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Visit to Tunisia

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 Tunisia from 18 to 29 July 2022. The present report contains his findings and recommendations to the Government of Tunisia.

* 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, Arabic and French only.

Annex

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

I. Introduction

1. Pursuant to Human Rights Council resolution 51/19, the Special Rapporteur on the human rights to safe drinking water and sanitation undertook an official visit to Tunisia from 18 to 29 July 2022 at the invitation of the Government.

2. During his two-week visit, the Special Rapporteur met representatives of a number of tiers of the Government, international organizations, international development funders and civil society, as well as a number of residents. He visited villages, towns, schools and correctional services across the country.[1]

3. The Special Rapporteur thanks the Government for the invitation and the organization of his visit. He would especially like to thank the people from rural areas and small villages who opened their communities and hearts to share their concerns and, many times, difficult living conditions. In addition, he would like to thank the United Nations country team and the office of the Resident Coordinator for their support.

II. General context

A. Geoclimatic context and availability of water resources

4. Tunisia is a Mediterranean country with approximately 12 million inhabitants, very limited availability of water resources and strongly impacted by climate change.

5. The environment in Tunisia varies significantly both between the north and south of the country, defined by the markedly low level of rainfall towards the south where the desert prevails, and also between the west and east of the country, from the coastal strip inland to the Sahara Desert. As a result, there are several different climatic regions, ranging from a relatively humid area in the far north, where there are rivers with permanent water flows, to a large desert area covering the south of the country.[2]

6. The main rivers are concentrated in the relatively humid region in the north of the country: 82 per cent of surface flows and 55 per cent of the renewable groundwater (surface and semi-deep aquifers). Further south, the rivers are ephemeral, accounting for 12 per cent of surface flows, whereas aquifers account for about 30 per cent. Sixty per cent of the national territory in the south of the country is arid or desert, with few ephemeral rivers representing only 6 per cent of the country's total surface water. However, deep aquifers (58 per cent of the country's deep aquifers) contain non-renewable fossil water.

7. Of the country's limited water resources, estimated at 4,865 hm3, 55 per cent is surface water and 45 per cent is groundwater; about 4,195 hm3 is considered renewable and the rest is non-renewable fossil groundwater.[3] However, it should be noted that not all renewable flows are strictly speaking available, as ecological flow regimes in rivers need to be preserved and exhaustive pumping of groundwater can lead to salinization and aquifer degradation.

[1] The Special Rapporteur visited Essoualem, Gabès, Gafsa, Kairouan, Manouba, Médenine, Meknassy, Nasrallah, Redeyef, Sagdoud, Sidi Bouzid, Tunis and Zarzis.

[2] Tunisian Institute for Strategic Studies, *Système Hydraulique de la Tunisie à l'Horizon 2030* (2014).

[3] Ibid.

8. Tunisia has a long legacy of methods to deal with the scarcity and uneven distribution of its water resources. Traditional and even ancestral techniques serve for collecting, storing and transferring flows, as evidenced by the remains of Roman aqueducts and other techniques, such as *foggaras* in the desert region.

9. In line with the development of supply-side strategies based on the construction of large hydraulic works with massive public funding that has prevailed worldwide, especially throughout the second half of the twentieth century, Tunisia opted in the 1970s to build large dams in the north and a large water transfer system along the coast as far as Sfax. Those large dams still supply water to Tunis today and have promoted urban development, tourism and irrigation along the coast, particularly in the north-east of the country.

10. However, over recent decades, developments in certain regions have been mainly supplied by groundwater. Notably, as explained above, almost half of the available water resources of Tunisia are groundwater. Significantly, most of those groundwaters, mainly located in the south of the country, are non-renewable fossil reserves.

B. Population distribution, economic activity and unsustainable overexploitation

11. In 2020, Tunisia had a population of approximately 11.7 million persons, the overwhelming majority of whom were located in the northern half of the country. In 2021, an estimated 69.9 per cent of the total population lived in urban areas and 30.1 per cent in rural areas. Urbanization is expected to grow at 1.34 per cent per annum between 2020 and 2025.[4]

12. Most of the Tunisian population lives on the coast, where industrial and tourist developments are located. On the other hand, agriculture, which supports 35 per cent of the population, has undergone a profound transformation through the massive expansion of irrigation from a few thousand hectares in the 1970s to more than 435,000 ha today.[5]

13. Given the close link between the risks of non-compliance with the human rights to safe drinking water and sanitation and the problems of vulnerability and poverty, the data identifying 260,000 needy families and 630,000 families with low or no fixed income provided in 2020 by the Ministry of Social Affairs are of interest. According to country statistics, the poverty rate is 26 per cent in rural areas and 10.1 per cent in urban areas.[6] However, in 2022 the World Bank detected a post-pandemic improvement that led it to predict a reduction in the poverty rate from 18.9 per cent in 2022 to 17.7 per cent in 2023.[7]

14. In recent decades, as a consequence of having exploited the surface resources of the north to the maximum, the development of pumping and well-drilling technologies has supported groundwater use to cover water demand in the country. Tunisia has relied on groundwater to cover the growing demand for water in urban areas and for irrigation. The result is the accelerated and uncontrolled development of thousands of drilled wells, most of which are unmetered. It is estimated that out of a total of 140,000 wells, 90,000 are illegal. Through 151,850 wells less than 50 m deep, the volume of overexploited water amounts to 265 Mm3/year. There are 32,323 wells in the deep aquifers, of which 13,322 (41 per cent) are legal and 19,001(59 per cent) are illegal. From the latter, 519 Mm3/year are extracted. The resulting overexploitation in these deep aquifers is 413 Mm2/year. The total

[4] See https://www.cia.gov/the-world-factbook/countries/tunisia.

[5] See Ministry of Agriculture, Water Resources and Fisheries, *Rapport National du Secteur de l'Eau. Année 2020* (in French only).

[6] See United Nations Resident Coordinator's Office, Tunisia. *Tunisia Common Country Assessment* (2020).

