Iraq’s Water Woes:
Present and Future Challenges to Scarcity and Abundance

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Introduction

Sustainable peace in Iraq has long been a challenge. Despite recent successes in local communities—such as the military wins against ISIS—a number of socio-economic, political, and environmental challenges remain. Climate change, environmental degradation, and resource scarcity have been agreed upon by experts to be multipliers of existing threats rather than direct causes of conflict and disruptions to peace.

This paper explores the role of water and the vulnerability to environmental issues, including climate change, in Iraq. It studies the history of water insecurity in Iraq and how it can exacerbate existing fragilities and hostilities. The inability to access basic resources combined with a troublesome political environment fuels the potential for conflict as livelihoods are lost and a lack of adaptive capacity causes heightened community tensions.

Equally, this paper seeks to explain the paradoxical situation in this country in terms of a lack of water for consumption, hygiene, and agriculture but an abundance of flooding in the Southern regions resulting from climate change–related sea level rise. Lastly, potential pathways forward are discussed.

History of Water Challenges

Water flow from the Euphrates and Tigris, rivers that supply up to 98 per cent of Iraq’s water, has decreased by 30 percent in the last four decades. A 2018 report by the Iraq Energy Institute acknowledges the reductions in water flow coming from dam construction in neighboring countries, increased water use by the oil industry, and the destruction of infrastructure resulting from war. Turkey and Syria, upstream neighbours, developed large infrastructure projects such as canals and dams that hinder the flow of water downstream. Turkey’s Anatolia Development Project (GAP) hopes to construct 22 dams and 19 hydropower plants, and it plans to irrigate 1.7 million hectares of land. In 2018, Turkey also finished the construction of the Ilisu Dam that, when filled, could reduce flow from the Tigris by 50 percent and “strain relations between Baghdad and Ankara.” Additionally, such projects have typically been completed outside of regional agreements. As von Lossow (2018) notes, “despite bilateral and provisionally designed agreements, cooperation in the basin is limited at best and foremost on technical issues.” Therefore, since no legally binding treaty exists, interstate agreements do not necessarily count for much.

Iraq’s history of violent conflict has made the situation worse. During its multiple wars, including the US interventions in the country and conflicts with Iran, Iraq’s infrastructure has been neglected. Additionally, with the rise of terrorist organisations such as ISIS, important infrastructure has been captured. As von Lossow (2016) explored, the Islamic State group retained water, cut off supplies, and contaminated resources as a way to weaponize water in Iraq and Syria. By capturing dams on the Euphrates and Tigris rivers, both key to Iraq’s water access, ISIS “made it possible to deploy the water weapon even more effectively and in a frequent, systematic, consistent and flexible manner.” The Islamic State “extensively sabotaged and looted – resulting in severe damage to, or destruction of, several installations.”

Attempts to remove the terrorist group via military operations and airstrikes further damaged infrastructure. As mentioned by the Clingendael Institute of International Relations, this anti-ISIS campaign caused damages estimated around 600 million USD. Equally the costly operations of the campaign greatly reduced the budget of the Ministry of Water Resources from 1.7 billion
USD in 2013 to 50 million USD in 2017. Severe financial limitations meant repairing infrastructure was near impossible and a plan to successfully tackle water challenges was near impossible.

**Current Water Woes**

While the scarcity of water remains a major threat to citizens’ lives, the issue of flooding has also gained more recognition. In 2019, an analysis by researchers at Climate Central led to a new way of thinking about the true impacts of sea level rise. Researchers used artificial intelligence to determine the error rate of typical elevation measurements taken using satellites that often struggle to differentiate actual ground level from buildings, trees, etc. Their model then accounted for, and corrected, the previous projections. The results are dire. The study concluded that rising sea levels could affect around three times more people, with around 150 million people currently living on land that will be below the high-tide line by 2050.

The *New York Times* applied this research to specific cities, including cities in Iraq, to illustrate the true threats. According to this new calculation, and as shown in the graphic below, Iraq’s second largest city, Basra, could be mostly underwater by 2050. Located in the lower part of the Mesopotamian basin, the low-lying plains are home to rivers, marshes, and various other bodies of water. The security implications of this are enormous. As land is lost to rising seas, the residents of Basra may be forced to leave, possibly to neighboring Iran and Kuwait. Forced displacement and migration could create hostilities. Lieutenant General Josh Castellaw, a retired US Marine Corps veteran who was chief of staff for the United States Central Command during the Iraq War, notes that the risks surrounding water security and loss of land “threatens to drive further social and political instability in the region, which could reignite armed conflict and increase the likelihood of terrorism.” Such instability already currently occurs. This abundance-drought paradox, as mentioned by the Planetary Security Initiative, has ignited tribal conflicts in Southern Iraq that will likely get worse without significant government intervention to improve water management and responses to climate change. Thus, Iraq’s climate vulnerability threatens to worsen social, economic, political, and even military risks as well.

