

Mapping Locations at Risk of Climate-Induced Displacement

AL ANBAR

MARCH 2026



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INTRODUCTION

The effects of climate change and environmental degradation on Iraqi communities are wide-ranging and continue to escalate.¹ Iraq is witnessing these impacts in the form of increasingly severe and prolonged droughts, land degradation and desertification, and frequent sand and dust storms. Increasing water salinization continues to undermine rural livelihoods, including agriculture, livestock herding, and fishing. As environmental pressures persist and adaptive capacity remains limited, families increasingly leave their homes in search of alternative livelihood opportunities. Beyond displacement, these environmental factors also contribute to the abandonment of rural livelihoods and the adoption of short-term coping strategies, including debt accumulation and asset liquidation.

These environmental changes are occurring across Iraq, including in governorates affected by conflict displacement as well. However, there remains limited understanding of exactly where and the extent to which conflict and environmental factors interact, as well as the implications for affected communities. Thus, this mapping and assessment report aims to identify and understand areas at risk of climate-induced displacement and ongoing mobility pressures within the governorates that experienced conflict-related displacement due to the conflict with ISIL (2014–2017). The goal is to provide evidence-based insights into mobility drivers and livelihood impacts within Iraq's post-conflict, environmentally stressed context. Such insights not only serve to inform and support the country's climate and national development plans, but further the International Organization for Migration's (IOM) efforts globally in this regard as well. This includes contributing to its route-based and climate mobility agenda and specific related commitments under both the Global Compact for Safe, Orderly and Regular Migration and the Sustainable Development Goals.²

This report focuses on Al Anbar Governorate, site of both complex ecosystems as well as legacies of conflict. The governorate contains both lush and arid terrain. The Euphrates River runs through Al Anbar's eastern districts, which have historically been home to some of the most productive agricultural lands and water resources in the governorate, before giving way to drylands and the vast desert expanse of its western side. In addition, Al Anbar Governorate experienced some of the earliest waves of violence and mass displacement

due to the ISIL conflict. As of December 2024, approximately 1.5 million individuals (258,629 households) have returned to their places of origin in the governorate.³ Al Anbar also hosts 33,120 internally displaced persons (IDPs) (5,520 displaced households) due to conflict, the majority of whom are from other parts of the governorate.⁴

Following a brief description of the methodology, this report explores findings from the spatial mapping of climate-induced displacement risk alongside patterns of conflict-related displacement and return. It then analyses the impacts of both slow-onset environmental processes and extreme weather events, including their effects on water resources for agriculture, livelihoods and coping strategies, public services and basic needs, social cohesion, existing adaptation strategies, and ongoing needs.



IOM staff members planting trees as part of a local environmental initiative in Iraq © Anjam Rasool/IOM Iraq 2025

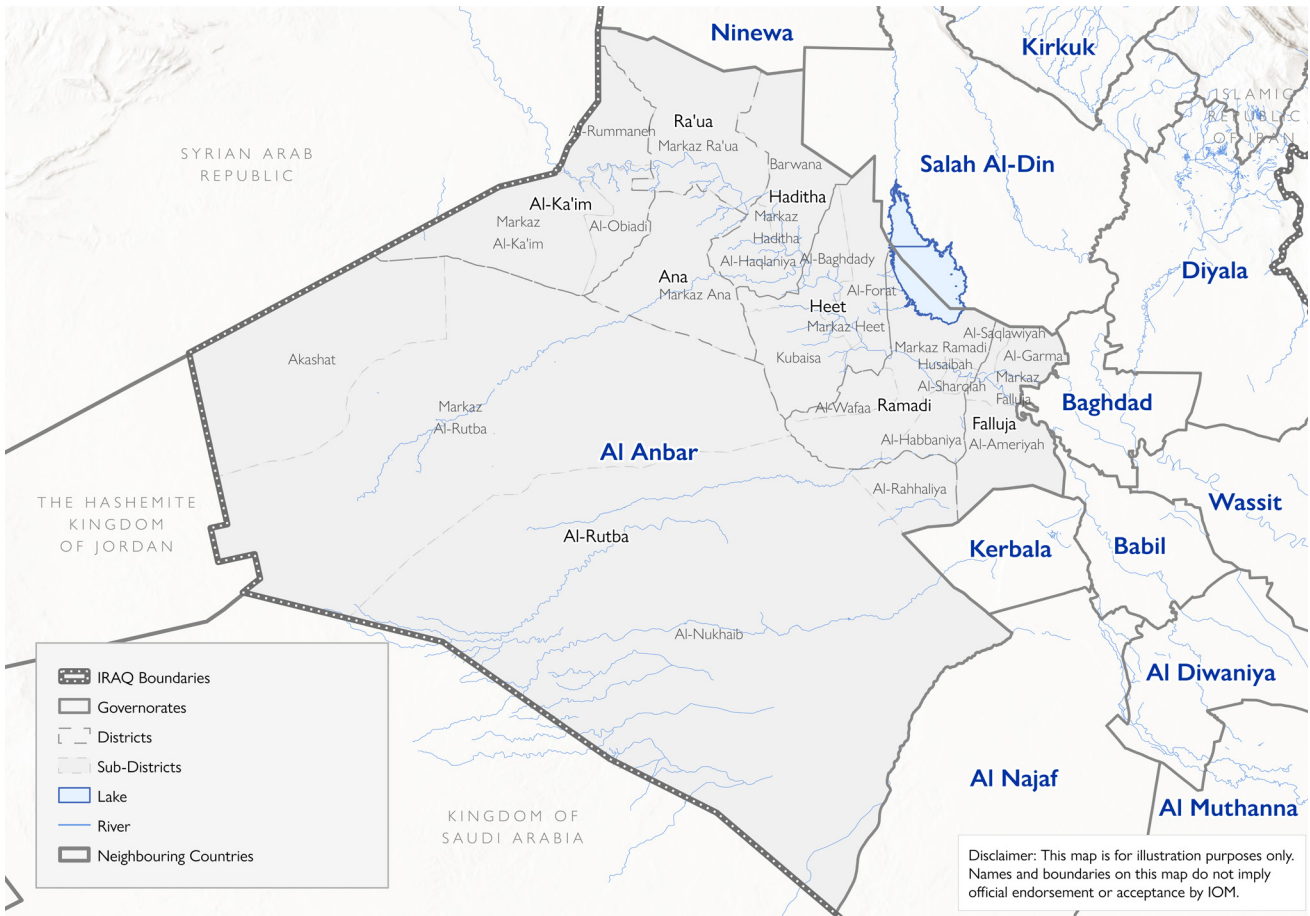
1 See, for example, IOM DTM, *Understanding the Needs and Vulnerabilities of Climate-Induced Migrants in Iraq* (2025); IOM DTM, *Drivers of Climate-Induced Displacement in Iraq* (2023); IOM DTM, *Factsheet: The Impact of Climate Change on the Environment in IDP and Returnee Locations* (2022); and IOM and Social Inquiry, *Migration into a Fragile Setting: Responding to Climate-Induced Informal Urbanization and Inequality in Basra, Iraq* (2021).

