

TUNISIA

In December 2020, authorities in Sidi Bouzid planned a ceremony to commemorate the 10-year anniversary of Mohammed Bouazizi's self-immolation.

The fruit vendor's protest against harassment from local officials had ignited nationwide protests which swept Tunisia's aging dictator from power and catalyzed protests from Morocco to Bahrain. A decade later, Tunisia's democratic revolution is considered the only success story of the Arab Spring.

But when crowds marched through the streets of Sidi Bouzid last December, they were not celebrating the success of the revolution. Instead, they chanted and shouted, railing against unemployment, poor services, and the lack of local development.¹⁰⁷ After a decade of failed promises, the people of Sidi Bouzid returned to the street to call for a new revolution. At the last minute, local authorities were forced to cancel the commemoration.

Tunisia's 2011 revolution created an opportunity for the government to remake the social contract through improved service delivery, but the government has fallen short of Tunisians' expectations. As part of its effort to build government accountability, Tunisia has embarked upon a broad strategy of decentralization. However, the decentralization process has been slow and uneven, and the central government has not provided local authorities with sufficient support to improve basic services of electricity, water and sanitation, and solid waste management.

Many Tunisians have now become disillusioned about prospects for positive change. Despite lockdown measures for the Covid-19 pandemic, violent protests spread across multiple governorates on the tenth anniversary of the revolution in January 2021. There is increasing urgency for the government to deliver sustainable and reliable utilities to its people.

GOVERNANCE OF SERVICE DELIVERY

The Tunisian government rapidly increased the provision of utilities in the last half-century, but regional disparities endure. The state sought to expand its authority in Tunisia in the second half of the twentieth century and extended utilities services to rural areas as part of the strategy. However, development was unequal and exacerbated interregional disparities. The state simultaneously dismantled mediating institutions—including tribes—and decisionmaking became highly centralized.¹⁰⁸ The government concentrated resources on several large cities on the coast, believing that was critical to Tunisia's development, and neglected the poorer regions of the interior and the south. These disparities exacerbated growing perceptions of marginalization which reached a crescendo in 2011.

Tunisians had high hopes that their living conditions would improve after the 2011 revolution. But the government has struggled to contend with rising demand for services and stresses on supply. As Tunisia's population has grown and become increasingly urban, the pressure on Tunisia's utilities has become more acute. Between 2010 and 2019, Tunisia's population grew by roughly 1 million, the vast majority of whom live in urban areas.¹⁰⁹ Tunisia is also grappling with the effects of climate change. Summers are hotter and drier, and winters are wetter, with less predictable rainfall. Meanwhile, political turmoil, endemic corruption, and

financial constraints have stymied the government's ability to make progress on its ambitious nationwide plans to improve the provision of utilities.

The most prominent attempt to harness the potential of solar power in the Maghreb was Desertec. The Desertec Industrial Initiative was a consortium of mainly European companies that planned to invest \$472 billion in solar megaprojects in the Maghreb and then pipe energy through a super-grid to Europe.¹¹² However, the consortium fell apart and the dream never materialized when the price of renewable energy technologies decreased to the extent that investors believed Europe could meet its energy needs domestically.

POWER

When a map from a German student's 2005 diploma thesis went viral on social media, it captured the excitement of engineers, environmentalists, and businesspeople alike.¹¹⁰ The map was of North Africa and superimposed a red square over a small section of the Sahara Desert. If you just filled that area with solar panels, the caption stated, you could generate enough energy to power the entire Earth.¹¹¹

Even before its demise, the Desertec megaproject had been met with skepticism in Tunisia. Tunisian trade unionist Mansour Cherni summarized local concerns at a conference in 2013: "Where will the energy produced here be used? Where will the water come from that will cool the solar power plants? And what do the locals get from it all?"¹¹³



BRIGHT SKIES, BRIGHT FUTURE

Ahmed Ernez was amazed at Germany's success despite its cloudy skies. The Tunisian electrical engineer had moved to Berlin to work in Germany's innovative solar energy industry and was convinced his perpetually sunny homeland held even more potential. But the German technology was too expensive for the Tunisian market. Instead of exporting it to Tunisia, he founded his own company, Biome Solar Industry (BSI), and manufactured affordable solar water heaters in Tunisia for Tunisians.

