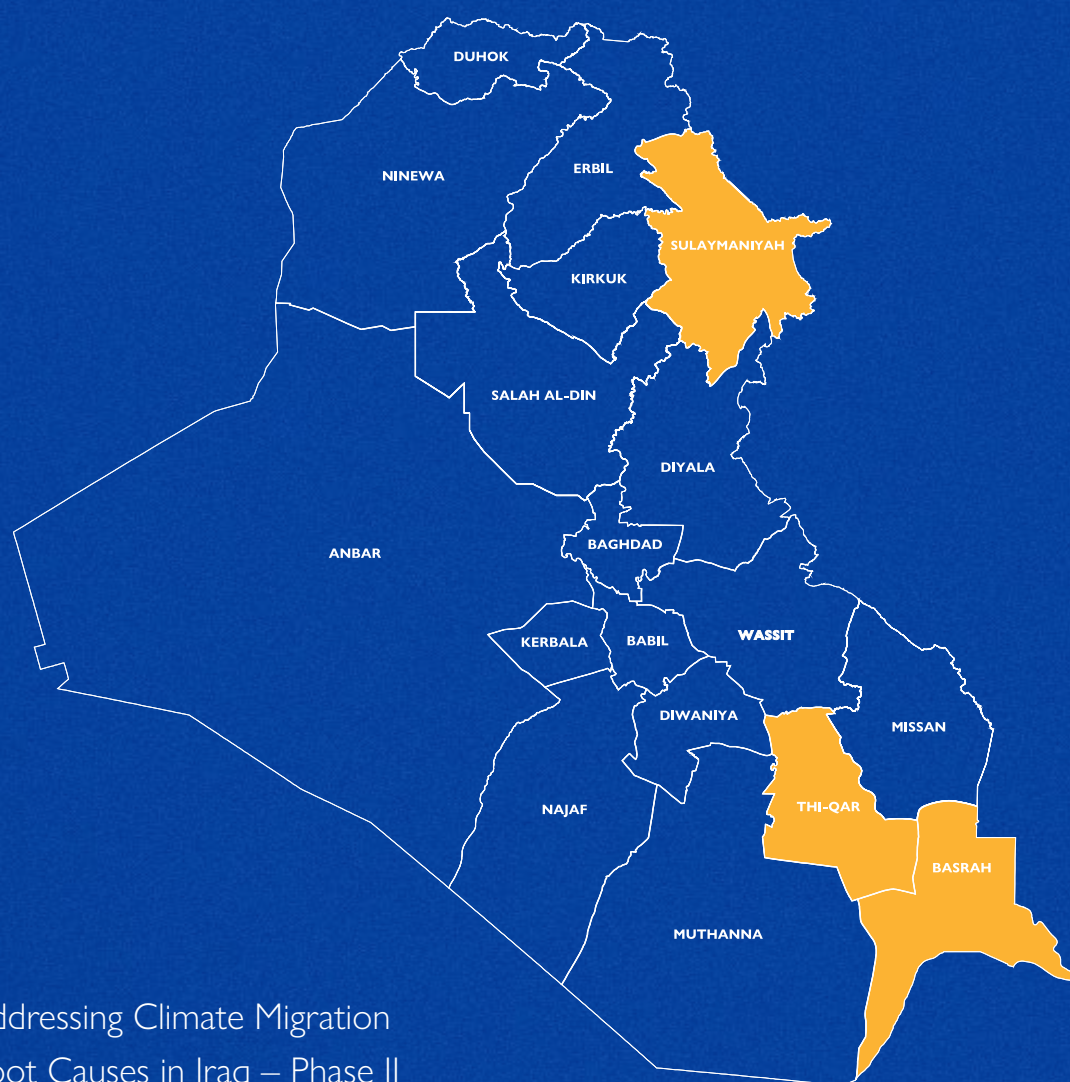


MAPPING FRAGILITY IN IRAQ AND THE KURDISTAN REGION:

CLIMATE CHANGE, CONFLICT, AND HUMAN
MOBILITY IN THI QAR, BASRAH, AND SULAYMANIYAH [KALAR]



Addressing Climate Migration
Root Causes in Iraq – Phase II



Foreign, Commonwealth
& Development Office

 **IOM**
UN MIGRATION

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INTRODUCTION

As part of IOM's ongoing collaboration with the Foreign, Commonwealth & Development Office (FCDO) under the “Addressing Climate Migration Root Causes in Iraq – Phase II” project, this paper builds on the foundation laid during Phase I to provide a deeper, location-specific analysis of fragility in climate-affected regions of Iraq. Phase II of the project seeks to enhance evidence-based responses to the complex and interconnected challenges of climate change, environmental degradation, displacement, and conflict—challenges that increasingly define Iraq's risk landscape.

This expanded fragility analysis focuses on three geographical areas — **Thi-Qar, Basra, and Kalar (in Sulaymaniyah)**—each representing distinct but overlapping climate vulnerability and mobility dynamics. Drawing from lessons learned in Phase I, the paper examines how climate and non-climate stressors converge to shape localized fragility, drive patterns of internal displacement, and erode social and institutional resilience.

Despite being classified as **extremely fragile** in the OECD Fragility Framework, Iraq is demonstrating significant signs of progress.¹ Transitioning from decades of conflict, the country is increasingly turning its attention toward resilience-building and long-term development. In the face of mounting climate pressures, economic challenges, and rapid urbanization, Iraq is carving out a path that emphasizes climate resilience, inclusive governance, and sustainable development. The progress made across several sectors highlights the opportunities emerging within Iraq's current fragility landscape.

Iraq has taken major steps to integrate climate resilience into national planning. As a signatory to the Paris Agreement, Iraq has committed to advancing climate action and building adaptive capacity across vulnerable sectors. The National Adaptation Plan (NAP) and Iraq Vision 2030 focus on reducing climate vulnerability across sectors like water, health, energy, and agriculture. The 2024–2030 Environmental Strategy recognizes climate-induced displacement and promotes climate security as a national priority. In this view, this analysis aims to inform targeted interventions, support the integration of fragility considerations into Iraq's NAP process, and contribute to the development of a localized Fragility Index as a tool for anticipatory governance and climate-security planning.

UNDERSTANDING MULTIDIMENSIONAL FRAGILITY: A FRAMEWORK FOR IRAQ.

The Organisation for Economic Co-operation and Development (OECD) defines fragility as “the combination of exposure to risk and insufficient coping capacities to manage, absorb, and mitigate those risks.”² In recent years, fragility has gained increased attention, particularly in light of the United Nations Secretary-General's 2017 call for prioritizing conflict prevention and connecting the pillars of development, peace and security, and human rights. Additionally, the World Bank's 2020–2025 strategy on fragility, conflict, and violence underscores the importance of a shift toward prevention.

This report adapts the OECD's multidimensional fragility framework to the context of Iraq. The framework generally categorizes fragility into six dimensions:

- **Economic Fragility:** Reflects vulnerabilities in economic systems, including education levels, financial stability, reliance on aid, and the ability to manage major expenses.
- **Environmental Fragility:** Examines risks related to natural resources and climate change, focusing on impacts on income, food security, mobility, health, and early warning response mechanisms.
- **Human Fragility:** Encompasses people's well-being, health, and quality of life, including food, water, shelter, medical access, and exposure to sexual violence.
- **Political/Legal Fragility:** Highlights weaknesses in governance, measuring trust in government, participation in democratic processes, and freedom of speech.
- **Security Fragility:** Assesses the extent of threats from crime, conflict, land disputes, armed militias, and other security risks.
- **Societal Fragility:** Focuses on social cohesion, inclusion, discrimination, and the integration of migrants and locals.

Iraq's context is shaped by a complex web of risks that intersect and amplify one another, creating both immediate shocks and long-term stresses for communities across the country. Among the most pressing challenges are climate change, conflict, and socio-economic vulnerabilities—each contributing to an environment of uncertainty and instability. Climate change looms as a particularly severe threat. Iraq's population is increasingly affected by droughts, floods, heatwaves, and dust storms, which disrupt daily life by impacting the environment, agriculture, water resources, and public health.³ These climate-related challenges not only hinder development but also intensify existing vulnerabilities. When combined with other socio-political and economic pressures, these environmental stresses contribute to a heightened risk of instability and conflict, further complicating efforts to build resilience and sustain progress.

The country's dependence on the Tigris and Euphrates rivers—both subject to upstream water management policies—compounds the crisis, leaving communities struggling to sustain livelihoods, particularly in agriculture. As access to water diminishes, competition over resources intensifies, often escalating pre-existing tensions and fueling localized disputes.⁴

Yet, climate change is not an isolated risk; it interacts with Iraq's fragile security landscape. Years of war, insurgency, and political instability have left a fractured society where armed groups and militias continue to wield influence⁵. In areas where government presence is weak, and institutions struggle to provide basic services, climate-induced resource scarcity becomes a potential trigger for conflict, further deepening social divisions and displacing

¹ OECD. States of Fragility 2025. Paris: OECD Publishing, 2024. https://www.oecd.org/en/publications/states-of-fragility-2025_81982370-en.html.

² Organisation for Economic Co-operation and Development (OECD). States of Fragility 2022. Paris: OECD Publishing, 2022. <https://doi.org/10.1787/c7fedf5e-en>.

