rationalizing water use – which together shape the country’s long-term vision for water resource sustainability. Government publications further describe ongoing efforts to advance the right to water, including measures to improve drinking water quality, expand desalination capacity, utilize groundwater in a sustainable manner, reduce water losses and strengthen public awareness around conservation, all of which form part of broader commitments to ensuring safe drinking water and sanitation.

15. The Special Rapporteur appreciates and recognizes the importance of the *Hayah Kareema* (Decent Life) Presidential Initiative, a flagship national programme launched to advance integrated rural development across Egypt. According to the Government, the Initiative covers thousands of villages, resulting in the implementation of 460 sanitation projects and 137 drinking water projects at various levels of completion. Future phases will aim to achieve universal coverage and service optimization.

C. Institutional framework

16. The Special Rapporteur notes information from the Government that the institutional architecture of the water and sanitation sector is predicated upon a precise distribution of competencies and coordination facilitated through joint frameworks and interministerial committees. However, an examination of the institutional framework of Egypt for water management indicates that the sector remains characterized by fragmented governance and a long-standing structural emphasis on irrigation. While several ministries hold mandates relevant to water resources and service delivery, water governance functions are primarily concentrated within the Ministry of Water Resources and Irrigation, which plays a leading role in major water-infrastructure management, allocation and national-level planning. Decision-making related to large-scale water projects involves security institutions under the justification of “national security”, affecting transparency. In contrast, ministries with clear responsibilities for environmental protection, public health and service provision – such as the Ministry of Environment, the Ministry of Health, and the Ministry of Housing, Utilities and Urban Communities – exercise comparatively limited influence, despite their relevance to safeguarding the human rights to safe drinking water and sanitation.

17. The Ministry of Environment is responsible for monitoring and regulating discharges and pollution affecting Nile water. However, the Ministry’s resources are limited, which presents a challenge to its capacity to conduct enforcement and oversight. In practice, this often results in a largely punitive, complaint-driven approach; due to this limited capacity, action is typically taken only after harm is documented, which usually happens only following repeated complaints rather than through systematic, regular inspections of industrial facilities.

18. This institutional fragmentation results in overlapping mandates, diffuse lines of responsibility and persistent gaps in coordination. The Special Rapporteur notes that such fragmentation undermines effective, rights-based water governance, particularly when institutional arrangements fail to prioritize ecosystem sustainability, even as climate change intensifies risks to water quality, aquifer recharge and ecological balance across the Nile Basin.

19. The Special Rapporteur is concerned that State institutions pay insufficient attention to maintaining the good condition of aquatic ecosystems and to the impacts of climate change in the Delta, which put water security, food production and public health at risk.

20. Water and sanitation services remain centralized through the Holding Company for Water and Wastewater, which operates under the Ministry of Housing, Utilities and Urban Communities, and manages these services through subsidiary companies across the governorates. Oversight functions are carried out by the National Authority for Regulating Drinking Water and Wastewater Services, which is responsible for setting service standards, licensing operators and monitoring compliance, including in tariff-related matters.⁸

21. The Special Rapporteur is concerned about the limited role of local authorities in water-sector decision-making. Although the operators that depend on the Holding Company for Water and Wastewater implement the services at the governorate level, management control remains highly centralized, and municipalities – the public institutions closest to the affected communities – still have no relevant influence in planning, needs identification or organizing meaningful community participation. Such marginalization disproportionately impacts populations living in poverty and vulnerability, whose priorities may not be adequately reflected in centralized decision-making structures.

22. The coexistence of a centralized operator and a central regulatory body, both reporting to the national Government, may also create functional redundancies and weaken oversight. Under Law No. 172 of 2025, which expands opportunities for the private sector, the mandate of the regulatory agency gains significance. However, this shift toward a public private partnership model requires developing effective social participation to ensure that affordability, equity and access are not compromised, particularly for low-income households. International financial pressures encouraging privatization may exacerbate these risks if not accompanied by robust human rights protections.

IV. Sources, availability and demand for fresh water

A. Hydrological structure

23. The Nile River remains the primary – and, in many regions, the only – source of renewable fresh water. The construction of the Aswan High Dam, inaugurated in 1971, brought about a profound transformation of this hydrological system. The creation of Lake Nasser resulted in the flooding of the length of approximately 500 kilometres of Lower Nubia, submerging numerous Nubian villages and displacing more than 100,000 Nubians from their ancestral lands in both Egypt and the Sudan, with long-lasting social, cultural and economic impacts.⁹ The Government reported that it has undertaken a number of remedial and compensation measures.

24. At the same time, the Dam provided the country with substantial benefits, including an estimated 50% of national electricity needs in 1970,¹⁰ enhanced flood control and the regulation of the Nile's annual flow, which reaches an average of 84 km³ per year, with a storage capacity of around 162 km³.

25. Downstream from the Dam, the alluvial sediment layers extending over approximately 1,000 kilometres to the Mediterranean sustain a vast and strategic aquifer system. In the Nile Delta, this aquifer expands into a large sedimentary formation that functions as a natural freshwater reservoir essential for the livelihoods of the roughly 40 million inhabitants of the region.

26. Beyond the Nile system with its renewable aquifer, the hydrological structure of Egypt is also shaped by other aquifers: the Coastal Aquifer, with a moderate recharge from

⁸ For a description of the central management structure of the Holding Company, see Ahmed Abdel-Hafez, "More private sector participation in water", *Al-Ahram Weekly*, 12 July 2025. Available at <https://english.ahram.org.eg/NewsContent/50/1201/549343/AlAhram-Weekly/Egypt/More-private-sector-participation-in-water.aspx>.

⁹ See https://www.researchgate.net/publication/305874467_Aswan_High_Dam_Resettlement_of_Egyptian_Nubians.

¹⁰ See <https://science.nasa.gov/earth/earth-observatory/aswan-high-dam-85992/#:~:text=Hydropower%20generated%20at%20the%20dam,positive%20and%20negative%20effects%20downstream>.

occasional rainfall; the Moghra Aquifer, with low recharge from inflow via the Nile Delta Aquifer, and the Nubian Sandstone Aquifer, the largest known fossil aquifer in the world. Extending beneath over 2 million km² of the Eastern Sahara, this aquifer is shared with Chad, Libya and the Sudan and is a critical groundwater source for several oases and desert communities.¹¹

B. Available freshwater sources and demand by sector

27. The current water of Egypt use is sustained through a combination of surface water, groundwater, treated drainage flows, treated wastewater and desalinated seawater.

28. As explained above, the country's principal source of freshwater remains the Nile River, which provides approximately 55,500 hm³ per year of renewable surface water.¹² In addition, around 7,200 hm³ per year are abstracted from the renewable aquifer systems of the Nile Valley and Delta, which are directly recharged by the river. Of this volume, 6,100 hm³ per year are extracted in the Delta, where the proliferation of wells has generated increasingly unsustainable extraction rates.¹³

29. Egypt also relies significantly on treated and reused drainage water, estimated at 23,200 hm³ per year, as well as about 3,700 hm³ per year of treated urban wastewater reused for irrigation. A further 1,650 hm³ per year are extracted from non-renewable fossil aquifers,¹⁴ including the Nubian Sandstone Aquifer System. During the period 2003-2021, nearly 7,250 hm³ have extracted,¹⁵ with projections indicating that withdrawals may rise to 3,000 hm³ per year in the future.¹⁶ According to Government comments, "no official government figures have been issued in this regard". Rainfall provides around 1,500 hm³ per year, while desalinated seawater accounts for 515 hm³ per year, although this sector is experiencing rapid growth.

