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Competing over the Tigris: The Politics of Water Governance in Iraq

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Executive Summary

In 2021 and 2022, conflicts in agricultural areas between groups of farmers over water shares, in addition to disputes between farmers and government agencies over restrictive water policies, have produced alarmist and exaggerated warnings about the coming age of “water wars” within Iraq and other states severely impacted by climate change. This paper argues that local struggles over water in Iraq are not solely the product of overall reductions in water supply from changing precipitation levels and drought (i.e., climate change), and nor can they be blamed entirely on upstream damming practices in Iran and Turkey. They are also the product of longstanding patterns of failed internal water governance – fueled by systemic corruption – in place since the US-led invasion of 2003. As a result of neglect in the

various government agencies responsible for water governance, Iraq's critical water infrastructure lies in a state of disrepair, particularly in the agricultural areas of the south where most local struggles over water originate. Irrigation channels, pumping stations, and drainage capacity have collapsed over the course of years of unexecuted contracts and failed maintenance, exacerbating water losses across the system and eroding trust in the state among agricultural communities.

An important root cause of the tensions between farmers and government agencies, and between government agencies themselves, is the fact that farmers regard the Ministry of Water Resources (MoWR), Ministry of Agriculture (MoA) and local authorities as negligent and corrupt in failing to uphold their end of the bargain in water governance. And instead of preventing water loss across the system by rebuilding and maintaining water infrastructure, these government agencies are increasingly placing the burden of confronting water scarcity on resource-poor agricultural communities by enforcing increasingly strict water quotas and imposing a shift to costly "modern" irrigation practices – policies that have inflamed existing tensions among different sets of water stakeholders. This paper examines contestation over water governance at three overlapping levels:

- **Grassroots activity in agricultural areas:** Throughout 2021 and 2022, several Iraqi governorates witnessed episodes of violent conflict between groups of farmers over water shares as well as grassroots demonstrations of farmers against the MoWR's water distribution policy and enforcement of restrictive water quotas. This grassroots pressure, in turn, has exacerbated tensions between governmental agencies and provincial governments (see below). It is important to situate this groundswell of collective anger and social strife among farmers within a broader context. As a product of the neglect of the Iraqi state of the agricultural sector since 2003, in addition to successive years of drought, small-scale Iraqi farmers are caught in vicious debt cycles, where debts from one season are repeatedly deferred to the next. Farmers regard the government as chronically negligent and systemically corrupt in failing to maintain water infrastructure and failing to distribute support for the agricultural sector. Calls for farmers on the part of the Ministry of Water Resources (MoWR) and the Ministry of Agriculture (MoA) to respect strict water quotas or to switch to costly "modern" irrigation techniques are often out of step with the harsh economic circumstances that farmers are facing, and the degree to which the agricultural community has lost trust in the

government's role in water management.

- ***Intragovernmental tensions:*** As a result of grassroots agitation and pressure from farmers, disputes between the government authorities concerned with water, namely, between provincial authorities, the Ministry of Water Resources (MoWR), and the Ministry of Agriculture (MoA), have become fiercer and more public in recent years. Though such tensions have been building over the course of the past decade, more recently they reached a critical point with the decision of the ministries to enforce water allocations and impose crop restrictions in response to the ongoing drought. In certain cases, governors of provinces with large agricultural areas have openly defied the MoWR and encouraged farmers to violate quotas. Tensions between the MoWR and the MoA have also erupted into the open, with each blaming the other for the wider failures in water governance.
- ***Interprovincial tensions:*** Disputes between different provinces have also been on the rise, with the governors of downstream provinces accusing the governors of upstream provinces of failing to implement water restrictions properly. These interprovincial conflicts simultaneously involve the MoWR as well as agricultural communities, as downstream provinces accuse the Ministry of failing to enforce water usage limits upstream and failing to crack down on illegal tapping from farmers. The research finds that disputes that arise between provinces over water resources are complicated by the fact that the provincial governments themselves do not enjoy legitimacy across all provincial domains – a fact that calls into serious question any notion that devolution of water governance to local authorities represents a viable policy pathway forward.

