



PALAIS DES NATIONS • 1211 GENEVA 10, SWITZERLAND
www.ohchr.org • TEL: +41 22 917 9000 • FAX: +41 22 917 9008 • E-MAIL: registry@ohchr.org

End of Mission Statement by the Special Rapporteur on the human rights to safe drinking water and sanitation, Mr Pedro Arrojo-Agudo

Tunis, 28 July 2022

At the end of my country visit to Tunisia undertaken at the government's invitation from 18 to 29 July 2022, I am pleased to share my preliminary findings and recommendations based on the information gathered before and during the visit. The final and complete report will be presented to the United Nations Human Rights Council at its 54th session in September 2023.

I want to thank the Government of Tunisia for the invitation and collaboration in the organization of the visit and for the respectful dialogue we had during the country visit, which I am sure will continue in the future. I am grateful to the staff of the Ministries that shared their knowledge with me and the municipalities, and local water, sanitation, and health authorities I met during my intense trip throughout the country. I want to thank you for having made time in your agendas to meet me and share your knowledge and experiences with me. During the visit, I also met with an extensive network of civil society, community organizations, and rights holders; the outcome of this visit would not have been possible without your work for months to prepare and support the visit in the field. Particularly, I would like to thank the people in the rural areas and small villages that have opened their communities and hearts to share their concerns, difficult living conditions and daily struggles to fulfil the human rights to safe drinking water and sanitation. Meeting with you confirmed my conviction that rights holders should be at the centre of safe drinking water and sanitation policies and programmes.

Finally, I would also like to thank the United Nations Resident Coordinator's Office and the Office of the High Commissioner for Human Rights in Tunisia for facilitating and supporting this visit.

* * *

Climate and available water resources

As many of you well know, Tunisia's history, culture, social fabric and natural resources are very much intertwined with its geographical position in the Mediterranean. I feel very close

to Mediterranean Tunisia and its people. I have already learnt about Tunisia's limited, unevenly distributed water resources and its climatic regions, ranging from the humid North to the desert in the South. Also, I have read about the surface, medium and even deep aquifers of non-fossil waters renewables aquifers in the South. During my preparations for the country visit, I studied the details of Tunisia's water resources, and I learned that of an estimated total of 4,929 hm³, 55% is surface water and 45% groundwater; about 4,200 hm³ is considered renewable and the rest is non-renewable fossil groundwater¹. In addition to the available natural resources, the country has a minimal volume from non-conventional sources, mainly desalination or reuse.

During the country visit, I witnessed how a well-structured state governance system is already in place at the national and territorial levels and how many public servants are willing to commit to improving water and sanitation services for all. Moreover, the descriptions and numbers I have read became real in the faces of the men, women, boys and girls I met and who daily struggles to fulfil their human rights to safe drinking water and sanitation. Building on all of this, I have identified a series of challenges and possible solutions that I would like to share:

1. FIRST CHALLENGE: to end the overexploitation of aquifers in the current context of climate change and prioritize the human rights to safe drinking water and sanitation

Most of Tunisia's population lives on the coast, where the industrial and tourist developments are. On the other hand, agriculture, which supports 35% of Tunisians' population, has undergone a profound transformation with the massive expansion of irrigation. According to the information I gathered during the country visit, irrigation has grown from a few thousand hectares in the 1970s to more than 400,000.

The so-called supply self- strategies, in force throughout the 20th century, led to the construction of large dams in the North that supply water until Sfax, with significant water transfers along the coast under massive public subsidies. On the other hand, developing pumping and well-drilling technologies has generated growing water underground demand. The demand growth exceeds ecosystem sustainability, rising from 67.3% renewable resources in 2000 to 82.8% in 2007 and 113% in 2017.

Most of this water, up to 80%, is used for irrigation purposes and 20% for urban and industrial uses.

In this context, with resources in the North exploited at maximum levels, the increasing demand mainly for irrigation is supplied by drilling underground water without control due to the absence of water meters and through illegal wells that reach 90.000 according to official data.

Likewise, in the Gabes Jeffara area, as a result of the massive use of flows in the industrial treatment of phosphates since the 1970s, a shallower aquifer was depleted, the springs dried up, and the natural and cultural heritage of the oases of Gabes, which deserves to be protected as a World Heritage Site, is disappearing. Likewise, coastal aquifers are suffering salinization processes due to marine intrusion. The overexploitation of the intermediate aquifer (around

¹ Rapport national du secteur de l'eau de 2019.