30. While the treatment of wastewater for reuse is valued, the enormous importance of the natural reuse of flows considered "lost" is not taken into consideration. It is very important to take into account the natural reuse of what are considered losses due to inefficiencies, particularly in irrigation. Given that approximately 68,100 hm³/year are dedicated to irrigation, and that the average efficiency on the traditional irrigation systems, representing around 61% of irrigated surface, is estimated at 50%,¹⁷ approximately 36,600 hm³ of returns are generated by traditional irrigation. A substantial share of these flows is naturally reintegrated into the alluvial aquifer, functioning as a non-visible extension of the river system; and the rest are discharged back into the Nile, contributing to important environmental functions and uses downstream.

31. However, the accumulated load of pollutants, particularly from agrochemicals and excessive use of fertilizers, creates increasing risks when reusing these flows downstream. In this context, a transition toward agroecological practices, as encouraged by the Food and Agriculture Organization, would significantly reduce diffuse pollution while improving long-term soil and water sustainability.¹⁸

¹¹ See <https://www.sciencedirect.com/science/article/abs/pii/S0022169424006322>.

¹² See <https://water.fanack.com/egypt/water-resources-in-egypt/>.

¹³ See <https://water.fanack.com/egypt/water-resources-in-egypt/> and <https://un-igrac.org/data/country-profiles/egypt/>.

¹⁴ See https://ejchem.journals.ekb.eg/article_1085_05d115ef6d0f11c01423cf2ae8fa0a7c.pdf.

¹⁵ See <https://pmc.ncbi.nlm.nih.gov/articles/PMC10119068/>.

¹⁶ See the Nubian Sandstone Aquifer System Project of the United Nations Development Programme, the Global Environment Facility, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Atomic Energy Agency (IAEA) for referenced modelling and management context. See <https://web.cedare.org/wp-content/uploads/2005/05/2030-National-Vision-for-Wastewater-Re-use-in-Egypt.pdf> and <https://www.iaea.org/sites/default/files/documents/tc/Nubian-flyer.pdf>.

¹⁷ See <https://www.wur.nl/en/longread/smart-water-use-egypt-50-years-impact>.

¹⁸ See <https://www.fao.org/agroecology/overview/scaling-up-agroecology-initiative/en/>.

32. With respect to water use, according to official data, in 2024 irrigation accounted for around 77%, urban supply 13%, industrial uses – 7% and other uses 3%.¹⁹

33. In assessing the implications of these figures for the human rights to safe drinking water and sanitation, the Special Rapporteur notes that urban demand represents roughly 13% of total national water use. Therefore, although the Government emphasizes the estimate of a structural water deficit of 20,000 hm³/year, this cannot be presented as a barrier to fulfilling the human rights to drinking water and sanitation. As he has done in previous reports, the Special Rapporteur wishes to recall that the General Assembly established the minimum amount of water necessary for a dignified life that allows for the fulfillment of the corresponding human rights, between 50 and 100 litres of water per person per day. Applying that minimum of 50 litres per person per day, the volume necessary for the entire population would amount to about 2,117 hm³ per year – that is, just over 2% of the country's total renewable freshwater availability. On this basis, and, in line with the principle of priority to develop a human rights-based approach to water management, water scarcity cannot be invoked as a legitimate justification for failing to ensure everyone's access to safe drinking water and sanitation. Guaranteeing human rights to drinking water and sanitation requires ensuring a sufficient and continuous supply of water for all, for personal and domestic uses, which includes water for drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene.²⁰ In the view of the Special Rapporteur, to develop a human rights-based approach to water management, drinking water and sanitation services must be prioritized over agricultural and industrial demands.

34. As will be discussed later, the main challenges arise from insufficient infrastructure in rural areas and impoverished urban settlements, and from accumulated pollution along the Nile corridor.

V. Water and sanitation services

35. The Special Rapporteur recognizes the measurable expansion of drinking water and sanitation services in recent years. According to official data, the coverage rate for sanitation in urban areas rose from 79% in 2014 to 96% in 2025, while rural coverage increased from 12% to approximately 60% during the same period, largely due to sanitation projects under the *Hayah Kareema* Presidential Initiative. The Government reported substantial investment in water and sanitation infrastructure, including major treatment facilities in Cairo and the Delta, aimed at supporting broader water-resource management objectives, although the Special Rapporteur has doubts about the priority of the objectives of some of those large facilities.

36. The Special Rapporteur welcomes the *Hayah Kareema* Presidential Initiative in rural areas, as well as the Government's efforts to maintain a tariff structure based on consumption blocks, under which basic levels of domestic water use remain affordable. This tiered tariff system is important to ensure access to drinking water for low-income households.

37. However, as previously stated, the Special Rapporteur is concerned that the entry into the system of private operators under Law No. 172 of 2025 could lead to tariff increases that jeopardize the affordability of water for the poorest.

38. While the law establishes a framework for tariff calculation via the regulatory body, mandates Cabinet approval and prohibits unauthorized overcharging, prices ultimately depend on costs. Ensuring credible fairness requires transparency and public access to this data on actual costs, especially in light of private sector involvement. The promotion of prepaid meters carries the risk of automatic service disconnections for those unable to pay,

¹⁹ Osama El-Zaher, "Ground water management in Egypt". Available at <https://www.unescwa.org/sites/default/files/event/materials/1-%20GW%20Management%20in%20Egypt-Dec2024-Tunis.pdf>.

²⁰ Committee on Economic, Social and Cultural Rights, general comment No. 15 (2002) on the right to water, para. 12 (a).

particularly as the law lacks safeguards to protect a minimum essential water usage that guarantees human rights to water and sanitation.

39. According to the Egyptian Family Health Survey 2021, published by the Central Agency for Public Mobilization and Statistics (hereafter, the statistics agency), for 89% of households, the primary source of drinking water is piped water located within the home or the household's yard, while 4% rely on public taps – rising to 6.6% in rural areas – and 3% rely on bottled or packaged water, a figure that increases to 4.1% in rural settings. Improved drinking water coverage reaches 99% in urban areas, and 96% in rural areas. Some 3% of households require less than 30 minutes to obtain drinking water from outside the home or yard, whereas 2% require 30 minutes or more. Concerning water quality practices, approximately 70% of households do not treat water prior to consumption, while 27% undertake some form of water treatment, most commonly through household water filters. Water treatment is more prevalent in urban areas (33%) than in rural ones (22%). The Government notes that Egyptian Family Health Survey 2021 does not fully reflect the significant progress achieved in recent years.