BSI worked within the government's PROSOL mechanism. Under PROSOL, Tunisia's national electricity utility vets the financial viability of potential clients and then provides them with subsidized credit and a loan that is repayable through their electricity bill, ensuring the manufacturer gets paid and removing customers' upfront investment costs. A combination of PROSOL financing and a growing team of highly trained technicians have allowed BSI to thrive. It now exports its products internationally.

Despite being established in the Tunisian renewables market, a lack of public awareness about solar technology remains an issue. BSI has taken to social media to educate Tunisians on the myriad benefits of solar water heaters. One recent Facebook post says taking a hot shower before bed improves sleep quality, while another states that hot washing machine cycles cost less and conserve water.

Rising gas prices, increasingly affordable technology, and vocational programs mean the Tunisian solar industry is also creating jobs. With help from the German government, BSI opened a training center in 2016 to facilitate installations and services in Tunisia's solar market. Trainees graduate with a nationally recognized "Qualisol" certificate and have gone on to found more than 60 microenterprises which operate across the country. However, entrepreneurs without Ernez's decades of technical experience and international contacts may struggle to replicate his success. Entering Tunisia's solar industry takes more than just a sunny disposition.

Although Tunisia has significant potential for renewables and the government has ambitious plans to transition to clean energy, the large-scale projects it has championed have often been met with local hostility. Opponents to these plans argue that the government prioritizes international companies over local initiatives, refuses to relinquish its monopoly on electricity generation, and fails to provide local communities with any of the benefits.

Tunisia's domestic energy situation worsens every year. Growing demand forced Tunisia to become an energy importer for the first time in 2000, and its energy dependency has grown progressively more pronounced since 2010. Tunisia relies heavily on fossil fuels and imports natural gas from neighboring Algeria. In 2017, natural gas and oil represented 94 percent of Tunisia's energy mix.¹¹⁴ Although nearly 100 percent of Tunisians have access to the national grid, shortages in supplies mean that electricity outages are common in many parts of the country.

Tunisia's energy sector is highly centralized. The national electricity utility, the Tunisian Company for Electricity and Gas (STEG), dominates the generation, transmission, and distribution of electricity. STEG generates 81 percent of Tunisia's electricity, distributes all energy generated in Tunisia, and exercises effective control over the strategic evolution of the sector.¹¹⁵ In a sign of its power, STEG has thus far resisted government attempts to establish an impartial regulation authority for the electricity sector.¹¹⁶

Despite its continued reliance on fossil fuels, the Tunisian government began to



Where will the energy produced here be used? Where will the water come from that will cool the solar power plants? And what do the locals get from it all?"

TUNISIAN TRADE UNIONIST MANSOUR CHERNI

integrate climate change concerns into its energy sector development processes as early as 1992.¹¹⁷ One of its early programs to promote renewable energy is the Tunisian Solar Programme (PROSOL), which was launched in 2005. PROSOL is a funding mechanism to develop solar water heaters as a way of managing energy demand. In 2009, PROSOL-Elec was launched, which authorized the self-production of energy and the right to sell electricity to STEG. However, strong interests have fought the introduction of renewable energy into the electricity sector. In addition to STEG, the

powerful electrical union has regularly gone on strike to protest the development of the renewable sector, which it equates with dangerous privatization.¹¹⁸

After the revolution, new voices in Tunisia began to challenge STEG's dominance. Private sector actors and civil society groups have tried to chip away at STEG's monopoly on the electricity sector and push for a renewable transition, although STEG still retains a preeminent position.¹¹⁹ Responding to growing pressures to deliver sustainable services, the government updated the regulatory framework for renewable sources in 2015, seeking to boost private sector investments and liberalize regulations. It set an ambitious target of increasing the share of renewable energy in Tunisia's mix to 30 percent by 2030. These moves have had some success. In 2017, STEG's opposition to renewable sources began to soften as it came out in support for some public-private partnerships. However, STEG's strong preference for large projects that are connected to the central grid means a top-down approach continues to dominate and smaller projects struggle.¹²⁰

