

How Mangled Dam Diplomacy Is Shaping Iraq's Water Crisis

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Brief Analysis

Failed international cooperation and an increase in dam construction is threatening Iraq's security.

Dams are a contentious issue in the Middle East. Perhaps most visible is the question of Ethiopia's [Renaissance Dam](#) (<https://www.washingtoninstitute.org/fikraforum/view/convergence-of-crises-egypt>) at the headwaters of the Nile, which Egypt has stated is an existential threat to its water supply. Yet the question of dams and their impact on downstream regions is also a vital one in Iraq and Iran, where the Tigris and its tributaries are an economic lifeline in an arid region.

In the last two months, the Iranian government has [significantly reduced](#) (<https://www.middleeasteye.net/news/iraq-kurdistan-water-catastrophe-iran-rivers>) the flows of the Sirwan (also known as the Diyala) and Little Zab rivers, both of which flow across the Iran-Iraq border in the Kurdistan Region of Iraq (KRI). [First noticed](#) (<https://www.middleeasteye.net/news/iraq-kurdistan-water-catastrophe-iran-rivers>) in August, the sudden drop follows roughly three years of depleted flows from upstream Iranian dam sites in the Zagros Mountains. While seemingly a local issue, the two rivers are indicative of a larger trend of water mismanagement and diplomatic immobility throughout the region, and the current regional push for greater dam construction, though slated to move forward, will likely have long-term consequences.

Iraq already faces water scarcity as a major [threat](#) (<https://www.washingtoninstitute.org/fikraforum/view/MENA-water-crisis-scarcity-conflict-refugees>) to its population; beyond recent [drinking water crises](#) (<https://www.hrw.org/report/2019/07/22/basra-thirsty/iraqs-failure-manage-water-crisis>) in regions of southern Iraq around Basra, the country is facing reduced water access due to upstream damming in Iran, Syria, and Turkey. The steepening effects of climate change and desertification have further aggravated water shortages across the country: the UN Environment Program reported in 2018 that Iraq was [losing](#) (<https://www.hrw.org/report/2019/07/22/basra-thirsty/iraqs-failure-manage-water-crisis>) around 25,000 hectares of arable land annually.

Turkey, now roughly fifty years into its [GAP](#) (<https://globalriskinsights.com/2019/11/water-shortage-and-unrest-in-iraq/>) dam-building project—which includes 22 dams and 19 power plants—has [just begun](#) (<https://www.dailysabah.com/business/energy/turkey-starts-operating-1st-turbine-at-huge-ilisu-dam>) power production from its newly constructed Ilisu Dam. The new dam is one of the largest in the country and will give the Turkish government significant control over water flows in the Tigris. Dams on the Euphrates in Syria and Turkey also pose a threat to Iraq's water security.

But perhaps the most complicated challenge is the role that Iranian dams play in stifling Iraqi water flow, just one of the many ways these two neighboring countries navigate the complex intersection of both competing and shared interests. After rising in the northwestern reaches of the Zagros Mountains, the Sirwan and Little Zab Rivers flow into the KRI. The Little Zab meets the Tigris at the town of El Zab in the Kirkuk Governorate, while the Sirwan turns south, running through Iraq's Diyala Governorate before its confluence with the Tigris just south of Baghdad. Both rivers support significant irrigation projects along the way, notably the canal system on the Sirwan following the Diyala Weir near Sinsil and the still incomplete [Kirkuk Irrigation Project](#) (<https://www.rudaw.net/arabic/middleeast/iraq/31082020>) on the Little Zab. Together, the two tributaries [contribute](#) (http://www.fao.org/nr/water/aquastat/countries_regions/Profile_segments/IRQ-WR_fra.stm) roughly a quarter of the Tigris's annual flow in Iraq.