As for policy implications, the paper calls for a renewed emphasis on restoring Iraq's water infrastructure, especially in agricultural areas – where the vast majority of these intragovernmental, interprovincial, and grassroots disputes over water governance originate. The responsibility for enhanced water management in agricultural areas cannot be placed solely on the shoulders of farmers. While it is true that sprinklers and localized drip irrigation would conserve water at the farm level, these on-farm practices are only meaningful if the relevant ministries are also doing their part to restore the country's broader water infrastructure. The focus of Iraqi climate activists and reform-minded political actors should be to hold the

Government of Iraq accountable for combatting corruption in water governance/contracting and for effective domestic management of water storage, transport, irrigation infrastructure, and drainage systems. Some policy analysts have argued that disputes between provincial authorities and the ministries could be mitigated through the successful implementation of decentralized water governance, with budgetary and project formation authority allocated to the provincial government apparatus. The concluding section explains why this reasoning is flawed and calls for the new administration under Mohammed Shia Al-Sudani to clarify and work within existing lines of authority in water governance.

Introduction

A growing chorus of policy reports and journalistic accounts have raised awareness of the problem of water scarcity in Iraq. These accounts point to the fact that cultivatable land is drying up in areas that were previously abundant not many years ago. They call attention to the ecological and cultural disaster facing the country's famed marshlands, and subsequent migration patterns to urban areas. Troublingly, reports have underscored the linkages between water scarcity, water pollution, and adverse health effects for Iraqi citizens. In 2018, hundreds of people died and scores grew sick due to the pollution of Basra's water supply.¹ Journalistic accounts tend to link water scarcity in Iraq to changing precipitation patterns and intensification of droughts – i.e. climate change.² Scholars writing about water problems in other MENA countries have cautioned about “climate reductionism”, stressing that the multi-layered political, social, and economic dynamics shaping water levels and water quality should not be subsumed within the broader phenomenon of climate change.³ The climate *is* changing and drought patterns are worsening, but this is only one of the drivers of Iraq's emerging water catastrophe.

In addition to climate change, much of Iraq's struggles with water scarcity are often attributed to the failure of *external* relations and geopolitics. The Government of Iraq has consistently placed the blame for its water woes on Turkey and Iran's dams, which have indeed reduced the overall water supply to Iraq. Much ink has been spilled on the repeated failures of Iraq to negotiate water sharing with upstream neighbors.⁴ The tendency of both the Iraqi authorities and the media to fixate on upstream damming practices is tied not only to the objectively devastating impacts on water levels, but also to the heavy symbolism of state-building that dams have come to hold in Iraq and across the MENA region: as concrete physical

manifestations of sovereignty, or lack thereof.⁵ Comparatively little attention has been directed to Iraq's *internal* water management decisions and water usage policies. As a result of this external focus, the rise in conflicts in Iraq over water in Iraq's agricultural areas has often been attributed to climate change and external damming practices.

In recent years, heated disputes over water – between upstream and downstream provinces; between provincial governments and national ministries; and among and between groups of farmers – have become a growing phenomenon, particularly in the agricultural areas of southern Iraq. In some cases, conflicts among farmers have resulted in violence. Though the warnings about a coming age of “water wars” in Iraq are alarmist and exaggerated,⁶ a less obvious problem with these warnings is that they simplistically attribute the cause of increasing struggles over water to reductions in precipitation levels and upstream damming practices. The paper argues that conflict over water cannot be divorced from longstanding patterns of failed internal water governance – fueled by systemic and politically sanctioned corruption – in place since the US-led invasion of 2003.⁷ Iraq's critical water infrastructure lies in ruins, particularly in the agricultural areas of the south where most disputes over water originate. Irrigation channels, pumping stations, and drainage capacity have collapsed throughout the southern areas over years of unexecuted contracts and failed maintenance, eroding trust between agricultural communities and government agencies. Without discounting the importance of forging agreements over transboundary issues with Turkey and Iran, taking the rise of tensions over water in agricultural areas seriously will require confronting these problems of governance and infrastructure.

The report's findings are based upon an extensive literature review in addition to 37 semi-structured interviews – with climate-focused activists and water/environmental specialists (18) as well as Iraqi farmers (19) – conducted between January and September 2022. The 19 in-depth interviews with members of the agricultural sector were complemented by field visits to farms, and with participant observation of irrigation techniques, planting, harvesting, drainage practices, selling in the market, interactions with equipment vendors, etc. As the agricultural sector consumes approximately 80 percent of the country's water, any serious analysis of water scarcity must treat farmers as stakeholders with political agency.

