Water Pressure
Water, Protest, and State Legitimacy in the Maghreb
By Haim Malka

SUMMARY
Protests triggered by citizen complaints over water access and quality are increasingly common in the North African Maghreb. Water has played an important role in building state legitimacy in every Maghreb country since independence, but growing water stress is eroding the ability of Maghreb governments to respond effectively to swelling demand and dwindling supply.

The Maghreb's water challenges—driven by climate change, population growth, urbanization, and mismanagement—are severe but not unique. Yet, water trends both illustrate and exacerbate tensions between citizens and governments at a time of heightened social protest and discontent in the region. Water's fundamental importance and symbolism mean any actions by state authorities or economic elites that violate water availability or quality could ignite public outrage.

The challenge for governments is that strategies for needed economic growth largely promote water-intensive industries including agriculture, tourism, mining, and hydrocarbons. Many of these sectors are either state-owned or connected to ruling elites, prompting accusations that elites mix economic and political activities at the expense of average citizens. Without accompanying government strategies to mitigate the negative impact of these industries on water quality and supply, the problem will deepen and the region will face growing unrest, inequality, and a widening gap between citizens and the state.

In the years ahead, Maghreb governments will be compelled to spend more resources on infrastructure, water transportation, and waste management, while also minimizing the negative impact of climate change, pollution, and increasing demand on their valuable water resources. Ultimately, governments in the Maghreb must rethink water's role in the contested relationship between citizens and the state while the problems are still manageable.

Water was not at the forefront of grievances that drove protests in the North African Maghreb in the 2010-11 Arab uprisings, but it has become an increasingly visible component of social protest. Access to clean water is not only vital to sustain life; it has also become a key government function and powerful symbol of state legitimacy. Water's importance has been enshrined in new constitutions in the Maghreb. When Morocco passed a new constitution in 2011, it included the right to equal access to water. Similarly, Tunisia's 2014 constitution explicitly guarantees the right to water.

The link between water and political legitimacy in the Maghreb is not new. When governments brought potable water and electricity to tens of millions of people in the 1960s and 1970s, they dramatically transformed people's lives and took credit for that progress. Not only was water a source of pride, it was also an instrument of state power that helped reinforce the social contract between citizens and the state.

Yet, as growing water stress besets every country in the Maghreb, what was once a symbol of modernity and a source of government legitimacy is eroding. In the last several years, complaints about poor water quality and scarcity have driven protests in every Maghreb country.

These water protests highlight two broad trends. First, they reinforce disparities between coastal populations that generally enjoy greater access to clean water and populations in the interior that grapple with issues of both quality and supply. Second, they deepen gaps between populations and elites, whom protestors accuse of mixing political and economic activity at the expense of average citizens. Without accompanying government strategies to mitigate the negative impact of these industries on water quality and supply, the problem will deepen and the region will face growing unrest, inequality, and a widening gap between citizens and the state.

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Governments are caught in a difficult predicament. The economic diversification and growth strategies that Maghreb states are pursuing to boost employment largely promote water-intensive industries including agriculture, mining, hydrocarbons, and tourism. Many of these industries are either owned by the state or by elites connected to centers of power.

Unless growth strategies are accompanied by more effective water management strategies, these plans threaten to exacerbate the Maghreb’s water stress, fuel more social unrest, and deepen inequalities. Water scarcity protests do not directly threaten any Maghreb government at the current juncture, but they underscore the declining ability of states to provide the services and resources that built their legitimacy.

**Dwindling Supply**

The Maghreb is a “water-stressed” region, meaning demand for water exceeds the amount of quality water available. Tunisia, Algeria, Morocco, and Libya are all on the World Resource Institute’s list of the top 33 water-stressed countries in the world. A recent World Bank report found that nearly 40 percent of Algeria’s population is considered water-stressed, a figure that rises to 66 percent in Libya, 70 percent in Morocco, and 80 percent in Tunisia. The causes of water stress are both natural and human-induced. Climate change is part of the equation. Temperatures are climbing as rainfall dwindles, threatening access to water and requiring increasing irrigation. Droughts hit all of the Maghreb countries particularly hard in 2016. The impact is straightforward. Less rainfall means lower economic output, lost revenue for farmers, lost jobs, and accelerated urbanization.