2 This includes Global Compact for Safe, Orderly and Regular Migration Objectives 2 (Minimize Adverse Drivers), 5 (Regular Migration), and 7 (Reduce Vulnerabilities) and Sustainable Development Goal 13 on taking urgent action to combat climate change and its impacts.

3 IOM DTM, *Returnee Masterlist*, round 134.

4 IOM DTM, *IDP Masterlist*, round 134.

Map 1: Topographical Map of Al Anbar Governorate



METHODOLOGY

Data collection for this assessment took place between August and October 2025 through in-person key informant interviews across 20 subdistricts where locations had been identified as being at risk of climate-induced displacement in Al Anbar Governorate. Subdistricts were identified as being at risk of climate-induced displacement based on criteria outlined in the introduction, including environmental events and impacts on water resources for agriculture, disruptions to livelihoods and coping strategies, access to public services and basic needs, social dynamics, and evidence of related population movements. Key informants included mayors and subdistrict representatives, officials from the Departments of Water Resources and Agriculture, representatives of NGOs and humanitarian actors, as well as community leaders and activists. Key informants provided insight on climate-induced displacement risks, environmental events, livelihoods, services and unmet needs, social cohesion, and adaptation measures and needs.

The climate-affected subdistricts were selected as part of the baseline for this assessment, based on the previous Climate

Vulnerable Assessment (CVA) conducted by DTM in 2023 across all displacement and return locations.⁵ Additionally, subdistricts identified by Rapid Assessment and Response Team (RART) in coordination with the local government were included.

The analysis conducted for this assessment includes not only the data collected above, but a triangulation of data from other relevant Displacement Tracking Matrix (DTM) indices to connect both climate and conflict mobility findings across IOM's existing evidence ecosystem. These indices include the following:

- The Return Index,⁶ which is a tool to measure and monitor the severity of living conditions in locations (i.e., village, town or neighborhood) with returning populations previously displaced by the ISIL conflict. It gathers regularly collected data across 16 indicators divided into two scales: Scale 1, on livelihoods and basic services (including housing), and Scale 2, focused on social cohesion and safety perceptions. These indicators are then combined into a numerical score (0-100) for each location that serves as a proxy for the

5 A subdistrict was classified as climate-affected if at least one assessed location in it met either of these two broad criteria: 1) family displaced as a result of environmental factors OR 2) its irrigation water supply decreased in the past 12 months, climate-sensitive livelihoods are among its primary livelihoods, AND family livelihoods were negatively impacted by environmental changes. See, IOM DTM, International Migration from Climate-Affected Areas in Iraq: Exploring the Influence of Climate Change on Mobility Patterns.

6 For more detail, see: IOM DTM, Returns Working Group, and Social Inquiry, Building Blocks of the Return Index in Iraq.

severity of living conditions. The weight of each indicator in the score determined by the strength of its correlation with the rate of returns based on a multivariate regression model. Scores of each scale and the overall index are classified in three groups: low, medium, and high severity of living conditions. Locations with high severity (i.e., a higher score) have worse conditions and lower rates of return of their original pre-conflict populations.

- The Displacement Index,⁷ which is a tool to measure and monitor the living conditions of IDPs from the ISIL conflict in the locations where they currently reside. It gathers regularly collected data across 22 indicators divided into five domains: 1) livelihoods, 2) housing, 3) infrastructure and

services, 4) safety and security and 5) social inclusiveness. These indicators are then combined into a numerical score (0-100) for each location that serves as a proxy for the severity of living conditions. The importance of each indicator to its respective domain and the importance of each domain for the overall index is examined through confirmatory factor analysis. Scores of each domain and the overall index are classified in three groups: low, medium, and high severity of living conditions. Higher scores denote more severe living conditions for IDPs

The findings presented in subsequent sections of this report are for Al Anbar Governorate at the subdistrict level unless otherwise noted.

