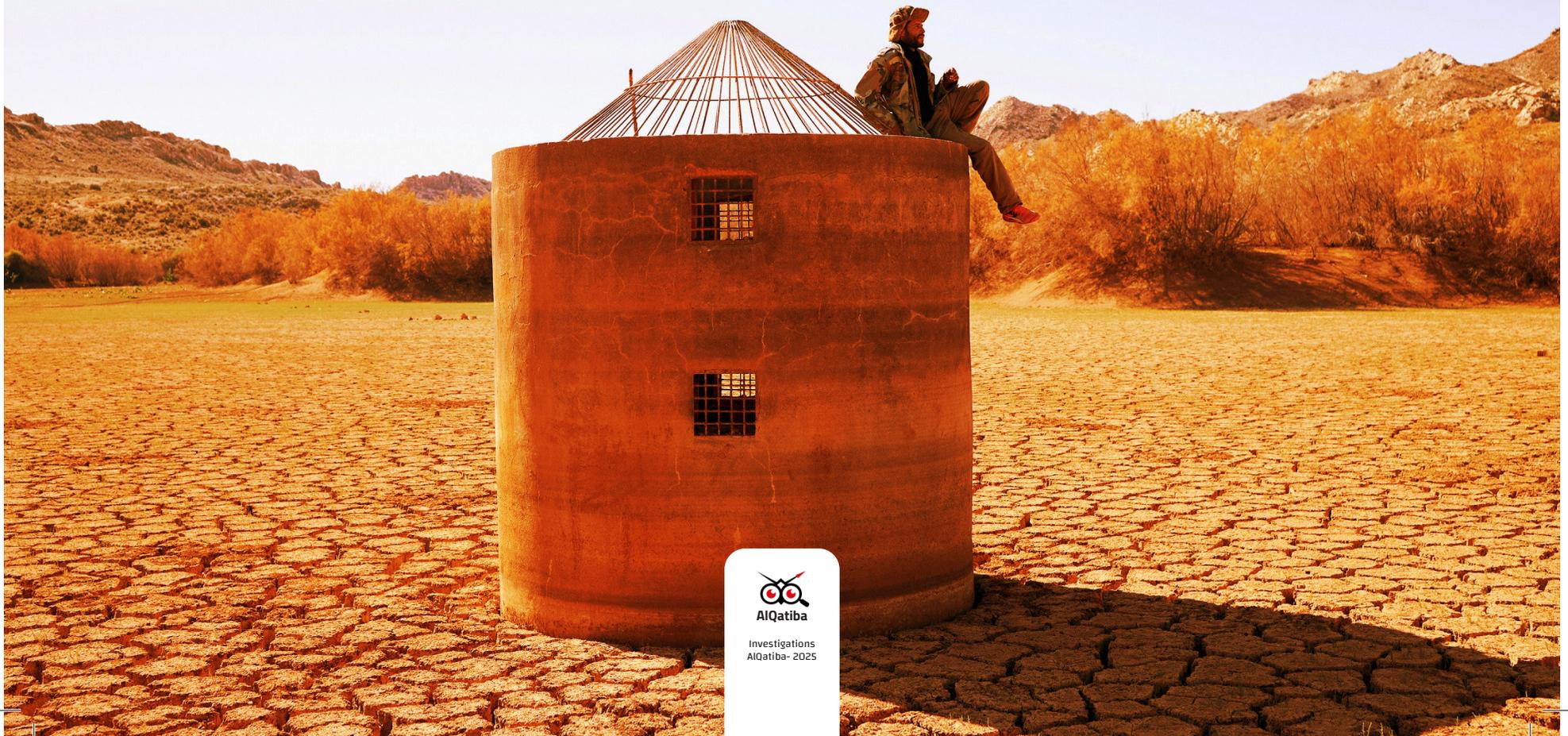


Thirsty Tunisia

Our Water Between Plunder, Depletion, and Patchwork Policies



AIQatiba

Investigations
AIQatiba- 2025



FRIEDRICH NAUMANN
STIFTUNG Für die Freiheit.



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Alqatiba's Manifesto

«Alqatiba» is an independent digital web-magazine, managed by the Association «Taqallam for Freedom of Speech and Creativity». It is issued in three languages: AR, FR and EN.

This media project addresses the large public in north africa and conveys its issues to the world, and it is based, in its editorial references, on commitment to the Universal Declaration of Humain Rights, as well as the International Declaration of Ethics for the Journalism profession, issued by the IFJ, and the charter of Journalistic Ethics of the SNJT.

Our Principles and objectives

- Establishing quality and in depth journalism.
- Humanizing journalistic work.
- Employing modern technology in producing journalistic content.
- Defending democracy, civil state, public and individual freedoms, gender equality and justice in all levels.
- Fighting corruption and enhancing transparency by strengthening investigative journalism.
- Supporting freedom of expression information, creativity and the right to access to information.

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Editorial

Thirsty Tunisia... and the Patchwork Policies

For more than two decades, water and environmental experts in Tunisia have been warning that the country is moving rapidly toward an unprecedented water crisis. What was once classified merely as an “environmental challenge” has today become an existential issue, directly affecting people’s lives and the stability of society and the economy alike. According to the World Bank (2023), Tunisia is officially ranked among the countries under the extreme water poverty line, with per capita water availability at just 360 cubic meters per year—well below the threshold of 500 cubic meters experts define as the “absolute scarcity” level.