Organization of Paper

This paper revolves around three overlapping axes of contestation over water: (1) grassroots agitation and conflict in agricultural areas; (2) intra-governmental tensions; (3) inter-provincial tensions. The first section looks at grassroots agitation in agricultural areas, including farmers engaging in protest action and open defiance of government policies, in addition to conflict among and between groups of farmers. The second section highlights disagreements between provincial governments and the Ministry of Water Resources over the latter's decision to reduce water allocation shares in response to the drought. It also explores contestation between the various national ministries which are involved in water management. The third section examines conflicts among several provincial governments, typically involving complaints issued by downstream provinces over the damning practices and water consumption patterns of upstream provinces.⁸ Disputes over water rarely involve one narrow set of actors, and so these three levels overlap. Disagreements between provinces and national ministries have implications for interprovincial relations over water, which in turn shape the everyday water consumption practices of farmers. Likewise, grassroots activity among farmers places pressure on government authorities and exacerbates the tensions between national ministries (e.g., MoWR, MoA, etc.) and provincial administrations.

Grassroots Activities and Pressure in Agricultural Areas

In the forthcoming section we analyze farmers as political actors, with complex sets of interests and economic incentives of their own. Throughout 2021 and 2022, several southern Iraqi governorates witnessed large-scale demonstrations and protests of farmers against the MoWR. In October 2021, dozens of farmers and tribesmen travelled to the provincial capital of Maysan province, al-Amarah, and intervened by force to change the water course towards their agricultural lands in Maysan's Kahla district. The MoWR described the incident as "an attack by a group of outlaws against the regulator."⁹ These demonstrations have been coupled with violent skirmishes between groups of farmers and tribes in rural areas. According to a security official in Baghdad, about 20 quarrels between farmers were recorded across the southern provinces in November 2021 alone, leading to several deaths and injuries.¹⁰

This groundswell of collective anger and social strife among farmers is not merely a product of overall reductions in water supply from climate change and upstream damming practices in Turkey and Iran. Without discounting the issue of overall water

supply, these local conflicts are equally about the erosion of trust between farmers and the government agencies responsible for water management. Farmers see the problem of water scarcity as partly stemming from a pattern of government neglect – fueled by systemic corruption – of water infrastructure.

The lack of understanding of the gravity of Iraqi farmers' situation is exacerbated by the fact that journalists and policymakers tend to repeat the same line uncritically – that farmers are largely to blame for their own suffering for utilizing outdated on-farm irrigation techniques. In the forthcoming sections, we address the issue of irrigation technique as a window into the political economy of the agricultural sector. From the perspective of farmers, the government is wrong to emphasize water loss due to on-farm irrigation practices while failing to maintain and service the broader irrigation/drainage network for which it is responsible.¹¹ Partly in response to MoWR criticism of farmers' water usage practices, the MoA is increasingly pushing farmers to switch to “modern” irrigation techniques. But the MoA's support for these on-farm irrigation practices is minuscule and, as the forthcoming sections will suggest, potentially politicized. In the absence of sustained government support, the notion that farmers can finance a switch to a new irrigation method during a water scarcity crisis is entirely out of step with the harsh economic realities farmers are facing.



Flood irrigation for rice in Najaf, Iraq Source: © Reuters (2022)

Agricultural debt cycles

“The Ministry of Agriculture is encouraging modern technologies, which is drip irrigation. Today, we don’t grant a license to any farm if it doesn’t work with drip irrigation to sustain water.” - Spokesperson of the Ministry of Agriculture

Such pronouncements from the MoA about the importance of drip irrigation often fall upon deaf ears in the southern areas of Iraq where flood irrigation is prevalent. This is not the product of ignorance – as farmers generally do understand that drip irrigation conserves water and even boosts productivity – but rather of economic constraints. Equipment purchases required for sprinkler and drip irrigation alone can amount to hundreds of dollars to over \$1,000 USD per donum (for hoses, sprinklers, motors, etc.), an expense that is not viewed as a ‘reduction from profit’ but as an ‘increase to the preseason debt’.¹² In instances where NGOs have given farmers new irrigation equipment, they have occasionally discovered that the equipment has been sold at the first opportunity.¹³ It is important to understand that these sales are not conducted maliciously. They are conducted to cover vicious agricultural debt cycles, and not to increase profit, per se. A farmer familiar with both techniques reflected:

“Why is it that the farmers, especially those in the south, don't want to go to drip irrigation (الري بالتنقيط)? For one thing flood irrigation (الري السطحي) is something that our fathers and grandfathers have done for many years or generations. But that's not the main issue. The main issue is that it's expensive. You have to purchase the pipes, the hoses, the electrical pump, and all of this requires maintenance as well. The government doesn't do anything to support these purchases. It's hard to make such a change when we are already facing so many costs and debts at the beginning of the season. We have to deal with our debts first.”¹⁴

It is important to place these concerns around cost and expense within the appropriate historical, political, and economic context. The post-2003 Iraqi state has essentially divested from agriculture, shifting costs previously covered by the government (e.g., pesticide, hoses, fuel, etc.) onto individual farmers. With the state stepping away from financing small-scale agriculture, farmers purchase their supplies for the season on credit. Even a small-scale farmer with 10 to 30 donums of property or rented lands will accumulate between 10,000 and 40,000 USD in debt at the beginning of each season to purchase seeds, fuel, make repairs, etc. As the harvest comes in, these debts will be paid off, but the margins are extremely tight.

One bad season can result in deferring debts to future seasons and/or spreading out the debt across an increasing number of creditors.¹⁵

In a context in which profits are already lower due to water scarcity, asking farmers to add to their pre-season accumulation of debt by purchasing a new set of technologies (e.g., sprinklers, hoses, pumps, etc.) is risky business that farmers are understandably wary of. Water scarcity generates an extreme aversion to debt among farmers. Farmers who are experiencing losses this year due to water quotas and water scarcity have been forced to carry over debts from previous seasons and are accruing new debts during the current season.

Government subsidies & allegations of corruption

*"The Ministry of Agriculture plans to facilitate the process of delivering the [irrigation] system units with the lowest possible payment installments over the long term to reduce the burden on the farmer."*¹⁶

- General Director of the State Company for Agricultural Supply

The Ministry of Agriculture (MoA) claims that it is supporting the transition to modern irrigation. But according to several interviews with farmers and agricultural engineers, the MoA's limited initiatives to encourage a shift to sprinkler and drip irrigation have become mired in the politically sanctioned corruption that defines the post-2003 order.¹⁷ Sources indicate that equipment packages subsidized by the government have been appropriated by powerful agricultural projects tied to political parties. Ordinary farmers seeking to benefit from these low-cost opportunities quickly find that subsidized equipment batches have already been sold upon arrival.¹⁸ The fact that the equipment required to transform one's plot from flood irrigation to "modern" irrigation techniques is only available at reduced prices to those who are politically connected makes it all the more unfair to lay blame at the feet of ordinary Iraqi farmers who are struggling to get by.

Not all farmers are created equal. Power imbalances separate farmers of small plots from wealthy agricultural businesspeople with political connections. There is a widespread perception among farmers of small plots that politically connected agricultural conglomerates are hoarding subsidized agricultural equipment as well as government investments in water infrastructure. Ordinary farmers point to the fact that enormous agricultural projects are popping up in the desert, which require massive redirections of water and land reclamations with government support. In the province of Karbala, a number of large agricultural projects tied to the Imam Hussein Holy Shrine have been widely publicized during the previous two years. In

one such project, a formerly desert area has been converted into cultivatable land for date palms through a combination of 10 wells dug by the Ministry of Oil and 4 kilometers of pipeline connecting the agricultural complex to the Euphrates.¹⁹ This project is not only under full operation but is also expanding during a year in which overall restrictions on water are highest.

Flood irrigation in a broader context

*"[The] farm is a few kilometers west of the ancient city of Babylon, whose empire flourished in the second millennium BC thanks to King Hammurabi's expansion of Sumerian irrigation networks. Iraq still relies on the same, open-surface irrigation methods...Irrigation water in Iraq flows through a network of open-air canals, resulting in high rates of evaporation in summer, when temperatures exceed 50 [degrees Celsius]. More water is squandered when it reaches the fields, as farmers use wasteful flood techniques instead of more precise drip or sprinkler irrigation."*²⁰ -The Guardian Newspaper

Journalistic accounts of Iraq's water crisis are right to call attention to the deficiencies in Iraq's irrigation network, but they often err in suggesting that the on-farm practice of flood irrigation is inherently a backward practice. Flood irrigation is the most common agricultural method globally due to its low cost and ease of usage. While pervasive in developing countries, it is still widely in use in the west. Until the 1970s with the advent of center pivot irrigation and other new irrigation technologies, flood irrigation was the dominant form of irrigation in the United States. Even in 2015, more than one-third of cultivatable land in the US utilized flood irrigation. This form of irrigation comes with benefits, being extremely low-cost and energy efficient. Moreover, some crops, such as rice, thrive on flood irrigation.