70 meters) continues to worsen due to the growth of irrigation. Even the non-renewable deep aquifer, which initially offered a pressurised water upwelling (artesian well), now requires pumping, and is expected to go into critical condition in less than 25 years. Brackish flows extracted from the deep aquifer are treated in a desalination plant and mixed with water of poorer quality from the intermediate aquifer to be used for the phosphate industry and partly for urban and agricultural use. The testimonies I collected from local and regional authorities and communities reveal that de facto, the priority to use water is being given to industry and irrigation, above drinking water, particularly for rural communities.

Furthermore, during the visit to Meknassi, rural communities denounced the overexploitation of aquifers by irrigation promoted by large investors who are granted drilling and pumping licenses without control and have illegal wells without punishment. On the contrary, similar permits for water to rural communities are denied. In addition, due to the deeper wells with greater pumping capacity near the water supply wells, the water table drops when they irrigate, and the drinking water pumping stops producing thus water cuts.

As stated by the Committee on Economic, Social and Cultural Rights General Comment No. 15 on the on the right to water, priority in the allocation of water must be given to the right to water for personal and domestic uses as well as to prevent starvation and disease

However, guaranteeing sustainability and avoiding over-exploitation is not enough given the climate change perspectives; it is fundamental to plan for a sustainable future that could guarantee water availability to everyone in the country. In this regard, I would like to share with you some climate change impacts that I consider essential to start thinking together about how to plan for the near future:

- A drastic reduction in average surface water flows will occur due to a decrease in medium rainfall and an increase in evapotranspiration from plant masses due to temperature rising. This reduction can reach 40% in the more sensitive Mediterranean territories²;
- Increasing risk of forest fires and intensification of erosion processes, progressive desertification of territories, and accelerated clogging of water reservoirs, with the consequent reduction in their storage and regulation capacity;
- The infiltration of water that feeds aquifers will be reduced due to decreasing medium precipitation, greater plant evapotranspiration and a more significant proportion of surface runoff at times of heavy rainfalls;
- A higher water consumption per irrigated hectare for agriculture due to temperature rise.
- Longer and more intense drought cycles that can even put the habitability of certain territories at risk.
- Storms of greater intensity, with the risks of flooding.
- Salinization of aquatic ecosystems due to the rise of the seas.

Given the context, it is urgent to adapt the water demand to the expected renewable availability, changing the "supply" strategies to approaches based on the principle of

² Spain Parliament–Subcommittee water and climate change - P.100 para 3;
https://fnca.eu/images/documentos/Temporal/BOCG-12-D448_InformeSubcomisionCambioClimatico_ConVotosParticulares.pdf

sustainability and adequate management of water demand, ending overexploitation and illegal wells and controlling the pumping by water meters. Aquifers, the water lungs of nature, must be managed as strategic reserves to cope with the extraordinary droughts that will tend to be more prolonged and intense.

Climate change will increase competition for water putting at risk the human rights to safe drinking water and sanitation. However, it is vital always to insist that water scarcity cannot justify the non-compliance to the human rights to drinking water and sanitation. It is necessary to give effective priority to drinking water, reserving the highest quality available water regardless of how profitable other uses might be.

Preliminary recommendation.

Strengthening hydrological planning from the perspective of climate change requires changing approaches. I believe there is a general consensus on the need to move from "supply-side" strategies to sustainability-based strategies and demand management. Given the reduction of water availability due to climate change, this requires rigorously applying the precautionary principle and moderating productive ambitions. The pumping must not exceed the rate at which aquifers are fed and guarantee strategic reserves to face the extraordinary droughts that will be harsher and longer.

Promoting a demanding and participatory control of aquifers implies putting an end to illegal wells and confronting influential sectors. It also requires controlling the pumping through compulsory meters, which will probably require a cultural change in the users. I think it would even be advisable to promote the collaboration of the beneficiaries of each aquifer, promoting public knowledge of their status, in quantity and quality, as well as the risks that threaten them. Territorial management and planning measures are also necessary to protect groundwater quality, preventing discharges and diffuse pollution with the collaboration of those who live in the territories and know it better.