[7] See World Bank, "Tunisia's economic update, April 2022", available from https://www.worldbank.org/en/country/tunisia/publication/economic-update-april-2022#:~:text=The%20poverty%20rate%20is%20expected,pre%2Dcrisis%20levels%20before%202024.

overexploitation of groundwater in the country, according to 2019 data, amounts to 678 Mm3/year, which represents an overexploitation rate of 131 per cent.[8]

15. Growth in demand has outstripped the sustainability of the country's ecosystems, particularly of most aquifers, rising from 67.3 per cent of renewable resources in 2000 to 82.8 per cent in 2007 and 113 per cent in 2017. Up to 80 per cent of this water is used for irrigation and 20 per cent for urban and industrial purposes. Renewable groundwater could be reduced from the current 1,524 million m3 to 1 billion m3 in 2050 and 700 million m3 in 2100, i.e. half of today's resources[9]

16. At the same time, coastal aquifers are suffering salinization, owing to marine intrusion, a problem which is likely to worsen as sea-levels rise. In that regard, the Special Rapporteur considers the situation in the Gabès-Jeffara area where, following the massive use of water in the industrial processing of phosphates since the 1970s, the shallower aquifer has been depleted, water sources have dried up and the natural and cultural heritage of the oasis of Gabès, which deserves protection as a world heritage site, is disappearing. It is of concern that the overexploitation of the intermediate aquifer (about 70 metres deep) continues to worsen due to the development of irrigation. Even the non-renewable deep aquifer, which initially provided pressurized water upwelling via an artesian well, now requires pumping. According to information received by the Special Rapporteur during his visit, the deep aquifer is expected to enter a critical state in fewer than 25 years.

17. During his visit to Meknassy and Nasrallah, the Special Rapporteur himself experienced how illegal irrigation wells compromise the human rights to safe drinking water and sanitation of the rural population in already water-scarce environments. Residents described how they have water in their households only for a few hours at night and how it usually comes with no pressure.

18. According to information received, the Government is studying the possibility of developing new dams, which the Special Rapporteur considers will have little potential to provide a solution, given current climate change perspectives. On the other hand, the Government has planned to build several seawater desalination plants. Finally, the Special Rapporteur has received information that the Government has increased water rates to curb excessive water consumption, with higher increases for the most intensive users and the most prosperous economic sectors.

C. Risks and impacts related to climate change

19. In the current climate change outlook, it is necessary to foresee a sharp decrease in available water flows, which will imply increasing levels of overexploitation and water scarcity crises. In the opinion of the Special Rapporteur, water demands should adapt to this trend.

20. The Special Rapporteur thinks that climate change projections in Tunisia must take into account the accelerated warming of the Mediterranean, whose average temperature has risen well above the global average by 1.4ºC since 1980. Among the expected impacts of the speeding-up warming of the Mediterranean is the change in the seasonality of rainfall in the Mediterranean countries, as a result of which the Mediterranean torrential rains will occur beyond the traditional seasonality. It will tend to rain less on average but be more concentrated in extreme events. In contrast, multi-annual drought cycles will tend to intensify and lengthen, which in semi-arid and arid territories, such as those prevailing in Tunisia, entail severe water scarcity risks, leading to some areas becoming uninhabitable.

21. The Special Rapporteur considers it fundamental for Tunisian decision makers to take into account the following matters: the drastic reduction in average surface flows due to the decrease in average rainfall and to the increase in evapotranspiration of plant masses with increasing temperatures (an average of 40 per cent of rainfall reduction is expected in

[8] Ministry of Agriculture, Water Resources and Fisheries, 2020. *Rapport National du Secteur de l'Eau. Année 2020*, pp. 79, 80 and 146.

[9] Ibid.

sensitive Mediterranean territories, such as south-eastern Spain); more significant and more intense clogging of water reservoirs, owing to increased erosion due to incidents such as severe storms and fires; reduced infiltration of water into aquifers, owing to reduced mean precipitation and an increased proportion of surface run-off and reduced infiltration in heavy rainfall events; accelerated desertification of territories; higher water consumption per irrigated hectare as temperatures rise; longer and more intense drought cycles; and the rise in sea level, which will have as a consequence the salinization of coastal aquifers. Regarding this last point, during his visit the Special Rapporteur was able to see how the salinization of aquifers in the south of Tunisia, for example, in Gabès, could affect the availability of drinking water in communities. Also, during interviews with asylum-seekers and refugees, many pointed out that the water in Tunisia was saltier than in their countries of origin.

22. In the context of the accelerated quantitative and qualitative deterioration of the aquifers, the de facto priority currently given in Tunisia to the productive uses of water sources linked to powerful economic sectors is undermining and putting at risk the human rights to drinking water and sanitation of many rural communities. The Special Rapporteur emphasizes that water scarcity does not justify non-compliance with the human rights to safe drinking water and sanitation and States are obliged to guarantee water for human consumption and use. As stated in international human rights standards, States should reserve the best available water quality for human use, regardless of how profitable water use for production or other uses could be.

III. Legal, policy and institutional framework

A. Institutional framework

23. Tunisia has a well-developed institutional water system, which since the 1970s has managed a remarkable heritage of waterworks and wells primarily dedicated to irrigation. The management of drinking water is in charge of the National Water Distribution Utility, a public institution dependent on the Ministry of Agriculture, Water Resources and Fisheries, while sanitation is managed by the National Sanitation Office, which comes under the Ministry of the Environment.

24. The National Water Distribution Utility manages the ample hydraulic infrastructures concerning surface water and the operation of numerous wells throughout the country that supply drinking water to the entire urban population and 51 per cent of the rural population. It also offers flows for irrigation and industrial use. For the remaining 49 per cent of the rural population, drinking water is handled by agrarian development groups under the responsibility of the Ministry of Agriculture, Water Resources and Fisheries through its regional delegations, the regional commissions for agrarian development.

25. The 2,500 agrarian development groups in place throughout the country are community-based organizations that manage irrigation and drinking water. The communities elect the boards of the agrarian development groups and their members are volunteers. However, the Ministry of Agriculture, Water Resources and Fisheries takes decisions regarding investments in infrastructure, such as the wells, pumping engines and distribution networks that provide water to rural communities. In cases where the complexity of the water systems exceeds the management capacity of the agrarian development group boards, the regional commission for agrarian development can hire the support of a person with technical training. The agrarian development groups manage the water of approximately 1.275 million people, most of them living in situations of poverty and vulnerability.