(/sites/default/files/imports/Cropped_Iran_Iraq_Water_Final_EN.png)

Depleted flows in the Sirwan are now affecting over (https://www.ooskanews.com/story/2020/08/iran-blocks-water-supply-kurdish-farmers_180006) 8,000 (<https://www.savethetigris.org/wp-content/uploads/2016/10/Daryan-Dam-Report.pdf>) acres of farmland in the Sulaymaniyah Governorate alone. Aside from irrigation, it is possible that drinking water in towns like Qalat Daza and Raniyah (<https://www.middleeasteye.net/news/iraq-kurdistan-water-catastrophe-iran-rivers>) in Sulaymaniyah Province will be threatened. According to the Darbandikhan Dam and Reservoir's director in the KRI, around two million (<https://www.middleeasteye.net/news/iraq-kurdistan-water-catastrophe-iran-rivers>) people rely on the two rivers in the Sulaymaniyah and Diyala governorates.

Water shortages are not only dangerous to the agricultural needs and water security of the KRI, they also have the potential to inflame disagreements between the semiautonomous Kurdistan Regional Government (KRG) and the Iraqi Federal Government in Baghdad. Kurdish officials have already withheld (<https://rasanah-iiis.org/english/wp-content/uploads/sites/2/2018/09/%E2%80%9CWater-Diplomacy%E2%80%9D-It-is-Not-Enough-to-Fix-Iran-Iraq%E2%80%99s-Water-Dispute.pdf>) flows to Shia-dominated regions of Iraq during budget disputes with the Iraqi federal government.

The decreased flow of these rivers will also have an impact on Iraq's own already-existing dams. Currently, there are three significant Iraqi dams on the two rivers: the Dukan Dam on the Little Zab, and the Darbandikhan and Hemrin dams on the Sirwan. The Dukan and Darbandikhan Dams are operated by the KRG, and the Hemrin Dam is operated by the Iraqi Federal Government. These are vital projects not only for water security in the KRI but also for agricultural regions near Baghdad and beyond. In general, a reduced ability to rely on steady flows in the Sirwan and Little Zab rivers will impact agriculture and water quality throughout the Tigris river basin.

While Turkey's ongoing dam projects have received considerable press coverage, and their effects on Iraq may be greater from a purely hydrological perspective, Iran's projects are particularly notable for the ways in which they are entangled in the two countries' relations. Likewise, these projects indicate political dynamics within Iran that are also likely to have an impact on Iraq's future, as Iraq's current prime minister seeks to navigate through what he has recently called a tightrope between U.S. and Iranian interests.

The decrease in the two rivers' flows into Iraq directly corresponds with the completion of new (https://www.ooskanews.com/story/2020/08/iran-blocks-water-supply-kurdish-farmers_180006) irrigation projects in Iran. In the last three decades, the Iranian government has contracted for the construction of 600 dams nationwide. Of those dams, notable projects like the Daryan Dam have been built on the upper tributaries of the Sirwan and Little Zab, mostly to transfer Iraq-bound water back into Iran through projects like the 48km (<C:/Users/Austin%2520Corona/Downloads/1-s2.0-S2095268617302288-main.pdf>) Nosoud Tunnel, completed in 2013, and a newly completed 10 km (<https://www.rudaw.net/english/middleeast/iran/110620181>) tunnel to deliver water from the Little Zab river to the dry bed of the dead Lake Urmia.

Iran's domestic water crises are largely the source for these developments on the Sirwan and Little Zab Rivers. While the Iranian government claims official ownership (<https://rasanah-iiis.org/english/wp-content/uploads/sites/2/2018/09/%E2%80%9CWater-Diplomacy%E2%80%9D-It-is-Not-Enough-to-Fix-Iran-Iraq%E2%80%99s-Water-Dispute.pdf>) over all the country's waters, with local people entitled to priority for use, the country lacks a comprehensive water policy.