40. Data published by the statistics agency estimates that 26.5% of drinking water was lost in the networks in 2021; a conservative estimate according to experts,²¹ which leads the Special Rapporteur to consider that, in numerous networks with multiple leaks, not only is a lot of water lost, but intrusions of contaminants are also generated that could render the water undrinkable.

41. During the visit, the authorities emphasized the national policy of providing irrigation water without charge, describing it as a measure intended to support small-scale farmers. The Special Rapporteur appreciates this intention, but notes that the absence of tariffication incentives for improving irrigation practices is particularly difficult to justify in the current context of growing water scarcity. Furthermore, it appears that irrigation water is also provided without charge to large producers and agribusiness companies.

42. It is evident to the Special Rapporteur that structural socioeconomic inequalities and high levels of poverty undermine the realization of the human rights to drinking water and sanitation. This disproportionately affects rural areas and informal settlements surrounding major cities. In parallel, the degradation of freshwater sources due to untreated industrial discharges, agricultural run-off and unsustainable abstraction of groundwater and surface water remains a serious concern, with particularly acute impacts in the Nile Delta.

43. In the Governorate of Al-Fayyum, recent studies indicate the presence of high concentrations of pollutants originating from agricultural drainage, which may adversely affect the potability of water sources.²² At the same time, the Special Rapporteur received reports of prolonged water cuts over the last year in villages such as Fidimin, as well as in Sanhūr, Desouk, Baltim, Fouh, Kafr Elsheikh City, and adjacent rural areas. Frequent service interruptions were also reported in Al-Mukhtalata, Al-Wanaisah, Al-Mu'arabeen, Al-Nazla, Al-Hamouli, and Al-Maqrani.

44. In the Kafr Elsheikh Governorate, published studies estimate that approximately 40% of residents lack access to drinking water; 60% lack adequate sanitation services; and roughly 30% of health-related problems are attributed to water contamination and inadequate sanitation infrastructure.²³ In addition, serious problems were reported regarding water turbidity, odour and frequent service disruptions, particularly during the summer months. According to the comments received from the Government, drinking water coverage in Kafr Elsheikh Governorate stands at 85% continuous 24-hour service and 15% service on a rotational basis. Sanitation service coverage in the Governorate stands at approximately 54%.

45. In the Aswan Governorate, villages such as Abu Al-Rish Al-Bahari and neighbouring communities reported an increase in cases of acute gastrointestinal illness, including vomiting and diarrhoea, at the end of 2024. These reports generated widespread community

²¹ See <https://www.trtworld.com/article/14527993>.

²² See <https://www.frontiersin.org/journals/environmental-science/articles/10.3389/fenvs.2025.1649938/full> and <https://link.springer.com/content/pdf/10.1186/s12302-024-00953-2.pdf>.

²³ "مشاكل المياه والصرف الصحي في كفر الشيخ .. أرقام صادمة وفوضى عارمة", GhadNews, 4 September 2024.

concern regarding possible contamination of drinking water sources, although official authorities denied the existence of such contamination.²⁴

46. In the Giza Governorate, in August 2025, residents of Kafr Bark Al-Khayam, in Kerdasa, reported deteriorating water quality and suspected contamination, particularly in marginalized areas. The responsible water company stated that water quality met national standards, suggesting instead that irregular pumping and unauthorized extraction from non-approved sources may be responsible for localized deterioration.

47. The Special Rapporteur received reports that in the Minya Governorate, in the Al-Muheet drain at Itsa village, the drainage system discharges water contaminated with agricultural and industrial waste directly into the Nile River, just few kilometres upstream from the Arab Al-Zeina station in Samalut, which supplies drinking water to the district. Local communities attribute numerous health problems to exposure to pollutants from these upstream discharges.

48. As explained above, the cumulative pollution along the Nile corridor breaks down water quality, especially in the Delta, posing serious risks to public health. According to one scientific study (among others), “water-borne diseases have been estimated to cause more than two million deaths and four billion cases of diarrhea annually. Water-borne pathogenic organisms include bacteria, protozoa, and viruses. Heavy metal contamination of water is also a potential threat to human health”.²⁵

VI. Populations requiring special attention

49. In order to give priority to populations living in situations of greater vulnerability, poverty and marginalization, the Special Rapporteur paid special attention to rural communities and informal settlements in large urban centres, as well as to the millions of people who have fled wars in nearby countries, and to the situation and role of women, especially in families and communities without access to supply networks.

A. Concerns regarding inequality and the impact of poverty

50. Although the statistics agency has not issued updated monetary-poverty statistics in recent years, World Bank estimates indicate that the national poverty rate was 33.5% in 2021/22, and that poverty – measured by the international poverty line for lower-middle-income countries (US\$4.20 a day in 2021 purchasing power parity terms) – increased by about five percentage points between 2022 and 2024.²⁶

51. According to the statistics agency, in 2015, in the rural areas of Upper Egypt, poverty reached 56.7%, while the poverty level in lower Egypt was recorded at 19.7%.²⁷ A United Nations study published in 2018 indicated that the incidence of multidimensional poverty was more than 2.2 times higher in rural areas than in urban areas, both in terms of poverty and extreme poverty.²⁸

52. In major cities, poverty is highly concentrated in informal settlements on the urban periphery. The United Nations Human Settlements Programme (UN-Habitat) has documented the persistence and expansion of urban informality, reporting that, in 2016, there

²⁴ See <https://english.ahram.org.eg/NewsContent/1/1236/532316/Egypt/Health/E-coli-bacteria-cause-gastroenteritis-outbreak-in-.aspx>, <https://egyptianstreets.com/2024/09/24/stomach-flu-outbreak-in-egypts-aswan-linked-to-e-coli-bacteria-health-ministry/> and <https://www.madamasr.com/en/2024/09/23/news/society/initial-tests-suggest-e-coli-behind-spate-of-gastrointestinal-cases-in-aswan-health-minister-says/>.

²⁵ See <https://www.sciencedirect.com/science/article/pii/S2090123215001137>.

²⁶ See <https://thedocs.worldbank.org/en/doc/77351105a334213c64122e44c2efe523-0500072021/related/mpo-sm26.pdf>.

²⁷ See <https://www.egyptindependent.com/278-percent-egyptian-population-lives-below-poverty-line-capmas/>.

²⁸ See https://www.unescwa.org/sites/default/files/pubs/pdf/multidimensional_poverty_in_egypt-ry-07012019_0.pdf.

were 1,171 informal settlements (Ashwa'yyat). In Greater Cairo alone, 60% of people live in informal settlements.²⁹ In 2019, the Special Rapporteur on the right to adequate housing noted in her visit report to Egypt that 38 million people lived in informal settlements, although she pointed out that living in these areas did not necessarily imply a lack of drinking water and sanitation services.³⁰ The lack of disaggregated information on the population living in these informal settlements, which undoubtedly includes millions of people who have fled wars and are not registered as asylum-seekers or refugees, has made it difficult for the Special Rapporteur to clarify how many people live in these areas without guaranteed access to drinking water and basic sanitation.

