Water Scarcity and Social Tensions in the Bekaa: Roundtable #4 Report

WE'AM Project - December 4, 2025

This report documents the proceedings and key outcomes of the fourth roundtable discussion organized by the WE'AM Project, held on December 4, 2025, in Chtoura, Bekaa region, Lebanon. The roundtable brought together local authorities, civil society organizations, NGOs, water establishment representatives, UN agencies, and donor partners to examine the critical intersections between water scarcity, tensions, and social stability in the Bekaa region. The report synthesizes the roundtable inputs on water-related tensions, with lived experiences and institutional perspectives shared by 30+ participants at the roundtable. The primary objectives were to identify knowledge and information gaps hindering trust-building processes, explore how water scarcity and infrastructure deficits contribute to social tensions, and compile actionable insights for improved water governance and moving forward with conflict-sensitive water programming. This report serves as an evidence-based resource for policymakers, donor agencies, civil society organizations, NGOs, and local authorities seeking to address the root causes of water-related tensions while strengthening social stability in most water-stressed regions.

1- EXECUTIVE SUMMARY

Water scarcity in the Bekaa has shifted from a chronic stressor into an immediate driver of social instability and mistrust, as deepening drought, collapsing infrastructure, and overlapping crises converge with limited governance and expanding informal water economies to fuel tensions within and between communities and institutions. The roundtable convened under the WEAM project in December 2025 positioned water governance as a core peacebuilding and social stability priority, generating evidence-based, conflict-sensitive recommendations for emergency water security measures, structural governance reforms, and inclusive dialogue mechanisms to reduce tensions and protect the most vulnerable, including refugees.

Water scarcity, tensions, and vulnerabilities- Participants confirmed that the Bekaa is moving from a seasonal drought context into a longer drought phase, with main wells and surface sources drying for the first time in localities such as Deir El Ahmar and Baalbeck, and at least 1.58 million people affected by drought and declining rainfall and snow. Between January and September 2025, 15 water-related incidents were documented in North Bekaa and Baalbeck, including one fatality, while municipalities reported suspension of some agricultural activities and complete failure of certain wells, signaling that water scarcity is now a direct tension driver materializing into conflicts. Tensions manifest horizontally and vertically. Municipal representatives documented clashes between villages over encroachments on springs and streams (e.g. Baalbeck–Nahleh, conflicts over Yammouneh Lake), as well as intracommunity disputes among farmers competing for decreasing irrigation water. Vertical mistrust between citizens and public institutions is widespread, with 99 percent of surveyed residents in Western Bekaa and Rachaya reporting insufficient water and fearing shortages, and many attributing shortages to institutional mismanagement, inequitable distribution, pollution, and failure to regulate illegal access rather than to structural scarcity. Compounding crises magnify these pressures: the financial collapse, climate-driven drought, the 2024–2025 hostilities and strikes, and displacement (including from Syria) have overloaded already fragile water and energy systems. Electricity cutoffs have disabled pumping stations, while a 60 percent rise in water trucking prices significantly since 2020 has forced low-income Lebanese and refugees—who rely heavily on informal trucking—to divert spending from health, education, and

food, deepening marginalization and raising risks of distress migration from rural areas. The ongoing hostilities since October 2024, including cross-border strikes and bombardments, has further disrupted water and energy infrastructure in the Bekaa, disabling pumping stations, constraining maintenance, worsening already fragile access conditions for low-income residents and refugees, and intensifying competition over scarce water resources, making the hostilities a key additional factor shaping access to water and related tensions.