FINDINGS

Spatial mapping of climate-Induced displacement risk alongside conflict-related displacement and return

Table 1. District and subdistricts with locations at risk of climate-induced displacement

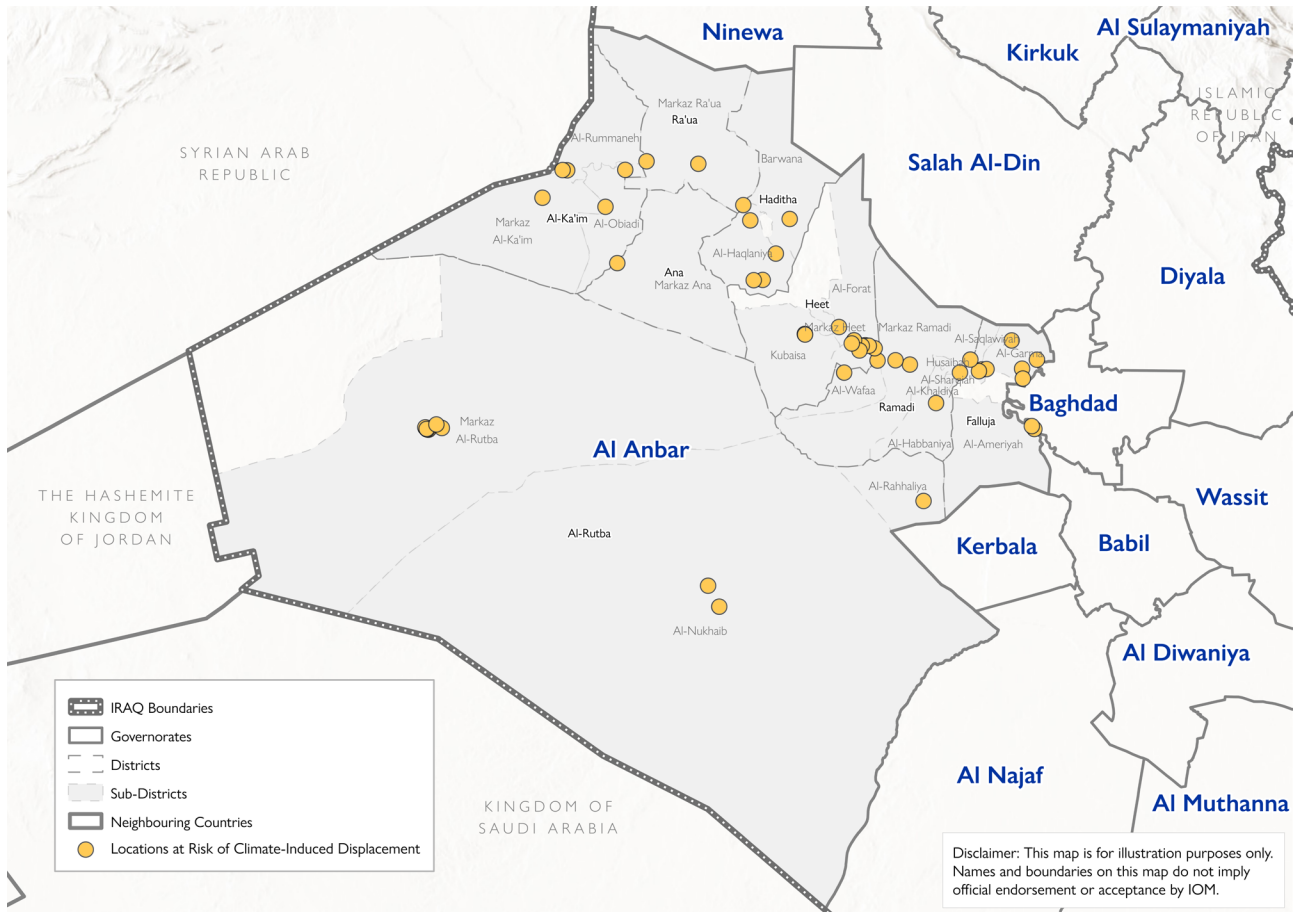
District	Subdistrict	Number of locations at risk
Al-Ka'im	Al-Obiadi	2
	Al-Rummaneh	2
	Markaz Al-Ka'im	1
Al-Rutba	Al-Nukhaib	2
	Al-Rahhaliya	1
	Markaz Al-Rutba	9
Ana	Markaz Ana	2
Falluja	Al-Amirya	2
	Al-Garma	4
	Al-Saqlawiyah	4
Haditha	Al-Haqlaniya	3
	Barwana	1
Heet	Al-Baghdady	2
	Al-Forat	6
	Kubaisa	2
	Markaz Heet	3
Ra'ua	Markaz Ra'ua	1
Ramadi	Al-Wafaa	1
	Husaibah Al-Sharqiah	1
	Markaz Ramadi	4
TOTAL		53

⁷ For more detail, see: IOM DTM, Displacement Index Methodological Overview.

Key informants reported 53 locations across 20 subdistricts in Al Anbar Governorate as at risk of climate-induced displacement. Locations within the subdistricts of Markaz Ana (Ana District) and Al-Rahhaliya (Al-Rutba District) are very likely to experience displacement, while locations in the other subdistricts are somewhat likely to

experience it. The greatest number of locations at risk of climate-induced displacement are found in Markaz Al-Rutba (Al-Rutba District) and in Al-Forat (Heet District), followed by the subdistricts of Al-Garma, Al-Saqlawiyah (Falluja District) and Markaz Ramadi (Ramadi District).

Map 2: Subdistricts with locations at risk of climate-induced displacement.