53. Approximately 7.3 million people lacked access to drinking water in their homes in 2018, including 5.8 million in rural areas and 1.5 million in urban settlements.³¹

54. Code No. 102/1 (May 2010) accounts further for inequality in the distribution of drinking water flows, as it establishes differentiated pipe diameters and corresponding per-capita water allocations for residential areas. The Code provides only 100–150 litres per person per day for rural villages, compared to 280–320 litres in new cities and 350–400 litres in tourist areas.

55. The rapid and highly visible development of new cities – whose housing stock is largely unaffordable to low-income households – raises concerns regarding equity in public budgeting and water allocation. Although these new cities are home to only 8% of the population, they reportedly consume 23% of national drinking water resources – 11.5%, according to the Government. As an illustrative example, information received indicates that New Giza receives 2.5 times more water per capita than the town of Meet Rahina, where approximately 20% of households reportedly remain unconnected to the network. According to a 2013 report of the Cairo Governorate, there were 3 areas with no water service, 10 with a service line running through them but no formal network, 14 with water service only at the border and 14 with network service. In contrast, New Cairo receives 1,733 litres per person per day, with golf courses featuring large water fountains, green spaces with grass that require daily watering, swimming pools and unlimited access to drinking water 24 hours a day.³²

56. Beyond unequal distribution, structural constraints, such as lack of infrastructure, low water pressure, degraded network conditions and frequent supply cuts – particularly during summer months – affect numerous communities living in poverty in rural areas and peripheral urban settlements. In many cases, although a physical connection to the network is possible, households cannot afford the connection fees charged by water companies.

57. The Special Rapporteur visited a project implemented in cooperation with the Water and Sanitation Holding Company aimed at overcoming these barriers. In the Al-Fayyum Governorate, the project subsidizes 60% of connection costs, while households pay the remaining 40% through a loan. Subsequent repayments by beneficiary families are accumulated in a sustainability fund used to finance further community connections, operating through what is termed a revolving fund mechanism.³³ While a commendable initiative, the Special Rapporteur would argue that, in line with the requirement to deploy the maximum of its available resources for the full realization of the right as per the Covenant, Egypt needs to invest much more in connecting unconnected impoverished people and communities to water and sanitation networks. The Special Rapporteur wonders whether priority should not be given to providing free connections to water supply networks for impoverished families, over providing free irrigation water to large agribusinesses.

58. Despite the positive effort that the *Hayah Kareema* Presidential Initiative represents, transparency regarding specific project expenditures, procurement procedures, implementation monitoring and independent evaluation remains insufficient. The Special Rapporteur notes that the absence of fully accessible, disaggregated and verifiable public data

²⁹ See https://www.habitat.org/sites/default/files/documents/Egypt%20Housing%20Continuum_2026_snapshot.pdf and https://unhabitat.org/sites/default/files/2023/06/eg_package.pdf.

³⁰ A/HRC/40/61/Add.2.

³¹ See https://www.unicef.org/egypt/water-sanitation-and-hygiene#_ftn1.

³² See <https://aps.aucegypt.edu/en/articles/118/cairos-hidden-urban-water-scarcity>.

³³ See <https://www.unicef.org/egypt/water-sanitation-and-hygiene>.

– particularly at governorate and village levels – continues to hinder independent assessment of compliance with human rights standards related to water and sanitation.

59. The Special Rapporteur further notes serious problems of inequality and inequity when comparing the financial resources allocated to *Hayah Kareema* and those mobilized for large-scale urban megaprojects in the New Cities. In this regard, the Special Rapporteur emphasizes the need for equitable budgetary prioritization consistent with the State’s human rights obligations, including the principles of non-discrimination, progressive realization, and prioritization of marginalized groups.

B. Rural areas

60. According to information received, in many villages the only water available for domestic use comes from irrigation canals that are polluted with pesticides, fertilizers, and urban and industrial discharges. The consumption of such water is associated with higher prevalence of kidney and liver diseases. In the north-eastern Nile Delta, high rates of pancreatic cancer have been reported, potentially linked to elevated levels of heavy metals and organochlorine pesticides found in water sources.³⁴ Schistosomiasis has been documented in irrigation canals, along with cyanobacteria capable of producing toxins due to eutrophication. Microbiological contamination includes pathogenic fecal coliforms, hookworms and other intestinal helminths, while salinity levels are increasing because of marine intrusion.

C. Women and gender equality

61. As in many other countries, the Special Rapporteur received testimonies illustrating that in Egypt, women, particularly in impoverished rural areas without domestic water connections, bear the burden of collecting water from distant or unsafe sources, such as irrigation and drainage canals, exposing them and their families to considerable health risks.

62. The role of women in agriculture in Egypt is vital, considering that they represent nearly 45% of the agricultural workforce.³⁵ However, neither this work outside the home, nor the burden they bear in domestic water management, is reflected in their participation in decision-making. Women are rarely considered agricultural workers or irrigators because they are not usually “legal owners/tenants” of the land.³⁶ All of this results in marginal participation of women on the boards of directors of water user associations, which constitute the backbone of social participation in irrigation governance and the only legally recognized right holders-based structures in water management matters.

63. Throughout the country visit, women provided highly valuable contributions across meetings. Their active engagement in water management responsibilities constitutes a positive reference point for the Government’s stated commitment to ensuring equal participation. Nevertheless, the Special Rapporteur observed that women were significantly underrepresented in most meetings, indicating that substantial progress remains necessary to achieve gender equality. The Government emphasizes that approximately 40% of the engineers employed by the Ministry of Water Resources and Irrigation are women.

D. Persons fleeing armed conflicts

64. Egypt hosts one of the largest refugee populations on the African continent. As of March 2026, 1,099,000 refugees and asylum-seekers were registered with the Office of the

³⁴ In the absence of publicly available up-to-date epidemiological data, the Special Rapporteur bases his analysis on the below two studies from 2004 and 2005, considering that pollutants have not only persisted but also increased, as well as their impacts on human health: <https://www.fao.org/3/y5738e/y5738e00.htm> and <https://apps.who.int/iris/handle/10665/43252>.

³⁵ See <https://openknowledge.fao.org/server/api/core/bitstreams/a22a1cc5-56be-42ae-8650-fc4a3535a8d1/content>.

³⁶ Ibid.

United Nations High Commissioner for Refugees.³⁷ However, according to government estimates, the total number of people fleeing armed conflicts amounts to approximately 10 million. While Egypt has officially adopted a policy of welcoming refugees and asylum-seekers outside of camps to promote their integration and avoid segregation, the lack of their official recognition challenges the monitoring of different human rights impacts. The reality is that most displaced persons live in densely populated, underserved informal settlements that may also lack access to adequate water and sanitation.

65. All of this raises great concern for the Special Rapporteur, not only regarding compliance with their human rights to safe drinking water and sanitation, but also regarding the multiple human rights concerns raised in a communication addressed to the Government in 2025 by several special procedures mandate holders.³⁸

E. Persons deprived of liberty

66. Although the Special Rapporteur did not visit prisons in person during the visit, according to reports received, in some prisons tap water is reportedly heavily contaminated and unchlorinated; in some cases, the tap water is treated wastewater. Those who can afford and have access to prison canteens reportedly have the possibility of purchasing bottled water but access even to bottled water may be severely restricted. Detainees from one prison have reported chronic sewage system blockages.