Importantly, Iraqi farmers do not exclusively rely upon flood irrigation. The northern provinces have historically received enough rain for farmers to rely upon rain-fed agriculture for annual crops (e.g., wheat, corn, rice) and irrigation for vegetables/fruits (e.g., tomatoes, peppers, onions, watermelon), while provinces in the central and southern dry regions rely upon irrigation for all crops. Of the 5.9 million cultivated hectares in Iraq, 64% are irrigated while 36% are rain-fed.²¹ As for irrigation techniques, sprinkler/drip irrigation is commonplace in the northern provinces due to the undulations in the land.²² Southern provinces rely predominately on flood irrigation fed through the Tigris and Euphrates rivers as well as the network of irrigation channels linking those rivers to agricultural areas. There are exceptions to the rule, however, as drip and sprinkler methods have penetrated certain southern areas.

From a water conservation standpoint, the downside of flood irrigation is that over-irrigation is hard to avoid (which increases salinity in the soil), and there is the potential for high water waste from runoffs along the edges of the fields (though such losses can be mitigated through careful upkeep).²³ Drip or sprinkler irrigation, if done correctly, allows for a considerable reduction of water loss and improvements in salinity management. But, as the previous sections have explained, the policy emphasis on the problem of flood irrigation and the need to transfer to “modern” irrigation is, from the perspective of many farmers in the south, entirely out of step with the harsh economic realities they face. It is also out of step with the pervasive sense within the agricultural community that the relevant government agencies are mired in corruption and failing to reduce water loss across the broader irrigation/drainage system – both before and after water reaches the farm.

Improving (hidden) infrastructures, addressing corruption

If the MoWR and MoA want farmers to comply with reduced water usage and eventually switch to new irrigation techniques, the government must hold up its end of the bargain across all water infrastructures by maintaining and fixing irrigation channels, pumping stations, and drainage systems. One of the least known – but nonetheless essential – of these water infrastructures is subsurface drainage. It is notable that neither the MoA nor the MoWR make mention of subsurface drainage in their statements regarding the need for farmers to switch to “modern” irrigation methods. But on-farm irrigation and drainage are a nexus that cannot be separated from one another. For more precise irrigation methods to produce optimal results, they must be coupled with effective subsurface drainage to ensure that excess water does not accumulate in cultivated fields, and to avoid water logging and increased salinity that saps the productivity of the fields. While both effective irrigation and drainage are equally important, the key difference between the two is where the responsibility lies; the former is typically the responsibility of the farmer, and the latter is the responsibility of the government.

Iraq's subsurface drainage systems have not been updated for several decades and have largely fallen into disrepair.²⁴ Farmers over 30 years of age still remember the old system. One noted:

“Back in the 80s and 90s, there were pipes that ran underneath the fields and carried the salty water – or the water that was oily – out of the field. The system wouldn't return that dirty water to the fresh water source but would be dumped out into a desert area or a wasteland. There is still a small residual effect of

*these systems but mostly they're completely non-functioning, which allows for the land to become salty. Before 2003 the state would come every so often, once or twice a year, and would clear out the sediments and weeds from the irrigation ditches and make fixes to the subsurface drainage systems. But none of this happens anymore. They see agricultural contracts as a money-making source rather than as a service to the people, and so these projects never happen."*²⁵

It is estimated that less than 25% of cultivatable areas in Iraq are currently equipped for drainage. Most existing drainage systems in the country are abandoned or malfunctioning, which has serious implications for salination levels and crop yields. Farmers see the source of the problem as government neglect – fueled by corruption – of water infrastructure. It is much easier for the government to blame farmers for poor on-farm irrigation practices than it is for the relevant agencies to do their part by installing and maintaining subsurface drainage pipes and infrastructures. Drainage often falls out of view in the debates over agriculture because it is, quite literally, not visible and because the symbolism around drainage is not nearly as clear to the average person as damming infrastructure, irrigation practices, etc. However, if the government is serious about preserving Iraq's water levels and cultivatable lands, investments and successful project implementation in drainage systems will be essential.