National figures reveal an even darker reality. According to the Ministry of Agriculture and Water Resources (2024), Tunisia’s maximum mobilizable water capacity is about 4.7 billion cubic meters annually, while actual consumption reaches 5.2 billion cubic meters. This structural water deficit is being covered mainly through the overexploitation of aquifers. More than 26,000 illegal wells spread across the country are draining deep groundwater reserves, increasing salinity levels, and causing seawater intrusion into farmland—threatening national food security in its entirety.

Beyond natural factors such as climate change and recurring droughts, agricultural and economic policies play a decisive role in worsening the crisis. Agricultural choices like the large-scale expansion of water-intensive crops—such as citrus and tomatoes—have drained resources without providing real economic returns to farmers or the state. A report by the Tunisian Forum for Economic and Social Rights (2024) indicated that the citrus sector alone consumes 13% of irrigation water, while its contribution to agricultural GDP remains limited, raising serious questions about the viability of this orientation.

Meanwhile, stark contradictions dominate water governance. Small farmers face ongoing impoverishment and marginalization, while bottled water companies accumulate enormous profits by exploiting natural springs and monopolizing the market—deepening perceptions of water and social injustice.

The crisis also reveals sensitive geopolitical dimensions. Border regions with Algeria and Libya are increasingly fragile due to the unbalanced exploitation of shared water resources—threatening to spark further tensions between countries in the region, particularly as water scarcity worsens across North Africa, one of the regions most vulnerable to climate change worldwide.

The consequences extend far beyond economics and politics, reaching ecological balance. The Ichkeul National Park in Bizerte—classified as a UNESCO World Natural Heritage site—faces the risk of extinction as its wetlands shrink catastrophically due to pollution, human pressure, and climate variability. Ichkeul has become not only a mirror of a local environmental crisis but also a symbol of the failure of public policy to protect the nation's natural

wealth.

This new edition of Al Qatiba Magazine sheds light on Tunisia's water crisis from multiple angles: economic, environmental, social, and political. Through a series of field investigations and analytical essays, we open files that have long remained in the shadows. What we aim to provide is not only a description of Tunisia's water crisis, but also a bold questioning of development choices and public policies—an urgent call to rethink the governance of natural resources on the basis of justice and sustainability.

Ultimately, water is not merely an economic resource or an environmental variable. It is the foundation of life and the condition for the survival of future generations. To waste this wealth—or allow it to remain hostage to narrow interests—is nothing less than a death sentence for the future of the nation as a whole.

Publication director
WALID MEJRI

**Tunisia's Water on the Brink:
Over 26,000 Illegal Wells
Draining the Country's Lifeline**



Executive Summary

General Context

Tunisia is currently living below the extreme water poverty line, with more than 26,000 illegal wells dug outside any legal framework. This alarming trend is fueled by prolonged droughts, weak enforcement, and the state's failure to update its water legislation in line with climate change challenges. The World Resources Institute has already ranked Tunisia among the top 33 countries most threatened by water stress by 2040.

Key Findings

1. Expansion of Illegal Wells

- By 2021, Tunisia recorded 26,341 illegal wells compared to only 14,842 licensed ones.
- In several regions (Kairouan, Kebili, Nabeul), illegal wells outnumbered licensed ones.
- This uncontrolled drilling has caused a sharp drop in groundwater levels and increased salinity.

2. Impact on Farmers

- Numerous testimonies show the collapse of agricultural production (dry orchards, loss of livestock) due to dried-up wells.
- Small farmers are frequently denied drilling permits on the grounds of



Radhia Charaabi

“water stress,” while industrial bottling companies continue to receive permits.

- This double standard has fueled anger and local protests among farmers.

3. Governance and Oversight Failures

- Monitoring systems are weak: 90% of licensed wells are not equipped with meters.
- The 2021 Court of Accounts report highlighted inconsistent criteria across regions and weak enforcement.
- The outdated Water Code (1975) remains inadequate, treating violations of water resources as minor infractions with limited financial penalties.

4. Environmental and Economic Dimensions

- Water exploitation rates exceed 125% for surface aquifers and 129% for deep aquifers (2022), far above the safe threshold of 70–80%.
- Rising water salinity has reduced agricultural productivity and quality.
- Agriculture consumes around 75% of Tunisia’s water resources, underscoring the urgent need to shift towards less water-intensive crops.

5. Warnings from Experts and Organizations

- Both national and international experts — including the UN Special Rapporteur on the right to water — have warned of the imminent danger, urging Tunisia to adopt a strategic plan for





groundwater management as a national reserve.

- The Tunisian Forum for Economic and Social Rights denounced the state's "double standards," favoring water bottling industries over smallholder farmers.

Conclusion

The investigation reveals that Tunisia's water resources are on the brink of collapse: uncontrolled drilling, groundwater depletion, lack of effective regulation, and the absence of a sustainable strategy to cope with climate change.