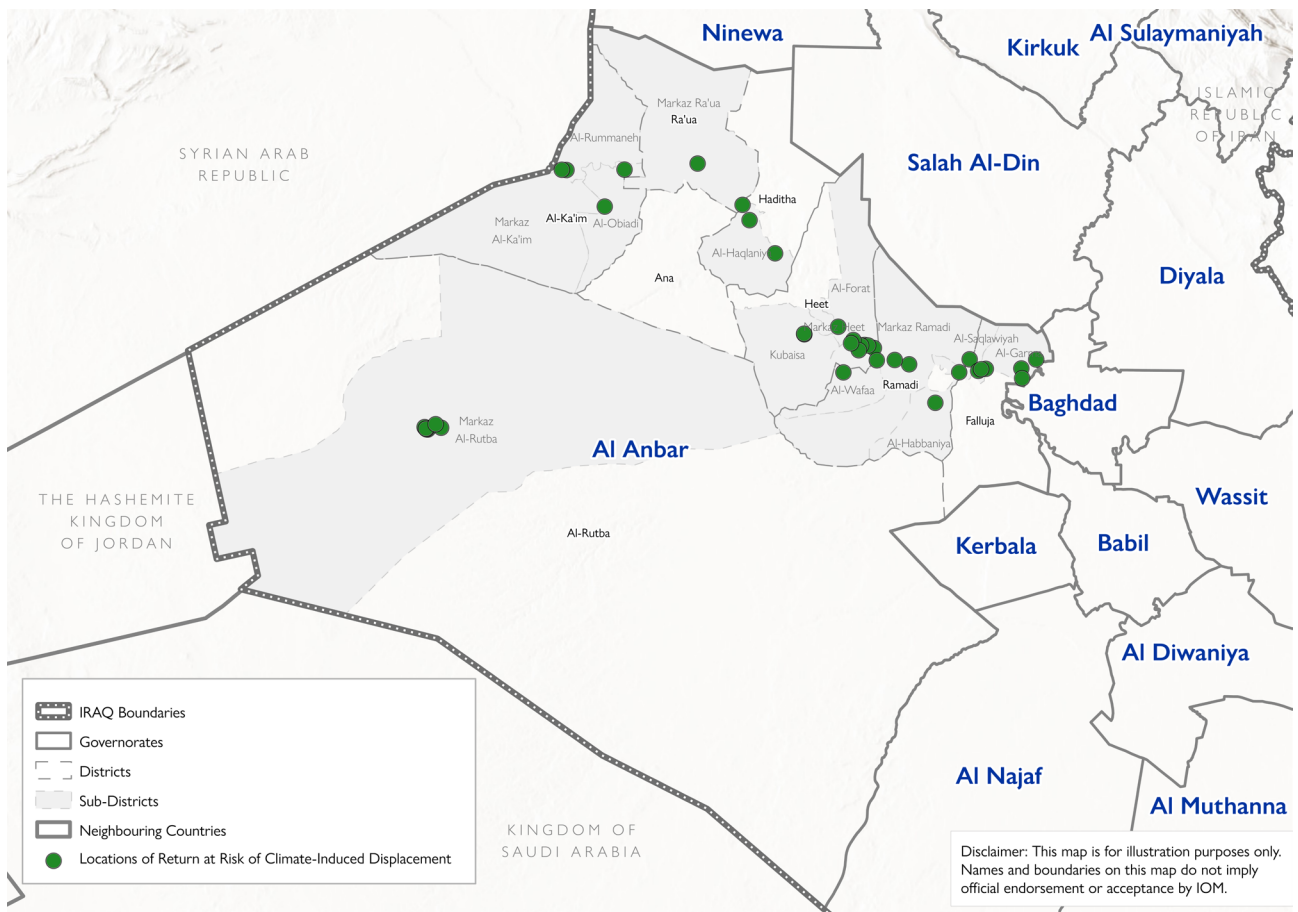
A significant proportion of locations (41 out of 53) reported by key informants as being at risk of climate-induced displacement are located across 13 subdistricts that were assessed during the most recent round of the Return Index.⁸ These subdistricts include Al-Obaidi and Al-Rummaneh (Al-Ka'im District), Markaz Al-Rutba (Al-Rutba District), Al-Garma and Al-Saqlawiyah (Falluja District), Al-Haqlaniya (Haditha District), Al-Forat, Kubaisa and Markaz Heet (Heet District), Markaz Ra'ua (Ra'ua District) and Al-Wafaa, Husaibah Al-Sharqiah, and Markaz Ramadi Subdistricts (Ramadi District).

Five additional subdistricts in this sample—Markaz Al-Ka'im (Al-Ka'im District), Markaz Ana (Ana District), Al-Amiryah (Falluja District), Barwana (Haditha District) and Al-Baghdady (Heet District)—had locations assessed in the Return Index. However, these subdistricts were not

reported as being at risk of climate-induced displacement in this assessment, bringing the total number of subdistricts assessed in the Return Index to 18 out of 20.

Overall, these subdistricts exhibit medium level of severity of living conditions in terms of livelihoods, access to basic services, social cohesion and safety perceptions. This is primarily driven by limited access to employment, the presence of armed groups other than the Iraqi Army, Federal Police, and Local Police at checkpoints and the continued blocked return of certain families. These subdistricts continue to grapple with the legacy of the ISIL conflict, having experienced conflict-related displacement and return of their populations and are now exposed to renewed displacement risks linked to climate and environmental factors.

Map 3: Locations of ISIL-Related Return at Risk of Climate-Induced Displacement.