³ Stockholm International Peace Research Institute (SIPRI). “Iraq in 2023: Challenges and Prospects for Peace and Human Security.” SIPRI, January 2023. <https://www.sipri.org/commentary/topical-background/2023/iraq-2023-challenges-and-prospects-peace-and-human-security>

⁴ Ibid.

⁵ Stockholm International Peace Research Institute (SIPRI). Iraq Invasion: 20 Years On—SIPRI Data. SIPRI, 2023. <https://www.sipri.org/commentary/topical-background/2023/iraq-invasion-20-years-sipri-data>.

already vulnerable populations.

Population mobility is another defining feature of Iraq's fragility. The legacy of displacement from past conflicts, coupled with emerging climate-induced migration, has reshaped demographics, with implications for relations between host communities and displaced individuals, which have ranged from cooperative to occasionally strained. Rural-to-urban migration is accelerating as livelihoods in agriculture become increasingly unsustainable, adding pressure to urban centers that lack the infrastructure to accommodate these growing populations. This movement not only affects housing and employment but also strains social cohesion, particularly in areas still recovering from the sectarian and ethnic conflicts of previous decades. For instance, as of October 2024, a total of 28,116 families—equivalent to 168,696 individuals—remain displaced across 12 governorates in central and southern Iraq.⁶ Additionally, socio-economic vulnerability remains a persistent challenge. Despite Iraq's vast oil wealth, many communities face high levels of underemployment, limited access to quality public services, and continued dependence on aid.⁷ Economic instability fuels grievances, particularly among youth, who often find themselves without opportunities for education or employment, making them more susceptible to recruitment by armed groups or engagement in illicit economies.⁸ The fragility of Iraq's economy, combined with a governance system struggling to implement reforms, makes long-term resilience difficult to achieve.⁹

UNDERSTANDING FRAGILITY THROUGH THE CLIMATE-CONFLICT-DISPLACEMENT NEXUS IN IRAQ

This report examines how the climate-conflict-displacement nexus manifests in Iraq by focusing on **three key fragility dimensions: environment, human mobility, and political/security dynamics**. These interconnected dimensions offer a lens through which to understand how different stressors interact, shaping the country's broader fragility landscape.

To explore these dynamics in depth, the report focuses on three distinct regions—**Basra, Thi Qar, and Suleymaniya (Kalar)**—each representing unique vulnerabilities and resilience patterns. Basra is particularly exposed to water scarcity, pollution, and governance challenges. Thi Qar, located in the heart of Iraq's marshlands, struggles with drought, environmental degradation, displacement pressures, socio-economic hardship and persistent challenges in public funds management. Meanwhile, Suleymaniya (Kalar), situated in the Kurdistan Region of Iraq, highlights the complex interplay between climate risks, resource management, population mobility, and political stability.

By analyzing these locations, the report aims to uncover how risks associated with environmental fragility, migration patterns, and security threats materialize in different contexts. More importantly, it seeks to illustrate how these risks interact, creating compound vulnerabilities that amplify fragility and reduce resilience to future shocks.



cations for communities across Iraq. The insights gained from these case studies inform policy recommendations for more effective advocacy, response planning, and mitigation strategies, ensuring that interventions address both immediate risks and long-term structural challenges.

II. METHODOLOGY

This report was developed using a mixed-methods approach, combining a review of existing datasets and literature with insights gathered through key informant interviews (KIs) and focus group discussions (FGDs) conducted in the three selected locations over 2024–2025. KIs were conducted with a diverse range of stakeholders, including local authorities, community leaders, service providers, and representatives from civil society organizations. Participants were purposively selected based on their knowledge of local dynamics and involvement in climate, displacement, or governance-related issues. The analysis began with a comprehensive analysis of datasets covering climate, conflict and mobility, examining both immediate triggers and long-term structural drivers of fragility. This analysis integrates both recent and longitudinal data to provide a comprehensive understanding of fragility dynamics. While priority was given to data from the most recent three-month period—typically covering the last quarter of 2024, depending on data collection cycles—the report also draws on longer-term datasets to capture evolving trends. This dual approach allows the analysis to reflect both immediate shocks and structural vulnerabilities, particularly in areas such as climate change, displacement, and economic transitions, where impacts unfold over extended timeframes.

While the mixed-methods approach strengthens the analysis, there are certain limitations to note. The qualitative data is based on a relatively small, purposive sample and may not fully capture the perspectives of all affected populations. Furthermore, data collection periods often coincide with changes in seasonality, which may affect the reporting and perception of certain issues—particularly those related to water scarcity, agricultural impacts, and migration patterns, which tend to fluctuate seasonally. As such, while the findings offer valuable insights into fragility dynamics, they should be interpreted with an awareness of potential seasonal biases and gaps in representativeness.

⁶ IOM, DTM Iraq – Climate-Induced Displacement – Central and Southern Iraq (September 2024) (Baghdad, 2025).

⁷ Erwin van Veen, *Reform Within Reach? Political Economy Dynamics and the Prospects for Reform in Iraq* (Stockholm: Stockholm International Peace Research Institute, 2021).

⁸ Mikhal Ben-Joseph, "No Prosperity, No Peace: The Iraqi Economy and Instability," *The Internationalist*, 2020.

⁹ Ali, Zhino, and Sima Hussein. 2024. "Economic Diversification in Iraq: Overcoming Oil Dependency and Building a Sustainable Future." *Business and Investment Review* 2 (6). <https://doi.org/10.61292/birev.143>.

III. CASE STUDIES

3.1 DRIVERS OF FRAGILITY IN THI-QAR: ENVIRONMENTAL, MOBILITY, AND SOCIO-POLITICAL CHALLENGES

Thi-Qar, located in southern Iraq, is experiencing severe environmental degradation, climate-induced displacement, and rising political instability, all of which contribute to its increasing fragility. Water scarcity, loss of agricultural livelihoods, and weak governance structures have triggered widespread migration, inter-tribal disputes, and competition over dwindling natural resources. This section outlines four main drivers of fragility in Thi Qar:

A. Challenges to Water Availability and Access

Thi-Qar's water crisis is among the most severe in Iraq, driven by declining river flows, poor water management, and extended drought periods. The province receives the highest water quota in southern Iraq, reflecting its historical role as a key agricultural hub. However, this allocation is often not met, leaving many communities with insufficient water for drinking, irrigation, and livestock. According to KIs and FGDs conducted in early 2025, water quotas from central government policies have severely impacted agriculture, leading to economic downturns and livestock deaths¹⁰. As a result, agricultural output has declined sharply, leading to widespread loss of income and food insecurity. Thi Qar also experiences severe water quality issues, especially during the summer months. Recent research by IOM Iraq and Deltares indicates that water salinity presents a significant challenge to agriculture in Thi-Qar, with average Total Dissolved Solids (TDS) levels at 1,985 mg/l and peaks reaching 8,019 mg/l—well above thresholds for safe irrigation.¹¹ For context, the World Health Organization (WHO) recommends that TDS levels in drinking water should not exceed 1,000 ppm to be considered safe for human consumption. Therefore, the current salinity levels in the Euphrates River within Thi Qar province are substantially higher than the recommended limits, posing serious health risks to the local population¹². Due to the combined challenges related to water availability, quality, and accessibility, Thi Qar is classified as having a **high** water insecurity¹³ and is one of the two governorates in Iraq that has most of districts rated as having **extremely high** baseline water stress.¹⁴

Additionally, with the recession of the marshlands, and associated water resources available for maintaining cultural and agricultural practices, there is a significant lack of infrastructure and associated services available to periphery communities. Lack of basic services such as drinking water, electricity, roads, health and education compound the impact of climate change, which is removing the final resource available to rural populations - agriculture. Service provision in Thi-Qar is particularly critical, with fewer than one in four households rating basic services such as water, electricity, education, and healthcare as “good” or “very good”—notably, only 9% expressed satisfaction with healthcare services and just 17% with electricity supply.¹⁵

b. Climate-Induced Displacement and Urbanization

As of January 2025, 28,379 families (170,274 individuals) in Iraq were displaced by climatic and environmental factors. Thi-Qar Governorate plays a pivotal role in this displacement landscape, accounting for 50% of all climate-induced migrants as a place of origin and receiving 40% of the displaced population as a destination—the highest among all governorates.¹⁶ ¹⁷ in Thi-Qar account for nearly half (41%) of all climate-induced migrants ¹⁸. This rapid depopulation of rural areas is straining urban centers and increasing social tensions, while the failure of governance institutions to effectively manage the crisis is exacerbating long-standing grievances. Data from September 2024 shows that 14,052 families (84,312 individuals) have been forced to relocate due to water scarcity and failing agricultural livelihoods. However, as economic pressures mount, many are seeking livelihood opportunities elsewhere, particularly in Najaf and Kerbala, where better water access supports continued agricultural activities. Migration within rural areas enables families to retain traditional farming and herding practices, but it also places stress on resource availability. A 2023 study found that 27% of Thi-Qar's¹⁹ Entire communities have been abandoned, with eight locations completely depopulated—five in Nasiriyah and three in Suq Al-Shoyekh²⁰ Urbanization is an increasingly prominent feature of displacement patterns in southern Iraq, with a growing number of families seeking stability and services in urban centers. Approximately 61% of displaced families settled in urban areas, while the remainder relocated to rural or peri-urban settings. Rural destinations commonly included districts such as Najaf, Al-Chibayish, and Nassriya, whereas Al-Shatra, Amara, and Nassriya emerged as prominent urban destinations for displaced populations.²¹ This growing influx into urban centers—particularly in already vulnerable governorates like Thi-Qar—places additional strain on limited public services. Service provision in Thi-Qar is particularly critical, with fewer than one in four households rating basic services such as water, electricity, education, and healthcare as “good” or “very good.” Notably, only 9% expressed satisfaction with health-care services and just 17% with electricity supply.²²

10 Enlil – IOM (tbd)

11 IOM Iraq and Deltares, *Water Quantity and Water Quality in Central and South Iraq: A Baseline Assessment* (International Organization for Migration, 2020).