67. The Special Rapporteur recalls that international human rights law requires that prisoners and detainees be provided with sufficient and safe water to meet their daily needs, in accordance with the United Nations Standard Minimum Rules for the Treatment of Prisoners.

VII. Challenges and risks to available fresh water

A. Impacts of climate change

68. Climate change is already exerting significant pressure on the country's hydrological systems, heightening the frequency and severity of both droughts and floods, reducing the proportion of precipitation that infiltrates soils and recharges aquifers and rising evaporation rates and demand for irrigation, under hotter climatic conditions. Furthermore, rising sea levels, along with other factors stemming from Nile management, pose potentially catastrophic risks to the Delta and the vast population living there.

1. Rising temperatures and evaporation losses

69. The Special Rapporteur notes with concern that one of the most severe impacts of rising temperatures in Egypt is the accelerated rate of evaporation from Lake Nasser. Recent hydrological assessments conducted by the National Water Research Center indicate that annual evaporative losses range between 10,000 and 16,000 hm³ per year. Climate-model projections confirm an additional 470 hm³ of evaporation by 2030, 880 hm³ by 2050 and 1,660 hm³ by 2100.³⁹ Similarly, plant evapotranspiration and irrigation demand are increasing. By 2070, evapotranspiration in the Nile Delta could increase by up to 19%.⁴⁰

³⁷ See <https://www.unhcr.org/eg/media/registered-population-refugees-and-asylum-seekers-31-march-2026>.

³⁸ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=30371>.

³⁹ See also <https://www.iwra.org/proceedings/congress/resource/PAP00-5652.pdf> <https://www.tandfonline.com/doi/pdf/10.1080/17538947.2011.586442>.

⁴⁰ See <https://www.mdpi.com/2073-4441/15/3/572>.

2. Growing vulnerability of the Nile Delta

(a) Delta subsidence and sea level rise

70. The Intergovernmental Panel on Climate Change identifies the Nile Delta as one of the world's three "extreme" vulnerable hotspots, under the simultaneous threats of sea-level rise, salinization of freshwater resources and land subsidence.⁴¹

71. The Delta's geological structure – formed over millennia by sediment deposition – creates a porous hydrological "sponge" whose equilibrium depends on continuous sediment replenishment. However, the construction of major upstream reservoirs, especially the Aswan Dam, dramatically reduced sediment transport to the Delta. Studies show a rate of subsidence between -3 and -8 mm/year along the coastal margins due to the natural compaction of sediments,⁴² while the rate of sea level rise is between 3.2 and 6.6mm/year.⁴³

72. In 2022, sediment retention at the Aswan Dam had reduced its original capacity by about 18%; by 2050, that reduction is estimated to reach 28%.⁴⁴ Academic studies estimate that the Aswan Dam traps around 130 hm³ of sediment annually, amounting to roughly 8,000 hm³ accumulated since the dam's completion.⁴⁵ This underlines the need for a basin-wide sediment management strategy that includes all Nile Basin States.

73. The Special Rapporteur visited an interesting community-based coastal defense project led by local communities with support from United Nations Development Programme. Women are building reed barriers that retain sand, forming a large longitudinal dune that protects the coast. This promising low-cost adaptation project can be replicated.⁴⁶

(b) Salinization of soils and aquifers

74. Saltwater intrusion into the Nile Delta aquifer now reaches up to 100 kilometers inland,⁴⁷ driven by the combined effects of rising sea levels, excessive groundwater pumping and the diversion of freshwater flows and drainage from the Delta to new desert irrigation projects.

75. According to recent analyses of soil and irrigation water samples, 64% of tested soils and 87.5% of irrigation water show elevated salinity, particularly sodium salinity, leading to substantial declines in soil fertility and crop productivity.⁴⁸

76. On a positive note, rice cultivation, often mischaracterized as a water wasteful practice, in fact plays a critical environmental function in the Delta. Flood irrigation of rice paddies and the drainage water from these irrigation systems play a vital environmental role in the Nile Delta, containing saltwater intrusion from the Mediterranean Sea, protecting aquifers on which millions of people depend.

⁴¹ Intergovernmental Panel on Climate Change, *IPCC Fourth Assessment Report: Climate Change 2007*, chap. 6. Available at https://archive.ipcc.ch/publications_and_data/ar4/wg2/en/ch6s6-4-1-2.html.

⁴² See <https://www.sciencedirect.com/science/article/abs/pii/S0048969720323858>.

⁴³ See <https://www.adaptation-undp.org/projects/enhancing-climate-change-adaptation-north-coast-egypt>.

⁴⁴ See <https://unu.edu/press-release/trapped-sediment-robbing-worlds-large-dams-vital-water-storage-capacity>.

⁴⁵ See https://www.researchgate.net/publication/382374669_Sediment_Management_for_the_Nile_River_in_Times_of_Global_Warming.

⁴⁶ See <https://www.undp.org/egypt/blog/learning-local-ingenuity-how-simple-reed-fencing-has-unlocked-solution-rising-sea-levels-egypt>.

⁴⁷ El-Zaher, "Ground water management in Egypt".

⁴⁸ M. Hagage and others, "Monitoring soil salinization and waterlogging in the northeastern Nile Delta linked to shallow saline groundwater and irrigation water quality", *Nature*, Scientific Reports. Abstract. Available at <https://www.nature.com/articles/s41598-024-77954-x>.

B. Pollution of surface and groundwater flows

77. The Nile receives significant and systematic polluting discharges downstream from Lake Nasser to the Delta. According to a recent scientific study, while Lake Nasser has favourable physicochemical properties,⁴⁹ river flows in the Aswan Governorate are severely affected by untreated discharges from sugar, paper and ferroalloy industries, irrigation run-off with fertilizers and pesticides and urban discharges.⁵⁰

78. Numerous well-founded studies confirm the increasing deterioration of surface water quality,⁵¹ due to toxic discharges,⁵² with an alarming risk to the health of millions of people, particularly in the Delta, due to cumulative heavy metal contamination.

79. North of Cairo, the Nile River divides into two main branches (Rosetta and Damietta). In particular, the Rosetta Branch, which is of vital importance as it serves as a water source for municipal, industrial, agricultural, and aquaculture purposes, receives pollutant discharges, in particular with pesticides,⁵³ from sewage and agricultural drainage in the Giza Governorate;⁵⁴ as well as industrial discharges in Kafr El-Zayat, from manufacturers of sulfur compounds and superphosphate, and from soap and pesticide factories.⁵⁵ As a result of all this, the concentration of heavy metals, such as chromium, cadmium, lead, iron and zinc, in the Rosetta Branch's flows exceeded the limits established for aquatic life and for drinking water.⁵⁶

80. Despite a prohibition on discharging untreated effluents under the Environmental Law No. 4 (1994) and Decree No. 1963 (2017), enforcement challenges persist. According to data from the Environmental Affairs Agency, published in 2022, around 150 million tonnes of industrial wastewater continue to be dumped untreated annually.⁵⁷

81. The massive agricultural drainages loaded with nutrients (phosphorus and nitrogen), due to the excessive use of industrial fertilizers, overwhelm the river's natural assimilation capacity and cause eutrophication, proliferation of harmful algae and cyanobacteria, especially in the Delta, with serious impact on Lakes Manzala, Burullus, Edku and Mariout and their rich fisheries.⁵⁸ Fish populations, in addition to being affected by various infections, show an accumulation of heavy metals in their tissues at levels dangerous for consumption. In the 1990s, to alleviate water scarcity in the Nile Delta, the Government of Egypt decided

⁴⁹ E.S.E. Omran and S.A. Elawah, "Life under Lake Nasser: water quality as means to achieving the Egypt's Agenda 2030" in *Egypt's Strategy to Meet the Sustainable Development Goals and Agenda 2030: Researchers' Contributions: SDGs Viewed Through the Lens of Egypt's Strategy and Researchers' Views* (Springer, 2023), pp. 249–259.