This situation threatens the country's water and food security, and requires urgent measures:

- Reforming water legislation (updating the Water Code).
- Digitizing and strictly monitoring all wells.
- Restructuring agricultural policies towards less water-demanding crops.
- Developing a comprehensive national strategy to face drought and climate change.

Drought on the Edge: How Algeria's Overuse of Shared Water Deepens Tunisia's Borderland Crisis



Executive Summary

General Context

Tunisia's border regions with Algeria are facing a severe drought crisis, driven not only by climate change and declining rainfall but also by Algeria's unilateral exploitation of shared water resources through the construction of dams and artificial lakes. This has deepened the vulnerability of Tunisia's inland communities, undermining agriculture, livelihoods, and demographic stability.

Key Findings

1. Direct Impact on Farmers

- Areas such as Oum El Aqssab (Kasserine) and El-Felta (Kef) lost their surface and groundwater resources after Algeria built dams (e.g., the Grand Oued Dam and Oued Mellag).
- Hundreds of families abandoned their farms as orchards dried up.
- Farmers' testimonies reveal a shift from agricultural production to unemployment, migration, or survival activities like cutting olive trees for firewood.

2. Algeria's Water Policy

- Algeria has built 81 dams (2019) and plans to reach 139 by 2030, with storage capacity exceeding 12 billion m³.
- While Algerian farmers benefit from these projects, Tunisian border farmers suffer drastic reductions in water access.



Sameh Gharssali

- Lack of bilateral coordination makes Tunisia the weaker party in managing shared resources.
- Significant internal migration: dozens of families from border villages left for coastal cities after their land became unproductive.

3. Social and Demographic Consequences



- Poverty rates are highest in border governorates such as Kasserine, Kef, and Gafsa.
- Agriculture, the backbone of local economies, is collapsing, threatening both livelihoods and social stability.

4. Tunisian State Response and Weak Governance

- The Ministry of Agriculture confirmed that no formal water-sharing agreements exist with Algeria.
- The Ministry of Foreign Affairs declined to comment, citing diplomatic sensitivity.
- Tunisia lacks a water diplomacy strategy, leaving its rights unprotected in transboundary water negotiations.

5. Expert and Civil Society Warnings

- Experts warn that the crisis threatens Tunisia's water and food security.
- Civil society organizations accuse Algeria of unilateral exploitation and call for Tunisia to defend its rights through bilateral frameworks.
- International bodies (UN, WHO) confirm that Tunisia is already below the extreme water poverty line, with per capita water availability under 400 m³/year (far below the global minimum of 1,000 m³).

Conclusion

The article demonstrates that Tunisia's border water crisis is not only environmental but also political and diplomatic. Algeria's unilateral water policies have aggravated drought impacts, forcing Tunisian farmers into poverty, migration, and abandonment of agriculture.

Tunisia urgently needs to:

- Establish active water diplomacy with Algeria.
- Develop bilateral agreements to secure fair resource-sharing.
- Reform its domestic water governance and invest in alternative supply strategies.
- Ensure sustainability to safeguard future generations' right to water.

**Tunisia's Water Resources
Squandered: A Grim Picture
of Mismanagement and
Misconceptions**



Executive Summary

General Context

Tunisia is on the verge of a severe water crisis, often described as a looming “thirst nightmare.” Despite repeated warnings, the country continues to waste and mismanage its scarce water resources. While climate change and limited rainfall exacerbate the challenge, the root of the crisis lies in poor governance, systemic mismanagement, and misguided policies dating back decades.

Key Findings

1. Structural Water Scarcity

- Tunisia’s climate is semi-arid, with highly uneven rainfall (1,000 mm in the north vs. less than 100 mm in the south).
- By 2020, per capita water availability had dropped to 420 m³/year, well below the global water poverty threshold (1,000 m³).
- Water reserves are estimated at around 5 billion m³, yet annual exploitation levels already exceed 117% of renewable surface water and 120–129% of groundwater resources, highlighting unsustainable use.

2. Infrastructure Deficiencies and Water Losses

- Dams lose up to 20% of storage capacity due to sedimentation and poor maintenance. The Sidi El Barrak Dam alone has wasted 3.5 billion m³ of water into



Moez Elbey

the sea since 2002.

- Distribution networks are outdated: nearly 40% of drinking water pipelines are over 29 years old, leading to 30% losses in potable water networks and 40% in agricultural irrigation channels.
- The state-owned water utility faces severe financial strain, with debts exceeding 50% of annual revenue, hindering its capacity for infrastructure renewal.

3. Distorted Water Consumption and Inequality

- Wealthier households and the tourism sector consume potable water for non-essential uses (gardens, car washing, hotels), while rural communities suffer chronic shortages.
- Tunisia ranks 4th globally in bottled water consumption, reflecting widespread distrust of tap water.
- Ironically, regions hosting water bottling plants (e.g., Kairouan, Sahel) face some of the highest rates of water cuts.

4. Overexploitation and Mismanagement

- Non-renewable aquifers, especially in the south (Jfara basin), are being depleted at rates far beyond natural recharge.
- Industrial users (such as the chemical complex in Gabès and phosphate washing in Gafsa) are among the largest water consumers, often prioritised over local needs.
- Water user associations (2,694 nationwide) are heavily indebted and poorly governed, supplying 1.5 million people but unable to ensure sustainable distribution.