The expansion of industry, aging of infrastructure, and poor management have all exacerbated the growing shortage. Underground aquifers are drying up, in part due to heavy extraction by water-intensive industries. Algeria’s primary aquifer—the Northwestern Sahara Aquifer—is being depleted at double the rate of replenishment. Oftentimes, industries not only deplete water resources but also pollute the sources that remain. As the supply has declined, so too has water quality—further reducing citizens’ access to safe water.

In a bid to diversify water sources, Maghreb countries have expanded their desalination capacities in recent years. But while desalination can alleviate some water scarcity challenges in the short term, particularly for drinking water, it is expensive, energy intensive, and requires moving water to points of consumption. In addition, governments will need to manage desalination’s potential long-term negative impacts on marine environments.

**Rising Demand**

While water supply has dwindled in the Maghreb, demand for water is increasing. The amount of water available per capita has declined in all Maghreb countries since independence. In part, increasing demand is simply an issue of mathematics: The population in Maghreb states has more than doubled since 1975. But it is also due to the structure of Maghreb states’ economies. Agriculture consumes the vast majority of water in the region, and remains a significant driver of economic output. In Morocco, for example, agriculture employs more than one-third of the labor force and constitutes more than 13 percent of gross domestic product (GDP). In rural areas, dependence on agriculture for economic output is even higher. Even though Algeria primarily produces hydrocarbons, it is still dependent on agriculture for approximately 13 percent of GDP, which employs nearly 13 percent of the workforce. Agriculture in Tunisia is also important, absorbing more than 13 percent of the labor force and comprising 10 percent of GDP.

The Maghreb’s growing urbanization has also driven up water consumption. More people living in cities drives up demand for drinking water and sanitation services, straining existing infrastructure. In the post-independence period, urbanization in Libya, Morocco, and Algeria hovered around 30 percent, with Tunisia higher at about 38 percent. In the ensuing decades, rural-to-urban migration accelerated, in part due to droughts. The result was the creation of highly urbanized—and therefore more water-intensive—Maghreb societies. Today, four out of five people in Libya live in urban areas, while nearly three out of four reside in cities in Algeria and Tunisia. Morocco’s urbanization rate of 60 percent is the lowest in the Maghreb, but declining rainfall in rural areas is likely to trigger more movement toward cities in the years ahead.

**Balancing Economic Growth and Water Management**

Maghreb governments are now confronted with the need to balance the competing priorities of protecting valuable water resources and promoting economic expansion and job creation. The challenge is that many of the industries that have been targeted for investment and growth—and which support the labor force—are water-intensive. Among the most important are agriculture, mining, hydrocarbons, and tourism. The fact that many of these sectors are either state-owned or closely held by ruling elites threatens to stoke public anger and drive a deeper wedge between citizens and the state. In some cases, people protest that state-owned corporations exploit natural resources and pollute water sources, while providing no benefit to the
average citizen. In other cases, anger is turning toward elites who mix business and politics and who are accused of reaping large profits at the expense of lower- and middle-class consumers who are squeezed by higher prices.

Tunisia’s government, which faces heavy pressure to deliver on the socioeconomic demands of the 2011 revolution, has staked its 2016-2020 development plan on the water-intensive sectors of agriculture, tourism, and infrastructure development. In subsequent expansion and investment plans, including the Integrated Regional Development Program (IRDP), the government aims to generate thousands of jobs through 12,400 production projects. Agriculture, the country’s biggest water consumer, is the plan’s main focus, setting a target to develop 3,200 hectares of irrigated areas. Irrigation requirements will further erode Tunisia’s water supply unless it is accompanied by complementary strategies to increase wastewater management for irrigation purposes. Tourism is also critical for Tunisia’s economy and is a water-dependent sector.