26. During his visit, the Special Rapporteur learned that the authorities estimate that around one third of the agrarian development groups work well, another third work with problems and the remaining third are defunct. The Special Rapporteur received many testimonies regarding the reported pressures faced by the agrarian development groups, causing some to fail. Among the issues raised were: (a) the high cost of electricity leading to non-payment and resulting in electricity cuts and therefore water cuts; (b) high levels of leakages and frequent cuts in the supply of drinking water through the public networks, producing contaminating intrusions and provoking a growing rate of non-payment; and (c)

the discontent and protests of local actors due to widespread perceived non-compliance with the law that establishes the priority of drinking water over productive uses, such as irrigation by large producers and phosphate mining.

27. The Special Rapporteur was particularly moved by the water scarcity situation in the Sagdoud oasis, near the Redeyef phosphate mine, which has had no water supply for seven years due to the poor state of the pipes and lack of pressure. At the time of the visit, the health centre at the oasis was closed due to the lack of water. The community explained that they had offered to renovate the pipeline and build a well with their labour but the Government had rejected this, arguing that fixing the pipeline was the responsibility of the State, not of the population. The Special Rapporteur was informed that three quarters of the members of the community had abandoned their homes in the oasis due to the difficult living conditions.

28. During his visit, the Special Rapporteur met with several members of agrarian development groups, who explained the difficulties they faced due to the accumulation of electricity debts. Electricity costs represented more than 70 per cent of the expenditures of the groups. Due to these problems, in many communities the boards of agrarian development groups were vacant since no one wanted to take part.

29. The construction and management of sewerage networks and sanitation facilities are the responsibility of the National Sanitation Office, which covers these services only in urban areas. As a consequence, there is no effective regulation regarding sanitation in rural areas and the rural population does not receive adequate support. The Special Rapporteur saw that rural families addressed sanitation individually through toilets, septic tanks and cesspits that often lacked adequate design and maintenance, increasing the risks of contaminating their drinking water.

30. In localities where the population ranges between 1,000 and 3,000 inhabitants, the sanitation service falls under the regional councils and communes, led by the Ministry of the Environment, with technical assistance from the National Sanitation Office.

31. According to information received during the visit, in localities with a population of less than 1,000 inhabitants, the rights holders rely on on-site sanitation systems without any official regulation or support. In addition, local and regional authorities recognized in their meetings with the Special Rapporteur that many urban neighbourhoods were built without urban planning or permits. As a result, these areas are usually not connected to sewerage networks. In 2021, the number of inhabitants connected to the sewerage network was estimated at 7.6 million (63.2 per cent of the population) in 193 communes managed by the National Sanitation Office.[10]

32. In the various regions, local and regional authorities, both municipal and from the National Sanitation Office, recognized significant impacts owing to the drastic reduction in personnel in the National Sanitation Office in recent years, leading to a deterioration in the service and the management of existing sewage treatment plants being outsourced to private companies.[11] Between 2000 and 2020, the number of National Sanitation Office agents was reduced by 36 per cent,[12] while there was an 87 per cent increase in sewerage kilometres during that period and an increase of about 40 per cent in the population served by the National Sanitation Office.[13]

33. Throughout his visit, the Special Rapporteur observed how the institutional structure for water management derived from the vision of productivity linked to the development of irrigation that was predominant in the country throughout the twentieth century. In that regard, following conversations with municipal authorities and regional officials from the National Water Distribution Utility and the National Sanitation Office, the Special Rapporteur evaluated as positive the emergence of a process of administrative

[10] See http://www.onas.nat.tn/En/page.php?code=19.

[11] See https://amcow-online.org/titbits-from-member-states-tunisia-holds-its-first-ever-public-private-partnership-in-the-water-sector/.

[12] See http://www.onas.nat.tn/En/page.php?code=10.

[13] See https://www.oecd.org/mena/governance/43316523.pdf.

decentralization after the revolution, even though the process was incomplete, particularly in terms of water and sanitation.[14]

B. Legal framework

34. Tunisia is a party to several international human rights treaties, including the International Covenant on Economic, Social and Cultural Rights, which stipulates the right to an adequate standard of living, including the rights to water and sanitation. Tunisia is also a party to the African Charter on Human and People's Rights and the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa, which stipulate the rights related to an adequate standard of living and the principle of non-discrimination. However, Tunisia has not ratified the International Convention on the Rights of All Migrant Workers and Members of Their Families, nor has it ratified the Optional Protocol to the International Covenant on Economic, Social and Cultural Rights.

35. The Constitution of Tunisia has changed twice in the last decade. A new Constitution was adopted in 2014 after the revolution, which was itself changed to a new Constitution published in the Official Journal on 18 August 2022, following a national referendum that took place during the Special Rapporteur's visit.

36. Concerning the human rights to water and sanitation, the 2014 Constitution established that "the right to water shall be guaranteed. The conservation and rational use of water is a duty of the state and of society". The 2022 Constitution explicitly includes the right to water, establishing in article 48 that: "The state must provide clean water to all on an equal basis and must preserve water resources for future generations." The human right to sanitation is not included.

37. The Special Rapporteur considers that, while it is positive that the State assumes responsibility for the provision of water under the principles of availability, sustainability and non-discrimination, in order for the human right to water to be fulfilled the State should also guarantee quality and affordability.

38. In that regard, the Special Rapporteur considers it important to emphasize that the 1975 Water Code,[15] which is the overarching legislation regarding the water sector, includes a provision regarding quality and acceptability (despite not clearly defining the right to water). Indeed, article 97 of the Water Code determines that water intended for consumption must not contain harmful quantities of chemical substances or germs harmful to health. It must be free of pollution and have organoleptic characteristics that render it acceptable.

39. On 3 October 2019, a draft law to replace and update the Water Code was presented.[16] Over the course of 2020 and 2021, the law was reworked in consultation with experts, regional governments and civil society, and finally approved by the Commission on Agriculture, Food Safety, Trade and Related Services for presentation to the parliament on 21 June 2021, however consideration of the draft law was postponed.

40. After the conversations held during his visit with civil servants, organizations, institutions, parliamentarians and social actors, the Special Rapporteur regards the developments included in the proposed draft law very positively. In particular, he considers that the provisions regarding the human rights to water and sanitation in rural areas, the measures proposed concerning access to information by citizens and the climate change adaptation strategies related to water to be of relevance.