12 Institute of Regional and International Studies (IRIS), *Iraq's Water Crisis: Climate Adaptation in Conflict Settings*, commissioned by the U.S. Institute of Peace, November 2024.

13 Water, Peace, and Security Iraq <https://app.powerbi.com/view?r=eyJrIjoiYTYxODc4ZiEtMTdlYy00NmMwLWE1MigtN2U3ZWQwMzMsZWVlIiwidCI6IiE1ZiNmZTBlLWQ3MTItNDk4MS1yZdiLWZlOTQ5YyYwMTVYIiIsImMiOiIh9>

14 According to WPS, baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. Higher values (with Thi Qar at 4.00- extremely high) indicate more competition among users. Water withdrawals include domestic, industrial, irrigation and livestock consumptive and non-consumptive uses. Available renewable water supplies include surface and groundwater supplies and considers the impact of upstream users and large dams on downstream water availability.

15 Social Inquiry. International Organization for Migration. *A Climate of Fragility: Household Profiling in the South of Iraq—Basra, Thi-Qar and Missan* (2022).

16 International Organization for Migration. *Climate Vulnerability Assessment: From Displacement to Integration – Understanding the Needs and Vulnerabilities of Climate-Induced Migrants in Iraq*. March 2025.

17 Al-Rifa'i (16%) - Al-Chibayish (13%) - Nassriya (12%)

18 International Organization for Migration (IOM). From Displacement to Integration: Understanding the Needs and Vulnerabilities of Climate-Induced Migrants in Iraq. IOM, March 2025.

19 'International Organization for Migration (IOM), October 2023. Drivers of Climate-Induced Displacement in Iraq: Climate Vulnerability Assessment. IOM, Iraq.

20 Ibid.

21 'International Organization for Migration (IOM), January 2025. *Climate-Induced Displacement in Central and Southern Iraq*. IOM, Iraq.'

22 Social Inquiry. International Organization for Migration. A Climate of Fragility: Household Profiling in the South of Iraq—Basra, Thi-Qar and Missan (2022)

c. Socio-political tensions and weak governance

Competition over water has emerged as a key driver of disputes, both at the provincial and community levels. Water-related deficiencies in Thi Qar province have simultaneously fostered collective solidarity and intensified internal divisions among communities. In 2019, Nasiriyah, the provincial capital, became a focal point of protests, with residents expressing dissatisfaction over inadequate infrastructure and services, including water shortages. These demonstrations often escalated into violent confrontations between state authorities, armed groups, and local populations advocating for their rights²³. At the community level, inter-communal conflicts over natural resources are increasing. In 2019 alone, 20 tribal clashes erupted in Islah district over land and water rights, with local authorities unable to resolve the disputes²⁴. Tribes have also been in-dispute over access to marshland water sources, as drought has pushed herding communities deeper into contested areas.²⁵ More generally, tribes in Thi-Qar play a dominant role in local governance and dispute resolution, and water scarcity has intensified inter-tribal conflicts over resource access. Reports on intercommunal mediation document frequent clashes over water use in agricultural areas, with some disputes escalating into armed confrontations²⁶. The following are a few examples of recent tribal disputes²⁷:

- Al-Ibrahim vs. Al-Hasasara (Sayed Dakheel district): A long-standing dispute over irrigation rights turned violent after government-installed water pumps were perceived as favoring one tribe over the other.
- Etab vs. Bani Rakab (Al-Aslah district): Conflict arose over the distribution of water under the Al-MoRashnah system, a traditional water management practice. The dispute led to multiple casualties before mediation efforts intervened.
- Al-Rumayd vs. Al-Omar (Al-Nassir district): Competing claims over the use of marshland water escalated into an armed confrontation, prompting both government and tribal leaders to intervene.

Additionally, Nasiriyah, the provincial capital, has been a focal point for anti-government protests, notably escalating in October 2019²⁸, as citizens demanded improved services, employment opportunities, and political reforms. These protests are closely linked to climate and water security issues. The decline of agriculture, exacerbated by environmental degradation and water scarcity, has left thousands of young people unemployed, contributing to the emergence of a marginalized youth demographic with limited economic alternatives.²⁹ This environment has fostered distrust toward government authorities, as residents accuse both federal and regional administrations of neglecting their water crisis.

Several factors contribute to the political unrest in Thi-Qar. Weak enforcement of water-sharing agreements – both at provincial and communal level – has led unresolved water-related disputes.³⁰ For instance, issues with neighbouring provinces such as Wasit allegedly violating water quotas, exacerbating political disputes³¹. Further, residents perceive marginalization, believing urban centers such as Baghdad and Basra receive preferential access to water infrastructure, while rural communities in Thi-Qar suffer chronic shortages³².

CONCLUSION AND RECOMMENDATIONS

Thi-Qar's fragility is driven by severe environmental decline, climate-induced mobility—both rural-to-urban migration driven by desertification and rural-to-rural displacement in search of better water access—and growing political instability. With half of Iraq's climate-induced displacement occurring in this governorate, rural depopulation is accelerating, putting unprecedented pressure on urban areas. These dynamics present a unique opportunity to develop targeted interventions that harness tribal structures, community networks, and local capacities to build resilience, manage climate-related disputes, and ease the mounting pressure on urban center—particularly in terms of overstretched services and aging infrastructure.

²³ Institute of Regional and International Studies (IRIS), Iraq's Water Crisis: Climate Adaptation in Conflict Settings, commissioned by the U.S. Institute of Peace, November 2024

²⁴ Save the Tigris, "Tribal Disputes Flare in Southern Iraq Over Water Disputes"; European Asylum Support Office (EASO), "Country Guidance," June 2019, 110.

²⁵ Guli Alaa, "بين قتلى وجرحى، ما قصة النزاع العشائري في محافظة ذي قار (العراق)؟" [Between Dead and Injured: What Is the Story of the Tribal Conflict in Thi Qar Governorate, Iraq?], Al Jazeera, April 15, 2023.

²⁶ International Organization for Migration in Iraq, Climate-Informed Mediation: Resolution of Water Disputes Through Mediation in the City of Thi Qar, 2023

²⁷ Ibid.

²⁸ Barbarani, Sofia, "Nasiriya: City at the Heart of Iraq's Uprisings and Rebellion," Al Jazeera, December 1, 2020

²⁹ "Oil-Rich but Impoverished: Thi Qar's Struggle with Economic Inequality," Kurdistan24, February 2025

³⁰ Save the Tigris, "Tribal Disputes Flare in Southern Iraq Over Water Disputes," Save the Tigris, February 2018.

³¹ Laura Birkman, Dorith Kool, Eva Struyken, "Water challenges and conflict dynamics in Southern Iraq: An in-depth analysis of an under-researched crisis," Water, Peace & Security, February 2022.

³² Ibid.