Likewise, management of water projects within the Iranian government is often corrupt and inefficient. According to one report, a dam-building

lobby within the Iranian government sometimes referred to as the “agricultural mafia” (<https://www.pacificcouncil.org/newsroom/diplomacy-isn%E2%80%99t-not-enough-fix-iran-iraq%E2%80%99s-water-dispute>) has passed legislation and generally arranged contracts for water infrastructure projects across the country via a single Iranian company—Khatam al-Anbiya. These efforts have led Iran to designate itself as the [third-largest dam constructor in the world](https://www.savethetigris.org/wp-content/uploads/2020/07/Damming-the-Kurdistan-Region-of-Iraq-1.pdf) (<https://www.savethetigris.org/wp-content/uploads/2020/07/Damming-the-Kurdistan-Region-of-Iraq-1.pdf>). Another report (<https://rasanah-iiis.org/english/wp-content/uploads/sites/2/2018/09/%E2%80%9CWater-Diplomacy%E2%80%9D-It-is-Not-Enough-to-Fix-Iran-Iraq%E2%80%99s-Water-Dispute.pdf>) describes Iranian politicians as diverting water to their home regions as a potential means of earning support from their constituencies.

The country’s water strategy has also been accused of favoring ethnic Persians. By and large, government-administered water transfers in Iran divert water away from western provinces—often those populated by non-Persian ethnic groups such as Kurdish and Arab minorities—and deliver it to the country’s eastern provinces’ agricultural sectors. According to [one report](https://rasanah-iiis.org/english/wp-content/uploads/sites/2/2018/09/%E2%80%9CWater-Diplomacy%E2%80%9D-It-is-Not-Enough-to-Fix-Iran-Iraq%E2%80%99s-Water-Dispute.pdf) (<https://rasanah-iiis.org/english/wp-content/uploads/sites/2/2018/09/%E2%80%9CWater-Diplomacy%E2%80%9D-It-is-Not-Enough-to-Fix-Iran-Iraq%E2%80%99s-Water-Dispute.pdf>), the Karoun River, a major lifeline for Iranian communities near the southern stretches of the Iraqi border, has seen 45 percent of its flow diverted from its natural course. The resulting water shortages have sparked riots in the western province of Khuzestan. Similarly, flows from the Zayandeh Rud river have been diverted from its westward path to serve farmers in the eastern Yazd region.

Compounding the issue, the Iranian government was rumored to have signed an agreement with Kuwait in [2003](https://www.rferl.org/a/1342763.html) (<https://www.rferl.org/a/1342763.html>) to direct water into Kuwait in a de facto exchange for political influence. Similarly, reports emerged from Basra in May 2018 that Iran was supplying local people with clean drinking water during a water crisis there. Western Iranians, incensed by their government’s perceived willingness to transfer away their much-needed water in exchange for political favor in other countries, arranged [loud protests](https://www.voanews.com/middle-east/voa-news-iran/iranians-join-major-protest-against-water-shortages-south) (<https://www.voanews.com/middle-east/voa-news-iran/iranians-join-major-protest-against-water-shortages-south>) in cities like Khorramshahr.

Such political manipulation of water resources is likely to have negative effects both up and downstream. Already, Iran has called on Iraq to irrigate and manage dry regions of the country where they claim desertification has produced newly intensified [sandstorms](https://apnews.com/943b41266a0649dca956f912f2281f02) (<https://apnews.com/943b41266a0649dca956f912f2281f02>) that blow into Iran, polluting its own water supplies. Furthermore, acute water shortages in Iraq threaten to increase security concerns by impoverishing rural communities, increasing population growth in [urban slums](https://www.ft.com/content/82ca2e3c-6369-11e8-90c2-9563a0613e56) (<https://www.ft.com/content/82ca2e3c-6369-11e8-90c2-9563a0613e56>), and providing fertile grounds for recruitment into Salafi jihadist organizations like the Islamic State. [Studies](https://journals.ametsoc.org/wcas/article/6/3/331/970/Water-Drought-Climate-Change-and-Conflict-in-Syria) (<https://journals.ametsoc.org/wcas/article/6/3/331/970/Water-Drought-Climate-Change-and-Conflict-in-Syria>) have linked loss of agricultural land in the Middle East generally with rising unrest and recruitment in insurgent and/or terrorist armed groups like ISIS (<https://www.nationalgeographic.com/news/2017/11/climate-change-drought-drove-isis-terrorist-recruiting-iraq/>). Water is a critical element here, as in 2018, [80 percent](https://www.ft.com/content/82ca2e3c-6369-11e8-90c2-9563a0613e56) (<https://www.ft.com/content/82ca2e3c-6369-11e8-90c2-9563a0613e56>) of Iraq’s water went towards agriculture, a sector that provides employment for more than a third of its population.