![Image taken from the forecasting map created by Climate Central]
“Iraq’s capacity and efforts to mitigate the impacts of climate change and modernize water infrastructure and the agriculture sector have been weakened by systemic corruption, poor governance, war, UN sanctions and the legacy of the Saddam Hussein regime.” This has led to frequent protests and social outrage. In recent years, masses have taken to the streets to bring attention to the lack of basic social provisions. In 2018, 118,000 people in Basra were hospitalised due to symptoms related to water quality. As a result, “hundreds of residents stormed the Basra Health Directorate to protest the poor health services provided to those who had fallen ill.”

In 2019, protestors across the country marched against corruption and the lack of public services, resulting in around 600 dying and thousands more injured. Although a fiscal stimulus package announced in 2019 pleased some, it was largely oil-related spending “and came at the expense of critical spending on both human capital and reconstruction.” Earlier this year, the Thomas Reuters Foundation reported that worsening contamination from sewage is causing more hospitalisations, meaning the healthcare system must tackle water-borne diseases while simultaneously dealing with COVID-19. Elsewhere, chemical dumping and agricultural runoffs are forcing families to rely on expensive bottled water that many cannot afford. The impact on public health is especially concerning now, as COVID-19 threatens to overwhelm an already fragile healthcare system.

To compound these challenges, temperatures in the country recently broke all-time records. In July, Iraq’s capital Baghdad experienced three days in a row over 123 degrees (50.5 Celsius) with highs reaching 125.2 degrees (51.8 Celsius). Exposure to such heat, even for just a few hours, is potentially devastating to human health. Residents were forced inside, relying upon generators in refrigerators to keep them cool as the state’s electricity grid failed. While periods of extreme heat caused by high pressure systems are reasonably common, “they are disproportionately more likely to occur thanks to warming effects of climate change.”

Mismanagement of oil profits that have not been used to improve public services or the funding of water infrastructure remains a national challenge. The future of water in Iraq is uncertain. Earlier this year, the International Military Council on Climate and Security, an expert representing 31 militaries, published their 2020 world report. In it, 93 percent of military experts they surveyed expect climate change–related water insecurity to create significant risks by 2030. Equally, these experts see a growing threat to security that will require enhanced military intervention in some regions.

Towards Future Solutions

If Iraq is to successfully limit its exposure to the impacts of climate change, enhance water security, and reduce the risk of resource conflicts, immediate and widespread action must be taken. Firstly, significant increases in spending to enhance water security is essential. Funding, despite infrequent, typically comes from oil profits. Yet, the Iraqi economy, like many others, is a victim of COVID-19, with a 5 per cent contraction expected for 2020. As a country reliant on oil for 90 per cent of government revenue, the collapse of oil prices earlier this year threatens widespread economic devastation. The diversification of Iraq’s economy has long been studied, especially as the transition to a low-carbon economy gathers momentum. The pandemic has made many rethink the country’s future much earlier than planned but any further significant changes to the price of oil risks destabilization of the country.

Greater government investment into water infrastructure, management, and training must lie at the heart of Iraq’s future. The Planetary Security Initiative proposes a number of nature-based
and modern technology solutions, including: building reservoirs in specific areas to harvest floodwaters; reducing pollutants and GHGs that contribute to sea level rise; enhancing training to manage flooding predictions; and creating joint management plans with neighboring Iran and Kuwait to prevent marine transgression and potential conflicts. Focusing on diplomacy and rebuilding relationships with Turkey and Syria may also go some way to enhancing water security, perhaps through the creation of legally binding agreements.

Recent analysis by Kool et al (2020) sets out three ‘building blocks to stability’ to address water-related conflict in Iraq. Firstly, identifying interprovincial water challenges to understand how water security may risk livelihoods, create food and energy insecurity, and identify which stakeholders would be involved. This can be done with local assessments of hydrological and socio-economic factors. Secondly, raising awareness to encourage dialogue. Knowledge is a prerequisite to effective action and a public with access to more complete information allows for more stakeholders to be involved in the decision-making processes. Finally, transforming knowledge into action can and should be done through the creation of knowledge-sharing platforms or facilitation of debates, workshops or other community events. The Ministry of Water Resources, as a leader with national influence, must also be a key player in delivering this.

Conclusion

“Conflict, corruption and climate fragility are eroding coping capacities, creating a vicious cycle of vulnerability and insecurity in Iraq. This negative feedback loop is likely to expose Iraq to further crisis and make it even more challenging to sustain peace.”

Iraq’s history of water challenges is long and hostile. Now, as temperatures rise and inhabitants still lack access to basic services, water insecurity again rears its ugly head. The government must be proactive in its investment and approach to repairing and rebuilding infrastructure. Equally, diplomacy and cooperation with neighbours is essential to ensure deep-rooted history and long-term hostility do not boil over again. Iraq must work with downstream states to come to an arrangement that works for all parties.

Lastly, Iraq must understand the security threats that come from water insecurity. It is now widely accepted that water plays a significant role in conflict in areas around the world where scarcity is a problem. Only with significant, immediate, and widespread changes to governance and infrastructure can Iraq limit the threat of further conflict and instability.

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Notes


4 Ibid


7 Ibid


10 Ibid


14 Ibid


18 Ibid