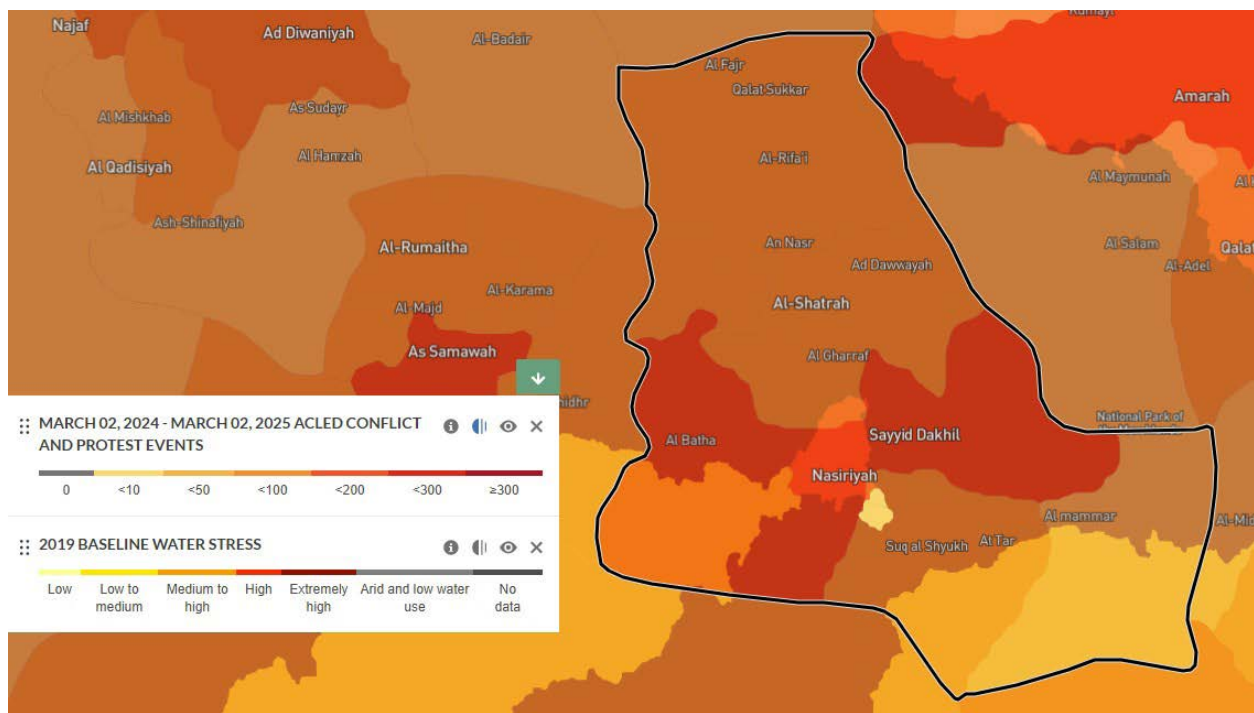


Figure 1. Baseline water stress overlaid with records of violence and protests in Thi Qar³³

By examining Figure 1, the central areas of Thi-Qar, including Nasiriyah and Sayyid Dakhil, are shaded in red, which corresponds to the highest tier of conflict and protest activity (≥200 events) over the past year. This indicates that these districts are major hotspots of socio-political tension, likely driven by a combination of resource scarcity, governance challenges, and local grievances, discussed in subsequent sections. These same areas are also marked as experiencing “Extremely High” water stress, which suggests that demand for water significantly exceeds supply. The overlap between extreme water stress and high conflict incidence signals a strong correlation between resource scarcity and instability in the region. Central Thi-Qar is at a critical intersection of resource management, environmental, basic services, and socio-political fragility. The central region of Thi-Qar, particularly around Nasiriyah, Sayyid Dakhil, and Al Batha, emerges as a critical hotspot where extreme water stress overlaps with a high frequency of conflict and protest events, as evidenced by the Water, Peace and Security conflict map. This convergence underscores the urgent need for IOM to adopt a climate-security lens in its programming in the area. Outlined below are several priority recommendations:

INTEGRATING TRIBAL MEDIATION INTO CLIMATE RESILIENCE STRATEGIES:

In many areas in Iraq, localized tensions related to water are affected by tribal dynamics.³⁴ (According to the Armed Conflict Location & Event Data Project (ACLED), incidents of tribal violence in Iraq more than doubled in 2020 compared to 2019).³⁵ However, in Iraq’s most vulnerable regions, tribal networks play a crucial role in enhancing social cohesion and bolstering

communities’ resilience, with an estimated 75% of the population affiliated with one of Iraq’s 150 major tribes.³⁶ Considering the challenges faced by public institutions, these tribes serve as vital social safety nets.³⁷ As highlighted in the **Water, Peace and Security** report (2022), tribal customary law and traditional dispute resolution mechanisms, such as **Sulha**, play a crucial role in managing conflicts and maintaining stability in Iraq, particularly in regions affected by climate-induced disputes. These indigenous practices provide a structured framework for mediating tensions over water-sharing agreements and resource allocation between communities. While tribal mediation is not a substitute for formal state institutions, its integration into national and subnational governance structures—ensuring inclusivity of women and the protection of their rights—can be instrumental in mitigating climate-related security risks and fostering long-term peace. Mediation emerges as a vital tool in this process, offering a bridge between traditional tribal customs and contemporary legal frameworks.³⁸

In Thi Qar, water scarcity has contributed to escalating tribal tensions in certain locations, particularly over the allocation of agricultural water resources. However, this same dynamic presents an opportunity for constructive tribal engagement in climate-related dispute resolution. As key actors in their communities, tribal leaders hold considerable legitimacy and influence, especially in rural areas where state institutions often lack reach or trust. Their embeddedness within social and governance structures positions them uniquely to mediate access to natural resources, de-escalate tensions, and promote cooperative water-sharing arrangements between communities.³⁹

³³ Water, Peace and Security. Global Early Warning Tool: Conflict Map. Accessed March 13, 2025. <https://waterpeacesecurity.org/map>

³⁴ United States Institute for Peace. “USIP’s Work in Iraq”, August 2020. <https://www.usip.org/publications/2020/08/current-situation-iraq>

³⁵ Badawi, Tamer. “The Growing Tribal Role in Iraq’s Post-election Shia Politics”, Carnegie, May 2022. <https://carnegieendowment.org/sada/87147>

³⁶ Bobseine, Haley. Tribal Justice in a Fragile Iraq. New York: The Century Foundation, November 7, 2019. <https://tcf.org/content/report/tribaljustice-fragile-iraq/>.

³⁷ United Nations Department of Political and Peacebuilding Affairs. The Interlinkages Between Climate, Peace, and Security in Iraq: A Desk Review. New York: United Nations, 2021

³⁸ Ibid.

³⁹ Laura Birkman, Dorith Kool, Eva Struyken, Water challenges and conflict dynamics in Southern Iraq: An in-depth analysis of an under-researched crisis. Water, Peace & Security: February 2022.

The experience of Thi Qar provides valuable insights into effective dispute resolution, underscoring the importance of harmonizing customary and formal legal procedures. By facilitating constructive dialogue, this approach enhances the potential for sustainable conflict resolution, particularly in culturally distinct contexts where local customs remain deeply embedded in governance and social structures. A significant majority of respondents (83%) in mediation best practices study⁴⁰ in Thi Qar emphasized the necessity of integrating local customs and traditions into conflict resolution processes, highlighting that customary practices are essential for ensuring legitimacy and acceptance within communities. The acknowledgment of these traditions, while aligning them with formal legal mechanisms, paves the way for context-appropriate mediation procedures that can be effectively implemented at both local and national levels, ultimately benefiting all stakeholders involved.⁴¹

However, engaging tribal structures is not without significant risks. Tribal justice systems often operate on principles of reciprocity and compensation, which may include practices such as forced displacement ('jalwa')⁴² that conflict with human rights and IOM's protection standards. Moreover, given the prevalence of 'gun culture' in the region, unresolved or mismanaged disputes can rapidly turn violent, posing safety risks for communities and humanitarian actors alike.⁴³ The politicization of tribal alliances and their control over water flows also risks exacerbating inequalities if interventions are perceived as favoring particular groups.

IOM Iraq can leverage this legitimacy to foster locally led mechanisms that integrate tribal customary practices with national legal frameworks, encouraging more inclusive and context-sensitive resource governance. Tribal networks, which span provincial and even cross-border lines, can be instrumental in promoting regional cooperation and preventing localized disputes from escalating into broader conflicts. Additionally, many tribal leaders have expressed willingness to collaborate with state institutions when it comes to protecting livelihoods, which can be a valuable entry point for climate resilience programming.

Therefore, IOM's approach must remain highly sensitive, inclusive, and impartial. Any engagement with tribal actors should be grounded in thorough conflict sensitivity analysis and include parallel efforts to strengthen the role of civil society, women, and youth in climate-related decision-making. Collaborating with respected mediators or tribal sheikhs with a track record of peacemaking, and facilitating dialogues that include both upstream and downstream communities, can help ensure that interventions support equitable and sustainable resource management. Ultimately, the path forward requires a careful balancing act: leveraging the stabilizing potential of tribal engagement while safeguarding against the reinforcement of exclusionary or coercive practices. Getting this balance right will be critical to advancing climate security and social cohesion in Thi Qar.

STRENGTHENING TRIBAL ENGAGEMENT IN COLLABORATIVE WATER GOVERNANCE AND HLP ISSUES:

To address growing water scarcity and conflict in Thi-Qar, a structured tribal

engagement approach is essential. Engagements should be held with tribal leaders and government representatives to jointly review and dialogue on water allocation arrangements. These workshops can also serve to build understanding of upstream-downstream dynamics with neighboring provinces like Wasit and Missan, through cross-governorate dialogues. Given the limitations of current tribal mediation - such as perceived bias and limited inclusivity⁴⁴- there is a need to strengthen local mechanisms by embedding fairness, transparency, and sustainability. Tribal leaders should also play a key role in disseminating outcomes of these engagements to communities, helping to counteract harmful narratives of favoritism and increase local ownership of water management efforts.

In areas where informal housing tenure is common, particularly among environmental migrants, legal awareness and education are vital for improving access to rights and reducing housing insecurity. While many rely on tribal actors to address eviction threats and other disputes, limited legal knowledge often hinders formal resolution. Strengthening legal literacy—especially around housing, land, and property (HLP) rights—can help communities engage more effectively with state systems.⁴⁵ At the same time, tribal leaders can play a constructive role in conflict resolution when their efforts are aligned with legal frameworks. Promoting positive tribal values within the rule of law can enhance protection, reduce tensions, and support fairer outcomes for vulnerable populations.