Governance, data, and informal water economies- The discussions highlighted a multilevel governance vacuum characterized by unclear basin demarcation, overlapping mandates between the Ministry of Energy and Water, water establishments, municipalities and other ministries, and limited law enforcement. Thousands of unlicensed wells, illegal household-level and private pumping stations, and unregulated trucking networks operate outside formal oversight, depleting groundwater, bypassing quality control, and creating a parallel, often clientelist water economy, with political connotations in some areas, that many communities perceive as unfair and unsafe. Citizens' noncompliance both reflects and reinforces this vacuum. Many households cancel formal BWE subscriptions, connect illegally, overuse water, or rely on informal pumping and trucking, undermining revenue for maintenance and eroding the social contract as people see little value in formal rules. Participants stressed that this is not only a technical or financial issue but a governance challenge: when institutions do not communicate constraints, water management performance, or allocation criteria, perceptions of favoritism and corruption proliferate, fueling tensions even where capacity gaps, rather than intent, are the primary constraint. Severe data and information gaps block preventive action and trust-building. There is limited open, basin-level hydrogeological data, almost no public registry of informal wells and trucking, and little localized information on water availability, allocations, agricultural use, or infrastructure status. Communities rarely receive performance reporting on water quality, leakage, or hours of supply, nor transparent information on budgets, priorities, or national drought strategies, allowing misperceptions and instrumentalized narratives to fill the vacuum.

Multi-dimensional impacts: agriculture, health, and social stability- Water scarcity is triggering cascading economic and social effects, particularly in agriculture-dependent areas. Municipal and CSOs representatives reported suspension of agricultural activities in some areas, large crop losses over recent years (with farmers losing thousands of dollars), and the failure of agricultural support projects because farmers could not sustain irrigation. As agricultural productivity falls, laborers lose jobs, household incomes decline, and rural poverty and vulnerability increase, feeding a chain of impacts from unemployment to negative coping mechanisms and potential displacement to find better economic opportunities. The health and environmental spillover effects are equally acute. The 2023 cholera outbreak, linked to unsafe informal water sources, network gaps, and inadequate treatment, was described as an early warning of systemic water governance failure, turning invisible risks into a visible public health emergency that further damaged public confidence in water safety. Wastewater leakage from Baalbeck toward Deir El Ahmar, and the transformation of irrigation canals into wastewater channels in some areas, have caused severe pollution, perceived increases in cancer cases, and new layers of grievance, especially where downstream communities bear the environmental and financial burden of upstream negligence. Impacts are not evenly distributed. Refugees and lower income households, who depend more on informal and expensive sources, face disproportionate affordability and protection risks as trucking prices rise and network services deteriorate, exacerbating both vulnerability and perceptions of unfairness between host and refugee communities.

The roundtable highlighted that addressing water-related tensions in the Bekaa requires a combined focus on immediate water security, structural governance reforms, and inclusive dialogue. <u>The below are not confirmed actions but rather directions/insights emerged from both the roundtable inputs and the consortium's policy brief, towards potential actions which can be further unpacked in future discussions</u>:

- **Prioritize short-term water security and adaptation-** by mapping dried sources and high-risk localities, deploying targeted support to vulnerable households and farmers before summer 2026, and investing

in decentralized, renewable energy and nonconventional water solutions, alongside water-saving agricultural practices.

- **Regulate extraction and consumption**- through metering of major users, transparent well licensing, pricing and quality controls on water trucking, and realistic consumption limits that protect low-income residents and refugees while curbing overuse.
- **Establish and capacitate local water governance mechanisms-** at basin and municipal levels to coordinate allocation, oversee data and information management, and link shared water and tension monitoring systems with early warning and conflict-sensitive decision-making.
- **Strengthen active citizenship and behavior change-** by communicating water rules and allocation criteria, promoting conservation, and creating safe channels for communities to report theft, quality issues, and grievances, with particular support to local authorities and CSOs as intermediaries.
- **Advance priority policy and systems-level reforms-** including basin demarcation and mandate clarification, national drought and water access strategies, enforcement of water quality standards, and conflict-sensitive regulation of the informal water economy that protects the most vulnerable.

Across all these elements, a central message of the roundtable is that water scarcity in the Bekaa is inseparable from social stability, and that **the priority is no longer to produce more studies but to operationalize conflict-sensitive water governance on the ground**. By combining urgent water security interventions with structural governance reforms, inclusive dialogue, and protection of the most vulnerable, stakeholders can begin to reverse the current trajectory whereby water has become a multiplier of conflicts and instead position it as an entry point for rebuilding trust and resilience in the Bekaa.