41. In the Special Rapporteur's opinion, the decentralization process may have had positive consequences for the human rights to safe drinking water and sanitation of those living in rural or remote areas. In the Special Rapporteur's experience, water and sanitation are best managed at the territorial level. In a highly centralized country such as Tunisia, the Special Rapporteur was enthusiastic about a decentralization process that could have brought

[14] See Arab Reform Initiative, "Environmentalism after decentralization: the local politics of solid waste management in Tunisia" (2021).

[15] Law No. 75-16 of 31 March 1975.

[16] Draft law No. 66/2019.

water services and management of water sources closer to the rights holders living in the territory.[17]

C. Policy framework and hydrological planning

42. As established in pillar 5 of the country's strategic guidance document, water is a priority for the Government based on "promoting green growth for sustainable development". There are multiple water and sanitation policies, such as the regional master plans, the 2030 long-term strategy, and the "Eau 2050" strategy, which seeks to ensure the sustainable availability of water resources by 2050 and which was in the process of being drafted at the time of the Special Rapporteur's visit. Action plans, decision-making and tools for all actors will accompany this planning.[18]

43. All these policies aim principally to increase water resource availability by expanding the water infrastructure, namely by developing supply-side strategies instead of prioritizing demand management and ecosystem conservation strategies. From the Special Rapporteur's point of view, this is a strategic error, as has already been demonstrated in other countries, by fuelling demand expectations far beyond the availability that can ultimately be generated. These expectations increase the supply/demand imbalance and are non-sustainable in the current context of climate change.

44. In connection with the ongoing severe drought crisis, the Ministry of Agriculture, Water Resources and Fisheries announced on 31 March 2023 restrictions on agricultural irrigation, car washing etc., as well as measures to rationalize the consumption of water supplied by the National Water Distribution Utility until the end of September. Unfortunately, as of the date of the present report, those restrictive measures on water consumption do not seem to be applied by the population. In any case, beyond emergency measures and their effective application, it is essential to foresee situations of this type, which will be harsher and more frequent in the future, through adequate planning.

45. During his visit, the Special Rapporteur received numerous testimonies from rural communities and even from local and regional authorities on the de facto existing priority of water use for large-scale irrigation, mining and industry over drinking water in rural communities. For instance, in Meknassy rural communities denounced the overexploitation of aquifers by irrigation promoted by large investors who are granted drilling and pumping licences or are allowed to drill and operate illegal wells without any control, while similar permits for water for rural communities are denied. This ignores general comment No. 15 (2002) of the Committee on Economic, Social and Cultural Rights on the right to water, according to which priority must be given to the right to water for personal and domestic use, as well as to prevent hunger and disease. It even transgresses Tunisian law itself, which also establishes this priority.

46. In that context, the Special Rapporteur hopes that the "Eau 2050" strategy will be an opportunity for reflection for the Government to take up the challenge of restoring the good state of aquatic ecosystems, adjusting demands to the expected lower availability of water flows through demand management strategies and promoting a legal framework that guarantees social priorities from a human rights approach, paying special attention to rural communities.

[17] See presidential decree No. 2023-8, available at https://legislation-securite.tn/fr/law/105597.

[18] World Bank, *Water and Sanitation for All in Tunisia: a Realistic Objective*. Available at https://openknowledge.worldbank.org/handle/10986/30859.

IV. Human rights to safe drinking water and sanitation in Tunisia

A. Drinking water availability

47. According to World Bank data, Tunisia has made remarkable efforts to reduce poverty and increase access to water supply, sanitation and hygiene services, with 4 million people gaining access to water and improved sanitation between 1990 and 2015.[19] Unfortunately, the pandemic has increased poverty and the World Bank estimates that pre-pandemic levels will not be recovered until 2024.[20]

48. The National Water Distribution Utility states that the rate of drinking water supply to the population in Tunisia was 98.3 per cent in 2020, including 100 per cent in urban areas and 94.7 per cent in rural areas. The connection rate to the National Water Distribution Utility network is 84.8 per cent, including 99.8 per cent in urban areas and 49.7 per cent in rural areas. In the remaining rural areas not served by the Utility, 70 per cent of the population have individual connections to the networks and therefore have secure systems, according to the Utility.

49. However, the Special Rapporteur considers it important to note that the availability of safely managed water is significantly lower than the rate of access. In their joint monitoring programme for 2020, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) estimated that only 79 per cent of the population could effectively access managed water safely,[21] while according to data from the National Institute of Statistics, that percentage is only 57 per cent, a disparity in data that will be analysed below.

50. The availability of water services is geographically disparate: 650,000 people still do not have water in their homes, mostly in rural areas, and are supplied by public water sources, while some 300,000 people do not have public water sources near their homes, so they rely on springs, wells or water vendors.[22] Those 300,000 people represent about 2 per cent of the national population and live mostly in the centre-west and north-west regions, mainly in Jendouba, Kairouan, Kasserine and Sidi Bouzid.

51. Although water services are certainly available to most of the population in Tunisia, these services are frequently subject to continuity issues. Water shortage issues or breakdowns lead to increasingly frequent and prolonged water cuts. According to official data, in the past 15 years there has been a constant downward trend in the global efficiency of the network: 39.6 per cent of the National Water Distribution Utility networks are over 30 years old and 17 per cent were built 49 or more years ago.[23]

52. Despite the lack of data related to the obsolescence of rural networks not managed by the National Water Distribution Utility, it is likely that the figures there are even higher. In any case, water shortage issues or breaks in the network lead to increasingly frequent and prolonged water cuts, as the Tunisian Water Observatory reports, leading to a growing number of citizen complaints in this respect, to be precise 2,633 in 2021. According to the alerts received by the Tunisian Water Observatory in 2022 on their website, 147 reported water leaks lasted more than three days without intervention from the National Water Distribution Utility.[24] It is important to note that water cuts, when prolonged and frequent also affect the quality of the water, as will be explained below.

[19] Ibid.

[20] See World Bank, "Tunisia's economic update, April 2022".

[21] See WHO/UNICEF, *Progress in Household Drinking Water and Sanitation 2000–2020*.