Ensure the priority of drinking water and sanitation

Above all, it is necessary to guarantee the primacy of drinking water over productive uses, avoiding pumping licenses that threaten to cause water cuts or put the supply of drinking water at risk.

2. SECOND CHALLENGE: renew supply networks and guarantee drinking water, especially in rural areas

It is estimated that the coverage of home supply networks reaches 98% of the population, demonstrating the country's enormous and meritorious effort over decades. Nevertheless, water quality, strictly speaking, concerning potability, only 57% of people in the country have access to safely managed drinking water; 65% of them live in urban areas, and 42% are rural. Still, according to information received during a meeting with the government representatives, these percentages could be in terms of potability but also of acceptability. In this regard, faecal contamination problems such as E.coli reach 42% in some rural areas,

while in urban areas, this kind of contamination ranges to 23%³ The lack of water quality profoundly impacts the population's health, particularly children's health and life expectancy.

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 or wells.

In this connection, I want to tell you about the women I met raising water by hand from a well in Essoualem in the Governorate of Kairouan. While I chatted with these women, some of them of old age and in poor health conditions, I witnessed how they raised the utterly contaminated water by hand in buckets. The women explained that they use this water to attend to household hygiene. At the same time, they are forced to buy water for drinking and cooking from private sellers, with no guarantee of safety or potability. What I witnessed in Essoualem is an inhumane situation that needs to be urgently addressed.

What concerns me the most about the quality of water is that all parameters in Tunisia have been worsening year after year since 2019. The national average rate of bacteriological non-compliance recorded in 2020 is 10.1% compared to 9.9% in 2019 and the national average rate of physico-chemical non-compliance recorded is 5% compared to 6% in 2019⁴.

Beyond the contamination of the aquifers, due to the lack of sanitation of the used water, the key, in my opinion, lies in the obsolescence and poor condition of the supply networks, especially in rural areas, with water losses that in some cases exceed 40%. Water shortage issues or breakdowns lead to increasingly frequent and prolonged water cuts. Cutting off the water in a network or part of it avoids substantial water losses. However, when the water is cut, massive polluting intrusions are produced, breaking the water's potability when the service is restored.

In all the regions and municipalities, I visited, especially in rural communities, there was general anger because of the water cuts. In addition, many rights holders showed despair because of the quality of the water in their houses, which was not drinkable, often cloudy and sometimes with bad smells.

Preliminary recommendation

It should be a priority to renew the supply networks. Despite the commendable efforts made by Tunisia on this front, the high level of leaks is the main reason for the frequent water cuts and contamination of the drinking water of a large part of the Tunisian population.

In my opinion, community work could lower costs, optimize resources and collaborate with maintenance.

All of these should be complemented by regulations that guarantee budget allocations to guarantee the systematic maintenance and renewal of the water networks.

Urgent transition measures that guarantee the human right to drinking water. While structural measures such as the renovation of networks are developed, it is necessary to

³ MICS, 2018. <https://washdata.org/report/tunisia-2018-mics-report>

⁴ Le rapport national de secteur de l'eau 2020.

promote effective measures that ensure drinking water for those who do not have water today. For this reason, I suggest that in rural communities with no access to safe drinking water, the state guarantees, free of charge, through the municipalities, at least 2 litres of drinking water per day through tanker trucks that feed weekly drinking water cisterns. This measure should be urgently taken in schools, where I also recommend promoting a program of rainwater tanks, following the Arab and Mediterranean water cultures. This would entail an educational element that could be replicated in all public buildings as an example to follow in homes and communities.

In the urban environment, I recommend promoting a bulk drinking water service at a cost price, managed by the municipalities, so that drinking water of proven potability is distributed in bulk throughout the commercial food network. This public service would avoid the current massive use of plastic bottles and save money for families who are forced to buy bottled water. This municipal service should include a home service for persons with disabilities under the direction of the municipalities social services.

3. THIRD CHALLENGE: develop sanitation as a human right and protect people's health

Preserving the quality of water in nature is an essential condition to guarantee the potability required to fulfil the human right to water. Although, even from an economic point of view, it is much cheaper to prevent pollution than to clean it up.