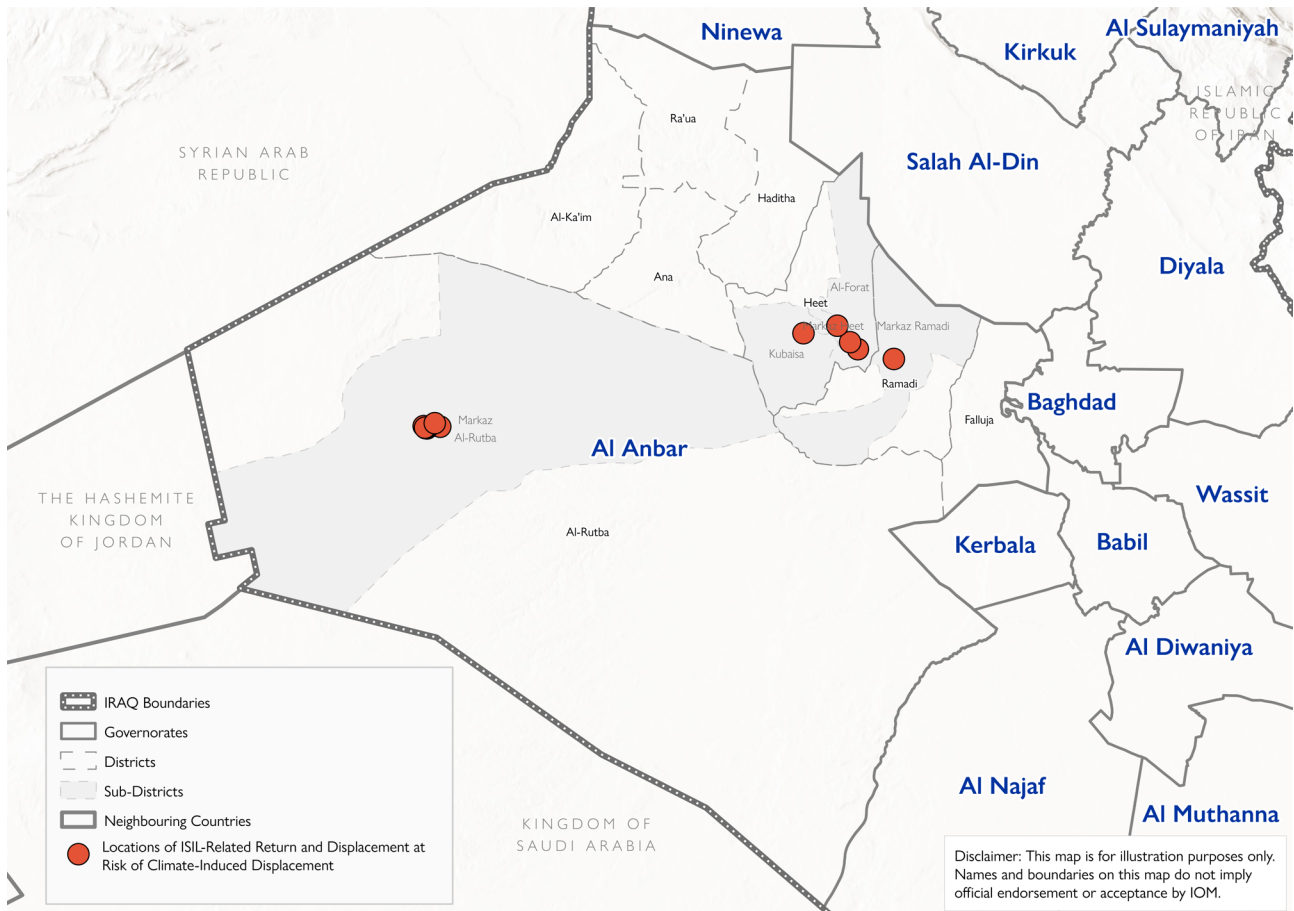


8 IOM DTM, Return Index, Round 23.

A smaller proportion of locations (16 out of 53) across Markaz Al-Rutba (Al-Rutba District), Al-Amiryā (Falluja District), Kubaisa and Markaz Heet (Heet District) and Markaz Ramadi (Ramadi District) were reported to host displaced families due to the ISIL conflict according to the most recent round of the Displacement Index.⁹ Of these locations, 14 were also assessed under the Return Index.

Displaced families in these locations seem to experience low overall severity of conditions; however, they face moderate difficulties in affording rent, some restrictions on daily life and live in areas where armed groups other than the Iraqi Army, Federal Police, and Local Police are present and report relatively high concern over potential ISIL attacks.

Map 4: Locations of ISIL-Related Return and Displacement at Risk of Climate-Induced Displacement



Finally, four subdistricts were reported to have received families displaced by environmental factors since 2016: Al-Obaidi and Al-Rummaneh (Al-Ka'im District), Markaz Ana (Ana District), and Markaz Heet (Heet District). In contrast,

families were reported to have left Al-Rahhaliya (Al-Rutba District), Al-Amiryā (Falluja District), Al-Forat, and Kubaisa Subdistricts (Heet District) for the same reason during the past nine years, according to key informants.

9 IOM DTM, Displacement Index, Round 11.

Environmental events and impacts on water resources for agricultural activities

Table 2. Experience of slow-onset environmental events by subdistrict

	Al-Obaidi	Al-Rummaneh	Markaz Al-Ka'im	Al-Nukhaib	Al-Rahhaliya	Markaz Al-Rutba	Markaz Ana	Al-Amirya	Al-Garma	Al-Saqlawiyah	Al-Haqlaniya	Barwana	Al-Baghdady	Al-Forat	Kubaisa	Markaz Heet	Markaz Ra'ua	Al-Wafaa	Husaibah Al-Sharqiah	Markaz Ramadi	
Biodiversity loss	•	•	•	•	•			•	•	•			•		•	•		•	•	•	
Changing rainfall patterns	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Changing river levels	•	•	•				•	•	•	•		•	•			•	•		•	•	
Changing temperatures	•	•	•	•	•		•	•	•	•	•		•	•	•	•	•	•	•	•	
Changing water salinity	•	•	•	•	•			•	•	•		•	•	•	•	•		•	•	•	
Desertification	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	
Land degradation	•	•	•	•	•			•	•	•			•	•	•	•		•	•	•	

All subdistricts in this analysis have experienced the negative effects of at least one slow-onset environmental event in the past five years. The riverine subdistricts of Al-Obaidi, Al-Rummaneh, Markaz Al-Ka'im (Al-Ka'im Districts), Al-Amirya, Al-Garma, Al-Saqlawiyah (Falluja District), Al-Baghdady, and Markaz Heet (Heet District) have reportedly experienced all seven slow-onset environmental events assessed. In contrast, Markaz Al-Rutba (Al-Rutba District) was reported to have experienced desertification only, reflecting its location as the furthest west subdistrict in the sample within the desert region of Al Anbar Governorate.