[22] Ibid.

[23] See Ministry of Agriculture, Water Resources and Fisheries, *Rapport National du Secteur de l'Eau. Année 2020*, and *Rapport des Statistiques, Année 2019*.

[24] Thirst map of the year 2022, available from https://www.watchwater.tn/fr/blog/ (in Arabic and French only).

B. Accessibility

53. According to a recent study, 75.4 per cent of households in rural areas of Tunisia have running water on site and 14.8 per cent spend less than 30 minutes to access the nearest water point.[25] Barely half (50.3 per cent) of the poor rural families whose head of household has a low educational level have access to drinking water.[26] When running water does not reach the homes or accessing water services is intermittent, women walk long distances to public fountains and wells or buy water from private vendors and transport it to their homes. Although Tunisia has achieved a high household coverage rate, problems of potability and increasingly frequent and prolonged water cuts are leading women to carry out this kind of work, especially in rural areas, aggravating the poverty and the vulnerability of their households.

54. During his visit to Nasrallah, the Special Rapporteur exchanged views with a group of women, some of them elderly, who were fetching water by hand from a deep well. They explained that the water was not drinkable but that they used it for domestic work. The women bought water for drinking and cooking from street vendors at high prices and although it was better than the water from the well, there was no guarantee that it was safe to drink.

C. Affordability

55. The National Water Distribution Utility tariff system is based on consumption blocks. The price per m^3 for the first consumption bracket (20 m^3) is 0.200 dinars. Forty per cent of the users served by the Utility are in the lowest bracket and 70 per cent do not exceed the second bracket (21–40 m^3), where water is charged at 0.495 dinars per m^3. These rates assume that an average family's monthly cost to be paid for reasonable consumption represents less than 1 per cent of the minimum wage (403 dinars). Including fees from the National Sanitation Office for sanitation services, tariffs for water and sanitation do not exceed 2 per cent of the minimum monthly salary.

56. The rural communities served by the National Water Distribution Utility networks, which account for around 51 per cent of the rural population, benefit from a fixed tariff equivalent to the first bracket of urban supply, whatever the volume consumed. Unfortunately, the low prices guaranteed by the National Water Distribution Utility tariff system are accompanied by a lack of confidence in the quality of the potable water supply, as the Special Rapporteur was able to observe on many occasions when he was advised not to drink tap water.

57. The difference between the National Water Distribution Utility rates for the lowest brackets and the rate charged by the agrarian development groups for 49 per cent of the rural population is enormous: on average, 0.730 dinars, varying between 0.5 and 1.25 dinars per m^3. Where the agrarian development groups do not function, households are forced to rely on informal vendors or alternative solutions, with costs varying widely, from around 5 to 25 dinars per m^3.

58. Across the country, and especially in rural areas, even though there is connected water in households, the perceived deterioration of its quality pushes more and more families to buy bottled water, with all the negative repercussions that this implies for their family budgets. Bottled water sales increased from 2.25 billion litres in 2019 to 2.7 billion litres in 2020. Tunisia is thus ranked fourth worldwide in terms of consumption of bottled water, with an annual average of 227 litres per person per year.[27]

[25] Moez Alloui, "Mise en œuvre du droit humain à l'eau: un cas pratique, la Tunisie" (March 2012).

[26] United Nations Resident Coordinator's Office, Tunisia, *Common Country Assessment*.

[27] Ministry of Agriculture, Water Resources and Fisheries, *Rapport National du Secteur de l'Eau. Année* 2020, p. 23.

D. Quality and safety

59. Regarding water quality and risks of contamination of drinking water supplies, the data is diverse and contradictory, depending on the sources used, as mentioned above. Indeed, the National Water Distribution Utility data states that 98.3 per cent of the population can access managed water safely, the UNICEF/WHO joint monitoring programme for 2020 estimated that figure at 79 per cent and the National Institute of Statistics at only 57 per cent. The Special Rapporteur has therefore tried to clarify the differences between the official sources.

60. In 2019, the National Institute of Statistics, in collaboration with the Ministry of Development, Investment and International Cooperation, published the multiple indicator cluster survey of Tunisia with technical support from UNICEF, taking into account four indicators relating to ensuring access to safely managed water: the water comes from an improved water source; the water source is within the concession; water from the source is available when needed; the water is free of faecal and chemical contamination. On those criteria, overall 57.2 per cent of homes have safely managed water, 64.9 per cent in urban areas and 40.5 per cent in rural areas.[28]

61. Since the data contained in the 2019 report are primary data collected directly on the ground in 2018, the Special Rapporteur finds them more reliable than the estimates in the report of the WHO/UNICEF joint monitoring programme, which are based on secondary data from various sources.

62. Based on the multiple indicator cluster survey data from 2018, the Special Rapporteur finds that if only the first two criteria of the four set out above are considered, 98 per cent of the population (99 per cent in urban areas and 95.9 per cent in rural areas) have access to an improved water source, namely National Water Distribution Utility networks, standpipes, boreholes equipped with pumps and so on, and 86.3 per cent have access to such water at home. Those data do not differ much from those provided by the National Water Distribution Utility.

63. The Special Rapporteur notes that 98 per cent of the population having an improved source of water and overall 86 per cent having it at home, and the connection rates achieved in rural areas both by the National Water Distribution Utility and agrarian development groups, are the fruits of a huge national effort that must be recognized.

64. However, problems of water quality, frequent water cuts and the great inequality between urban and rural areas emerge as urgent problems that jeopardize the results of this national effort. The fact that with 86.3 per cent of the population having improved water sources at home, only 57.2 per cent can ensure that the water received is managed safely (according to the four criteria used in the multiple indicator cluster survey) indicates that among those connected to a water supply network, 29.1 per cent suffer from frequent water cuts and/or receive water of poor microbiological and/or chemical quality. These problems are much worse in rural areas, where, according to the survey, only 40.5 per cent of the population have access to safely managed water at home.

65. Drinking water contamination problems have different origins: the level of wastewater treatment, the efficiency of chlorination and potabilization processes, the contamination of aquifers by industrial, mining and agricultural discharges, and the pollution in the networks related to their obsolescence and frequent water cuts.