⁵⁰ A.N.A. Abdou and others, "Assessment of industrial pollution and water quality in the Nile River using GIS-based indices at Aswan, Egypt", *Nature* (2025), Introduction. Available at <https://www.nature.com/articles/s41598-025-33738-5#ref-CR20>.

⁵¹ A.D.G. Al-Afify and A.M. Abdel-Satar, "Heavy metal contamination of the River Nile environment, Rosetta Branch, Egypt", *Springer Nature*, vol. 233 (2022). Available at <https://scispace.com/pdf/heavy-metal-contamination-of-the-river-nile-environment-25scuyzi.pdf>.

⁵² A.D.G. Al-Afify, A.A. Othman and M.A. Ramadan, "Characterization of chemical and microbiological quality of Nile River surface water at Cairo (Egypt)", *Rendiconti Lincei. Scienze Fisiche e Naturali*, vol. 29 (2018), pp. 725–736. Available at <https://link.springer.com/article/10.1007/s12210-018-0721-8>.

⁵³ F. Eissa, M. Al-Sisi and K. Ghanem, "Occurrence and ecotoxicological risk assessment of pesticides in sediments of the Rosetta branch, Nile River, Egypt", *Journal of Environmental Sciences*, vol. 118 (2022), pp. 21–31.

⁵⁴ A.A. Othman, A.D.G. Al-Afify, A.M. Abdel-Satar and M.F. Ramadan, "Quality assessment of surface water using the Nile Chemical Pollution Index (NCPI) and microbiological pollution of the Rosetta Branch (Nile River, Egypt)", *African Journal of Aquatic Science*, vol. 46 (2021), pp. 129–141.

⁵⁵ H.H. Abd El-Hady, "Alternations in biochemical structures of phytoplankton in Aswan Reservoir and River Nile, Egypt", *Journal of Biological and Environmental Sciences*, vol. 4 (2014), pp. 68–80.

⁵⁶ Al-Afify and Abdel-Satar, "Heavy metal contamination of the River Nile environment, Rosetta branch, Egypt", Abstract.

⁵⁷ National enforcement data reported by the Egyptian Environmental Affairs Agency, see <https://climateaction.africa/egypt-sets-up-network-industrial-waste-pollution/>.

⁵⁸ See <https://journals.sagepub.com/doi/full/10.1177/1178622120963072>.

that the better-quality water from the Nile could only be used for irrigation. This forced fish farmers to use highly contaminated water from the drainage canals.⁵⁹ These problems and fishing regulations that are harmful to small-scale fishers have led to the progressive ruin of thousands of families.

C. Overexploitation of renewable aquifers and use of non-renewable aquifers

82. Aquifers constitute the world's largest freshwater reserve, storing more than thirty times the volume of surface water from rivers, lakes, and wetlands.⁶⁰ As climate change increases the frequency and severity of droughts, the strategic importance of aquifers as key reserves for national water security grows.

83. According to International Groundwater Resources Assessment Centre, groundwater use in Egypt is dominated by the agricultural sector, which accounts for 85% of national withdrawals; followed by 9.5% for industrial uses; and 5.5% for domestic supply.⁶¹

84. The problems of overexploitation in the Nile's enormous renewable aquifer occur mainly in the Delta, where, in 2016, the number of wells, constantly growing, reached around 73,000.⁶² Overexploitation of the Delta's coastal aquifer is accelerating its salinization due to seawater intrusion. Furthermore, the existence of many wells, operating informally, makes shallow aquifers acutely vulnerable to diffuse agricultural pollution, industrial discharge and urban wastewater infiltration.

85. Strong salinization processes have been documented in the Mediterranean coastal aquifer, due to overexploitation and consequent marine intrusion.⁶³ The Moghra Aquifer is experiencing serious degradation—excessive pumping for desert agricultural expansion has resulted in salinity levels between 3,090 and 5,350 ppm,⁶⁴ with roughly half of the 800 wells tested exceeding 5,000 ppm – levels incompatible with most forms of agriculture and indicative of rapid quality deterioration. Overexploitation of coastal aquifers in the Sinai Peninsula is a critical issue, driven by rapid development, increasing population and agricultural expansion.⁶⁵

86. Egypt is expanding irrigation to 630,000 hectares, with an estimated extraction of 1,650 hm³ annually from the fossil Nubian Sandstone Aquifer. Given the aquifer's non-renewable nature, the expansion of irrigation in other countries that share it, and the absence of a cross-border governance framework, the aquifer's sustainability is a major concern.⁶⁶ Intense extraction has already caused water levels in some areas to drop by 40–80 metres.⁶⁷

⁵⁹ M. Ferrando, "Fish farmers in the Nile River Delta: empty lakes and dirty waters", Middle East Institute, 25 April 2023. Available at <https://mei.edu/publication/fish-farmers-nile-river-delta-empty-lakes-and-dirty-waters/>.

⁶⁰ World Wildlife Fund for Nature, "Five facts you might not know about groundwater". Available at <https://www.worldwildlife.org/resources/facts/five-facts-you-might-not-know-about-groundwater/>.

⁶¹ International Groundwater Resources Assessment Centre, "Egypt groundwater country profile". Available at <https://un-igrac.org/data/country-profiles/egypt/>.

⁶² Ibid.

⁶³ M.A. Eissa and others, "Geophysical and geochemical studies to delineate seawater intrusion in Bagoush area, Northwestern coast, Egypt", *Journal of African Earth Sciences*, vol. 121 (2016), pp. 365–381. Available at <https://www.sciencedirect.com/science/article/abs/pii/S1464343X16302011>.

⁶⁴ A. Sharaky and others, "Groundwater quality and potentiality of Moghra Aquifer, Northwestern Desert, Egypt", in *Groundwater in Egypt's Deserts*, A. Negm and A. Elkhoully (Springer Nature, 2021), pp. 243–275.

⁶⁵ See <https://www.mdpi.com/2306-5338/5/3/41>.

⁶⁶ See <https://eumena.org/desert-farming-in-egypt>.

⁶⁷ See <https://www.mdpi.com/2073-4441/12/2/604>.

D. Expansion of new irrigation systems in the desert

87. In a context of acute water scarcity, the promotion of large-scale irrigation megaprojects in desert areas – requiring substantial withdrawals from the Nile as well as from non-renewable or low-recharge aquifers – raises serious concerns.