International donors have attempted to challenge STEG's domination by promoting private sector activity in the electricity sector, but they too have achieved little success. The World Bank criticized STEG for failing to meet the government's annual targets for renewable energy generation, network expansion, and the reduction of technical and commercial losses.¹²¹ The bank argued that STEG needed to accept that its former role in the electricity sector was no longer viable

in the new context.¹²² The European Bank for Reconstruction and Development has similarly criticized Tunisia's authorization regime, arguing that STEG's contracts disadvantage developers.¹²³

In this highly centralized environment, local authorities and entrepreneurs have struggled to play a significant role. Businesses must overcome financial, social, and political obstacles to succeed in the electricity sector. The PROSOL initiative remains active, and financing processes have been optimized to facilitate the expansion of the solar water heater market. The head of one company, Biome Solar Industry (BSI), said PROSOL was critical to his success. In addition to exporting products across Africa, Europe, and the Americas, BSI set up a training center for the installation of solar water heaters and has created 62 micro-enterprises across Tunisia.¹²⁴ However, foreign investors are cautious to fund these projects, given Tunisia's political instability and limited resources from local banks.

Entrepreneurs often struggle to convince local communities of the benefits of renewables. Perceptions persist that renewable energy at the household level is only for the rich, while the potential benefits for local communities—including food security, water, and sanitation—are often poorly communicated.¹²⁵ Tunisians' perception of energy as a right, and the substantial subsidies they enjoy from the government, further diminishes their interest in renewable technologies. Tunisia spends 5 percent of its GDP on fuel subsidies. Although the government has embarked on a program to reduce these



FATHI NASRI/AFP via Getty Images

Tunisian protesters pose for a picture while standing on a tank at the oil and gas plant in el-Kamour in Tunisia's southern state of Tataouine on July 16, 2020.

subsidies gradually, the volatile social environment makes it difficult to implement the strategy without prompting large protests.

Tunisia has not yet been able to realize the dream of fueling the world's energy needs from its desert, and it has failed to even meet its own needs. The government has embarked on an ambitious plan to transition to renewable energy and has significantly improved the regulatory environment to achieve it. Experts predict

that although Tunisia will miss the target of 30 percent renewable energy by 2030, it will have made important strides toward that goal.¹²⁶ However, Tunisia will not realize its potential to transition to a more sustainable energy strategy as long as strong interests resist any initiatives that challenge the state utility's monopoly on the market, political instability and subsidies deter private sector investment, and authorities fail to change mindsets by clearly articulating the benefits of renewable technologies to local communities.