STRENGTHENING WATER INFRASTRUCTURE AND BASIC SERVICE DELIVERY IN THI-QAR:

The capacity of Thi-Qar's water infrastructure has not kept pace with growing demand. Outdated irrigation systems, coupled with inadequate investment and lack of Operation and Maintenance have made disputes over access inevitable. Without significant improvements, water shortages will continue to exacerbate conflict and drive climate-induced displacement.

To strengthen resilience, Thi-Qar must adopt sustainable, locally appropriate water solutions. Promoting water storage solutions, and decentralized, efficient and effective irrigation systems can help reduce reliance on increasingly unreliable river sources, especially in rural communities. Alongside these measures, the rehabilitation of irrigation canals and the construction of small-scale desalination plants would expand water availability, particularly in hard-to-reach areas where scarcity is most acute.

Adopting modern irrigation techniques, such as drip irrigation, wetland construction, hydroponics, and water recycling, as well as adaptive agricultural practices, offers an opportunity to drastically improve water use efficiency, helping farmers produce more with less and reducing friction over limited supplies. Equally important is the expansion of community-led water management initiatives. By empowering local leaders and stakeholders to take greater ownership of water governance, solutions can be better tailored to community needs, increasing buy-in and long-term sustainability. The successful implementation of these strategies hinges on coordinated action. Government institutions, tribal authorities, and civil society actors must work together to design and deliver inclusive, conflict-sensitive water

⁴⁰ International Organization for Migration. Mediation Best Practices in Thi Qar Governorate. 2023.

⁴¹ Ibid.

⁴² Laura Birkman, Dorith Kool, Eva Struyken, Water challenges and conflict dynamics in Southern Iraq: An in-depth analysis of an under-researched crisis. Water, Peace & Security: February 2022.

⁴³ Ibid.

⁴⁴ PPO- Berghof

⁴⁵ International Organization for Migration (IOM). Environmental Migration in Iraq: An Overview. 2024.

management interventions that address both the technical and socio-political dimensions of water scarcity in Thi-Qar.

Beyond water infrastructure, widespread dissatisfaction with basic service delivery—particularly healthcare, education, electricity, and clean water—continues to undermine public trust and social cohesion in Thi-Qar. Only 9% of households rated healthcare services as good or very good, and similar dissatisfaction was reported for education (23%), water (20%), and electricity supply (17%).⁴⁶ These figures reflect a critical need to invest not only in infrastructure but also in institutional capacity and service quality. Improving service delivery should be prioritized as a core resilience strategy.

3.2 DRIVERS OF FRAGILITY IN BASRA: ENVIRONMENTAL, MOBILITY, AND POLITICAL/ SOCIAL CHALLENGES

Basra, Iraq's southernmost governorate, is facing an unprecedented confluence of environmental degradation, displacement, and political instability that is straining local governance, security, and infrastructure. As water scarcity, salinization, and flooding intensify, traditional livelihoods—particularly in agriculture and fishing—are rapidly collapsing, driving significant rural-urban and rural-rural migration and exacerbating economic and social instability. These challenges are further compounded by weak governance, political disputes over resource allocation, and the expansion of informal and illicit economies, all of which contribute to Basra's growing fragility.

Water Insecurity, Industrial Pollution, and Climate Risks

Basra's geographical and climatic conditions make it particularly vulnerable to environmental shocks. The convergence of the Tigris and Euphrates rivers in the region has historically sustained its agricultural and fishing industries. However, declining river flow, rising sea levels, and increased salinization have severely degraded the quality of water and soil, threatening public health and economic activity. The primary water sources—the Shatt al-Arab river and its freshwater canals—have suffered from upstream water mismanagement, inadequate pollution regulation, and deteriorating infrastructure⁴⁷. Further, industrial waste from oil extraction activities contaminates local waterways, with minimal accountability for both local and international polluters. In 2018, this environmental neglect coupled with a lack of water flow in the Tigris and Euphrates rivers, resulted in seawater intrusion into the city. This in turn led to a public health crisis, as over 118,000 residents suffered from gastrointestinal illnesses linked to pollutants in the local water supply.⁴⁸ In Basra, only 24% of surveyed households rated their water supply as “very good” or “good.” This low satisfaction level underscores the pressing challenges in Basra's water infrastructure and management.⁴⁹ Adding to these environmental pressures, climate change has increased the frequency of

extreme weather events, particularly sea-level rise. Projections indicate that sea levels could rise by approximately 9.6 cm by 2030, 17.9 cm by 2050, and 30.2 cm by 2080, potentially inundating significant portions of the Basra Governorate⁵⁰. In the most severe scenarios, up to 38% of Basra's total area could be submerged by the end of the century, posing substantial threats to infrastructure and economic activities⁵¹.

Climate-Induced Migration and Urbanization

Basra has already witnessed significant climate-driven displacement, with around 12,000 individuals (2,000 families) recorded as climate migrants by IOM's Displacement Tracking Matrix (DTM)⁵². Climate migration has been particularly prominent in rural areas, where water scarcity and lack of economic opportunities have pushed thousands of families into Basra city and neighboring urban centers and other rural areas.

A 2021 study found that 12% of Basra city's population consists of climate migrants, with more than half citing lack of economic opportunities (52%) and water scarcity (49%) as their primary reasons for leaving rural areas. Unlike past migration patterns, recent climate-induced displacement appears to be largely permanent, as many families sell their land, livestock, and homes before relocating. The pressure on urban infrastructure has intensified, with informal housing settlements now housing up to 600,000 people—30% of Basra's total population. The rapid expansion of informal settlements has complicated land tenure issues, as many migrants occupy agricultural or public land without legal recognition. In high-migration neighbourhoods, only 16% of households hold official land ownership, leaving many vulnerable to evictions and legal disputes. In some cases, displaced families turn to tribal networks for protection, further weakening state authority in land governance. Tensions between migrants and host communities are also rising. A 2022 perception survey in Basra found that 77% of residents believed migration had intensified competition for jobs and services, while 67% linked migration to declining public service quality.⁵³ In some cases, tribal disputes have escalated into violent clashes, particularly between displaced livestock herders and settled communities in Shatt al-Arab and Al Chebayesh Marshes, where conflicts over grazing rights have resulted in direct confrontations. For instance, in Basra's Al-Qurna district, around one-third of assessed locations reported 5–6 resource-related issues, making it the most problematic district in terms of natural resource tensions. These tensions have escalated beyond verbal disputes in some cases, with 20% of affected locations reporting the procurement of weapons and 13% experiencing open conflict.⁵⁴

Socio-political Tensions, Weak Governance and Tribal-economic Competition

Basra, Iraq's southern oil-rich province, has been a focal point of socio-political tensions exacerbated by weak governance and resource mismanagement. Decades of corruption, clientelism, and underinvestment in infrastructure

⁴⁶ Social Inquiry. International Organization for Migration. A Climate of Fragility: Household Profiling in the South of Iraq—Basra, Thi-Qar and Misan (2022).

⁴⁷ Human Rights Watch, Basra is Thirsty: Iraq's Failure to Manage the Water Crisis (New York: Human Rights Watch, July 22, 2019), <https://www.hrw.org/report/2019/07/22/basra-thirsty/iraqs-failure-manage-water-crisis>.

⁴⁸ Ibid.

⁴⁹ International Organization for Migration and Social Inquiry. A Climate of Fragility: Household Profiling in the South of Iraq: Basra, Thi-Qar, and Misan, 2022.

⁵⁰ Weathering Risk. “Climate Risk Profile: Iraq.” Weathering Risk, 2022.

⁵¹ Abbas, N., et al. “The Impacts of Sea Level Rise on Basra City, Iraq.” Open Journal of Geology 10, no. 12 (2020): 1187-1200.

⁵² International Organization for Migration (IOM), January 2025. Climate-Induced Displacement in Central and Southern Iraq. IOM, Iraq.

⁵³ Climate Resilience in Basrah: Enhancing Community Preparedness and Local Governance. The Hague: Cordaid, October 2022. <https://www.cordaid.org/en/wp-content/uploads/2022/10/Climate-Resilience-in-Basrah.pdf>.

⁵⁴ International Organization for Migration (IOM). Drivers of Climate-Induced Displacement in Iraq: Insights from the Field. Baghdad: IOM Iraq, November 2023.