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2- BACKGROUND & CONTEXT OF THE ROUNDTABLE

The WE'AM Project and Its Evolution - The WE'AM (Working for Engagement, Acceptance and Mediation) Project represents a collaborative initiative by Oxfam, in partnership with Right to Play, SHiFT, and ALEF NGOs, to foster social stability across 12 localities in Lebanon over the 2023-2026 period. Funded by the European Union, the project operates in diverse geographical areas including Akkar, the North, Beirut, Mount Lebanon, Baalbek-Hermel, and Saida. The project's core approach combines three strategic pillars: addressing community-level drivers of tension, promoting gender-responsive conflict prevention and resolution tools, and mainstreaming social stability into programming. The WE'AM roundtable series was established as a structured mechanism to translate research findings into actionable dialogue, share learnings across stakeholder communities, and inform decision-making with real-time, organic data from affected populations. Three roundtables took place, building on these foundations, the fourth roundtable on December 4, 2025, focused on water scarcity and tensions as a natural progression into environmental peacebuilding, integrating natural resource management, climate resilience, and conflict prevention into a coherent programming framework.

Roundtable #4 Objectives and Expected Outcomes: The fourth roundtable aimed to strengthen dialogue between public institutions, water establishments, municipalities, CSOs, NGOs, donors, and local community representatives under the WASH and Social Stability sectors, in order to collectively identify practical, conflict-sensitive solutions to water scarcity, infrastructure gaps, and weak governance, while exploring innovative alternative water sources. It presented key findings from the WE'AM consortium's community-driven policy research on water and social tensions, used these to surface information gaps and perception barriers that hinder trust-building, and provided a platform to discuss how limited access, inadequate infrastructure, and perceived inequalities fuel tensions between and within host and refugee communities. The roundtable also sought to generate concrete, actionable insights for WASH and Social Stability partners, CSOs, and donors to improve programme design, promote cross-sector collaboration, and align stakeholders around shared priorities for reform and more inclusive water governance.

Session Structure, Facilitation, and Reporting: The roundtable was organized by the **WE'AM Project Manager, Jad Abou Jaoudeh (Oxfam)** and facilitated by the **Renewable Energy Expert, Elias Kinab (Oxfam),** who structured the dialogue into two thematic sections. The first section focused on identifying key water-related tensions, providing space for participants to share area-specific examples, recent experiences, and institutional perspectives. The second section concentrated on systemic gaps and actionable solutions, encouraging dialogue partners to propose solutions, identify dialogue opportunities, and prioritize policy reforms for WASH and Social Stability partners. This report was prepared by the Reporting Analyst (Consultant, Oxfam) based on comprehensive notes from the session, the ALEF policy brief findings, and supporting documentation. Throughout the report, participant inputs are referenced by institutional affiliation and title (without attribution of individual names) to respect confidentiality while demonstrating that the analysis is pragmatically grounded in participants lived experiences and professional expertise.

3- WATER-RELATED TENSIONS & MISTRUST: REGIONAL MANIFESTATIONS

Building on the policy brief framework, participants in the roundtable shared experiences of water-related tensions across the Bekaa, illustrating the diversity of conflict dynamics:

3.1- Horizontal Tensions Between Communities and Villages: The Deputy Mayor of Deir El Ahmar[1] Municipality described how water scarcity has generated conflicts within and between villages. The case of Yammouneh Lake[2], a large water stream that remains underutilized and mismanaged, illustrates how unresolved governances escalate into conflicts "between families, between tribes" and generate numerous unresolved disputes. The Mayor of Baalbeck[3] municipality provided local-level updates of horizontal tensions, noting that illegal encroachments on key water sources by Baalbeck residents have created direct clashes with the nearby village of Nahleh[4], where residents can no longer access water enough. Similarly, farmers in the Mekseh[5] area (based on observations at nearby villages of Jdita and Chtoura) reported intra-community conflicts on water access, with tensions escalating "even among close families" as agricultural water becomes scarce.