The remaining subdistricts in the sample are all within relatively close proximity to the Euphrates River or water sources in the governorate. Despite these differences in topography, all subdistricts reportedly faced drought and heatwaves over the past year. Furthermore, Al-Obaidi and Markaz Al-Ka'im subdistricts (Al-Ka'im District), Al-Nukhaib (Al-Rutba District), Markaz Ana (Ana District), Al-Haqlaniya, Barwana (Haditha

District), Al-Baghdady (Heet District), and Al-Wafaa (Ramadi District) reported dust or sandstorms as well.

Given these climate and environmental factors, it is unsurprising that key informants across all subdistricts indicate a reduction in the water available for agricultural activities. As such, water for irrigation is reported as the main unmet household need in 17 of the 20 subdistricts in this sample. These subdistricts were Al-Obaidi and Al-Rummaneh (Al-Ka'im District), Al-Nukhaib and Al-Rahhaliya (Al-Rutba District), Markaz Ana (Ana District), Al-Amirya, Al-Garma, Al-Saqlawiyah (Falluja District), Al-Haqlaniya and Barwana (Haditha District), Al-Baghdady, Al-Forat, Kubaisa, and Markaz Heet (Heet District), and Al-Wafaa, Husaibah Al-Sharqiah, and Markaz Ramadi (Ramadi District).

All subdistricts rely primarily on natural or man-made water resources for these activities. Markaz Al-Rutba and Markaz Ana also use water trucking for their livestock.

Table 3. Main sources of water for irrigation and other livelihood activities by subdistrict

	Al-Obaidi	Al-Rummaneh	Markaz Al-Ka'im	Al-Nukhaib	Al-Rahhaliya	Markaz Al-Rutba	Markaz Ana	Al-Amirya	Al-Garma	Al-Saqlawiyah	Al-Haqlaniya	Barwana	Al-Baghdady	Al-Forat	Kubaisa	Markaz Heet	Markaz Ra'ua	Al-Wafaa	Husaibah Al-Sharqiah	Markaz Ramadi
Borehole/well	•	•	•	•	•	•		•	•	•	•	•	•	•	•			•	•	•
Irrigation canal (man-made)								•	•							•			•	•
Natural spring				•											•					
Rainfall	•	•	•		•		•						•					•		
River/stream	•	•	•					•	•	•	•	•	•	•		•	•		•	•
Water truck/tanker (public)																				
Water truck/tanker (private)						•	•													

Livelihoods and coping strategies

Key informants reported that the livelihoods most vulnerable to climate and environmental factors relate directly to the agricultural sector. These include livestock rearing (19 subdistricts), smallholder farming (18 subdistricts), commercial farming (16 subdistricts), fish farming (9 subdistricts). To a lesser extent, vulnerability was also reported among households engaged in fishing (6 subdistricts) and informal and sporadic daily labour (6 subdistricts).

These findings are further reflected in the fact that all subdistricts experienced losses in crop production, livestock deaths, or reduction in fishing yields in the past year. As such, some level of households who had previously engaged in such livelihood activities reportedly have stopped them across all subdistricts included in the analysis.

Table 4. Proportion of households abandoning farming, livestock, or fishing by subdistrict

Al-Ka'im	Al-Obiadi	Around half of families
	Al-Rummaneh	Some families
	Markaz Al-Kaim	Around half of families
Al-Rutba	Al-Nukhaib	Some families
	Al-Rahhaliya	Around half of families
	Markaz Al-Rutba	More than half of families
Ana	Markaz Ana	More than half of families
Falluja	Al-Amiriya	Around half of families
	Al-Garma	Around half of families
	Al-Saqlqiyah	Around half of families
Haditha	Al-Haqlaniya	Some families
	Barwana	Some families
Heet	Al-Baghdady	Around half of families
	Al-Forat	Around half of families
	Kubaisa	More than half of families
	Markaz Heet	Some families
Ra'ua	Markaz Ra-ua	Around half of families
Ramadi	Al-Wafaa	Around half of families
	Husaibah Al-Sharqiah	Around half of families
	Markaz Ramadi	Around half of families

The majority of subdistricts in the sample (12 out of 20) reported that approximately half of households previously engaged in agricultural livelihoods have abandoned these activities. More critically, over half of households have given up these agricultural activities in Markaz Al-Rutba (Al-Rutba District), Markaz Ana (Ana District), and Kubaisa (Heet District). Regardless of severity of agricultural abandonment across subdistricts, key informants report that households are taking measures to adapt and cope to a situation in which farming, livestock rearing, and fishing are becoming increasingly difficult and unprofitable.

In 18 out of 20 districts, the primary reported coping strategy is to send working-age household members (15 years of age and higher) to other districts to earn an income. Key informants did not specify whether these household members now reside in the other districts where they work or travel back and forth. Households have also sought to diversify their livelihood activities (16 subdistricts) and selling assets, land, or livestock (15 subdistricts). Other reported coping strategies reported include reducing expenditures (13 subdistricts), sending working-age household members to locations within the district to work (12 subdistricts), reducing amount of land cultivated (12 subdistricts) and migrating seasonally to urban areas for work (11 subdistricts).