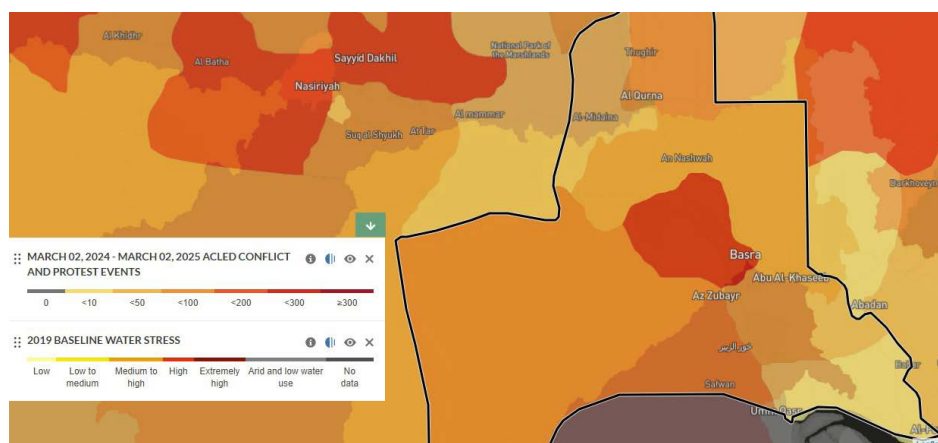
Basra also faces high levels of youth unemployment, estimated at an average of 22.4% across all districts.⁵⁸ The lack of formal employment pathways has pushed many into informal labor, security forces, or armed groups. The Popular Mobilization Forces (PMF) have established a strong presence in Basra, leveraging recruitment as an economic alternative for disenfranchised youth while simultaneously engaging in service provision, flood response⁵⁹, and waste management, further blurring the lines between state and non-state governance.⁶⁰ Grievances against the oil industry have emerged as a significant source of instability. Many residents accuse oil companies of monopolizing state-owned land while failing to provide economic benefits to local communities.⁶¹ Protests against the oil sector have been frequent,

At the local level, competition over natural resources has intensified inter-communal conflict. The decline of agriculture has eroded traditional cooperative agreements between herders and farmers, forcing herding communities to migrate beyond agreed-upon grazing routes. This has led to encroachments on farmland, destruction of crops, and violent confrontations, particularly in the southern Shatt al-Arab region, where displaced herders have clashed with settled communities⁶³. For instance, the regression of water levels in the Al-Chibayish marshes, spanning Thi Qar and Basra provinces, has historically led to disputes between local tribes. Drought conditions have exacerbated these tensions, as diminishing resources intensify competition among communities.⁶⁴

In summary, Basra's socio-political tensions are deeply intertwined with weak governance, resource mismanagement, high youth unemployment, and the complex interplay of tribal and paramilitary influences, all contributing to a cycle of instability and unrest.

Basra is undergoing a compounded crisis rooted in environmental degradation, climate-driven displacement, and political instability. The province's agricultural and fishing sectors have been severely affected by rising salinity, reduced river flow, and pollution, particularly from the oil industry. These environmental pressures have triggered widespread rural-to-urban and

rural-rural migration, contributing to the rapid expansion of informal settlements that now accommodate nearly 30% of Basra's population. The resulting strain on housing, public services, and employment opportunities has deepened social tensions and increased the potential for conflict, particularly between displaced populations and host communities.



55 United States Institute for Peace. "USIP's Work in Iraq", August 2020. <https://www.usip.org/publications/2020/08/current-situation-iraq>

56 United Nations Department of Political and Peacebuilding Affairs. "The Interlinkages Between Climate, Peace and Security in Iraq: A Desk Review." April 2023. https://dppa.un.org/sites/default/files/dppa_desk_study_on_the_interlinkages_between_climate_peace_and_security_in_iraq.pdf.

57 Al-Hamoud, Ali Taher. "Behind Events in Basra: Problems and Possible Solutions." Friedrich-Ebert-Stiftung, February 2019

58 International Organization for Migration (IOM) and Social Inquiry. Employment in the South of Iraq: Challenging Prospects for Women and Youth. Baghdad: IOM, 2022.

59 Porter, Lizzie. "In Iraq, Water Woes and Corruption Grips Signal Trouble in Key City." The New Humanitarian, September 9, 2019. <https://www.thenewhumanitarian.org/news-feature/2019/09/09/Iraq-Basra-water-pollution-competition-mismanagement>.

60 Parry, J., & Aymerich, O. (2022). Reintegration of ex-combatants in a militarized society. *Peacebuilding*, 11(1), 20–44. <https://doi.org/10.1080/21647259.2022.2042982>

61 Hasan, Harith. "Eden Denied: Environmental Decay, Illicit Activities, and Instability in Iraq's Southern Border Area." Carnegie Endowment for International Peace, March 2022

62 Ibid.

63 Al Hasan, Shukri. "Drought Ignites Tribal Conflicts in Southern Iraq." Planetary Security Initiative, August 17, 2020.

64 Ibid.

65 Water, Peace and Security. Global Early Warning Tool: Conflict Map. Accessed March 13, 2025. <https://waterpeacesecurity.org/map>

By examining Figure 2, Basra Governorate, particularly areas around Basra city, Abu Al-Khaseeb, and Az Zubayr, is experiencing extremely high baseline water stress, as indicated by the deep red shading on the 2019 water stress layer. Basra city is also marked by high levels of recent conflict and protest events (<300 incidents from March 2024 to March 2025), as recorded by ACLED. Further south and southwest—areas like Umm Qasr, Safwan, and the Shatt al-Arab corridor—experience slightly lower levels of conflict but remain under **high** to **extremely high** water stress, reinforcing the pattern of

environmental vulnerability throughout the governorate. This convergence of environmental pressure and socio-political instability reflected in Figure 2 underscores the urgency for conflict-sensitive adaptation responses in these areas. Outlined below are several priority recommendations:

1. STRENGTHEN CLIMATE-RESILIENT INFRASTRUCTURE AND ENVIRONMENTAL GOVERNANCE:

In Basra, the deterioration of water infrastructure has directly contributed to recurring public health crises, mass protests, and the erosion of state legitimacy. Prioritizing the rehabilitation of Basra's water treatment plants, especially those serving urban centers like Basra city and Abu Al-Khaseeb, is essential to addressing toxic water supply issues linked to industrial and agricultural pollutants. The reconstruction of irrigation canals—particularly in areas adjacent to the Shatt al-Arab and in Az Zubayr—will support rural livelihoods and reduce dependence on declining water flows from upstream provinces. Stronger enforcement of environmental regulations is also critical, particularly in monitoring oil sector waste discharge, which remains a major contributor to soil and water contamination in southern Basra. Given the transboundary nature of the water crisis, negotiations with upstream actors in Missan and Wasit, and across Iranian border areas affecting the Karun and Karkheh rivers, are urgently needed to restore ecological flow into the marshlands and stabilize the Shatt al-Arab.

2. PROMOTE INCLUSIVE LIVELIHOODS AND COMMUNITY STABILIZATION:

Basra's overreliance on the oil sector and the contraction of agriculture have left thousands—particularly youth—without sustainable income, fueling migration and vulnerability to recruitment by armed actors. Livelihood support should focus on expanding aquaculture and palm agriculture in the Shatt al-Arab delta, and reviving marsh-based economies around areas like Hammar Marsh and Al-Qurna, where traditional livelihoods have been lost due to upstream diversions and salinization. Investment in solar energy generation, particularly in off-grid rural areas, can address both energy gaps and job creation. For displaced populations settling in informal neighborhoods such as Hayaniya or Tamimi, securing land tenure and civil documentation, alongside upgrading water, sanitation, and electricity infrastructure, will be essential to prevent evictions and support durable returns. These interventions should be informed by the socio-political dynamics of tribal control and informal service provision in urban peripheries.

3. REBUILD LOCAL GOVERNANCE AND DISPUTE RESOLUTION MECHANISMS:

Basra's hybrid governance landscape—where tribal leaders, political blocs, and paramilitary actors compete for control—requires tailored approaches to dispute resolution and institutional rebuilding. Establishing inclusive local dialogue platforms in districts such as Az Zubayr and Abu Al-Khaseeb, where land, water, and employment grievances are acute, can help mediate disputes between host communities, returnees, and displaced groups. These platforms must engage both formal authorities and traditional leaders, given the de facto governance roles tribes play in resolving access disputes and managing communal resources. Municipal authorities need targeted support to regulate rapid urban sprawl in eastern Basra, plan infrastructure investments, and implement transparent criteria for accessing public employment and compensation schemes. Crucially, the roles of non-state actors in service delivery must be clearly delineated to prevent the normalization of parallel governance and ensure that the state reclaims a credible, equitable presence in local development.

3.3. DRIVERS OF FRAGILITY IN KALAR: ENVIRONMENTAL, MOBILITY, AND POLITICAL/ SOCIAL CHALLENGES

Unlike central and southern Iraq, where other water sources may play a more prominent role, rain remains the dominant source of irrigation in KRI. Consequently, shifts in rainfall patterns due to climate change have a direct and significant effect on agricultural productivity in the region.⁶⁶ As part of the Garmian Administration, Kalar plays a central administrative role, yet it remains vulnerable to water scarcity, loss of agricultural livelihoods, and unresolved territorial disputes between the Federal Government of Iraq and the Kurdistan Regional Government (KRG). These factors have contributed to growing displacement, inter-tribal conflicts, and dissatisfaction with governance structures, all of which intensify the district's instability. The impacts of climate change, particularly prolonged drought and desertification have further exacerbated local tensions by driving displacement and increasing competition over dwindling resources.

a. Environmental Degradation, Water Insecurity, and the Decline of Rural Livelihoods

Water scarcity is a major and worsening issue in Kalar, exacerbated by drought, irregular rainfall, and regional water management practices. The Sirwan River, Kalar's primary water source, originates in Iran, making the district highly vulnerable to upstream diversions. In recent years, Iran has constructed 13 lakes along the Sirwan River, significantly reducing water availability downstream. This reduction has forced the KRG to release water from Darbandikhan Lake, highlighting the district's dependence on external water sources and the political tensions surrounding water access.⁶⁷ For years, diminishing water resources, unauthorized diversions, and violations

⁶⁶ International Organization for Migration (IOM). Climate Vulnerability Assessment: Kurdistan Region of Iraq. Displacement Tracking Matrix (DTM), 2023.