Morocco has launched a widespread economic diversification and growth campaign aimed at numerous industries including infrastructure, agriculture, mining, hydrocarbons, and renewable energy. Morocco has also launched a tourism expansion plan and attracted large-scale investments from Gulf Arab partners. In 2016, the tourism sector accounted for approximately 12 percent of Morocco’s GDP and directly employed about a half-million workers. Tourism is also a disproportionate consumer of the country’s water. For example, almost 70 percent of treated water in Morocco is currently used on golf courses, which require vast amounts of water, compared to just 12 percent on agriculture and 16 percent on industry.

In Algeria, the sharp drop in energy prices between 2014 and 2016 accelerated long-standing debates on economic diversification. The government’s economic development plans will likely have an amplifying effect on water consumption. The government has set ambitious goals for increasing hydrocarbon production, including hydraulic fracturing or “fracking” to extract shale gas, as well as agricultural output. Fracking impacts water quality as well as supply, and the push to expand agricultural productivity will also drive up water consumption. Algeria is already a large wheat importer, and to offset imports, the government has set a goal of increasing annual wheat output from 3.5 million tons to over 5 million tons between 2017 and 2022.

Libya’s post-Qaddafi rulers have struggled to manage water issues that have largely been left to the control of local actors. The ongoing civil war threatens to undo years of infrastructure investment in the water sector. During the Qaddafi era, desalination was initially the main means of supplying water, but this left little water for irrigation. Meanwhile, the coastal aquifer that traditionally supplied water to Tripoli had become contaminated and increasingly saline. To solve these issues, Qaddafi endorsed a massive engineering project in 1983 with the goal of supplying water from desert aquifers to the coastal region and expanding agriculture through irrigation. When the 2011 uprising started, more than 70 percent of the project, known as the Great Man-Made River Project, had been completed. Today, the ongoing conflict has halted progress and created uncertainty around the project. Chronic power shortages, degrading desalination plants, and contaminated aquifers all contribute to the uncertain fate of the project. Without a stable government in place, the longevity of the project is in question and Libya’s water supply will continue to be hostage to political conflict.

WATER AND SOCIAL PROTEST

A combination of poor governance, a lack of economic development, and high youth unemployment continues to spur discontent and protests in the Maghreb. The mass protests of December 2010 and early 2011 that shook the region and toppled dictators have largely dissolved. Instead, localized micro-protests, driven by specific socioeconomic demands, have become routine across the region. In March 2018, for example, Tunisia witnessed approximately 850 protests of various sizes. In October 2016, protests erupted in Northern Morocco’s Rif region after a confrontation with local authorities led to the gruesome death of a fish seller. It took months for police and security authorities to contain the demonstrations, and residual protests continue to flare occasionally.

Protests over water fit into a broader pattern of social protest in the Maghreb.

Thus, protests over water fit into a broader pattern of social protest in the Maghreb. Inequalities in water access and quality have become an increasingly explosive issue dividing people and governments in the Maghreb. Every country in the region has faced protests and demonstrations in the last several years linked to water issues. While these protests do not directly threaten regime control, they are part of a larger wave of social protest and public discontent aimed at government shortcomings, mismanagement, and inequality. Many spontaneous protests in this new environment are triggered by perceived abuses of state power or elite influence. Given water’s fundamental...
importance and symbolism, any actions by state authorities or economic elites that violate water availability or quality could trigger public outrage and protest.

Discontent and anger are high in marginalized areas that are cut off from the jobs and services that coastal population centers enjoy. Frustration driven by perceptions of neglect in the interior regions is also a future source of protest. Unequal access to water between coastal and interior regions compounds perceptions of geographic inequality in terms of socioeconomic status and development. In Tunisia, for example, nearly 100 percent of homes in the capital Tunis are supplied with drinking water, compared to just 50 percent in Sidi Bouzid, the birthplace of the Arab uprisings, in the center of the country. Similarly, in Morocco, 88 percent of the urban population has access to safely managed water, compared to just 38 percent of the rural population.