A valid response to Iran’s dam construction almost certainly includes improved irrigation infrastructure in Iraq, much of which still relies on ancient and inefficient methods of flood irrigation. In the short-term, it may also serve well for the KRG to continue its several [planned dam projects](https://www.savethetigris.org/wp-content/uploads/2020/07/Damming-the-Kurdistan-Region-of-Iraq-1.pdf). (<https://www.savethetigris.org/wp-content/uploads/2020/07/Damming-the-Kurdistan-Region-of-Iraq-1.pdf>) Such dams might catch runoff from spring rains and provide a more consistent water supply for the region as Iran begins to divert more water from the Tigris tributaries. These dams would also increase the amount of stored water available within Iraq’s borders. More available water in the KRG also will help ease any future water-related tensions between it and Federal Iraq, as the KRG will be less desperate to reduce flows to Federal Iraq in order to meet its own needs.

Yet long-term solutions to these challenges are less clear. Any sustainable long-term agreement would likely need to include a binding legal framework for the two countries’ transboundary waterways, an unlikely standard given the domestic politics of both countries. Currently, the only [international law](https://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf) (https://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf) applicable in this situation—the United Nations’ Convention on the Law of the Non-navigational Uses of International Watercourses (1997)—is vague and remains unenforced.

Unfortunately, the alternative solution of increased dam construction will mean financial stress for the already [cash-strapped](https://www.rudaw.net/english/kurdistan/krq-salaries-cuts-210620204) KRG, and negative environmental effects are sure to follow. Furthermore, dam construction contributes to the kind of unilateral water management strategies that created these issues in the first place, and reservoirs have already caused mass relocations in [Iran](https://www.savethetigris.org/wp-content/uploads/2016/10/Daryan-Dam-Report.pdf) (<https://www.savethetigris.org/wp-content/uploads/2016/10/Daryan-Dam-Report.pdf>) and [Turkey](https://www.thejakartapost.com/travel/2020/09/29/turkey-seeks-new-life-for-submerged-tourist-town.html) (<https://www.thejakartapost.com/travel/2020/09/29/turkey-seeks-new-life-for-submerged-tourist-town.html>), often to the economic detriment of the relocated populations.

Recent talks between Iraq and Iran have addressed issues over [dredging the Shatt al-Arab](https://www.al-monitor.com/pulse/originals/2019/05/shatt-al-arab-iran-iraq.html) (<https://www.al-monitor.com/pulse/originals/2019/05/shatt-al-arab-iran-iraq.html>), the waterway that defines the southernmost section of the Iran-Iraq border, but it is unclear whether the two countries can reach agreements about other waterways like the Sirwan and the Little Zab. Iran has demonstrated through its delivery of water to Iraqis in Basra and its continued support for destabilizing militant factions in Iraq that an ordered, legally binding agreement is not as useful to its regional vision as is the exploitation of turmoil in Iraq. Furthermore, the Iranian agricultural sector benefits greatly from its ability to supply Iraqi markets with cheap produce, meaning Iran will probably be reluctant to surrender any of the water it diverts from Iraqi borders in order to support its own crop production.

Besides, Iran has historically considered water issues on the Iraqi border as domestic disputes specific to particular border regions, and there is not an extant tradition of bilateral negotiations on the subject of water—except in the case of the [Shatt al-Arab \(https://library.ecc-platform.org/conflicts/iraq-iran-water-dispute-war\)](https://library.ecc-platform.org/conflicts/iraq-iran-water-dispute-war), where negotiations have historically been rocky and difficult, though conflict over the river no longer rages like it once did.

Were Iran's attitudes to shift, and internal cooperation between the KRG and the Iraqi federal government improve, bilateral cooperation could lead to a new era in water negotiations between the two countries. In the meantime, Iraq can focus on dams as symbols of national unity and safeguards against fluctuations in water supply while making improvements in irrigation methods that will show tangible results. Nonetheless, the continuation of regional damming as a solution to water scarcity will likely bear unfortunate long-term consequences. ❖

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