5. Case Studies: Gabès and Gafsa

- Gabès (El Hamma): Despite being historically known as “the city of water,” residents face daily supply cuts while industries consume vast quantities of groundwater. Traditional oases are drying out, and thermal bath waters are wasted instead of being recycled.
- Gafsa (Mining Basin): Phosphate extraction consumes hundreds of times more water than local residents, drying up aquifers and triggering repeated protests. Wastewater from washing plants further pollutes scarce resources.

Conclusion

Tunisia’s water crisis stems not primarily from overconsumption by citizens but from decades of poor governance, inadequate infrastructure, unchecked industrial use, and political inertia. Unless urgent reforms are adopted—including stricter regulation of industrial water use, investment in modern infrastructure, restructuring of water user associations, and sustainable resource planning—the country faces an irreversible decline in water availability.

The looming prospect is stark: renewable groundwater reserves could fall from 1.5 billion m³ today to 700 million m³ by 2050, condemning future generations to even harsher water poverty.



The Water Governance: SONEDE's Crisis of Infrastructure, Finance, and Trust

مساءول بلا قرار
بمشى بشد الدار
يزينا ما سكتنا

انحرمني من الماء
نحب تفنلني

الحق في الماء
حق دستوري

حقي في الماء
غير قابل للمسومة

Executive Summary

General Context

Tunisia has been experiencing a deepening water crisis, marked by frequent and prolonged supply cuts affecting both urban centers and rural areas. While climate change contributes to water scarcity, the crisis of the National Water Exploitation and Distribution Company (SONEDE) reveals deeper structural issues tied to aging infrastructure, mounting financial deficits, and governance failures. These factors threaten citizens' constitutional right to water.

Key Findings

1. Aging Networks and Water Losses

- Network efficiency stands at only 67%, with 149 million m³ of water lost in 2023.
- More than 30% of water is wasted through leaks and outdated, inaccurate meters.
- Many pipelines are over 35 years old, with 200,000+ leaks recorded annually, often left unrepaired for long periods.

2. Water Quality and Health Risks

- Non-compliance with bacteriological standards rose to 13.6% in 2023, particularly in interior governorates such as Kasserine and Kef.
- High salinity levels (e.g., 1.9 g/L in Monastir) render water undrinkable without desalination.
- Disinfection procedures are inconsistent: chlorine levels often fluctuate, at times



Rahma behi

الماء الذي ماشي للفسفاط المواطن أولى بيه

مسيرة تحرير المياه

حقي في الماء... هو حقي في الحياة

exceeding safe international thresholds.

3. Severe Financial Crisis

- Net losses peaked at –129 million TND in 2019, improving to –8.9 million TND in 2023.
- Customer debts reached 1.084 billion TND, while the state itself owes SONEDE 809 million TND.
- Water tariffs fail to cover production costs (1,670 millimes/m³ vs. consumer prices of 200 millimes–2 TND/m³), exacerbating deficits.

4. Workforce Shortages and Governance Failures

- Workforce shrank from 7,500 employees to 5,900, overburdening staff and delaying repairs.
- Frequent leadership changes (3 CEOs between 2023 and 2025) highlight institutional instability.
- SONEDE operates under heavy bureaucracy and ministerial interference, slowing decision-making.
- Lack of strategic workforce planning, outdated HR systems, and weak performance incentives undermine effectiveness.

5. Delayed Reforms and Future Challenges

- Tunisia's National Water Strategy 2050 projects 75 billion TND in required investments, aiming to raise distribution

efficiency to 85% by 2050.

- Current renewal pace (200–300 km/year) would take half a century to modernize the entire network.
- Experts recommend:
 - Transitioning gradually to smart networks to detect leaks in real-time.
 - Expanding seawater desalination projects.
 - Restructuring SONEDE and potentially merging it with the National Sanitation Office under a dedicated Ministry of Water.
 - Reforming water tariffs to balance social equity and financial sustainability.

Conclusion

SONEDE's crisis shows that Tunisia's water challenge is not only climatic but also institutional and structural. With crumbling infrastructure, a weak financial model, and poor governance, the company struggles to ensure citizens' basic right to water. Saving Tunisia's water system requires urgent systemic reform, beginning with the activation of the 2050 Water Strategy, modernization of networks, restructuring of SONEDE, and adoption of a governance model that integrates efficiency, equity, and sustainability.



Interview with Hakim Gabtni
Dry Wells and Drained
Resources: An Expert's Take
on Tunisia's Water Emergency

Executive Summary

General Context

Tunisia has been facing an unprecedented water crisis, marked by declining rainfall, historically low dam reserves, and the overexploitation of groundwater resources. What was once a purely environmental issue has now escalated into a matter of national security, threatening citizens' daily lives and the country's economic stability. Against this backdrop, Professor Hakim Kebtani, a leading scholar in applied geophysics specializing in groundwater systems, offers a scientific and strategic perspective on the crisis.

Key Findings

1. Drivers of the Water Crisis

- Declining tap water quality: Though technically compliant with Tunisian standards, tap water often has an unpleasant taste, odor, or color. This has fueled a massive shift toward bottled mineral water consumption.
- Rapid growth of the bottled water sector: State-backed investments and high consumer demand have driven the industry's expansion, adding further stress on groundwater resources.
- Persistent drought: Tunisia is in its sixth consecutive year of drought. Recent dam reserves stood at only 10% of their normal levels, directly impacting groundwater recharge.