In 2017, water shortages precipitated a series of occasionally violent protests in Morocco. In the town of Ouazzane in the Northern Rif region, protesters demanded that the government take action against local growers who were overusing water for cannabis production, a water-intensive crop that is widespread in the Rif. In the same month, activists in the Beni Mellal region decried the high cost of water access, leading to violent clashes between protesters and police in the town of Aghbala. Intermittent protests in towns like Sefrou (Fes-Meknes region), Azilal (central Atlas Mountains), and Zagora (South) continued throughout the fall. From September to November 2017, Moroccans in several towns demonstrated over a lack of clean drinking water. In Zagora, which has been affected disproportionately and has struggled with water access for decades, 23 people were arrested after clashes with police.

After the Zagora protests, Moroccan Prime Minister Saadeddine al-Othmani publicly apologized to residents for the lack of clean water, acknowledging that it is the “state’s responsibility” to provide drinking water. In December 2017, the government introduced a “water police” force tasked with supervising the use of water resources and penalizing those who do not comply with usage regulations. Whether penalties will be applied to corporations and powerful business interests that abuse water, or merely individual end users who violate the new regulations, remains a question.

Other protests highlight popular mobilization against perceived elite interests, an issue that intersects with water debates and protests. In April 2018, Facebook users in Morocco started a consumer boycott of leading dairy, bottled water and beverage, and fuel companies. The boycott quickly gained momentum. Two million Facebook users have reportedly joined the boycott, which has already had an economic toll on dairy producers. Boycotters have highlighted a range of grievances including high prices, corruption, nepotism, poverty, unemployment, and injustice. Some of the companies targeted are owned by prominent businessmen active in politics.

While the boycott is not driven directly by water scarcity and quality issues, it illustrates the potential of middle-class mobilization to challenge the status quo. For the Justice and Development Party (PJD)-led government, the boycott poses a difficult dilemma. Many of its members sympathize with the protestors’ grievances. Others within the ruling coalition fear the economic impact of the boycott will further hurt small farmers and suppliers.

Moreover, for Morocco’s administration, the challenge of a successful grassroots protest campaign could spur other middle-class demands and campaigns. Unlike popular protests and demonstrations in 2011, boycotting consumer goods is a much less confrontational, yet potentially equally powerful, tactic of social protest.

In Tunisia, protesters demonstrated outside phosphate mines in February 2018 to decry the contamination of groundwater from mining activities. Protests in mining areas have occurred since the 1980s in Tunisia. Residents of mining areas in particular demand jobs in state-owned mining enterprises, believing they suffer from the mining industry’s negative environmental impact, while the coastal elite exploits its economic benefits. Water supply shortages announced by the Tunisian government have also triggered protests, including one man’s self-immolation in 2016.

Algerians have also taken to the street to protest water issues. Their main grievance involves proposed fracking to extract shale gas. The process consumes large volumes of water and produces even larger volumes of waste water, which require disposal wells that can contaminate aquifers. In January 2015, thousands demonstrated in the southern town of Ain Saleh opposing government interest in a $70 billion fracking project. The protests spread to Algiers and other cities. Despite local opposition, the government relaunched plans for shale gas extraction in October 2017 and is reportedly in talks with Exxon Mobil to play a role in developing production in the south.

More recently, protests erupted in Algeria during the summer of 2017 in the midst of a particularly dry spell as 16 out of 48 wilayas (regions) reported water shortages. In particular, the eastern city of Annaba had been experiencing a shortage due to a severe drop in volume at a key dam. Citizens protested in Annaba as well as Mila, Setif, Tizi Ouzou, Khemchla, and Tiaret. Although these parts of the country had experienced shortages in previous summers, in 2017 the wait for sufficient water,
which is normally transported by truck during dry spells, was much longer than usual.