88. The principal projects completed or under development include the New Valley (Toshka) Project, the West Delta Project/New Delta Project, and the North Sinai Development Project.

89. The New Valley (Toshka) Project, initiated in 1997, aims to irrigate around 234,000 hectares in the Toshka depression of the Western Desert. The project plans to be able to transfer 5,400 hm³ per year from Lake Nasser, pumped from the Mubarak station, with the capacity to raise 1.2 hm³ per hour, to transport the flows through the 138-kilometre Sheikh Zayed canal.

90. The West Delta Project, developed in response to groundwater overextraction in the southwestern Delta, was designed to supply 3,157 hm³ per year of surface water to 107,000 hectares of new agricultural land. Building on this initiative, the Government subsequently launched the more extensive New Delta Project, targeting 920,000 hectares and relying on treated drainage flows from the Al-Hammam treatment plant – with a reported capacity of 7.5 hm³/day – supplemented by Nile water and additional groundwater abstraction in an aquifer with minimal natural recharge.

91. The North Sinai Development Project seeks to reclaim 92,500 hectares west of the Suez Canal and 168,000 hectares east of the Canal, using the El-Salam/Sheikh Gaber Al-Sabah Canal system and a siphon built in 1997. The project requires 4,380 hm³ per year, sourced equally from Nile water and from treated agricultural drainage conveyed from the Delta via the Bahr al-Bakar treatment plant (5.6 hm³/day).

92. Together, these initiatives encompass more than 1.3 million hectares and require an estimated 13,000 hm³ per year – which means on average 10,000 m³/ha annually. Even with efficient irrigation systems, such high-water allocations can only be explained by extreme evaporation and evapotranspiration losses under desert conditions, and the need to leach salts from land with significant salinity.

93. The cumulative extraction of water for these megaprojects poses serious risks to the Nile Delta, where the diversion of Nile flows, and the diversion and reuse of drainage flows accelerate the salinization of soils and aquifers, threaten agricultural productivity and compromise access to safe drinking water for millions.

VIII. Risks due to lack of cross-border agreements at the basin level

94. The construction of a dam in a third country has raised concerns in Egypt about reduced water flows from the Upper Nile region. The absence of a comprehensive bilateral and multilateral cross-border agreements for the Nile Basin continues to pose significant risks for regional stability and water security. Given the accelerating impacts of climate change, it is now more essential than ever to adopt basin-level management strategies grounded in an ecosystem approach that ensures long-term sustainability and strengthens the collective capacity to prevent and manage increasingly frequent extreme droughts and floods. Such an approach is also indispensable for addressing the salinization of coastal aquifers, the vulnerability of the Delta to sea-level rise and the need to restore sediment flows that sustain deltaic ecosystems.

95. The Nile Basin – shared by 11 riparian States – is one of the world's most climate-vulnerable and conflict-prone river basins. In this context, the Special Rapporteur stresses that only cooperation at the basin level, under the principles and criteria of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, can reduce regional tensions, improve hydrological planning, coordinate climate

change adaptation strategies, manage sediment flows, establish harmonized early warning and monitoring systems, systematically exchange data and integrate climate risk modelling into national and regional planning.

IX. Promoting a human rights-based approach to water governance

96. In the current global context of climate change, the Special Rapporteur underscores the urgent need to promote governance systems that establish clear ethical priorities in water management. The foremost priority must be the allocation of water for life, guaranteeing the human rights to safe drinking water and sanitation and ensuring the sustainability of aquatic ecosystems. The second priority concerns water uses that serve the common good, fulfilling functions of general interest to society. Only after these priorities are met should water be directed to support economic development beyond basic needs.⁶⁸

97. Taking into account, as already explained, that to satisfy the human rights to safe drinking water and sanitation, in quantitative terms, only 2% of the water extracted from the Nile and its aquifers is required, the most significant challenges are related to water quality.

98. Ensuring water potability is increasingly difficult, given that the surface and groundwater sources feeding public supply systems are exposed to cumulative pollution trends, which are escalating dramatically in the Nile Delta and further aggravated by the rapid salinization of the territory. The Special Rapporteur observes that at stake are not only the human rights to safe drinking water, sanitation, and a healthy and sustainable environment of the current population, but also those same rights of future generations.

99. In parallel, Egypt faces the challenge of mobilizing adequate public investment to ensure access to safe drinking water and sanitation for tens of millions of people living in rural areas and in impoverished informal settlements in urban peripheries.

100. To address these problems, the Special Rapporteur insists on the need to promote a human rights-based approach to water governance. This implies, above all, effectively applying the principle of priority, both in protecting water sources and in making the necessary investments to guarantee the human right to safe drinking water and sanitation.

101. Egyptian legislation, as explained above, recognizes the priority of providing drinking water to the population and prohibits the deterioration of aquatic ecosystems. Particularly with regard to industrial pollution, the primary challenge lies not in the absence of legislation but in the need to effectively enforce existing environmental regulations, including the application of the “polluter pays” or “polluter restores” principles.⁶⁹ Addressing cumulative agricultural pollution along the Nile River corridor is a huge and complex challenge, for which the Special Rapporteur suggests promoting an ambitious agroecological transition strategy, as mentioned.⁷⁰

102. With regard to the priority of financing the basic infrastructure needed to guarantee the human rights to safe drinking water and sanitation for the entire population, the Rapporteur understands that the Hayah Kareema Presidential Initiative goes in the right direction and should be reinforced. However, arguing that there are not enough public funds to meet this challenge does not justify marginalizing the principle of priority in available public budgets to decisively address the lack of basic water and sanitation infrastructure in rural areas or in the poorest environments.

103. Beyond the consistent application of the principle of priority, developing a human rights-based approach requires also transparent water management, robust mechanisms for public accountability, and broad, meaningful, and safe participation of the whole population. In this regard, the Special Rapporteur notes serious shortcomings.

⁶⁸ See [A/80/117](#).

⁶⁹ OECD, *The Polluter-Pays Principle: OECD Analyses and Recommendations*.

⁷⁰ Food and Agriculture Organization, “The 10 elements of agroecology: guiding the transition to sustainable food and agricultural systems” (2018).

A. Transparency and access to information

104. Throughout the visit, government authorities consistently affirmed that water supplied through public networks is safe for human consumption. They informed the Special Rapporteur that approximately 13 million water samples are analysed annually to ensure compliance with safety standards. However, when asked if the results of these analyses were publicly available, officials stated that the data is not published due to national security and its complexity, which is incomprehensible to the public. The Special Rapporteur notes that, despite article 68 of the Constitution declaring that information, data, statistics and official documents are owned by the people, Egypt lacks a dedicated law on access to information. Most residents consulted during the visit reported a widespread lack of confidence in the safety of tap water, with many recommending reliance on bottled water.