The effort made by Tunisia over the last few decades in terms of water and sanitation has been significant, reaching today 96% coverage of water supply in major cities; and 68% of basic sanitation in municipal urban areas (connected to sanitation networks but not necessarily to treatment plants, since the quantity of sanitary water treated in Tunisia does not exceed 38%)

However, only 86% of people in Tunisia have access to safely managed sanitation, around 250,000 people in Tunisia still practice open defecation.⁵

The human right to sanitation do not only entail having decent, hygienic and safe toilets, but also the management of waste water to prevent contamination of aquifers. For instance, in dispersed communities, it is necessary to have individual septic tanks or other safe solutions that help avoid contamination. Meanwhile, small towns and villages need extensive and easy manageable sewage systems. In the case of more extensive urban areas, on top of sewage systems, intensive sanitation plants are necessary to manage the risks of polluting the aquifers that provide them with drinking water.

To avoid and manage the risks of water contamination in the country due to:

- the deficient sanitation of wastewater in existing sanitation plants, to which industrial effluents are often discharged, undermining the plants' performance;
- direct discharges coming from municipalities that have a sewerage network but no sewage station or from irregular neighbourhoods and urbanizations not connected to the sewerage network;

6 World Bank, 2018, Water and Sanitation for all in Tunisia, page 2.

- individual wells and septic tanks in rural areas, without adequate design or maintenance, contaminate the aquifers that supply water to the communities.
- industrial and mining pollution due to toxic discharges without specific purification;
- the growing diffuse contamination by nitrates and agricultural pesticides that contaminate aquifers and water supplies;
- contamination in the transport and distribution networks due to their poor condition, as explained above.

Of particular concern are the serious deficiencies in water and sanitation services in educational and health centres. During the visit to Gabes, for instance, I observed that the schools served by the water network have frequent cuts, and the water is not drinkable. The evaluation carried out in 2017 by the Ministry of Health on hygiene in Health Centres (HC) shows that only 66% of the premises met the necessary hygiene; only 55% the hygiene of materials and equipment; and only 69% adequate personal hygiene.

Preliminary recommendation

Develop rural sanitation. It will be challenging to guarantee rural drinking water without sanitation that prevents contamination of aquifers. For this reason, I recommend promoting a specific rural sanitation program for all communities, especially for those who currently are not reached by ONAS, around 32% of the population.

Such a program should offer co-financing incentives and technical collaboration commitments in the design, construction and maintenance of septic tanks in dispersed rural populations. By providing adequate technical staff, the municipalities collaborating with the GDAs could collaborate effectively with the families that have been neglected. In towns of up to 5,000 inhabitants, it is reasonable to design sewage networks with extensive sanitation plants. These well-designed and built plants will allow wastewater to be treated with no energy cost. Rural communities could later reuse the treated wastewater for agricultural uses. Guaranteeing 100% sewage sanitation in the urban areas requires providing municipalities with intensive sanitation plants and tertiary systems, which allows the regenerated water to be reused. Where there are plants, it is urgent to avoid mixing water with industrial discharges that usually collapse the sanitation system.

Make the priority of drinking water and phosphate production. Both in Gabes and Redeyef, the priority of drinking water over industrial treatment and the washing of phosphates could be guaranteed by reusing the urban flows retrieved from industrial and mining uses. The companies themselves should contribute to financing these sanitation infrastructures to the extent that they would be helpful for their productive activity. The state should make accountable the phosphate companies concerning discharges that could affect aquifers' in towns around Redeyef as well as regarding possible impacts on the sea in Gabes.

4. FOURTH challenge: the governance of drinking water and sanitation

Tunisia has a good institutional water system which since the 1970s has taken the development and management of significant water works and wells with the central objective of extending irrigation.

In Tunisia the management of drinking water is done by the National Water Distribution Utility (SONEDE), a public institution dependent on the Ministry of Agriculture, while sanitation is managed by National Sanitation Office (ONAS) dependent on the Ministry of the Environment.