WATER AND SANITATION

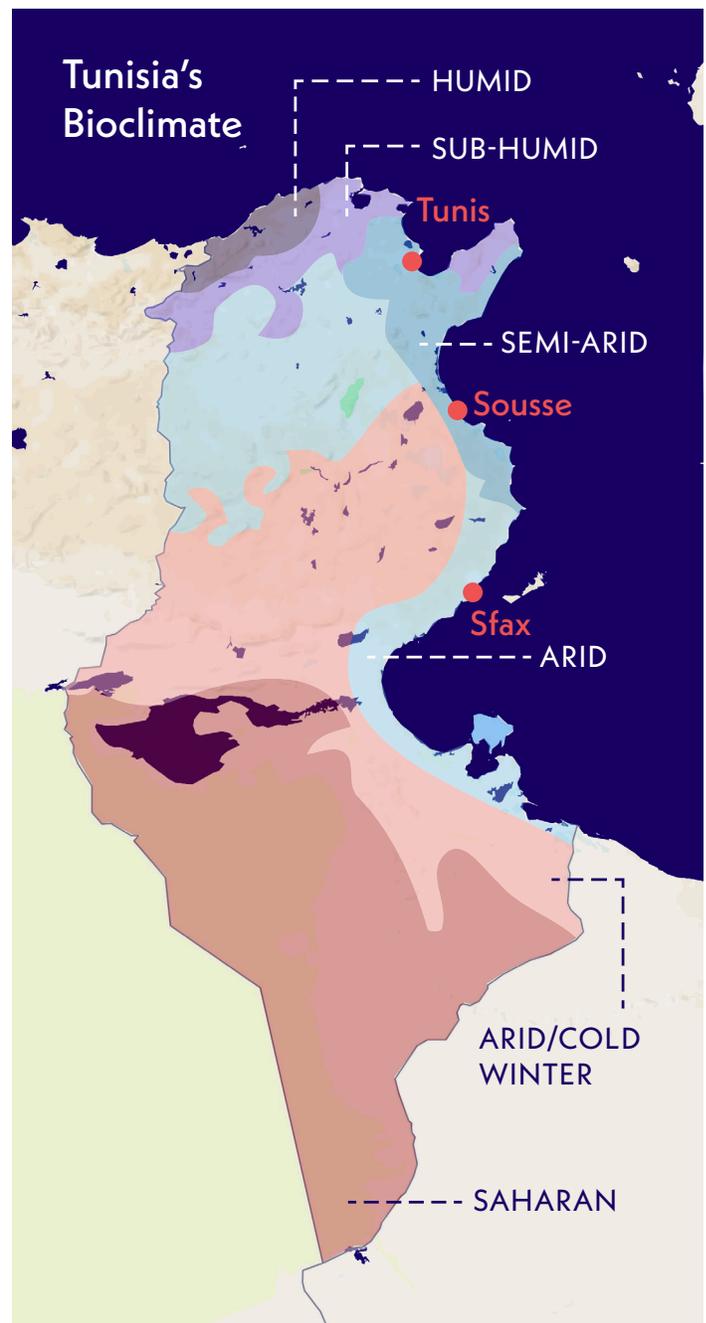
In March 2021, a national crisis in

Tunisia prompted the Ministry of Religious Affairs to issue a call for the faithful to unite in prayer. It cautioned Tunisians to respect social distancing guidelines for Covid-19, but the crisis it referenced was not the pandemic. The government urged Tunisians across the country to pray for rain.¹²⁷

Tunisia is one of the driest countries in North Africa. Two-thirds of the country is arid or semi-arid, and it is on the verge of water scarcity. The water resources Tunisia does have are distributed unevenly across the country and are heavily concentrated in the northwest. The areas on the coast that need the most water have the fewest resources. To make matters worse, climate change is causing fluctuations in rainfall, which is decreasing overall and becoming less predictable. As a result, droughts are becoming more common.¹²⁸

Tunisia's growing population and economy increase demand for water year over year. The government has worked to extend water and sanitation services to the population and has achieved above average rates for the region. In 2016, the rate of drinking water coverage reached 97.7 percent at the national level, and between 2004 and 2015, the percentage of households connected to the public sanitation network increased from just under 74 percent to almost 90 percent.¹²⁹ However, Tunisia has a high level of water mobilization at 95 percent, meaning it has few options to increase supply.¹³⁰ Tunisia uses 83 percent of its mobilized water for agricultural irriga-

tion, but the share used in the tourism sector is increasing, forcing two key sectors of the economy to compete for the dwindling resources. The water network is plagued by deteriorating infrastructure. Between 2010 and 2016, the system had an average efficiency of just 59 percent due to physical losses such as leaks, water theft, and insuf-



Source: Hana You et al., "Plant Diversity in Different Bioclimatic Zones in Tunisia," *Journal of Asia-Pacific Biodiversity* 9, Issue 1 (March 2016): 56–62, doi:10.1016/j.japb.2016.01.002; Dorte Verner et al., *Climate Variability, Drought, and Drought Management in Tunisia's Agricultural Sector* (Washington, DC: World Bank, October, 2018), 24, <https://openknowledge.worldbank.org/handle/10986/30604>.

THIRST ALONGSIDE A RESERVOIR

A group of women in the remote village of Erroui in northwestern Tunisia staged a sit-in by a reservoir. "We are dying of thirst!" they shouted, gesticulating at the reservoir full of drinking water two miles from their homes. Despite being in Tunisia's most water-rich region, their homes and the school in Erroui are not connected to the state water utility's network, and the women must walk for more than four hours a day for water.

The Tunisian government delegates responsibility for water provision in rural areas such as Erroui to volunteer-run associations called Agricultural Development Groups (GDAs). GDAs were designed to be democratic and financially sustainable entities, based on a model trialed in Germany. Rural populations elect directors to run their local GDA, and the group funds itself by charging consumers for water.

Until the Tunisian revolution in 2011, the system worked relatively well. A government-assigned representative in each GDA monitored its functioning and ensured consumers paid their bills. These representatives were often feared, so compliance was high.