3.2- Vertical Tensions Between Communities and Institutions: Vertical tensions reflect deep mistrust between citizens and water institutions, where communities often attribute shortages to mismanagement, inequitable distribution, and tolerance of illegal connections rather than to structural scarcity. A representative from Al Ain[6] municipality noted that "vertical tension and mistrust between the citizens and the BWE characterize the relationship, with citizens attributing water shortages to institutional mismanagement rather than structural scarcity". The head of a women-led organization from Deir El Ahmar area shared that a water-related conflict in her village escalated so severely that "it led to evacuation of an entire family from this village," demonstrating how water tensions can fuel negative competition and escalate into aggressive confrontations and displacement even within single communities. A participant from Al Laboueh[7] village described the vertical dynamic acutely: despite the existence of a river in the area, "severe access issues to water persist because of "illegal networking to access water and random water pumping stations at the level of a household which can affect entire neighborhoods' supply". When their organization attempted to track illegal water access, they "received threats, resistance, and community backlash" and couldn't follow up on monitoring activities' findings.

3.3- Explicit Confrontations and Armed Clashes: The roundtable discussion highlighted increased tensions with escalation to physical confrontation in some hotspot areas. The Beqaa Coordinator of the Social Stability sector at UNDP reported that between January and September 2025, 15 water-related incidents were documented in North Bekaa and Baalbeck governorates as reported by the tension monitoring system, with one incident in June 2025 resulting in a casualty. The Mayor of Baalbeck described how "illegal encroachments and access to water" have created "clashes directly with the nearby Village" and how scarcity-driven competition has motivated "illegal encroachments on key water sources" by some communities seeking to secure supply. Worthy to note that the WE'AM policy brief documented that armed clashes around wells and cisterns have caused "severe injuries and in some cases casualties due to water-related tensions and conflicts."

3.4- Implicit Tensions and Perceptions of Inequity: According to the UNDP/ARK social tensions perception survey data shared by the UNDP Social Stability coordinator, 99 percent of surveyed population in Western Bekaa and Rachaya El Wadi reported having "not enough quantities of water at their households" and expressed "fears of shortage of potable water." These perceptions, whether rooted in actual inequities or

[1] Deir El Ahmar: a village in the Baalbek-Hermel Governorate of Lebanon, with an area of about 41–42 km² and an average elevation of roughly 1,020–1,050 m.
[2] Yammouneh Lake: Its water surface is roughly 1–2 km² in winter–spring, it lies at an altitude of about 1,350–1,380 m in Baalbek-Hermel Governorate.
[3] Baalbeck: It is the capital of Baalbek-Hermel Governorate at an elevation of roughly 1,130–1,170 m.
[4] Nahleh: Is a nearby village to Baalbeck, with an altitude of 1,000 to 1,400 m.
[5] Mekseh: It is in the Central Beqaa, with an altitude of 1,000 m, and roughly 3–5 km² of built-up and agricultural land surface.
[6] Al Ain: a large village/town in the Baalbek District of Baalbek-Hermel Governorate, with an altitude of around 1,000–1,050 m.
[7] Al Laboueh: a village in the Baalbek-Hermel Governorate, with an altitude of 900–950 m and a surface of about 22–23 km².

institutional communication gaps, represent fears and dormant grievances as drivers of tension and mistrust that shape communities' dynamics, strengthen dividers and weaken connectors around access to water. The roundtable also highlighted that communities frequently attribute shortages to municipal governance issues, illegal encroachments, electricity cutoffs, and unequal distribution, with information gaps allowing speculation and suspicion to fill the vacuum.

3.5- Behavioral & Citizenship vs. External Factors in Tension Dynamics: Participants identified how water tensions are shaped by both internal community dynamics and external structural factor.