66. Faecal contamination of water bodies, especially aquifers, from domestic discharges without adequate treatment must be considered in order to assess the level of fulfilment of the human right to sanitation. The absence or inefficiency of disinfection operations, many without free residual chlorine, are of concern, particularly in rural areas, even in systems managed by the National Water Distribution Utility: in Ariana (21 per cent without chlorination), Bizerte (18 per cent), Gafsa (15 per cent) and Tataouine (33 per cent).[29]

[28] See https://mics.unicef.org/surveys.

[29] Ministry of Agriculture, Water Resources and Fisheries, *Rapport National du Secteur de l'Eau. Année 2020*, p. 164.

67. According to the Ministry of Health, the national average rate of bacteriological non-compliance registered in 2020 for the water managed by the National Water Distribution Utility is 10.1 per cent, with high rates in regions such as Ariana (33 per cent), Béja (21 per cent) and Tataouine (38 per cent), and much higher rates in rural areas managed by the agrarian development groups: Béja (29 per cent), Ben Arous (57 per cent), Gabès (39 per cent) and Tozeur (100 per cent).

68. According to the multiple indicator cluster survey, the population under moderate, high or very high risk of faecal contamination, such as E.coli, of water received in households reaches 28.9 per cent: 23.1 per cent in the urban population and 41.8 per cent in rural areas; 20.5 per cent make reference to pollution in the source and 28.9 per cent refer to contamination in the water received at home.

69. The Special Rapporteur thinks that one of the critical reasons for the high proportion of drinking water not managed safely is due to contamination in the networks and to water cuts because of the obsolescence of the pipes. When the water is cut off and therefore pressure also, in networks with 40 per cent of losses or more because of leaks, massive polluting intrusions occur through the leak points, endangering or destroying the potability of the water when the service is recovered. The Special Rapporteur noted with concern that in all the regions and municipalities he visited, people expressed general discomfort over the water cuts, complaining about the perceived quality of the water in their homes, which, according to them, was not drinkable, often cloudy and sometimes with a bad smell.

E. Human right to sanitation

70. The rates of availability of sanitation services are lower than those of water services. According to World Bank data, 86 per cent of people in Tunisia have access to safely managed sanitation. Around 250,000 people practise open defecation and unimproved sanitation is concentrated in the three governorates of the central-west region, which are also the regions with the lowest availability of piped sewerage and the highest use of pit latrines. The World Bank estimated that 900,000 people were using unimproved sanitation.

71. It is important to note that the human right to sanitation implies decent, hygienic and safe toilets and adequate wastewater treatment. In dispersed communities, individual septic tanks or similar solutions need to be correctly designed and maintained to avoid contamination of local water sources and aquifers by sewage infiltration. Small towns and villages need sewerage systems and extensive, affordable and easy-to-manage sanitation plants. In the case of larger urban areas, intensive sanitation plants are necessary, in addition to sewerage systems to prevent contamination of the aquifers that provide drinking water.

72. Wastewater treatment remains an issue in Tunisia. Of the 240 million m^3 of wastewater discharged annually in Tunisia, 140 million m^3 (58 per cent) are treated in 61 treatment plants.[30] The Special Rapporteur received testimonies in Gabès about the fact that these treatment plants are often overloaded, suffer frequent breakdowns and have to treat industrial discharges along with wastewater. This frequently results in a significant degradation or breakdown of their effectiveness due to the toxins that such discharges often carry. Although the Special Rapporteur has not had access to data that would allow for a rigorous assessment of the efficiency of those plants and of the privatized management policy applied by the National Sanitation Office for their management, this model does not seem to be effective. On the other hand, the lack of transparency and participation of rights holders in the privatized management prevents a documented assessment by the civil society organizations that monitor water and sanitation services.

73. Regarding the 32 per cent of the population not covered by National Sanitation Office networks, rural municipalities often do not have sewerage networks and when they do, they do not have wastewater treatment facilities. In addition, during his visit the Special Rapporteur saw how rural communities and the dispersed population lacked support in the

[30] Gaaloul Noureddine, Saeid Eslamian and Rim Katlane, “Status of water resources and climate change in Maghreb regions (Mauritania, Morocco, Algeria, Tunisia and Libya)”, *International Journal of Water Sciences and Environment Technologies*, vol. vi, No. 4 (December 2021).

design and supervision of the septic tanks and cesspools constructed by each family to ensure their proper installation and maintenance.

74. Staff of the National Sanitation Office and officials in the different regions visited explained to the Special Rapporteur that the policy of staff reduction being carried out by the National Sanitation Office in the face of a sharp increase in the population to be served, combined with the process of privatization of the management of the sanitation plants, has led to a degradation of the service.

75. Although much more moderately, the workforce of the National Water Distribution Utility is also weakening, having gone from 130 water subscribers per worker in 1990 to 475 subscribers per worker in 2019.[31]

F. Participation and access to information

76. State obligations related to the human rights to water and sanitation include applying the human rights principles of non-discrimination, participation and access to information. As explained above, in Tunisia the management of water and sanitation services is highly centralized. Regarding access to information, data related to drinking water distribution is provided by the National Water Distribution Utility as the responsible entity on the subject. Along the same lines, the National Sanitation Office provides data about sanitation networks and wastewater treatment. Nonetheless, there is a serious and significant lack of information concerning 49 per cent of the rural areas, where the National Sanitation Office does not cover sanitation and agrarian development groups manage the supply.

77. The Special Rapporteur noted that the considerable technical capacity, the robust institutional framework and the significant availability of knowledge and data in Tunisia do not translate into the efficient, transparent and participatory management of the water and sanitation services and resources. The administrative complexity of a highly centralized system hampers access to information and public participation.

78. Bureaucratism favoured by State centralization of services that are clearly local in character, together with problems of corruption and clientelism frequently denounced in the testimonies collected during the visit, explain the problems of lack of participation and transparency. The territorial presence of the National Water Distribution Utility and National Sanitation Office delegations is positive but insufficient. In fact, the lack of means, competencies, financial resources and participative neighbourhood articulation in municipalities causes imbalances as serious as the disconnection of a large part of city neighbourhoods from the sewage network.