However, the government has retreated further from water management in rural areas in the decade since the revolution. Corruption has increased, and some consumers extract more than their fair share of water. As service deteriorates, fewer consumers are willing to pay GDAs for their bills. In turn, GDAs have fallen behind on paying for electricity to run the water pumps, and the state electrical utility has cut their electricity.

GDA directors say they are trapped. They lack the authority to enforce payment and regulations, and they lack an independent body to investigate corruption. The GDA in Erroui, like many others, has fallen into debt. Of the estimated 2,500 GDAs across Tunisia, as many as 1,400 have stopped operating entirely.

Parliament's instinct is to get less involved rather than more so. A new water code would add wastewater management to GDA responsibilities. When civil society groups pushed back, the government argued that it is Tunisians' responsibility to elect effective representatives to GDAs. Whether they have effective representatives or weak ones, rural Tunisians may be walking hours a day for water for some time to come.

efficient registration of water meters.¹³¹ The World Bank predicts water shortages in the Greater Tunis area by 2022 if supply capacity does not increase.¹³²

Before the revolution, the water sector was characterized by highly centralized decisionmaking with limited stakeholder participation or consultation. The water code of 1975 defined water resources as a public good, banning private water ownership and centralizing water management under the Ministry of Agriculture, Water Resources, and Fisheries (MARHP).¹³³ Water was seen as critical to Tunisia's development, and the state invested in costly infrastructure to mobilize resources from the interior toward industrial cities on the coast.

Toward the end of the twentieth century, Tunisia embarked on a gradual shift from a supply management policy to a policy of managing demand. The government introduced water saving programs and sought to correlate water pricing more closely with operating costs. Although water management in most of Tunisia remained highly centralized, the government decentralized groundwater governance in rural areas. From 1987, the state began to implement reforms to decentralize agricultural development and progressively withdrew from local water management in agricultural communities. The result was the creation of water user associations (GDAs) in 2004. GDAs are non-profit associations that manage collective irrigation schemes or rural drinking water supplies on behalf of their members.¹³⁴ The structure aimed to increase technical expertise in decisionmaking, reduce resource management, and encourage direct public par-

ticipation. However, members struggled to collect fees from their members, and many groups lacked the administrative, technical, and managerial skills to function effectively.

After the revolution, the government professed an aim to decentralize the water sector but made little progress in that regard. Water policy remains largely in the control of the same stakeholders as before the revolution. The national water strategies—Eau 2020, Eau 2030, and Eau 2050—were mainly conceived by the same government experts through non-participatory processes.¹³⁵ In 2014, civil society pressure resulted in Tunisia's constitution recognizing water as a right. The government tried to introduce a new public water code in 2015 which factored in climate change, but the powerful Tunisian General Labor Union (UGTT) opposed it due to fears of the privatization of the sector.¹³⁶ A compromise was agreed in 2019 and sent to parliament.

The changing relationship between the government and the people has manifested in increased tensions in the water sphere since the revolution. Protesters in the interior have decried the government's strategy of transporting water to richer areas on the coast. "How can you explain that the Jendouba region, which has large reservoirs, is suffering from thirst?" one man demanded in 2016.¹³⁷ Following pressure from the World Bank, the government pledged to increase the price of water in 2018, but frequent protests have delayed the process. The number of Tunisians refusing to pay their wa-



A rural woman walks with her donkey after collecting water in the northern Tunisian countryside of Mateur on March 14, 2019.

FETHI BELAID/AFP via Getty Images

ter bills in protest at service outages has also increased.

Decreasing rates of bill paying since the revolution have also undermined the effectiveness of decentralized water management bodies. GDAs' revenues come from selling water but collect just 40 percent of bills.¹³⁸ The groups lack the means to sanction farmers who over-pump groundwater, and so have no way to impose sustainable management of their resources. As a result of their financial difficulties, more than half of the 2,500 GDAs in Tunisia are estimated to be inactive.¹³⁹

The Tunisian government is simultaneously grappling with growing demand for water, decreasing supplies, and an increasingly angry public. Repairing water infrastructure to mitigate losses is vital but will be costly and take time. Increasing water rates as a means of managing demand is necessary but should be implemented in a progressive manner to ensure that the most vulnerable are protected. The government must also integrate stakeholder participation and consultation in its strategic planning. Better understanding the needs and concerns of water users should enable the

government to provide incentives to reduce water usage. For example, farmers should be incentivized to transition to less water-intensive crops.