Wael Ounifi

2. Mounting Risks

- Overexploitation (“overdraft”): In some areas, groundwater extraction reaches 400% of natural recharge capacity, leading to falling water tables, increased salinity, and dried-up wells.
- Illegal wells: About 60% of wells are unlicensed, operating outside regulatory oversight and significantly worsening groundwater depletion.
- Vulnerability of shallow aquifers: Mountain foothill aquifers are cleaner but more sensitive to drought, unlike deeper aquifers that contain older, less renewable water.

3. Institutional Gaps

- Weak regulation of bottled water plants: Despite legal provisions prioritizing household and agricultural use, enforcement remains limited.
- Inadequate monitoring: Official groundwater assessments are conducted only twice a year, insufficient for effective crisis management in the context of climate change.

4. Proposed Solutions

- Professor Kebtani outlines a set of urgent and practical recommendations:





- Annual revision of groundwater extraction permits linked to real-time monitoring.
- Reducing bottled water production during drought periods to prioritize households and farmers.
- Strict enforcement against illegal wells.
- Encouraging industries and agriculture to lower their water footprint through recycling and crop diversification.
- Investing in desalination and treated wastewater reuse to reduce pressure on aquifers.
- Transitioning toward sustainable, low-water agricultural models, with emphasis on local and organic farming.

Conclusion

Professor Gabtani stresses that Tunisia cannot continue treating its water resources as if they were limitless. Bottled water should be seen as a secondary solution, not a long-term substitute for public supply. Achieving water security requires a paradigm shift in how Tunisia manages its resources, built on shared responsibility among the state, investors, farmers, and citizens, to safeguard this vital resource for future generations.

A man wearing a blue raincoat and a blue hooded garment is walking on a dirt path. He is holding a long wooden staff. To his right, a grey donkey is carrying two blue plastic jugs on its back. The background shows a rural landscape with dry vegetation and a blue sky with white clouds. The text is overlaid on the image in a white box with red text.

**Water User Associations
in Tunisia – From
Solution to Rural Burden**

Executive Summary

General Context

Since the 1970s, water user associations (known locally as “mujama ât mâ iyya”) have played a central role in supplying rural Tunisia with drinking and irrigation water. Conceived as a decentralized solution to ease pressure on the national water utility (SONEDE), more than 2,500 associations were established across the country. Yet over time, this model has shifted from being a driver of rural development to a structural problem that now deepens hardship for thousands of households.

Today, nearly half of rural residents face chronic water shortages, marked by repeated service disruptions and poor water quality. Testimonies from villagers reveal daily struggles: families resorting to tanker trucks or abandoned wells, and women bearing the heavy burden of fetching and rationing water, with serious financial, health, and social costs.

Root Causes of the Crisis

- Weak governance and corruption: lack of transparency, mismanagement, nepotism, and sham elections have eroded community trust.
- Mounting debt: millions owed to the national electricity and water utilities, leading to frequent power cuts on pumping stations.
- Aging infrastructure: less than 14% of networks are properly maintained; illegal connections and leakages cause water losses of up to 50%.
- Climate change and chronic drought: declining rainfall and aquifer overexploitation



Sameh Gharssali

have worsened system fragility.

Social Impacts

- Rising forced migration from villages to cities.
- Growing incidence of waterborne diseases such as gastrointestinal infections and kidney problems.
- Widespread protests: over 180 demonstrations in 2024 and 127 by mid-2025, demanding urgent solutions.

Official and Civil Responses

- The President pledges to restructure debts and renew supply networks.
- Ministry of Agriculture proposals: stronger regional institutions, tighter financial oversight, and transforming associations into public-interest entities.
- Civil society advocacy for reforming the Water Code through a rights-based approach that affirms access to water as a fundamental human right.

Conclusion

The crisis of Tunisia's water user associations is no longer a technical issue but a mirror of deeper developmental and social fragility in rural areas. For tens of thousands of families, the struggle is not just about thirst, but about dignity, health, and survival. Unless a comprehensive reform is undertaken—combining political will, transparency, and investment in infrastructure—the constitutional right to water will remain elusive, further fueling rural marginalization and social instability.





Ichkeul: A UNESCO Treasure on the Brink of Collapse



Executive Summary

General Context

Despite its global recognition as one of the Mediterranean's most important wetlands and its inscription on the UNESCO World Heritage List since 1979, Ichkeul Reserve in northern Tunisia is facing a severe ecological crisis that threatens its very existence. The combined effects of climate change, unsustainable human activities, and weak governance have led to a dramatic decline in biodiversity and the collapse of its fragile ecosystem.

Key Threats

- Dam construction on tributary rivers since the 1960s, reducing freshwater inflows and raising salinity to dangerous levels.
- Prolonged droughts and declining rainfall due to climate change, causing sharp drops in lake levels.
- Overgrazing and poaching, accelerating ecological degradation and loss of vegetation cover.
- Drastic decline in migratory bird populations: from hundreds of thousands in previous decades to just a few thousand in recent years.
- Administrative shortcomings and poor governance from the National Agency for Environmental Protection and the General Directorate of Forests, with the site remaining closed to visitors since 2020 without a clear recovery strategy.