- Behavioral & Citizenship Factors/ Water Misuse by Citizens- Communities' own habits, practices, and collective choices influence water tensions. The Mayor of Baalbeck noted that "bad habits from the Citizens" include significant water abuse by some restaurants and businesses (e.g., water use for exaggerated and long-lasting cleaning despite being aware by water scarcity), whereas other establishments are completely cut off from water supply. This uneven distribution reflects not only governance limitations but also the absence of awareness around conservation and smart use, and collective responsibility including wasteful irrigation and lack of conservation in times of scarcity. Karama Humanitarian Association [8] representative stressed that citizens must support authorities and be guided towards wiser water use, linking solutions to behavioural change and active citizenship, not only institutional reform.
- Behavioral & Citizenship Factors/ Citizens' Compliance and Illegal Issues - Widespread non-compliance that is fuelling tensions, including cancelled BWE subscriptions, illegal connections, and reliance on unregulated pumping and trucking, undermines revenues needed for public service delivery and erodes the social contract. Addressing this requires both enforcement and smart use/ active citizenship awareness efforts to demonstrate the value of formal subscription, so that communities see themselves as partners in managing water fairly.
- External Factors/ Structural and Political- The financial crisis, environmental degradation, climate-driven drought, recent bombardments, and displacement (including from Syria) have compounded scarcity, disabled pumping stations, and intensified competition over limited resources.

3.6- Health and Environmental Spillovers of Water Tensions: The roundtable highlighted how water issues generate health and environmental consequences that further increase tensions and undermine social stability.

- The 2023 Cholera Outbreak as a Water-Tension Indicator- The UNDP Social Stability coordinator reported that cholera disease outbreaks in 2023 were directly caused by "water scarcity and shortage of water services, water networks gaps as well as non-treatment issues of water." The outbreak generated public health crises, required emergency response resources, and further damaged public confidence in water safety as well as increased inter-communal tensions and stigmatization.
- Water Quality Deterioration and Pollution Effects- The Deputy Mayor of Deir El Ahmar described how "wastewater leakage specifically from Baalbeck region towards Deir El Ahmar village" has created environmental and health consequences, with "wastewater coming from Baalbeck getting stuck in Deir El Ahmar, and polluting its water and area, hence the increase of cancer cases allegedly". Another participant noted that "irrigation canals in their area have been transformed to wastewater canals", and this "transformation was without control from authorities, which led to severe environmental consequences and pollution and has exacerbated horizontal conflicts between people in the communities in the area." These cases show that environment and water-related tensions affect entire communities by contiguity, which adds new sources of tension and grievance.

3.7- Tensions Across Population Groups- Host Communities and Displaced Syrian Community: The policy brief notes that displaced Syrians, who depend mainly on informal and costly sources such as water trucking, face compounded affordability and protection risks, especially with trucking prices rising by 60 percent between

[8] A Local Civil Society Organisation and a WE'AM Subgrantee. For more info click here: https://www.facebook.com/Karama.Association.2022

2020 and 2025. These disproportionate burdens deepen economic marginalization and feeding inter-communal tensions over access to basic services.

4- KNOWLEDGE & DATA-RELATED GAPS AROUND WATER SECURITY

The roundtable highlighted critical knowledge and information gaps that undermine transparent water governance and fuel mistrust and tensions:

- **Absence of Transparent Water Allocation Data** – The lack of accessible, user-friendly data on how water is allocated, on what basis, and with what priorities prevents communities from understanding why some areas receive more regular or better-quality supply than others. In addition, there is no systematic data on agricultural water allocations, irrigation efficiency, or the extent to which irrigation systems intersect with wastewater networks and pollution sources. Without such data, decisions appear arbitrary or politicized, rumours of favouritism spread easily, and sustainable extraction and efficient irrigation remain harder to achieve.
- **Invisible Underground Water Networks Creating Confusion** – Lack of public[9] hydrogeological maps and basin-level assessments fuels disputes among landlords over underground water[10], often handled through ad hoc security interventions rather than informed negotiation.
- **Gaps in Localized Tension Early Warning Systems** – While some regional or national monitoring tools record a certain number of water-related incidents, many tensions remain implicit, unreported at the local level, or hidden due to fear of retaliation against those who document illegal water access or report abuses. This means that authorities, public institutions, and local mediators lack localized early-warning indicators. As a result, opportunities for tension preventive actions are missed, and disputes are more likely to escalate until they require security interventions or erupt into conflicts.
- **Communication Gaps** – Some perceptions of institutional malpractice reflect real governance gaps[11], others may be driven by outdated information or misunderstandings due to lack of systematic data-sharing mechanisms or regular communication. Bridging this gap requires better communication and accessible data that help communities differentiate between institutional capacity shortages and unwillingness.
- **Hydrogeological Assessments and Basin-Level Water Resource Mapping** – Comprehensive assessments of water availability in each basin, including surface flows, groundwater reserves, recharge rates, and drought vulnerability, are needed to establish a scientific baseline for sustainable extraction and equitable allocation. Without this foundation data, allocation decisions risk being reactive, politicized, or technically unsound.

5- WATER GOVERNANCE & INFRASTRUCTURE GAPS

Governance Challenges Across Institutional Levels

- **Absence of Clear Basin Demarcation and Institutional Mandates:** The policy brief recommends that "there should be clear and official demarcation of basins of water and there should be clear management limitations including roles and responsibilities of key public institutions around water services delivery." Currently, the GoL has no clear water basin boundaries, delineation around which institutions have authority over which areas, or define how municipalities, water establishments, and the Ministry of Energy and Water (MoEW) coordinate water management. This inter-institutional

[9] The fact that better data may exist in the private sector but not in the public domain reinforces perceptions that communities are excluded from knowledge that is essential for their livelihoods.
[10] Invisible underground water networks generate confusion and competing ownership claims among landlords, who often assert rights over water passing beneath their properties.
[11] including severe shortages of maintenance capacities, limited law enforcement, and politicized allocation.

ambiguity creates situations where water users do not know which institution to approach with concerns, institutions defer responsibility to each other, and coordination failures result in unmanaged water crises and leaving cracks for water misuse.

- **Weak Law Enforcement and Regulation Application**: Licensing and enforcement frameworks exist for wells, extraction limits, and water quality standards, but they are weakly applied, creating space for thousands of unlicensed wells, illegal household pumping stations, and unregulated trucking networks that operate outside formal oversight. These informal systems deplete groundwater, bypass quality control, and deepen perceptions of clientelism and unfair access, especially in politically sensitive areas.
- **Municipality-Water Establishment Coordination Issues**: Both BWE and municipalities lack the capacities and enforcement tools to implement measures such as metering or systematic follow-up on consumption, making concerted action difficult despite local initiatives like those of Al Ain municipality[12].
- **Absence of Local Water Governance Committees:** The absence of functioning basin-level water governance committees further limits coordination between municipalities, water establishments, agricultural actors, and civil society, forcing many disputes to escalate to security forces instead of being addressed through structured dialogue and conflict prevention.