Date harvest in Basra, Iraq Source: © Shutterstock (2022)

Intra-Governmental Disputes

Ministries and provincial authorities

As extensions of grassroots agitation and pressure from farmers, tensions between the government bodies concerned with water, namely, between provincial authorities and the Ministry of Water Resources (MoWR) have grown during 2021 and 2022. Several provincial governments and local authorities refused to implement the instructions of the ministries to crack down on farmers drawing out water in excess of the new limits. The governor of Babil province, Ali Waad Allawi, threatened MoWR workers with imprisonment if they refused to open water drains for his province's farmers. In a video, the drain was ultimately opened amidst applause from onlookers. The MoWR swiftly condemned the governor's behavior: "The Ministry will take legal measures against [Governor Allawi], as the Ministry of Water Resources is the only sectoral body responsible for managing water in the country, and no other party has the right to interfere in its work."²⁶ The MoWR has gone so far as to threaten the usage of Ministry of Interior security forces to bring unruly local governments into line, and to punish violations. To date, however, these threats have rarely materialized, and governors continue to test limits. Like many governors across the southern provinces, Allawi's threats are partly a function of his political vulnerability. As Babil is a province comprised almost exclusively of agricultural areas,²⁷ the inability to deliver water to previously cultivatable lands constitutes an existential threat to Allawi's political future. Farmers are major constituents.



Clearing irrigation channels in Babil Province Source: Ministry of Water Resources

The MoWR and MoA

In addition to the disputes between provincial authorities and the MoWR, there is considerable tension in the relationship between the MoWR and the Ministry of Agriculture (MoA). The MoWR determines and regulates the volume of water allocated to different provinces, while the Ministry of Agriculture delineates lands that are approved for cultivation and the crops that can be planted.²⁸ The MoWR is responsible for the water as it passes through the nation's major waterways and secondary/tertiary canals until it reaches the farm, and the MoA is responsible for placing parameters on the farmers' usage of the water in the context of agricultural production. In short, the MoWR controls waterways; the MoA oversees farmers. This means that both ministries are jointly responsible for implementing water management, limitations and quotas, but the MoWR tends to receive the bulk of the criticism as it is the authority that quite literally opens or closes the flow of water.

Tensions between the MoWR and the MoA have become heightened in recent months due to the intensity of the water crisis, with each blaming the other for failures in water governance. The spokesperson for the MoA recently said on live television:

"The irrigation system in Iraq is a very old one. In the 1950s some [channels] were covered with concrete. So, we have always called on the Ministry of Water Resources, which is serious about that, to switch to closed irrigation channels to fight water scarcity and prevent trespassing on water. However, the Ministry of Water Resources (MoWR) has always complained about funding because this is a huge project."²⁹

While the MoA acknowledges that farmers *are* involved in "trespassing" (i.e., connecting pipes to irrigation canals illegally and thereby exceeding quotas), the MoA implies that farmers are only engaged in this misbehavior because of the way irrigation channels (again, the responsibility of the MoWR) are constructed as open systems.

Security forces: local and national

A further intragovernmental tension arises in the designation of the appropriate security forces to address violations. In situations where illegal tapping has become rampant, the MoWR has evaded enforcement responsibility by saying that it is the duty of provincial governments – and where necessary, the local police under the authority of the governor – to enforce all violations of water usage within a province. In other situations, the MoWR has threatened to call upon the Ministry of Interior and Joint Operations Command to crack down on violations, which would suggest

that the responsibility for enforcement lies in the hands of the Ministry, in tandem with security forces. A literal reading of the relevant federal statutes would suggest that the MoWR bears the responsibility for all matters related to Iraq's waterways and should therefore bear responsibility for coordinating with security agencies.³⁰ Nonetheless, the new administration under Mohammed Shia Al-Sudani would do well to provide clear guidance on the interpretation of laws regulating water oversight and enforcement.

Inter-Provincial Conflicts

Disputes between different southern provinces have also been on the rise in recent years, with the governors of downstream provinces accusing the governors of upstream provinces of failing to implement water quotas properly. These conflicts are often multi-directional, involving several provinces along the Tigris and Euphrates.³¹ Disputes have been recorded between Basra and Maysan;³² Basra and Thi Qar;³³ Babil, Diwaniyah, and Muthana;³⁴ Wasit and Diwaniyah;³⁵ and Najaf and Diwaniyah. These inter-provincial conflicts simultaneously involve the MoWR, as downstream provinces accuse the Ministry of failing to enforce limits upstream.