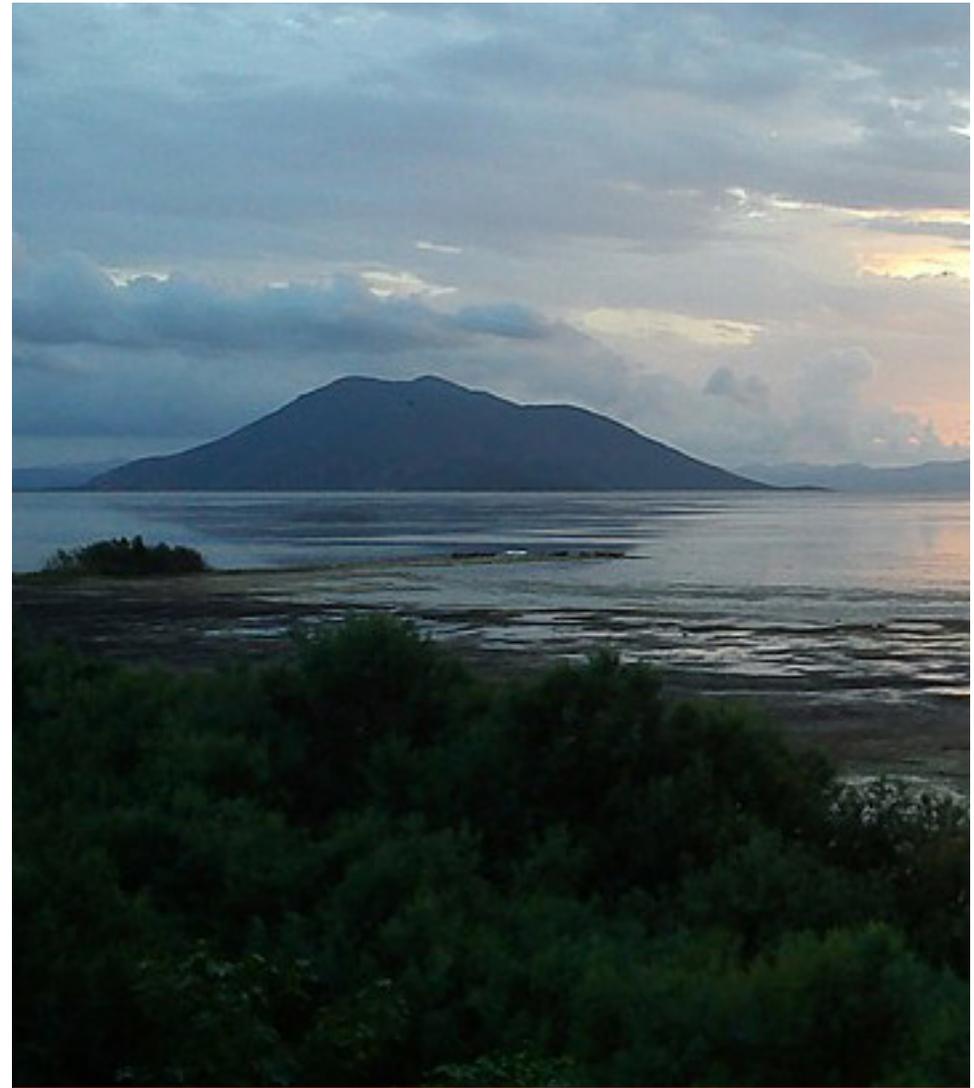
Safa Gabtni

Testimonies from Experts and Residents

- Environmental experts warn that Ichkeul has already lost much of its biodiversity, with its ecosystem on the verge of total collapse.
- Local residents, like Lotfi (62), express deep sorrow over losing their natural refuge, while activists denounce the situation as “systematic neglect.”

Impacts

- Shrinking aquatic vegetation (e.g., *scirpus maritimus*), depriving birds of essential food sources.
- Loss of fish stocks and overall decline in marine and terrestrial biodiversity.
- Growing public distrust in state institutions, perceived as unable or unwilling to protect a globally recognized heritage site.





What Is Needed to Save Ichkeul

- An urgent national plan to restore hydrological balance by revising dam policies and allocating “ecological water flows” to the lake.
- Stronger monitoring and sustainable management, with genuine involvement of civil society and researchers.
- Strict enforcement against poaching and overgrazing, while providing alternatives for local communities.
- International cooperation with UNESCO and environmental organizations for technical and financial support.

Conclusion

Ichkeul is more than just a reserve: it is Tunisia’s ecological lung and a global biodiversity hotspot. Its ongoing degradation risks turning it from a “natural paradise” into a barren wasteland. Saving Ichkeul requires strong political will, community partnership, and urgent investment in sustainability—before it is too late.



Oktor



Bottled Water Companies in Tunisia: Exploiting Scarce Resources, Capitalizing on People's Thirst



Executive Summary

General Context

This article examines the reality of the bottled water sector in Tunisia as one of the clearest indicators of the country's ongoing water crisis. Tunisians have become the third largest consumers of bottled water worldwide (about 300 liters per person per year), driven by the declining quality of tap water and widespread mistrust in it, in addition to aggressive corporate marketing campaigns.