The SONEDE manages the large surface water hydraulic infrastructures and the operation of numerous wells throughout the country to supply drinking water to the entire urban population and 51% of the rural population. At the same time, it offers flows for irrigation and industrial uses. For the rest of the rural population, that is, 49%, drinking water is managed by the Agricultural Development Groups (GDAs), under the support and direction of the Ministry of Agriculture, from its regional delegations, the Regional Commissions for Agricultural Development (CRDAs). The 2,500 GDAs throughout the country are community-based organizations that manage irrigation and drinking water. The communities elect the GDA boards, and their members are volunteers. However, it is the Ministry of Agriculture that decides and invests in infrastructures such as wells, pumping engines and distribution networks, which can serve water to more or less dispersed communities. In cases where the complexity of the water systems exceeds the management capacity of the GDA boards, the CRDA can hire the support of a person with technical training.

The construction and management of sewerage networks and sanitation facilities is the responsibility of ONAS, which currently covers these services in urban areas and municipalities with sewerage networks. As a result, most of the rural population is deprived of effective support or regulation with regard to sanitation and each family addresses sanitation individually through toilets, septic tanks and wells that often lack adequate design and maintenance, increasing the risks of contaminating the drinking water.

I can understand historical reasons that have led the Ministry of Agriculture, through SONEDE, to be responsible for managing drinking water services, including in the cities, but this implies contradictions that grow as sanitation, linked to water supply, is under the responsibility of the Ministry of Environment through ONAS. At the same time, an interesting but complex decentralization process is in implementation, in which municipalities would play an increasingly important role in services such as water and sanitation. Indeed, in most countries, the municipalities manage these services.

Problems in the GDAs functioning

The GDAs manage the water of some around 1,275,000 of the population mostly living in situations of poverty and vulnerability⁶.

In the various regions visited, the authorities consulted estimate that around a third of the GDAs work well, another third work with problems, while the remaining third are collapsed due to issues such as:

- The high cost of electricity that leads to non-payment, power cuts and, therefore, water cuts;
- Poor state supply network, with high levels of leaks and frequent outages that produce contaminating intrusions, causing water to be undrinkable, and encouraging a growing rate of non-payment.
- Rights holders discontent and protests due to non-compliance with the law regarding the priority of drinking water over productive uses, both for irrigation by large producers and for phosphate mining.

- Prolonged water cuts for weeks, months or even years. For instance, according to the information received, the Sagdoud oases near the Redeyef phosphate mine has been without water for seven years due to the poor condition of the pipes and the lack of water pressure. The community highlighted that they had offered the government to renovate the pipeline and construct a well, with no positive response. Three-quarters of the community have abandoned their homes in the oasis.

Women in water and sanitation management

Tunisia has made considerable progress in terms of equal rights of women. In 2016, women represented 35.94% of the national legislature and 40% of the judiciary⁷. However, women's effective participation remains a challenge in rural areas.

When running water does not reach the homes, women sometimes walk long distances to public fountains, wells or water points where they buy water from private vendors and transport it to their homes. Although Tunisia, as explained above, has achieved a high rate of household coverage, the non-potability of water and increasingly frequent and prolonged water cuts are leading women to this kind of work, especially in the rural areas. Despite their involvement in ensuring water and sanitation for their homes and communities, I was informed that there are no women on the boards of GDAs that I met.

Finally, I have received testimonies and have seen for myself the deplorable state of school toilets, often no toilets for girls, inadequate facilities and lack of attention to adolescent girls' menstrual health, while menstruation, as a shameful taboo, is still not included in the school curriculum. All of this penalises girls disproportionately in their dropout rates.

Preliminary recommendation

In my view, the community management approach is the one that best responds to the necessary democratic governance in rural areas, where a large part of the most impoverished and vulnerable population lives. For this reason, to promote adequate reforms, it seems essential to open a process of reflection and public debate on what works or what does not work in the GDAs. In this debate, it is vital to address the lack of women's participation in the GDA boards.

Having identified the problem of the high electricity costs as one of the reasons that led to the collapse of many GDAs, I believe it is necessary to promote a transition to solar energy (or wind energy where conditions exist) to guarantee drinking water in rural communities lowering the operating costs of the GDAs. The investment to be made and the 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, considering Tunisia's high level of education among youth, it is necessary to promote the technical training of young people in rural areas.

It is advisable to give the communities the possibility to collectively own and make investments in the water systems they manage to motivate greater community involvement

⁷ [Preliminary observations on the visit to Tunisia by the Independent expert on protection against violence and discrimination based on sexual orientation and gender identity | OHCHR](#)

without reducing the current participation of the state in water investments and infrastructures. In addition, community work could be integrated as a substitute or complementary contribution to the payment of the tariffs.