Water access issues continue to plague Libyans, and authorities’ inability to provide steady access to clean water has become a symbol of the internationally-backed government’s limited reach and ineffectiveness.

In October 2017, desperate residents in Tripoli started drilling through pavement to access wells in the face of water shortages in the city. The lack of water was initially due to scheduled maintenance, but sabotage by an armed group prolonged it. Earlier, in August 2017, protests erupted in Tobruk when a desalination plant closed due to a lack of chemicals necessary to operate the plant. Residents threatened to shut down Marsa Hariga port, a major oil export terminal, in the hopes of convincing authorities to invest in desalination to ensure adequate water supply. So far, those demands have gone unmet.

GOVERNMENT STRATEGIES AND POLICY RESPONSES

These trends do not come as a surprise to governments in the region. Each is aware of the gaps between water supply and demand, environmental degradation, as well as its own mismanagement. In addition, more than a decade’s worth of international reports addressing various aspects of water scarcity in individual countries and the region reinforce the nature of the problem. Each government is addressing the problem in a different way.

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In 2016, Morocco outlined an ambitious plan, submitted to the United Nations Framework Convention on Climate Change (UNFCCC), to address the negative impacts of climate change, including water stress. The plan describes water resources as “the most constraining factor to sustainable economic and social development in Morocco” and is estimated to cost a minimum of $35 billion between 2020 and 2030.

The plan calls for a number of initiatives, including increasing the urban sewage connection rate; increasing wastewater treatment; reusing 50 percent of wastewater in cities; and modernizing irrigation systems across the country. Given the scale and cost of the projects outlined in the plan, Morocco would require significant external financing to proceed with most aspects of the plan. Morocco’s report to the UNFCCC builds on previous efforts to address the environmental impact of its economic development activities, including the 2008 Plan Vert. Plan Vert specifically aimed to encourage more sustainable agricultural techniques in order to continue expansion in the agricultural industry without further depleting water resources and damaging the environment. The challenge, beyond the vast financing requirements, lies in ensuring that the plans see implementation.

Water has also become a topic of greater discussion in the development of tourism in Morocco. Plan Azur is aimed at developing Morocco’s seaside resort facilities by building six resorts that include golf courses. To account for the high water usage golf courses require, Plan Azur calls for the implementation of integrated water treatment plants in all of the resorts.

One opportunity for Morocco to make strides in efficiency lies in expanding wastewater treatment, which is mentioned in the UNFCCC plan. Morocco currently only treats about 25 percent of wastewater, which means that its “water productivity,” or level of economic efficiency with which it uses water, is quite low compared to its neighbors. Treated wastewater can be reused for agriculture or for recharging aquifers, but a number of barriers have impeded doing so. Financially, transporting water can be expensive, but social barriers also prevent the reuse of wastewater, as it can be seen as unsanitary.

Tunisia’s post-revolutionary governments have been largely compelled to respond to acute water emergencies but more recently have started developing a longer-term vision for water development and management. In Tunisia, agricultural losses from poor rainfall during 2016 and 2017 were significant, forcing the government to allocate a $6 million emergency fund for farmers and central and southern governorates affected by drought.

Furthermore, a national water strategy was articulated as part of the 2020 development plans, with the goal of increasing the number and capacity of dams and wells in the country. The government submitted a draft “intended” national plan to the United Nations in 2015 to address water issues as part of its plan to respond to climate change. The plan calls for projects to transfer and reuse treated wastewater and to improve and secure the water supplies of large urban centers, especially Greater Tunis, Cap-bon, Sahel, and Sfax. The estimated cost for the water project-component exceeds $500 million, a sum that would require external financing and assistance.