105. The Special Rapporteur emphasizes that the absence of publicly accessible water-quality data undermines transparency, limits informed public participation and weakens accountability – core elements of a human rights-based approach to water and sanitation. In the view of the Special Rapporteur, withholding such data on the grounds that the public may not understand it is not a valid justification. In the experience of the Special Rapporteur, individuals and civil society organizations – including academics, water practitioners and community-based experts – are fully capable of analysing and interpreting this information. Moreover, it is the responsibility of the Government to present technical data in an accessible and educational manner. Similarly, invoking “national security” as a justification for secrecy is counterproductive: nothing fuels public insecurity and distrust more than restricting access to information essential to public health.⁷¹

106. The situation is further aggravated by the adoption of Law No. 172 of 2025, which criminalizes the dissemination of “rumours” related to water quality. The specific offence is punishable with a fine ranging from 50,000 to 500,000 Egyptian pounds (the current minimum monthly wage is 7,000 Egyptian pounds). This provision not only prevents public debate on issues directly affecting public health, but also inhibits the submission of complaints, accountability, independent oversight, local government initiative, as well as scientific research.

107. In addition, individuals may face imprisonment penalties under current Penal Code (Law No. 58 of 1937) that criminalize the possession or distribution of printed materials intended for publication that contain “false news, statements, or rumors”, under the alleged argument that it may disturb public security, spread panic, or harm the public interest.

B. Accountability mechanisms

108. As explained above, Law No. 172 of 2025 opens the door for private corporations to both invest in and manage new infrastructure.

109. While the law does not explicitly address the expansion of the privatization process, in light of similar processes in other countries, the Special Rapporteur is concerned about the subsequent evolution of this entry of large private corporations into water management. Furthermore, the Special Rapporteur considers it a serious matter that these corporations participate in the regulatory body, while users, as rights holders, and municipalities are effectively excluded.

C. Participation

110. The Special Rapporteur was able to meet with representatives of the Water Users Associations (at local and canal level), as non-profit entities managed by farmers, legalized

⁷¹ Human Rights Committee, general comment No. 34 (2011) on the freedoms of opinion expression, stressing the presumption of maximum transparency in matters of public interest.

under the Law No. 147 of 2021. In contrast to this positive participatory reality, he wonders why options for participation by residents and their local councils are not opened up in the management of drinking water and sanitation services.

111. Undoubtedly, the greatest concern regarding the necessary social participation required to promote a human rights-based approach to water governance arose from the serious difficulties encountered in meeting with researchers, social actors and human rights defenders, due to fear of severe reprisals. This led to their valuable contributions and testimonies being received online rather than in person.

D. Workers in the water and sanitation sector

112. The Special Rapporteur was informed about the lack of trade union freedoms and widespread protests, with employees of the water and sanitation services demanding implementation of the national minimum wage, the distribution of annual profits, and the conversion of decade-long temporary contracts into permanent ones. Beyond the labor rights at stake, the Special Rapporteur wishes to emphasize the importance of integrating the effective participation of workers in the sector to promote a human rights-based approach to the management of these services.

X. Conclusions and recommendations

113. Egypt is at an important juncture whereby decisions taken now, will affect the human rights to safe drinking water and sanitation currently of tens of millions of people in vulnerable situations and, even more so, of future generations. The Special Rapporteur understands that Egypt faces critical prospects of unsustainability of the aquatic ecosystems linked to the Nile, as well as inequality and poverty, which pose a risk to the human rights to drinking water and sanitation for tens of millions of people in vulnerable situations. Cumulative pollution along the Nile, exacerbated in the Delta by the salinization of aquifers and land due to climate change, not only puts the region's drinking water supply at increasing risk, but also degrades the fertility of the country's most productive land. The massive diversion of water from the Nile to develop irrigation in the deserts, with huge investment of dubious economic and social rationality, in land of poor fertility and serious salinity problems, accelerates and aggravates the Delta's unsustainability crisis.

114. The Special Rapporteur noted progress in the expansion of water and sanitation services by Egypt and the existence of a significant institutional and legal framework. However, serious problems of socioeconomic inequality and poverty, exacerbated by the priority given to new cities for the wealthiest, lead to serious problems of access to truly safe drinking water and sanitation services in rural areas and in the impoverished suburbs of large cities. The Special Rapporteur is also concerned about the entrance of private actors in the water and sanitation sector that may affect affordability and equity.

115. In this context, the Special Rapporteur recommends that Egypt:

(a) Design and promote a strategy for the sustainability of the Delta by reinforcing the flows of the river and irrigation drainage systems, in their protective function of the Delta against marine intrusion; as well as study and promote a strategy to mobilize sediments from large dams to compensate for the gradual subsidence of the Delta;

(b) Resolutely combat untreated industrial waste, especially toxic waste, by effectively enforcing the law and the principle that whoever damages or pollutes must pay and restore;

(c) Design and promote an ambitious agroecological transition programme, in line with Food and Agriculture Organization guidelines at the global level, to drastically reduce the diffuse pollution of nitrogen, phosphorus and agrochemicals that

accumulate in the waterways along the Nile, putting the potability of its waters at increasing risk – such a programme could transform Egypt into a world leader in agroecological production;

(d) Guarantee permanently access to safe drinking water and adequate sanitation to populations living in poverty, giving this priority over the development of New Cities and agricultural mega-projects in the desert, as they are unsustainable practices from both an ecological and economic perspective in the view of the Special Rapporteur; in this regard, he recommends reviewing relevant legislation, policies and spending, to reflect these priorities; this would require, for example, strengthening the budget of the *Hayah Kareema* Presidential Initiative, as well as providing clear information on progress, problems and remaining challenges;

(e) Publish territorially and socially disaggregated information and data on effective access to drinking water and sanitation and on waterborne diseases, by territory and by social sector, paying special attention to women, children, rural communities, informal settlements and people in vulnerable situations, such as refugees and migrants, regardless of their migratory status;

(f) Ensure people who are deprived of liberty have access to safe drinking water and sanitation;

(g) Strengthen interinstitutional coordination around the dual objective of recovering and conserving the good condition of aquatic ecosystems and guaranteeing drinking water and adequate sanitation for the entire population; avoid overlapping competencies and gaps;

(h) Promote the progressive participation of municipalities in the management of water and sanitation services, strengthening their capacities, with a view to decentralizing the management of these services under their responsibility and strengthening neighbourhood participation;

(i) Promote a human rights-based approach to water and aquatic ecosystem governance, which requires transparent management, accountability and broad social participation – in adopting this approach, the results of water-quality analyses should be published and repressive laws that criminalize criticism and public debate on water management should be repealed: in this vein, the Special Rapporteur recommends ensuring wide public participation in the generation of water and sanitation policies, monitoring and evaluation, as well as improve transparency in large infrastructure, agricultural and urban development projects;

(j) Recognize the fundamental role of women in supplying water to unconnected households, as well as in the agricultural workforce, and ensure their equal and effective participation in decision-making, and in particular in water user associations;

(k) Ratify the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and promote negotiations under the principles and criteria established by that Convention, in the Nile Basin.

(l) Promote dialogue and negotiations, on the one hand, with countries sharing the Nile River basin and, on the other, with countries sharing the Nubian Sandstone Aquifer, to foster cross-border management agreements, effectively involving the peoples and communities that depend on the Aquifer specifically.