Key Points

Consumption and Financial Burden

- Bottled water consumption rose from 19 liters per person in 1990 to 300 liters in 2022.
- Tunisian households spend between 800 and 1,000 TND annually on bottled water, while the minimum monthly wage is only 460 TND.

Market Monopoly and Profits

- Three major economic groups (SFBT, Mazabi, and Délice) control about 75% of the market.
- The sector's turnover exceeded 1 billion TND in 2022.
- The production cost of a 1.5-liter bottle does not exceed 0.420 TND, yet it is sold at 0.670–0.700 TND, highlighting massive profit margins.



Wael Ounifi

Weak Oversight and Poor Governance

- Regulatory oversight has weakened after being transferred to an under-resourced national authority.
- Companies frequently violate standards (altering water composition, using prohibited technologies).
- Reports of corruption in licensing and over-extraction of water resources are widespread.

Environmental Impact

- Aquifers are being overexploited, particularly in already water-stressed regions (Sidi Bouzid, Zaghouan, Kairouan).
- More than 1.8 billion plastic bottles are consumed annually, with limited recycling policies in place.
- Plastic pollution and increasing water scarcity are becoming critical threats.

Social and Political Consequences

- Bottled water has become a costly necessity, deepening social inequalities.
- Citizens' trust in state institutions responsible for water supply is eroding.
- No integrated policies exist to address drought and climate change challenges.

Conclusion

The investigation reveals that Tunisia's bottled water sector is driven by huge profits and market monopolization at the expense of systematic depletion of water resources, amid weak regulation and fragmented public policies. This raises critical questions about Tunisians' right to water and underscores the urgent need to revise water and regulatory policies to cope with drought and climate change.





Tunisia's Tomato Sector: Water Drained, Farmers Drained



Executive Summary

General Context

The tomato sector in Tunisia illustrates a profound paradox in the agricultural economy: massive water depletion, impoverishment of small farmers, and dominance of processing factories that reap disproportionate profits compared to actual production costs.

1. Water Crisis and Farmers

- In a context of severe water scarcity, tomato cultivation consumes enormous quantities of water (between 110 and 400 liters to produce 1 kg).
- Ministry of Agriculture restrictions on irrigated crops have added pressure on farmers, who already face climate volatility and plant diseases that increase production costs.
- Smallholders, who supply 90% of the national output, are forced to sell at extremely low prices (0.2 TND/kg) that do not cover expenses, while canned tomato paste (800g) reaches 4.9 TND on the market.

2. Processing Factories and Market Monopoly

- Factories pressure farmers and fail to respect the reference price set by unions and authorities.
- In 2018, the Competition Council condemned 24 factories for price-fixing, yet collusive practices continue.



Wael ounifi

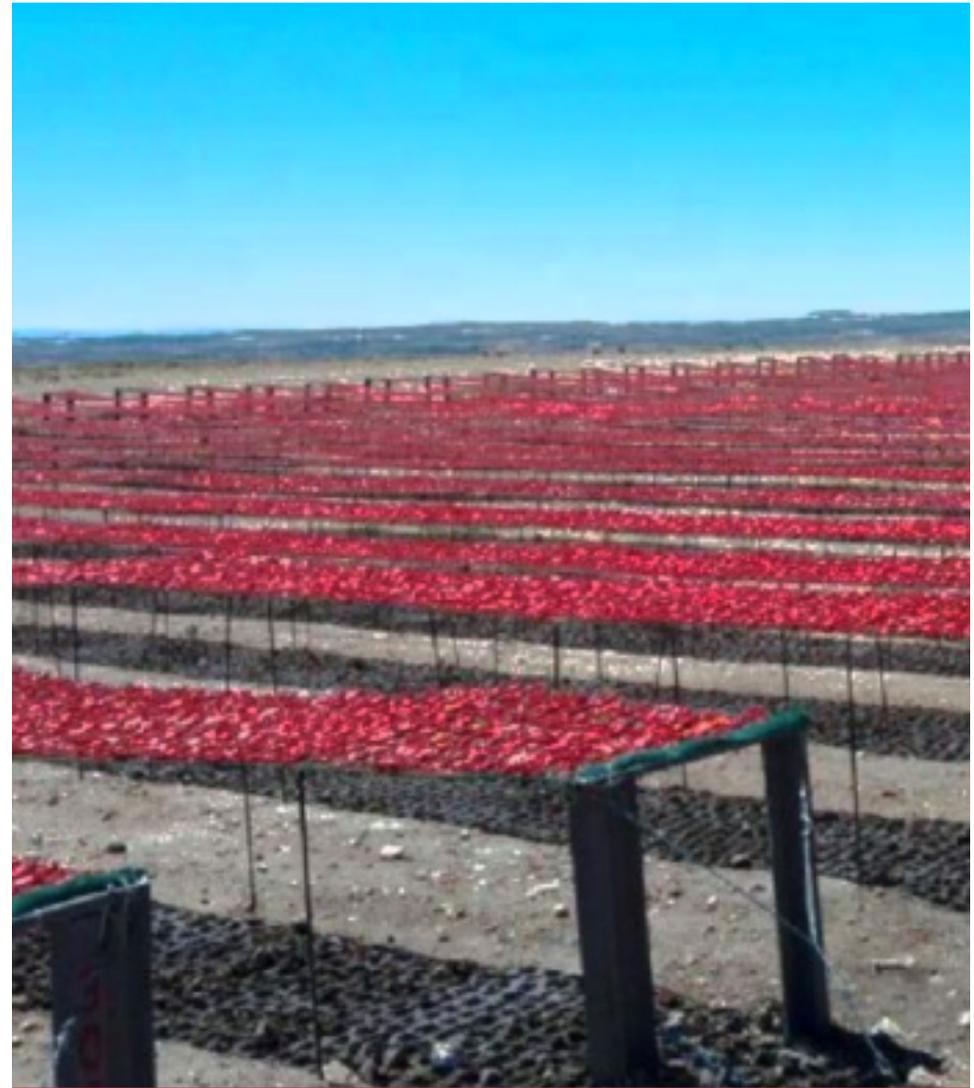
- Local tomato paste prices have surged by 300% in just a few years, even though producers benefit from state subsidies for exports.