Algeria’s government relies heavily on expensive water management solutions, such as desalination, and heavily subsidizes water. The government also attempts to mitigate the effects of drought for shepherds by providing...
subsidies to offset some of the increasing costs for water and feed. Low oil prices, however, have also restricted government spending—Algeria’s 2015-2019 Development Plan set aside $18 billion for water infrastructure projects, but the projects have been increasingly stalled. 63 Algeria has submitted a UNFCCC report but it is less specific than those of its neighbors, and the document remains in an “intended” or draft form. 64

Moving forward, every government in the Maghreb will be compelled to spend more resources on infrastructure, water transportation, and waste management, while also minimizing the negative impact of climate change, pollution, and increasing demand on their valuable water resources.

LOOKING FORWARD

In the years ahead, how Maghreb states respond to water stress, and how they close the gap between citizens with access to clean water and those who lack it, will affect government legitimacy and social stability. Adapting to the realities of a changing climate, mobilizing external actors to finance these projects, and building local expertise will be key.

It will also require adapting to the new realities of social protest in the region. Protests over a wide range of socioeconomic and political grievances have become the new normal in the Maghreb. Part of the challenge will be minimizing the negative effects of economic growth strategies that target water-intensive industries. If not addressed, popular perceptions that political elites benefit from these sectors at the expense of most citizens will further public anger and could prompt middle-class mobilization and protest against these elites, further deepening social divides.

While demonstrations triggered by water issues are unlikely to directly threaten regime control in the Maghreb, water stress threatens to erode public confidence over time, intersecting with broader grievances and public demands. Water helped build state legitimacy in the Maghreb. Now, governments must rethink water’s role in the contested relationship between citizens and the state, while the problems are still manageable.

ENDNOTES


3. Article 44 of Tunisia’s 2014 constitution states that “the right to water shall be guaranteed” and that “the conservation and rational use of water is a duty of the state and of society.” Article 45 includes that “the state guarantees the right to a healthy and balanced environment and the right to participate in the protection of the climate. The state shall provide the necessary means to eradicate pollution of the environment.” See “Constitution of the Republic of Tunisia,” Via Al Bawsala, January 26, 2014, https://majles.marsad.tn/uploads/documents/TnConstit_final_1.pdf.


7. See Beyond Scarcity.


9. Illegal drilling into aquifers depletes additional water and damages supply. Withdrawals from Algeria’s Northwestern Sahara Aquifer are estimated at 2.5 billion cubic meters per year, while replenishment is estimated at around 1 billion cubic meters per year. See “Algeria: A Desert Nation Fighting to Maintain Water Supplies,” Stratfor Worldview, January 20, 2016, https://worldview.stratfor.com/article/algeria-desert-nation-fighting-maintain-water-supplies.


12. Improper brine disposal, a desalination byproduct, poses a hazard to marine ecosystems. Technology exists to mitigate the negative impact but is not always used. See Heather Cooley, Newsha Ajami, and Matthew Keberger, “Key Issues in Seawater Desalination in California:

13. In Morocco, water resources per capita hovered around 2,200 cubic meters in 1962, compared to 843 in 2014; Tunisia saw a decrease from 1,073 cubic meters in 1962 to 410 in 2015; and Algeria’s per capita availability sank from 998 in 1962 to just 294 in 2014; Libya’s availability in 2014 was the lowest at 115 cubic meters, compared to 455 in 1962. See Food and Agriculture Organization of the United Nations, “AQUASTAT,” http://www.fao.org/nr/water/aquastat/data/query/index.html.


15. According to a recent World Bank report, 80 percent of water withdrawals in the Middle East and North Africa are for agricultural purposes, which is higher than the global average of 70 percent for agriculture. See World Bank, Beyond Scarcity, 46.


22. Before 2011, tourism accounted for 6.5 percent of Tunisia’s GDP, but it then dropped dramatically after a wave of terrorist attacks and political uncertainty. Today, tourism revenue has started rebounding, bouncing back to 6.9 percent in 2017. See: Tim Cocks and Tarek Amara, “In Trouble ahead.”


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