In my opinion, it is essential to reflect on the current institutional model to improve drinking water and sanitation governance. In any case and above all, I must recognize and congratulate SONEDE, ONAS and the respective ministries for the social approach of the tariff system, by consumption blocks, that make the services affordable to the most impoverished.

I believe it is convenient to resume the process of debate on the new Water Code that is pending in Parliament and consider an institutional reorganization by progressive phases that will allow integration of water and sanitation management as a municipal competence, with relevant national regulation and supports. However, I know that this institutional transition needs time, and it is advisable to carry it out in gradual phases.

On the other hand, hydrological planning should continue to be a centralized responsibility concerning the promotion and management of large infrastructures and the planning and management of river basins and aquifers.

The need to strengthen municipal capacities manifests dramatically in the lack of technical teams and human and financial resources to develop and enforce urban plans that prevent the massive existence of irregular houses and urbanizations that cannot be linked to the water supply network, particularly sewage.

Strengthening the public institutions and governance of water in the face of the enormous challenges that arise on which human rights depend is, in my opinion, necessary. That is why I find it surprising, to say the least, the drastic cut in staff decided by the ONAS, which currently makes it impossible, as I was able to confirm in my interviews with those responsible for these services, to attend to the basic and urgent needs of the population. Outsourcing the management of sanitation plants seems more of a "defensive" option, based on a strategy of thinning public capacities, contradictory to the need to take on the national challenge that sanitation represents today for Tunisia. Therefore, I recommend submitting this privatization process to a public audit that allows conclusions to be drawn and the challenges posed to be addressed.

Energy transition strategy linked to drinking water and sanitation. Water and sanitation governance has an energy dimension that must be addressed, from energy transition to tackling climate change for economic reasons.

On the coast, where the most significant urban demands are concentrated, I recommend considering the option of desalinating seawater with solar or wind energy. In the entire country, the availability of solar energy should lead to pumping groundwater with solar energy, giving priority to rural communities as a way to strengthen community management.

Generate dialogue with the people and avoid the judicialization of water protests. In the many meetings with communities, human rights defenders and social activists, it was clear that not fulfilling the human rights to water and sanitation leads to complaints from people

who find no solution or response from the authorities. The lack of response has resulted in protests that tend to be criminalized instead of promoting dialogue and solutions to what are usually just demands.

My official visit to Tunisia took place at a crucial juncture for Tunisia's democracy. I want to take the opportunity to reiterate my disposal to support the government of Tunisia in fulfilling the human rights to safe drinking and sanitation of all who live in the country. Two weeks is not sufficient to fully understand all aspects of the situation of human rights to water and sanitation in any country. After the visit, I will gather further information, provide an analysis of and recommendation to the issues that I have mentioned today, together with other issues including but not limited to the regulatory framework, national legislation recognizing the human rights to water and sanitation and disaggregation of monitoring data.

Information about the visit

I met with Government officials at the National level: Minister of Foreign Affairs, Directors of the Ministry of Agriculture, Water Resource's and Fishing, Head of Division of the Ministry of Agriculture, Water Resources and Fishing, Central Director of SONEDE, Deputy Director of the Ministry of Health, Deputy Director of the Ministry of the Environment, Director of ONAS, Director and Project Manager of the Ministry of Social Affairs, Director and Head of Division of the Ministry of Family, Women, Children and Seniors and the Director and Project Manager of the Ministry of Education. At regional level I met with the Municipalities and representatives of SONEDE, ONAS and GDA in Kairouan, Sidi Bouzid, Gabes, and Zarzis.

During the visit, I also visited and interacted with communities in Kairouan, Nasrallah, Essoualem, Sidi Bouzid, Mekkassy, Gabes, Sagdoud, Redeyef, Gafsa, Zarzis Médenine, Tunis, and Manouba.

At the outset I want to reiterate that this Statement include my preliminary thoughts and ideas. A report containing a large analysis as well as information related to the human rights to water and sanitation of refugees, asylum seekers, migrants, persons with disabilities and persons living in detention centres will be presented to the Human Rights Council 54th session in September 2023.