3. Policy Failures

- Since 2011, the state has largely abandoned its regulatory role, following the collapse of the National Canning Company, which previously monitored costs and prices.
- In 2014, canned tomato products were liberalized under a free-market regime, allowing manufacturers to dictate prices.
- Export subsidies (554 millimes/kg) have benefited factories rather than farmers, while cultivated areas are shrinking due to water shortages and soil salinity.

4. Environmental and Economic Impacts

- The sector exacerbates Tunisia's water crisis through overexploitation of groundwater and industrial pollution, as factories often discharge untreated wastewater into rivers.
- Export revenues from tomatoes amount to only about 140 million TND annually, a modest return compared to the scale of water and environmental depletion.





- Tomatoes have become a staple of Tunisian diets (10 kg annual consumption per person), increasing the vulnerability of food security to price manipulation.

5. Possible Alternatives

- Transition towards sustainable agriculture with crops less water-intensive and more climate-resilient.
- Reform subsidy and export policies to protect local markets and farmers.
- Strengthen state oversight of factories and enforce pricing based on actual production costs.
- Invest in wastewater treatment and recycling technologies in processing plants.

Conclusion:

Tunisia's tomato sector, now a cornerstone of national cuisine, operates on an unjust equation: farmers lose, consumers pay excessive prices, and factories monopolize profits at the expense of water and the environment. Structural reform is urgently needed to secure resource sustainability and food security.

A photograph showing a man in a black jacket harvesting oranges into yellow crates. The background is a cracked, dry field with an irrigation pipe and a metal valve. The text "Orange Gold, Blue Crisis: The Water Cost of Citrus" is overlaid in red on a white background.

Orange Gold, Blue Crisis: The Water Cost of Citrus

Executive Summary

General Context

This article sheds light on the citrus sector in Tunisia, one of the country's oldest agricultural pillars and a key contributor to the national economy and rural livelihoods. Today, however, the sector faces deep structural challenges that threaten its long-term sustainability.

Tunisia is grappling with a worsening water scarcity crisis caused by declining rainfall and intensifying climate change. Agriculture consumes over 80% of national water resources, with citrus farming—highly water-intensive—exacerbating this imbalance. This raises a critical dilemma between food security, water security, and economic policy choices.

Current Status of the Sector

- Citrus plantations cover more than 26,000 hectares, with 70% concentrated in Cap Bon.
- Production reached 384,000 tons in the 2024/2025 season, but financial returns remain limited compared to the sector's water footprint.
- The industry provides a livelihood for around 25,000 families and generates millions of seasonal workdays, yet it is increasingly threatened by aging orchards, viral diseases (e.g., tristeza), and agricultural pests.

Key Challenges

- Water Depletion: One hectare requires between 6,000 and 9,000 m³ annually—



Jawaher bensir

hundreds of millions of cubic meters overall—sometimes exceeding the reserves of entire dams.

- **Weak Export Revenues:** Despite the global reputation of Tunisian “Maltaise” oranges, exports remain limited due to high transport costs and weak logistics.
- **Production Losses:** Lack of processing and value-added facilities results in thousands of tons being wasted during peak harvests.
- **Declining Competitiveness:** European markets increasingly favor cheaper competitors, while Tunisia fails to penetrate new export destinations.
- **Policy Gaps:** The state lacks a forward-looking strategy to restructure agricultural priorities in line with water scarcity and climate threats.

Diverging Perspectives

- Experts such as Alaa Marzouki call for a radical policy shift, reallocating water to more strategic crops like cereals.





- Agricultural stakeholders like Bachir Aounallah emphasize boosting exports through state support in air transport.
- Technical experts like Khaled Ayadi propose investing in desalination (reverse osmosis) and dam rehabilitation.
- Politicians like MP Yassine Mami stress the need to safeguard the sector given its socio-economic role.

Conclusion

The citrus sector embodies Tunisia's development paradox: high yields but unsustainable water and economic costs. Caught between calls for structural reform and demands for protection, the future of Tunisian citrus depends on bold political choices that reconcile water security, food sovereignty, and social equity.



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