Public service provision and basic needs

Table 5. Availability of public services and household ability to provide basic needs by subdistrict

	Al-Obiadi	Al-Rummaneh	Markaz Al-Ka'im	Al-Nukhaib	Al-Rahhalija	Markaz Al-Rutba	Markaz Ana	Al-Amiriya	Al-Garma	Al-Saqlawiyah	Al-Haqlariya	Barwana	Al-Baghdady	Al-Forat	Kubaisa	Markaz Heet	Markaz Ra'ua	Al-Wafaa	Husabih	Al-Sharqiah	Markaz Ramadi
Access to health facilities	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Access to education facilities	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Access to public water supply	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Have funds for food	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Have funds for non-food items	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

- Access to services in all locations / food or NFI secured
- Access to services in some locations / food or NFI partially secured
- No access to services in any location / food or NFI not secured

In most of the subdistricts included in this analysis, key informants report a relatively satisfactory level of access to basic services and basic needs. Specifically, in 12 out of 20 subdistricts, access to functioning basic services—such as health facilities, schools, and public water supply—ranged from some locations to all locations. Around half of households to few or no households experience food insecurity or difficulties in purchasing non-food items as reported by the Key informants. Notably, in Al-Saqlawiyah (Falluja District), all locations have access to all essential services and few to no families have affordability issues.

Across the sample, eight subdistricts report significant deficiencies for only one or two indicators. These findings are consistent with results from the most recent Return Index and Displacement Index as well where subdistricts tend to exhibit relatively low severity in terms of public service provision. It is important to note that these relatively favorable conditions are largely the result of post-conflict recovery and stabilization investments, rather than targeted climate-adaptation measures.

One factor that may help account for households being able to meet their basic needs, drawn from this assessment, is that in Al-Obiadi, Al-Rummaneh subdistricts (Al-Ka'im District), as well as Markaz Ra'ua (Ra'ua District), eligible households reportedly

receive assistance from UN or humanitarian organizations, in addition to receiving assistance from the government (including through its social welfare network). In Al-Nukhaib (Al-Rutba District), key informants reported that households have also been receiving government support.

Markaz Ana (Ana District) differs from the rest of the sample, with no functional, accessible services across the subdistrict and more than half of the households are both food insecure and unable to meet other basic needs. No assistance from humanitarian actors nor government sources was reported in this subdistrict either, highlighting it as a priority hotspot for both humanitarian response and climate-adaptation interventions.

The indicator with the poorest overall performance across subdistricts is related to public water supply. In line with this finding, the key informants identified that predominantly **water for irrigation is the most critical unmet needs for households (17 out of 20 subdistricts), followed by water for drinking and domestic use (12 subdistricts).** Other reported unmet needs include infrastructure and other services including roads, sewage system, garbage collection, electricity (11 subdistricts), health (9 subdistricts), education (8 subdistricts), and access to employment (8 subdistricts).

Table 6. Most important unmet needs by subdistrict

	Al-Obiadi	Al-Rummaneh	Markaz Al-Ka'im	Al-Nukhaib	Al-Rahhalija	Markaz Al-Rutba	Markaz Ana	Al-Amiriya	Al-Garma	Al-Saqlawiyah	Al-Haqlariya	Barwana	Al-Baghdady	Al-Forat	Kubaisa	Markaz Heet	Markaz Ra'ua	Al-Wafaa	Husabih	Al-Sharqiah	Markaz Ramadi
Water for irrigation	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Water for drinking and household use	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Infrastructure and services (roads, sewage system, electricity, garbage, etc.)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Health (including building health centres)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Access to employment/livelihoods	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Education (including building schools)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Request approval from local government/security authorities to move to another location	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Freedom of movement (e.g. ability to move through checkpoints)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Improved shelter/housing conditions	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Access to legal land and housing ownership	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Food	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NFIs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Access to and replacement of documentation (ID, housing cards, Public Distribution System (PDS) cards etc.)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Protection from exploitative labour conditions	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Social dynamics

In most districts (14 of 20), key informants did not report any tensions, disputes, or violence linked to environmental factors. This again aligns with findings from both the Return Index and Displacement Index for these overlapping areas, where the primary social and safety concerns reported at the location-level related to ongoing security concerns.

In the five subdistricts where key informants specified incidents, they tended to be relatively mundane. For example, in Al-Amiryia subdistrict (Falluja District), Husaibah Al-Sharqiah, and Markaz Ramadi subdistricts (Ramadi District), incidents between residents are described as “minor altercations and legal disputes.” In Al-Forat (Heet District),

residents reportedly engaged in “disputes over water quantities in irrigation projects,” while in Al-Garma (Falluja District), such incidents occurred between tribes instead.

Finally, key informants from those subdistricts that have received families displaced due to environmental factors since 2016 indicate that their levels of acceptance into their new communities range from moderate to good. While climate-related tensions are currently limited, this does not preclude future risks. As environmental pressures intensify, competition over water and land may increase, highlighting the importance of continued monitoring.

Existing adaptation measures and needed support to reduce displacement risk.

Table 7. Government, civil society, or community mitigation and adaptation measures implemented by subdistrict.

	Al-Obiadi	Al-Rummaneh	Markaz Al-Ka'im	Al-Nukhail	Al-Rahhalia	Markaz Al-Rutba	Markaz Ana	Al-Amiryia	Al-Garma	Al-Saqlawiyah	Al-Haqaniya	Barwana	Al-Baghdady	Al-Forat	Kubaisa	Markaz Heet	Markaz Ra'ua	Al-Wafaa	Husaibah Al-Sharqiah	Markaz Ramadi
Plant trees, sustainable agriculture	•	•	•	•	•	•				•	•	•								
Dig new boreholes or deepened existing ones		•		•	•	•					•									
Public awareness campaigns	•	•							•						•	•				
Build dams/harvest rainwater		•			•	•				•										
Implement risk management plan	•	•					•					•								
Improve resilient infrastructure		•					•				•									
Support households to withstand and recover	•						•									•				
Form volunteer groups to assist in disaster response							•													
Implement policy and regulations to promote water conservation																•				
Provide water through water trucks					•															
None							•	•					•	•			•	•	•	•

Among the 13 subdistricts that have reported implementing mitigation and adaptation measures, the most frequently cited is tree planting and sustainable agriculture (9 subdistricts), followed by digging new boreholes or deepening existing ones (5 subdistricts), launching public awareness campaigns on environmental risks (5 subdistricts), implementing risk management plans on climate adaptation and disaster risk reduction (4 subdistricts), and building dams or harvesting rainwater (4

subdistricts). Markaz Ana in Ana District and Al-Rummaneh subdistrict in Al-Ka'im District have reportedly undertaken the most mitigation and adaptation measures.