waste. The annual quantity of municipal solid waste produced in Tunisia increased from 1.8 million tons in 2002 to 2.8 million tons in 2017, and it is projected to almost double again to 5 million tons by 2036.¹⁴¹ The increase in solid waste increases pollution, poses serious public health risks, and strains underfunded management systems. It also carries economic costs. Several European tourism companies stopped offering tours to Tunisia, citing complaints about trash on the beaches.¹⁴²

WASTE

In July 2020, Tunisian customs officers discovered hundreds of containers of suspicious cargo in the port city of Sousse. The containers were listed as storing plastic scraps for recycling but contained something else entirely. Not drugs, weapons, or cigarettes, but tons of putrid household and hospital waste from Italy.¹⁴⁰ The discovery shocked Tunisians, who demanded to know why Tunisia would import another country's garbage when it fails to manage its own waste effectively. The answer was money. Despite Tunisia's ban on importing foreign waste, the incident was evidence of a murky global trade in which industrialized countries pay developing countries to take care of their waste. The investigation into the scandal resulted in the sacking of Tunisia's environment minister, who was subsequently arrested in November 2020 alongside customs officials, a Tunisian diplomat in Naples, and national waste management agency officials.

Even without importing other countries' garbage, Tunisia's solid waste management crisis worsens year on year. Growing urban populations and changing lifestyles have caused dramatic increases in municipal

Tunisia adopted a relatively forward-looking, but highly centralized national solid waste management program in 1993. The new National Waste Management Agency (ANGeD) was tasked with rehabilitating illegal landfills and creating controlled landfills.¹⁴³ The government also established a decent legal framework for solid waste management, which defined different types of waste and the roles of the institutions that are responsible for managing different parts of the process. However, municipalities were responsible for waste collection but were not able to achieve financial or administrative autonomy, and some rural areas were not covered by any municipalities, meaning no one was responsible for waste collection.

Tunisia began to implement the first system of managing packaging waste in the MENA region—ECO-LEF—in 2001. ECO-LEF is a public-private partnership to collect, sort, and resell plastic waste to recyclers. The system is primarily funded by a 5 percent “eco-tax” on imports of raw materials and packaging made of certain materials, including plastic.¹⁴⁴ The government is supposed to operate a “pollut-

VOLUNTEER TRASH COLLECTORS

Tunisia's revolution in 2011 improved many things, but the odors of Tunis was not one of them. Trash collectors went on strike for almost half a year after the revolution to demand better salaries, and waste collection systems broke down. Garbage piled up and rotted in the streets.

The situation motivated some Tunisians to take matters into their own hands. A sound engineer, a software developer, and a French expatriate in the northern suburbs of Tunis founded an initiative "Tunisie Propre" to organize beach clean-ups and public awareness campaigns on littering. The three volunteers realized they could sell some of the waste they collected to recyclers if they sorted it. They saw an opportunity to use the limited revenues to increase the environmental impact of their efforts. They devised a plan to collect garbage directly from homes and businesses.

Tunisie Recyclage was born, a volunteer-run non-profit association that collects and sorts waste from members, who pay a subscription fee. The association attracted the attention of foreign embassies and international organizations in Tunis and secured funding to expand their work. By 2018, more than 1,200 households and 30 companies had subscribed, and they were able to hire three paid permanent staff.

However, the system relied on volunteers and an old truck that kept breaking down. Multiple times, they were forced to cancel their service at the last minute, and many of their members grew frustrated and stopped paying. Although they bought a new truck in 2020 through crowd-funding and resumed reliable service, they are still working to win back members' trust.