Since 2003, Basra province has historically been the most consistent and visible in making complaints about upstream provinces, frequently alleging that Maysan (to the north along the Tigris) and Dhi Qar (to the northwest along the Euphrates) are depriving the province of its rightful share. Basra is the furthest downstream province and therefore is subject to both water scarcity and accumulated pollution from the upper 17 provinces. Basra is perhaps the most successful province in lobbying the MoWR and other government bodies to act upon its water demands – a product of the fact that Basra is politically influential as the seat of the country's oil wealth.³⁶ And yet Basra's weight in water negotiations is not without constraints. The two provinces immediately upstream from Basra (Maysan and Dhi Qar) are rife with internal divisions that complicate negotiations over water allocations. This phenomenon of political fragmentation and competition is found throughout Iraq. As has been detailed in prior research, each province in Iraq can be analyzed as a unique “political marketplace,”³⁷ with different political parties, armed groups, and tribal entities competing for influence. Disputes that arise between provinces over water resources are complicated by the fact that the provincial governments themselves do not enjoy legitimacy across all the domains technically falling under their jurisdiction.

Basra and Dhi Qar

Of all the southern provinces, Dhi Qar is the province with the most internal political fragmentation – largely along tribal lines. Consequently, residents of the rural districts where agricultural production is highest do not necessarily regard the dictates issued by provincial authorities in Nasriyah as the final word; they also look to local tribal leaders for guidance. In instances in which Basra has levied complaints against Dhi Qar over water allocations and usage, the provincial government of Dhi Qar has often lacked the political power to control the actions of farmers and tribes with water interests of their own. On one occasion the Basra governor threatened to cut off fuel supplies to Dhi Qar Governorate if it did not commit to closing the Al-Khamisiyah Dam. Dhi Qar ultimately relented and *did* formally commit to closing the dam, but reports indicated people tied to tribal groups residing near the dam threatened not to allow the closure because of the damage and flooding it would create for their agricultural lands.³⁸

The fact that many farmers in Dhi Qar are tribal affiliates does not mean that the *source* of non-compliance with water policies is tribalism; the root cause of the problem is, as was argued in the prior section analyzing grassroots agitation in agricultural communities, systemic and related to the governmental neglect of water management/infrastructure between 2003 and the present moment. Tribal entities are nonetheless important, however, in that they provide a mechanism through which widespread frustrations among farmers can be channeled into powerful expressions of dissent that provincial governments cannot easily ignore or override.

Basra and Maysan

Similar dynamics are at play in the relationship between Basra and Maysan. In 2018, the Vice Governor of Basra stated that certain fish farms in Maysan were illegally drawing water coming from Qala'a Salih regulator dam in southern Maysan near Basra, causing insufficient water supply.³⁹ The provincial government of Maysan has been generally cooperative with the directives of the MoWR to resolve the Qala'a Salih issue. Indeed, the MoWR recently confirmed that water flow from Qala'a Salih regulator dam to Basra had reached 83 m³/s, indicating that upstream compliance in Maysan had been satisfactory.⁴⁰ Despite this overall compliance at the provincial level, the Mayor of Al-Masharrah sub-district in central Maysan prevented MoWR staff from removing illegal pipes and encouraged residents to forcefully resist the Ministry's efforts.⁴¹ Though Maysan does not suffer from the same degree of political fragmentation as Dhi Qar, the province likewise has tribal groups with independent

bases

of

power.⁴²

Drying marshlands in Dhi Qar, Iraq Source: ©Shutterstock (2018)

Nonetheless, it is notable that the MoWR and Maysan provincial government were seemingly able to implement an agreement on the Qala'a Salih problem with relative speed. Some interviewees speculated that common party affiliation might have played a role in bringing the two sides together, as both the MoWR and the Maysan provincial government are tied to the Sadrist Movement. While shared political affiliation might very well have encouraged coordination between the governor and minister, this alliance does not necessarily improve perceptions among Maysan citizens of the effectiveness of water governance in the province. A Maysan resident recently tweeted: "...The Sadrists are ignoring the drought in the marshes because the Governor of Maysan is a Sadrist, and the Minister of Water Resources is also supported by them. Iraq and its people are outside their equation." Again, the widespread consensus across ordinary citizens is that systemic corruption fuels neglect of water governance.