79. The contrast between the official data on effective access to drinking water and people's assessment of it is a good example of the lack of transparency, participation and adequate communication between institutions and the population. As explained above, the Special Rapporteur collected widespread testimonies in all the regions he visited about the distrust of residents regarding the quality of the tap water, which leads to the purchase of bottled water, despite the fact that it is difficult for many people to pay for it.

80. At the time of the visit, although certain competences had been transferred to local administrations, lack of means, staff and funding made it difficult for them to effectively assume those competences, such as elaborating urban plans, including water and sanitation services. With the recent centralizing shift, these problems are likely to be exacerbated.

81. With respect to the agrarian development groups, community management turns out to be more a way of alleviating the limitations of the State in rural areas than an actual boost to community responsibility. The lack of means and adequate support for the agrarian development groups by the State is paradoxically combined with the lack of autonomy of the communities to contribute their own capacities and initiatives under the principle that everything must happen through the investments and decisions of the State.

[31] See Ministry of Agriculture, Water Resources and Fisheries, *Rapport National du Secteur de l'Eau. Année* 2020.

82. Regarding women's rights and participation in public life, Tunisia has made enormous progress, placing the country in a leading position in both the Arab world and Africa. In 2016, women accounted for 35.94 per cent of the national legislature and 40 per cent of the judiciary.[32] However, their effective participation remains a challenge in rural areas. The Special Rapporteur was informed that, in fact, no women served on the boards of any of the agrarian development groups that he encountered during his visit and that in general the participation of women remained very low across the country.

83. Regarding conflict management, the Special Rapporteur was struck by multiple reports of peaceful protests about the lack of access to water and sanitation across the country. In 2022, the Tunisian Observatory on Water counted 423 peaceful protests about water. The protests were related to the total lack of water or to intermittent or long-lasting water cuts. According to testimonies, the protests, sometimes violently repressed, were followed by judicial processes that criminalized the protesters. In the numerous meetings the Special Rapporteur held with communities, human rights defenders and social activists, it became clear that the population rarely found opportunities for dialogue with the authorities. The lack of response tended to accentuate protests, which tended to be criminalized and prosecuted rather than promoting dialogue and seeking solutions to often just demands and grievances.

G. Drinking water and sanitation in schools

84. During his visit, the Special Rapporteur received testimonies and witnessed first-hand the state and availability of school toilets. He noted that the toilets were often damaged and dirty and that there were often no toilets for girls. When they were available, there was a lack of facilities for girls to manage their menstruation. The Special Rapporteur noted that menstruation, as a shameful taboo, was still not included in the school curriculum. All of this penalizes girls disproportionately in dropout rates.

85. In a meeting during the visit, the Minister of Education indicated to the Special Rapporteur that 1,415 elementary schools were not yet connected to the national water supply network, of which 461 had problems with a regular supply of drinking water. The Minister said that promoting drinking water in schools was among the ministry's priorities during the next school year.[33]

H. Groups in situation of particular vulnerability

86. According to the Office of the United Nations High Commissioner for Refugees (UNHCR), in September 2021 there were 8,854 displaced persons in Tunisia, of whom 5,913 were asylum-seekers and 2,882 were refugees.[34] Refugees and asylum-seekers in Tunisia originate mainly from the Middle East, sub-Saharan Africa and the Horn of Africa. Most reach Tunisia by land or air from neighbouring countries and in mixed movements by sea or land to or from Algeria and Libya.

87. In 2019, a report found that the Red Crescent refugee camp in Médenine had insufficient and rarely cleaned showers and toilets and extremely limited access to hot water. The limited facilities were used by adults, children and people of all genders alike, and several women complained of a lack of privacy and sexual aggression and intimidation while using them.[35]

[32] See preliminary observations on the visit to Tunisia by the Independent Expert on protection against violence and discrimination based on sexual orientation and gender identity, available from https://www.ohchr.org/en/press-releases/2021/06/preliminary-observations-visit-tunisia-independent-expert-protection-against.

[33] Webmanagercenter, "1415 écoles primaires ne sont pas encore connectées au réseau national d'exploitation des eaux (Fathi Slaouti)", 12 February 2021 (in French only).

[34] See https://data.unhcr.org/en/documents/details/89130.

[35] Forum Tunisien pour les Droits Économiques et Sociaux, "La situation des migrants dans le centre du Croissant Rouge à Médenine" (2019), available from situation.centre.croissantrouge.medenine.pdf.

88. After visiting migrants in Médenine and listening to the stories of refugees and asylum-seekers, both women and men, the Special Rapporteur wishes to point out that the Government is responsible for providing an adequate standard of living for these populations. The rights of refugees and asylum-seekers to water and sanitation are interlinked with their status in the country. In that regard, the Special Rapporteur urges the Government to provide them with certainty regarding their legal status.

89. During his visit, the Special Rapporteur visited a women's detention centre, where he witnessed how the detainees were provided with only one toilet for more than a dozen women, with low water pressure and in a crowded space in high temperatures.

I. Public investment, local governance and community-based management

90. As explained above, the water and sanitation sector in Tunisia has benefited from large public investments and budgetary allocations over decades. However, several problems put the human rights to drinking water and sanitation at risk: the marginalization of rural areas, the increasing deterioration of the water supply networks, the sanitization of used water and adaptation to climate change.

91. There are disparities across the country. In 2015, total expenditures per capita on water, sanitation and hygiene in urban areas were around $66 compared to only $38 in rural areas. Inequality was even wider between governorates, with total water supply and sanitation expenditures ranging between $30 per capita in Kef (one of the most vulnerable areas) and $109 in Tozeur in 2015.[36] Inequality is even greater in the sanitation sector, where investment in rural areas is only 2 per cent.

92. The considerable efforts made to expand the water and sanitation networks require systematic budgetary commitments for their long-term maintenance and for replacing the supply networks that have become obsolete.

93. Regarding rural areas, the Special Rapporteur considers the community management of water and sanitation as the appropriate model of democratic governance that should be promoted in rural communities. He therefore believes that the extensive network of agrarian development groups should be seen as a social and political asset that the Government should strengthen by making the necessary financial and technical means available to rural communities. Effective recognition should also be given to community management, allowing communities to invest in their services and for community work to replace or complement the payment of tariffs. In short, it would promote community responsibility without reducing State responsibility and support in rural areas.