Because Tunisie Recyclage continues to rely on volunteers and donations, the initiative may be difficult to replicate elsewhere in Tunisia. Still, the organizers are keen to collaborate with municipalities and other similar organizations to expand their impact and encourage others to copy their model. They recently joined a consortium of 30 stakeholders working on fighting pollution. They believe that such partnerships may enable them to influence government strategies in the long term. However, Tunisia's political turmoil has made establishing relationships with the right authorities a challenge: in the 10 years since the revolution, Tunisia's government has changed seven times.

er pays” scheme for industrial waste, but the system is enforced unevenly and some powerful businesses evade it.¹⁴⁵

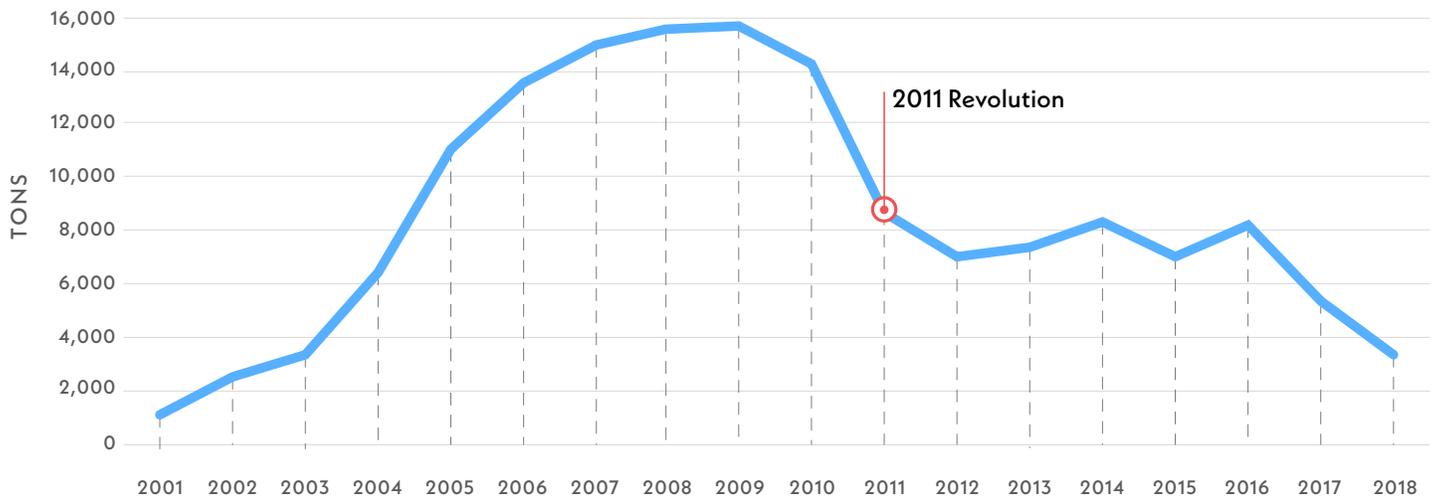
Immediately after the revolution, waste management deteriorated in both rural and urban areas. Systems of waste collection and recycling were disrupted.¹⁴⁶ More than 70 percent of waste went to landfills, and 21 percent was dumped in uncontrolled landfills which proliferated across the country.¹⁴⁷ As one manifestation of the government’s struggles with waste management since the revolution, the quantity of waste collected under ECO-LEF and the number of members of the system have both decreased dramatically since 2009.¹⁴⁸

Waste management is an important aspect of the new government’s commitment to decentralization. In 2014, the government issued a law which enabled municipalities to achieve financial and administrative autonomy, which is critical for their ability to perform their responsibilities in waste

management.¹⁴⁹ When municipal elections were held for the first time in May 2018, local elected authorities gained increased powers and became important decisionmakers in waste management. For the first time, the authorities responsible for solid waste management were clear across Tunisia, as every inch of territory was part of a municipality. The decentralization process therefore created new opportunities for accountability in the waste management sector.

However, several factors have undermined local authorities’ ability to manage waste effectively. There was little time between the creation of the new municipalities and local elections, meaning many local authorities came to power without knowing what their authorities or responsibilities were.¹⁵⁰ Because of weak revenue collection—just 27 percent of Tunisians pay municipal taxes—municipalities were overstretched and under-resourced.¹⁵¹ Municipalities also lack data to inform their strategies of waste man-

Recyclable Materials Collected under the ECO-LEF Scheme



agement. For example, without knowing where people live, how much trash is generated, and what type of trash is generated, municipalities stand little chance of optimizing collection processes.¹⁵² These challenges caused a number of mayors to resign—in the first two years, almost 1 in 10 mayors across Tunisia resigned.¹⁵³