Conclusions and Policy Implications

Policy analysts have argued that water-related disputes between provincial authorities and the ministries, and between different ministries, could be mitigated through the successful implementation of decentralized water governance, with budgetary and project formation authority allocated to the provincial government apparatus. The belief underlying the decentralization argument is that governors are

closer to their constituents and should therefore be granted more resources to manage water infrastructure and distribution challenges. One report cites examples of provinces requesting various water-related infrastructures, and of the relevant ministries denying or delaying these requests without explanation.⁴³ Indeed, governors generally favor the notion of increased devolution of water governance to the provinces.⁴⁴

Increased devolution of authority/budgets to the provinces would not solve the challenges facing water governance. Research has shown that directing more funds towards provincial governments in Iraq has simply accelerated local competition between competing political factions over state resources, thereby worsening the incoherence of governance.⁴⁵ The pitfall of putting too much weight on the debate between decentralizing and centralizing approaches is that *both* national ministries and provincial governments have been subject to the phenomenon of state capture and systemic corruption since the US-led invasion of 2003. Provincial agencies are part and parcel of the broader competition over state institutions among the country's major political parties and elites. Moreover, as the analysis of inter-provincial disputes above has demonstrated, provincial governments do not necessarily enjoy the buy-in or recognition of local constituents any more than national ministries.

Rather than retooling the structure of water governance, a better priority for Mohammed Shia Al-Sudani's government will be to ensure that existing lines of authority across relevant ministries are directed towards addressing corruption in water governance and making urgent improvements of Iraq's water infrastructure, particularly in agricultural areas where most of the country's water is consumed. Irrigation channels, pumping stations, and subsurface drainage systems have fallen into total disrepair over years of neglect and corruption, generating inefficiencies and water losses across the network. These infrastructural failures have also eroded the trust between the government and the agricultural community, reducing the willingness of farmers to collaborate with restrictive quotas and to transfer to the so-called "modern" irrigation methods at the farm level. Grassroots agitation among farmers and rejection of the government's water policies cannot be separated from the pervasive failure of the state to maintain irrigation and drainage infrastructures.

While those working in the agricultural sector should be viewed as partners in preventing water loss, the responsibility for enhanced water management in agricultural areas cannot be placed solely on the shoulders of farmers, whose

struggles with debt cycles make a commitment to costly irrigation technologies unlikely in the short-term. It is undeniable that modern sprinklers and localized drip irrigation would conserve water at the farm level; however, none of these practices are particularly meaningful if the state is neglecting the wider irrigation and drainage infrastructure that links agricultural plots to water sources.

Iraq needs to make serious progress in restoring water and drainage infrastructure, which would require fixing the deteriorated equipment, motors, irrigation and pumping stations, clearing of debris and sediment from irrigation and drainage channels, and regular maintenance and cleaning of subsurface tile drains, among other things.⁴⁶ Implementing these projects would require not only an increase in investments but also tackling systemic corruption across the relevant ministries, especially the Ministry of Water Resources (MoWR) and Ministry of Agriculture (MoA). Only when the Iraqi government starts to make serious headway in these areas can it reasonably expect that on-farm practices would change.

The role of the international community in this effort remains uncertain. The US-led Coalition authorities were widely perceived as failing to prioritize water infrastructure in the years following the 2003 invasion – laying the seeds for the patterns of neglect across the relevant Iraqi government agencies. Perhaps as a sign of learning from past mistakes, UN agencies did take water systems seriously after the 2014-2017 ISIS conflict, but these efforts were mostly limited to a narrow set of areas in Nineveh and Anbar. According to local sources, the most successful of these projects were those that holistically addressed all levels of the irrigation/drainage network. For example, one IOM project in Nineveh province effectively restored the entire irrigation network connecting the Tigris to a particular agricultural community, fixing 9 broken pumps and rehabilitating the irrigation channel from the Tigris.⁴⁷ The intervention was well-received locally because the project restored the entire system of channels beyond the farm as the primary intervention, and only secondarily attempted to generate water efficiencies at the farm level through promoting “modern” irrigation techniques. Such comprehensive projects are needed throughout the south where water scarcity and water governance problems are most acute; however, with international donors increasingly speaking of winding down support in Iraq, little progress will be made in the absence of a major change in the level of commitment of the Iraqi government to addressing corruption and increasing effectiveness in water governance.

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