⁶⁷ Löble, Nike, Florian Lüdtkke, Alina Viehoff, and Alexandra Steinkraus. "Addressing Environmental and Water Challenges Unites Divided Villages in North Eastern Kurdistan Iraq." Climate-Diplomacy, August 28, 2024.

of water-sharing agreements along the Bala Jo water canal have intensified hostilities, deepened divisions, and fostered mistrust among communities.⁶⁸ Over the past three decades, desertification has intensified along the Sirwan River, the primary water source in the district. Notably, 30 out of 151 square kilometers of green spaces have completely dried up.⁶⁹ In 2023, Kalar district experienced significant drought conditions, affecting approximately 50% of its area by December.⁷⁰ This environmental degradation has adversely affected vegetation, wildlife, and local agriculture. Consequently, farmers and herders face immense challenges in maintaining their livelihoods due to reduced water access and escalating costs.

Further, in Bawa Nour, a subdistrict with a strong agricultural foundation, climate change has significantly affected the sector's productivity. Many farmers have abandoned their traditional roles, migrating to urban centers in search of alternative employment.⁷¹ Those who remain have often converted pastoral lands into croplands, seeking more fertile grounds, leading to a decline in livestock production.⁷² Notably, urban areas within the subdistrict exhibit greater resilience to water scarcity, benefiting from more direct access to the Siwan River compared to their rural counterparts.

Urban expansion is compounding these environmental pressures. The construction of more than 30,000 residential units in Kalar has contributed to environmental degradation, unsustainable resource extraction, and unregulated industrial activity. The uncontrolled mining of sand and gravel along the riverbanks has further damaged the Sirwan River ecosystem, leading to protests by environmental activists.⁷³ However, due to high demand and weak regulatory enforcement, these destructive activities continue unchecked, worsening both climate and security risks.

b. Climate-Driven Displacement, Urban Migration, and Labor Market Strain

Since 2015, Kalar district has experienced notable shifts in migration patterns. The incursion of Daesh (ISIS) into federal areas prompted communities to seek refuge in Kalar, leading to increased tensions with host populations due to strained resources and rising housing costs. Residents perceived a loss of job opportunities as IDPs were often willing to work for lower wages, compelling some locals to migrate to urban centers, such as Sulaymaniyah, in search of employment.⁷⁴ As of early December 2024, over 14,800 were displaced in Kalar district.⁷⁵

In recent years, climate change-induced displacement has compounded these dynamics. Drought and water scarcity have forced many agricultural workers to abandon their livelihoods, seeking opportunities in urban areas both within and outside the district.⁷⁶ Economic pressures are further exacerbated by a lack of a trusted banking system, leading individuals to invest

in real estate as a secure asset. Limited government support for investment in diverse sectors, coupled with concerns over political interference, hampers economic diversification. These interconnected factors contribute to ongoing migration and economic challenges within Kalar district.

Agricultural workers, particularly those in wheat and barley farming, have been among the most affected. In recent years, the district's wheat production has plummeted from 140,000 metric tons to just 40,000 metric tons, reflecting the severity of drought conditions.⁷⁷ This decline in agricultural productivity has left many farming families with no choice but to migrate, further depopulating rural areas and intensifying urban overcrowding.

Alongside rural-to-urban migration, climate-related pressures appear to be influencing demographic and economic shifts in Kalar. Some displaced agricultural workers are now seeking employment in urban construction and service sectors; however, these industries often lack the capacity to absorb the expanding labor force, contributing to rising unemployment and economic instability.⁷⁸ The influx of rural migrants into Kalar's urban neighborhoods has also led to rising social tensions, with long-term residents expressing resentment toward newcomers due to increased competition for jobs and services.⁷⁹

c. Resource-Based Conflict, Historical Grievances, and Governance Gaps

The district of Kalar is characterized by a complex tapestry of social, economic, and political tensions that manifest both within the community and between residents and governmental institutions. Internally, the district grapples with familial and tribal disputes, domestic violence, land ownership conflicts, economic hardships stemming from limited employment opportunities, and political friction among supporters of rival parties. The influx of displaced populations, particularly from Tuz Khurmatu into areas like Rizgari, has further strained community relations. This strain is exacerbated by lingering resentments from past conflicts, such as the destruction of tribal infrastructures in regions like Jalawla in 2014, which led to the displacement of numerous families to Kalar and Kirkuk. These historical grievances continue to foster mistrust and instability within the community.⁸⁰

A significant source of tension in Kalar revolves around land ownership disputes, deeply rooted in the district's complex history. The Ba'athist regime's Arabization policies led to the confiscation of land from Kurdish and Turkmen farmers, which was then redistributed to Arab settlers. For instance, in 1975, the Iraqi government seized lands from Kurdish farmers under the pretext of oil zone restrictions and subsequently allocated them to Arab settlers in 1977, as per Decree No. 949 issued by the Ba'ath Supreme Revolutionary Court.⁸¹ Despite the fall of the Ba'ath regime in 2003, these

68 Ibid.

69 Community-based mapping sessions in Kalar Center. PPO. IOM. Berghof Foundation. 2024

70 International Organization for Migration (IOM), Jun 27 2024. DTM Climate Vulnerability Assessment in the Kurdistan Region of Iraq (June 2024). IOM, Iraq.

71 International Organization for Migration, Peace Paradigms Organization, and Berghof Foundation. Kalar District: Climate, Mobility, and Conflict Dynamics. 2024.

72 Ibid.

73 International Organization for Migration, Peace Paradigms Organization, and Berghof Foundation. Kalar District: Climate, Mobility, and Conflict Dynamics. 2024.

74 International Organization for Migration, Peace Paradigms Organization, and Berghof Foundation. Kalar District: Climate, Mobility, and Conflict Dynamics. 2024.

75 Displacement Tracking Matrix (DTM) Dataset Round 134, covering the months of September, October, November and December 2024.

76 Berghof Foundation. Climate Change Effects on Conflict Dynamics in Iraq: Entry Points. 2023.

77 International Organization for Migration, Peace Paradigms Organization, and Berghof Foundation. Kalar District: Climate, Mobility, and Conflict Dynamics. 2024.

78 Ibid.

79 Berghof Foundation. Climate Change Effects on Conflict Dynamics in Iraq: Entry Points. 2023.

80 International Organization for Migration, Peace Paradigms Organization, and Berghof Foundation. Kalar District: Climate, Mobility, and Conflict Dynamics. 2024.

81 "Iraq Not Serious About Solving Kurdish Farmers' Issue: Official." Rudaw, May 29, 2024. <https://www.rudaw.net/english/middleeast/iraq/29052024>.

land disputes persist, with Kurdish farmers seeking the return of their ancestral lands. The Iraqi constitution's Article 140, intended to address such disputes, remains unimplemented, prolonging tensions. Recent incidents, such as confrontations in the village of Tapasawz in Tuz Khurmatu district, highlight the ongoing nature of these conflicts, where Kurdish farmers face challenges from Arab settlers attempting to assert control over disputed lands.⁸²

Climate change exacerbates these challenges. Diminishing water resources and reduced fertile land intensify competition among farmers and herders, leading to conflicts over access to arable land and grazing areas. In districts like Kalar, these environmental pressures heighten tensions as communities vie for dwindling resources essential for their livelihoods. Pastoral landowners frequently face encroachments by herders seeking sustenance for their flocks amid arid conditions. Consequently, many in the agricultural sector are compelled to abandon their professions, migrating to urban areas in search of employment, which strains public services and fosters competition with local residents. Historically, tensions over water resources in Kalar's farming communities have been managed without escalating to violence. However, a recent incident between the villages of Aula Qot and Haji Fattah marked a concerning shift.⁸³ Escalating desertification and acute water shortages led to a violent confrontation between these communities. The conflict was eventually resolved through the intervention of the

Patriotic Union of Kurdistan, highlighting the pressing need for proactive measures to address climate-induced resource scarcity. An administrative official with expertise in the matter reported that district authorities are currently addressing 90 pending water-related disputes. This underscores the urgency for effective water management strategies to prevent future conflicts arising from environmental stressors.⁸⁴

At the governance level, frustration with the Kurdistan Regional Government (KRG) is growing, with residents feeling that authorities have prioritized the oil sector over sustainable development. The agricultural sector has received only 1.8% of the regional government's budget, a figure that is insignificant given the scale of agricultural land in the region. Many farmers lack access to government support for irrigation, fertilizers, or climate adaptation measures, leaving them highly vulnerable to economic collapse and displacement.

The lack of government intervention has also contributed to a wave of local self-help initiatives, with residents organizing to construct pumping stations, dig wells, and erect small dams. While these efforts highlight strong community resilience, they are ultimately unsustainable without state support. Many residents express a lack of confidence in government institutions, with one stating: **"The government does not have any plan to solve these problems. The only service it provides is drinking water."**

CONCLUSION AND RECOMMENDATIONS

Kalar is experiencing a convergence of environmental degradation, climate-induced displacement, and political instability that is rapidly deepening the district's fragility. Water scarcity, deteriorating agricultural livelihoods, and growing competition over land and resources are fueling tribal conflicts and increasing social tensions. These pressures are also contributing to rural-to-urban migration, further straining already overburdened public services. Meanwhile, weak governance structures and chronic budgetary limitations have hampered coordinated responses, forcing communities to rely on informal and unsustainable coping strategies.