94. In addition, having identified the problem of high electricity costs as one of the reasons that led to the collapse of many agrarian development groups, this could be an opportunity to promote a transition to solar energy (or wind energy where the right conditions exist) to guarantee drinking water in rural communities and lower the operating costs of those groups. The investment and installation costs can be significantly reduced if purchases and contracts are made at a national level. Likewise, to ensure the affordability of solar technology maintenance by the communities and considering the high level of education among Tunisian youth, the technical training of young people in rural areas should be promoted.

V. Conclusions and recommendations

95. **There is an urgent need for Tunisia to end the overexploitation of aquifers and promote sustainable planning adapted to climate change under a human rights approach.**

[36] See World Bank, *Tunisia WASH and Poverty Diagnostic Phase 2 Report: WASH Accounts* (June 2017).

96. **Given the progressive reduction of water availability due to climate change and the current overshoot of consumption over and above the renewable availability of resources, a rigorous application of the precautionary principle and moderation of productive ambitions is required. Also, human rights to drinking water and sanitation must be guaranteed priority over productive uses.**

97. **The Special Rapporteur recommends:**

(a) **Strengthening hydrological planning from the perspective of climate change, moving from supply-side strategies to sustainability-based strategies and demand management;**

(b) **The closure of illegal wells and the installation of meters to guarantee not only the sustainability of the aquifers but also reserves for extraordinary drought cycles;**

(c) **Promoting the creation of aquifer user associations with the participation of the agrarian development groups in the control and management of aquifers, both in quantitative (pumping) and qualitative (possible contamination) aspects;**

(d) **Guaranteeing the primacy of drinking water over productive uses, avoiding pumping licences that could lead to cuts in the supply of drinking water.**

98. **The Special Rapporteur recommends that supply networks be renewed and the potability of drinking water guaranteed, especially in rural areas. Obsolescence and the lack of network maintenance, together with the high level of leaks, is the main reason for the frequent water cuts and the contamination of drinking water in the networks through leakage points, especially in rural areas.**

99. **The Special Rapporteur recommends:**

(a) **Promoting a network renewal plan and prioritizing its financing, especially for rural communities;**

(b) **Promoting regulations that guarantee budget allocations for the systematic maintenance and renewal of the water networks;**

(c) **That the State guarantees, free of charge, at least two litres of drinking water per person per day, employing tanker trucks and cisterns in rural communities, with special priority for schools, as long as the public networks do not guarantee drinking water;**

(d) **In urban neighbourhoods, as long as drinking water is not guaranteed in the networks, promoting a municipal bulk drinking water service at cost price, distributed throughout the commercial food network, much cheaper than bottled water and avoiding plastic waste. That could include a home service for persons with disabilities under the direction of municipal social services.**

100. **The Special Rapporteur recommends that sanitation as a human right is developed and guaranteed. Ensuring the human right to sanitation is essential to preserving the potability of the water supply and the health of the population, especially in rural areas.**

101. **The Special Rapporteur therefore recommends:**

(a) **Promoting a specific rural sanitation programme for all communities, especially those not reached by the National Sanitation Office, involving the agrarian development groups, providing them with funding and strengthening their capacities in the design, construction and maintenance of septic tanks in dispersed rural populations;**

(b) **Promoting sewerage networks and well-designed extensive sanitation plants, with no energy costs, in rural municipalities of up to 5,000 inhabitants and providing decentralized technical staff to strengthen municipal and community capacities;**

(c) **Strengthening the National Sanitation Office in terms of financing and personnel, in order to be able to recover the public management of sanitation plants as strategic elements of national interest and develop tertiary systems in urban intensive sanitation plants that allow for the reuse of wastewater;**

(d) **Prioritizing urban supply over the mining sector by building wastewater treatment plants at both Gabès and Redeyef and supplying the mining and processing industries by reusing the water from those plants.**

102. **In terms of the governance of drinking water and sanitation, the Special Rapporteur recommends that the current public and social approach to water management, with an affordable rate system for blocks of consumption, should be improved by promoting the participatory governance of water and sanitation services, involving municipalities, rural community systems and the general public. This requires progressive reforms that promote the decentralization of competencies in the management of drinking water and sanitation services, and the strengthening of community management based on the agrarian development groups in rural areas. Unfortunately, following the Special Rapporteur's visit, the incipient decentralization process that was under way seems to have been reversed.**

103. **The Special Rapporteur recommends:**

(a) **Opening a process of reflection and public debate on what works or does not work in the agrarian development groups to reform and empower community-based management, paying special attention to women's participation;**

(b) **Prioritizing the transition to solar (or wind) energy for pumping water in rural areas, lowering the operating costs of the agrarian development groups and promoting the technical training of young people locally to maintain and manage those technologies;**

(c) **Giving agrarian development groups in rural communities the possibility to make investments and contribute their work on the water systems they manage, which will enable community ownership to motivate greater community participation;**

(d) **Reconsidering the process of decentralization of water and sanitation services, and developing it progressively but coherently, as municipal competences, with adequate regulation and national support to guarantee the human rights to drinking water and sanitation. Maintaining hydrological planning as a centralized competence in the management of large infrastructures, and in the planning and management of river basins and aquifers with the objective of guaranteeing their sustainability;**

(e) **Reinforcing sanitation as a national priority, as well as the staffing of the National Sanitation Office, and subjecting the privatization process to a public audit to draw conclusions and reverse the privatization promoted so far, if appropriate, in line with the traditional social approach to public water management in Tunisia;**

(f) **Progressively transitioning to solar energy for groundwater pumping, giving priority to rural communities, for intensive urban sanitation treatment plants and even, if necessary, for seawater desalination on the coast;**

(g) **Promoting transparency and citizen participation in the management of water and sanitation services at all levels, with special attention paid to the equal participation of women;**

(h) **Providing spaces for dialogue and mediation around water conflicts, avoiding their judicialization and the criminalization of protesters and water defenders, as part of a national dialogue on the water challenges posed by climate change;**

104. **Regarding the next water code, the Special Rapporteur would like to highlight the high level of social participation achieved in the proposal presented to the parliament in 2021. For that reason, he hopes and recommends that, following the withdrawal, under pressure from civil society organizations, of the most recent draft presented, the participatory spirit and the contents of the 2021 draft will be taken up again.**