Various international actors have attempted to support the development of Tunisia's solid waste management systems, but they have enjoyed limited success. The World Bank financed a \$22 million project to support sustainable municipal solid waste management from 2007 to 2014, which was intended to provide institutional support, build infrastructure, manage and monitor projects, and build capacity.¹⁵⁴ However, an independent evaluation in 2015 found the project to have been "highly unsatisfactory."¹⁵⁵ The revolution disrupted the project, but the evaluation pointed to various other shortcomings. It failed to appreciate the political economy, relied too much on top-down interventions, and failed to develop a communications strategy with local communities, which led to opposition to new landfills and the proliferation of illegal dump sites.¹⁵⁶

Donors have supported various local initiatives in the solid waste management space. The German government supported the creation of SWEEP-Net, a regional solid waste exchange of information and expertise in the MENA region in 2009. The platform aimed to serve as a network for municipalities to share best practices, but it collapsed when German financing expired in 2015. Local experts say that

more than ten local waste management projects have collapsed as they failed to develop sustainable systems and international financing ran out.¹⁵⁷

Local groups and entrepreneurs must overcome various challenges to engage in the solid waste management sector, including incomplete legal frameworks, negligible government support, and a lack of private sector investment. The constant political turmoil since the revolution, terrorist attacks, and now the Covid-19 pandemic have all undermined investor confidence in Tunisia's private sector, limiting entrepreneurs' ability to develop sustainable financing for their initiatives. Three volunteers founded Tunisie Recyclage in northern Tunis in 2012 as a response to the worsening waste situation after the revolution. What began as a campaign to raise awareness about pollution evolved into an association that collected waste from more than 1,000 houses and enterprises. The group attracted funding from various embassies and other international actors but remains small-scale and has received no real support from the Tunisian government.¹⁵⁸ Without a sustainable financing mechanism, it will struggle to expand beyond the northern suburbs of Tunis.

One international project sought to tackle the issue of informal waste collectors, but funding expired in 2020. Roughly 10,000 workers in the informal sector, known as *barbechas*, collect waste in Tunisia. They are not permitted to contribute directly to the ECO-LEF scheme and instead must sell their waste to middlemen who then sell it to private recycling factories or

ANGeD.¹⁵⁹ Several international donors and NGOs have attempted to integrate barbechas into the formal sector, but the waste pickers are often very sensitive to discussions about their status and little progress has been made.¹⁶⁰ One prominent British-funded project ended in 2020. A positive development came in 2020 when parliament passed a “social and solidarity economy” law which supports collectives and self-governed businesses that make a profit and serve a social objective. This law should give barbechas better protection from health risks and exploitation but will still not integrate them fully in the formal waste management sector.¹⁶¹

The Tunisian government has several good systems in place for solid waste management and has worked to improve the regulatory environment in recent years. However, although the government has shown interest in expensive technological solutions to manage waste—such as mechanical biological treatment plants—it has failed to put sufficient effort into establishing the foundations of basic governance in the sector. For example, the process for decentralization holds promise for waste management, but many of the necessary codes have yet to be issued.

Although the challenges to waste management have grown since the revolution, the new political environment has resulted in some important developments in the space. Corruption remains a scourge—as seen from the scandal of the contraband waste from Italy—but now the media is able to highlight it and the responsible parties were held accountable. Tunisians now elect local officials who

are responsible for waste management in their areas and who can be held accountable. However, as long as municipalities are over-stretched and under-resourced, they will bear the brunt of public discontent for unsatisfactory performance in waste management.

ANALYSIS

Tunisia’s revolution—arguably the only successful revolution of the Arab Spring—provided the backdrop for a similar revolution in service provision. The organs of the authoritarian state of Bourguiba and Ben Ali were weakened, and the public interest could take center stage in policymaking. Yet, Tunisia also stands as a reminder that even when existing structures shudder, replacing them with something more resilient is still a daunting task. New political leaders often lack either the expertise or experience to engender organizational change, and enduring institutions have incentives to redouble their efforts to protect or even advance the interest of those they represent. Tunisia has not failed at the task of adopting a more environmentally sustainable path toward service delivery, but neither has it succeeded. Instead, Tunisia warrants an “incomplete” as it continues to navigate the post-revolutionary period and find a new model of governance that meets the needs and demands of a public that has been underserved by its leaders.