Notably, seven subdistricts were reported to have no adaptation or mitigation measures in place. These included Al-Amiryia and Al-Garma (Falluja District), Al-Forat and Kubaisa (Heet District), and Al-Wafaa, Husaibah Al-Sharqiah, and Markaz Ramadi (Ramadi District).

Table 8. Initiatives that could effectively reduce risk of climate-related displacement by subdistrict

	Al-Obiadi	Al-Rummaneh	Markaz Al-Ka'im	Al-Nukhail	Al-Rahhalia	Markaz Al-Rutba	Markaz Ana	Al-Amiryia	Al-Garma	Al-Saqlawiyah	Al-Haqaniya	Barwana	Al-Baghdady	Al-Forat	Kubaisa	Markaz Heet	Markaz Ra'ua	Al-Wafaa	Husaibah Al-Sharqiah	Markaz Ramadi
Conduct workshops and trainings on climate resilience measures (short-term feasible)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Promote drought-resistant crops (short-term feasible)	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Provide incentives to plant trees and sustainable farming projects (short-term feasible)	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•
Implement efficient irrigation systems (longer-term structural)	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•
Provide cash assistance (short-term feasible)	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•
Provide job opportunities (longer-term structural)	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•	•
Drill wells (short-term feasible)	•	•	•	•	•	•			•			•				•	•			

Overall, key informants across the subdistricts in the sample reported that multiple initiatives, including those that are feasible in the short-term and those centered on longer-term structural changes, are needed to effectively reduce the risk of climate-related displacement. These initiatives primarily focus on **prioritizing improving the sustainability and efficiency of the agricultural sector** through modernizing practices and infrastructure. To a lesser extent, key informants also highlight the importance of providing job opportunities and cash assistance.

Finally, **two key informants** also raised the **need to better address man-made pollution** impacting the physical environment

and households' wellbeing. In the first instance, a key informant from Al-Obaidi (Al-Ka'im District) called for water sanitation measures broadly in addition to efforts to expand water networks and plant trees. In the second, urban expansion without environmental safeguards created localized displacement. Specifically, a key informant from Markaz Heet (Heet District) noted that in one location, urban housing developments have encroached on natural sulfur springs, exposing residents to toxic odors and gases. This key informant indicated that in this instance many residents have reportedly put their homes for sale and are relocating away from the area.

Key takeaways and next steps

- **Overlap of conflict factors and climate risks:** Subdistricts at risk of climate-related displacement in Al Anbar substantially overlap with areas previously affected by ISIL-related displacement and return. This confirms that communities already recovering from conflict are now exposed to new, climate-linked mobility pressures, underscoring the need for integrated recovery and adaptation programming rather than parallel, sector-specific responses.
- **Systematic environmental stress and water scarcity:** All subdistricts assessed have experienced at least one slow-onset environmental event in recent years, with widespread reports of reduced water availability for farming, livestock and fishing. Water for irrigation – and, in many locations, for domestic use – is consistently ranked as a top unmet need, pointing to water management and climate-resilient agriculture as immediate priorities.
- **Continuing agricultural decline and emerging mobility patterns:** Agricultural livelihoods (crop farming, livestock, fishing) are reported as the most climate-vulnerable across the sample, with many subdistricts indicating that around half or more of households have already abandoned these activities. Common coping strategies include sending working-age members to other districts, diversifying income sources and selling assets, suggesting an acceleration of the ongoing and decades long recession of the agricultural sector in Iraq. These dynamics seem to be enabling a progressive shift from rural, agriculture-based livelihoods towards more mobile and precarious labour migration, often within Iraq.
- **Services are relatively stable but not climate-proof:** Most subdistricts report acceptable levels of access to basic services and social assistance; likely reflecting investments linked to conflict recovery. However, this should not be interpreted as climate resilience. Marked gaps in water supply and infrastructure, together with high vulnerability in specific hotspots such as Markaz Ana, indicate that service systems remain fragile and require targeted climate-adaptation support.
- **Conflict factors predominate social dynamics:** Climate-related tensions are not widely reported and, where present, are largely limited to localized disputes over water allocations or land boundaries. These issues are resolved through existing local mechanisms, which should be bolstered and supported. However, the more critical and broader social and security risks continue to stem from conflict legacies and the presence of non-state actors. Addressing these conflict-related governance challenges remain essential and should be prioritized, even as climate and environmental factors gain greater national and international attention.
- **Adaptation measures are uneven and often ad hoc:** While some subdistricts have initiated tree planting, borehole rehabilitation, awareness campaigns and risk-management plans, seven subdistricts report no adaptation measures at all. Key informants consistently call for modernizing agricultural practices, improving irrigation efficiency and creating local employment opportunities, indicating a strong demand for structural, not only community-level, adaptation support.
- **Need for deeper, targeted diagnostics that reflect lived the realities of at-risk communities:** To gain a more accurate picture of inter-related dynamics and design appropriate interventions, more granular data are needed on household income portfolios with an understanding that agriculture may not be the sole source of income for many families, labour demand in non-agricultural sectors, and detailed movement patterns (origins, destinations and motives). In parallel, future analyses should explicitly integrate man-made environmental risks (industrial pollution, unsafe urban expansion, lack of appropriate sanitation infrastructure, etc.) and regulatory/enforcement gaps, which also shape displacement risk but are currently under-assessed.

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