To address these escalating risks, a comprehensive and multi-sectoral response is urgently needed. A first step is to promote sustainable water practices at both the community and business levels. Awareness campaigns should inform residents about the consequences of water overuse and equip them with household-level conservation strategies. At the same time, local businesses—particularly those exploiting the Sirwan River for tourism and industrial purposes—must be engaged in conservation efforts and held to clear environmental standards.

Water management must also be elevated as a government priority, with increased budget allocations and political support for critical infrastructure projects, such as the Bawa Nour Dam. Given the political gridlock between the KDP and PUK, targeted mediation is needed to unlock resources and enable cross-party cooperation on urgent water and climate-security issues.

An inclusive, coordinated approach to governance is equally critical. Drawing from the successful Bala Jo Canal agreement, there is a need to foster

participatory water governance models that bring together communities, authorities, and civic actors to collaboratively address illegal water usage, resolve disputes, and manage shared resources. In areas where local water or conflict-resolution committees do not exist, stakeholders should work to establish and sustain these mechanisms, ensuring they are equipped with a monitoring mandate and long-term funding models. Capacity building, outreach, and peer learning will be essential to their functionality and independence.

To strengthen coherence and reduce institutional friction, these efforts should be aligned with the Garmian Supreme Committee for Resolving Agricultural Problems, ensuring trust and coordination among all governance bodies. Simultaneously, support for farmers must be prioritized, particularly through the promotion of efficient irrigation systems and climate-resilient cultivation methods. As government subsidies have dwindled, international and national actors should step in with technical assistance, training, and financial support to help farmers adapt.

Ultimately, stabilizing Kalar requires more than piecemeal interventions. It demands an integrated strategy focused on water security, land management, inclusive governance, and rural livelihoods. Only through coordinated action across sectors and political divides can long-term resilience and social cohesion be restored in the district.

IV. Key Takeaways and Recommendations

⁸² Ahmad, Laila. "Inaction Deepens Ownership Conflict Over Salahaddin's Agricultural Land." *KirkukNow*, November 16, 2024. <https://kirkuknow.com/en/news/70695>.

⁸³ International Organization for Migration, Peace Paradigms Organization, and Berghof Foundation. *Kalar District: Climate, Mobility, and Conflict Dynamics*. 2024.

⁸⁴ *Ibid.*

The cases of Basra, Thi Qar, and Kalar underscore the urgency of addressing climate-related fragility as a multidimensional challenge that spans environmental degradation, social tension, displacement, and weak governance. These dynamics are not isolated—they are mutually reinforcing, and without timely, targeted intervention, they threaten to undermine Iraq's long-term stability and development. The development of a localized Fragility Index, aligned with the National Adaptation Plan (NAP) process, presents a critical opportunity to institutionalize risk-informed planning and channel resources to the most vulnerable regions. By integrating climate, conflict, and displacement dynamics into national and subnational policy frameworks, Iraq can begin to move from crisis response to anticipatory governance. The recommendations outlined in this study provide a roadmap for building resilience—through improved water governance, inclusive urban planning, alternative livelihoods, and strengthened institutions—laying the groundwork for a more adaptive, equitable, and peaceful future. The following overarching recommendations are proposed for key stakeholders engaged in Iraq's climate, peace, and security landscape:

1. Integrate Climate Fragility into Iraq's National Adaptation Plan (NAP):

To ensure that climate-related fragility is adequately addressed, the NAP process must explicitly incorporate the multidimensional nature of fragility—including environmental degradation, political instability, and displacement. The insights from Basra, Thi Qar, and Kalar demonstrate that climate risks are not only environmental but compound existing governance, economic, and social vulnerabilities. As such, Iraq's NAP should:

- Include targeted adaptation strategies for climate-displaced populations.
- Prioritize investments in high-risk zones identified through the fragility analysis.
- Align adaptation actions with local governance capacity and conflict sensitivity.

2. Operationalize a Localized Fragility Index:

To support early warning, planning, and prioritization, Iraq can institutionalize a Fragility Index informed by the OECD framework but localized to Iraq's realities. This index should:

- Be disaggregated by governorate, district, and community level.
- Incorporate climate, displacement, governance, and conflict indicators.
- Be developed with national institutions (e.g., Ministry of Planning, Ministry of Environment) and validated through local data collection and community engagement.
- Serve as a tool to identify “hotspots” where compound risks demand urgent action and tailored responses.

3. Strengthen Conflict-Sensitive Water Governance:

Water scarcity is a major conflict driver across all three study areas. Effective, equitable, and inclusive water management must be central to any fragility mitigation strategy. Key steps include:

- Establishing and enforcing inter-provincial and tribal water-sharing agreements (e.g., in Thi Qar).
- Expanding community-led water governance councils to resolve disputes at the local level (e.g., Bala Jo model in Kalar).
- Prioritizing the rehabilitation of water infrastructure and improving regulation of industrial water pollution (e.g., Basra's oil sector).
- Supporting irrigation modernization, rainwater harvesting, and small-scale desalination.

4. Address Climate-Induced Displacement through Inclusive Urban Planning:

mobility driven by environmental decline is a growing trend in all three governorates. To mitigate the impact of this transition:

- Implement legal assistance and awareness programs for environmental migrants, with a focus on women, to support access to documentation and promote understanding of their housing, land, and property (HLP) rights, particularly in Basra and Thi Qar.⁸⁵
- Urban services (water, electricity, sanitation) must be expanded to underserved migration zones.
- Investments in secondary cities and rural service hubs can reduce pressure on major urban centers.
- Protection frameworks should be strengthened for climate-displaced persons, with tailored livelihood support and housing assistance.

5. Support Alternative Livelihoods and Economic Diversification:

The decline of agricultural and fishing livelihoods is accelerating fragility. To build economic resilience:

- Expand access to microfinance, vocational training, and climate-smart agriculture.
- Promote investment in sectors beyond oil—particularly renewable energy, aquaculture, and local agro-processing.
- Prioritize economic reintegration of displaced rural workers into urban labor markets, including through public works programs and entrepreneurship support.

6. Reinforce Local Governance and Rule of Law:

Weak institutions and overlapping authorities contribute to fragility, particularly in resource management and dispute resolution. To improve governance outcomes:

- Clarify and strengthen the roles of local councils in land and water governance.
- Build capacity of municipal authorities to manage migration, service delivery, and informal settlements.
- Increase transparency in resource allocation and public

⁸⁵ International Organization for Migration (IOM). Environmental Migration in Iraq: An Overview. 2024.

service budgeting.

- Limit the influence of non-state actors in governance, particularly armed groups providing parallel services.

7. Strengthen Customary Dispute Resolution for Local Governance:

Customary dispute resolution mechanisms, particularly tribal mediation, remain central in conflict management across Iraq. To ensure these mechanisms support inclusive and lawful governance:

- Formally recognize and integrate tribal councils and **Sulha** processes into district-level governance frameworks, while complementing them with enforceable legal and administrative mechanisms. This dual approach can help institutionalize effective local mediation practices—like those seen in Kalar—while addressing the structural weaknesses observed in places like Islah, such as lack of enforcement, inclusivity, and long-term sustainability. Embedding traditional dispute resolution within formal governance structures can strengthen water-sharing agreements, enhance community trust, and ensure that conflict resolution processes are equitable and resilient, particularly for marginalized groups.
- Establish safeguards to ensure inclusivity (e.g., participation of women and minorities) and alignment with human rights standards.
- Facilitate collaboration and dialogue between tribal leaders, local officials, and judiciary actors to resolve land and water disputes.
- Document and standardize successful local mediation models for replication and learning.

8. Expand Early Warning and Fragility Monitoring Systems:

As Iraq continues to face overlapping shocks, proactive monitoring systems are essential. The Fragility Index should feed into:

- National and local-level risk dashboards for use by planners, humanitarian actors, and security agencies.
- Scenario-based contingency planning tied to seasonal environmental stress (e.g., drought, salinization).
- Community-based early warning networks focused on tensions around water, migration, and service access.

9. Strengthen Coordination Between National and Subnational Authorities:

Many fragility drivers stem from misaligned responsibilities between central ministries and governorate-level administrations. To address this:

- Harmonize water management, disaster risk reduction, and urban planning policies across levels of government.
- Ensure that NAP implementation structures are localized and involve governorate technical departments.
- Provide direct budget lines and technical support for local adaptation and fragility reduction plans.

10. Embed Fragility and Resilience in Development Planning:

Finally, fragility and resilience considerations must be mainstreamed into Iraq's broader national development and recovery agenda. This includes:

- Linking fragility indicators with budget planning, public investment frameworks, and donor-funded programs.
- Requiring climate-conflict-displacement impact assessments for large-scale infrastructure and reconstruction projects.
- Leveraging the NAP and fragility index data to inform sustainable financing and climate adaptation funding proposals.



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