Infrastructure Deficits and Operation & Maintenance Issues

- **Non-Functional Water Supply Projects and Leakage Issues**: The Mayor of Baalbeck emphasized about "a gravity-fed water project that was established to channel water from the Dardara and Kawkaba rivers; however, recurrent drought and increasing water scarcity over the past few years have rendered the project ineffective." This illustrates how projects and interventions that invest in water infrastructure can be ineffective when there is water scarcity, underscoring the need to prioritize investments in water sources assessments and drought preparedness rather than investing solely in infrastructure interventions, to avoid projects failure. The policy brief stresses the need for rehabilitation that prioritizes leakage reduction, chlorination, and reliable energy for pumping.
- **Electricity Supply Dependence and Energy Crisis**: Chronic electricity shortages and bombardment-related blackouts have disabled pumping stations. A representative from Al Ain municipality highlighted how "the project of Oxfam of installing solar panels have compensated the power supply cutoff, which helped the village to cope after being bombarded," suggesting that renewable energy solutions address both electricity and water availability challenges simultaneously.
- **Water Quality Treatment Deficits**: The Mayor of Baalbeck highlighted pollution at public free-water points and the need for filtration both at source and network levels to ensure safe access, especially under drought conditions.
- **Network Coverage Gaps and Population Density Pressures**: A representative from Al Ain municipality noted that "The population increase, including displacement effects (including from Syria), has placed additional strain on the already deteriorated water infrastructure, causing network overload that cannot accommodate the area's growing population density". The representative emphasized that "the current water amount is insufficient for the current population size, and the only viable solution is to drill a new well; however, the municipality cannot afford its related excavation fees". This illustrates how population growth intersects with infrastructure gaps and shortages of municipal financial resources, to create systemic capacity deficits.
- **Random & Informal Water Infrastructure at Household Level**: Illegal connections and household pumping stations in areas e.g. Al Laboueh, disrupt supply across entire neighborhoods, shifting formal water management/ coordination to informal arrangements, negative competition and conflicts.

[12] A representative from Al Ain municipality noted that they have attempted to address water challenges independently but emphasized that solutions require "holistic approach and not fragmented one" with support from technical agencies (e.g. MoE, UNDP, Oxfam, etc.) and water establishments.

6- SPILLOVER EFFECTS & MULTI-DIMENSIONAL IMPACTS OF WATER ISSUES

Agricultural Sector Collapse and Rural Livelihoods

- **Suspension of Agricultural Activities and Crop Losses**: The Mayor of Baalbeck reported that "so many agricultural activities have been suspended due to water scarcity and drought," particularly in areas like Ras El Ain where water access occurs through private sources. The representative from Mekseh area reported "big losses of thousands of dollars in agricultural outcomes specifically the last two years, and farmers they cannot afford private access to water." The WE'AM policy brief notes that "the scarcity of water is leading to increased tensions and economic marginalization, so this is specifically affecting the agricultural and industrial outcomes that are decreasing due to water scarcity." A women-led organization representative from Deir El Ahmar, stated that their area is an "agricultural region by excellence," and shared that "the Farmers cannot cultivate their plantations," providing a specific example of "a project supporting farmers however farmers couldn't continue and they suspended the project by the mid of the year due to water scarcity issues." This represents not only economic loss but also failure of development interventions designed to strengthen agricultural livelihoods- when water constraints prevent farmers from implementing improved practices, development investments become wasted resources.
- **Intra-Community Conflicts Among Farmers:** Farmers in Mekseh and other villages face intra-community conflicts "even among close families," showing how economic desperation erodes solidarity and complicates collective solutions.
- **Declining Agricultural Productivity and Labor Displacement**: As agricultural production collapses due to water scarcity, agricultural laborers lose employment, rural communities experience income losses, and food security declines. The WE'AM policy brief documents that "decreased jobs, income generation activities" result from water scarcity-driven agricultural decline. This represents a chain of causation: water scarcity → agricultural production decline → unemployment → income loss → reduced purchasing power → increased poverty and vulnerability → internal displacement or negative coping mechanisms, etc. This chain affects not only farmers but agricultural laborers, rural traders, and communities dependent on agricultural supply chains.

Economic Marginalization and Increased Financial Pressure on Households

- **Diversion of Resources from Other Essential Services**: Rising water costs force households to divert spending from other essential services, reducing overall quality of life and compounding vulnerability.
- **Differential Vulnerability of Lower-Income and Refugee Households**: Lower-income residents and refugees, heavily reliant on expensive informal sources and unable to absorb a 60 percent increase in trucking prices, face disproportionate affordability pressures and heightened risk of marginalization.

7- ACTIONABLE INSIGHTS AROUND WATER-RELATED TENSIONS

The roundtable generated **directions and insights for potential actions which need to be further unpacked for concrete actions and next steps**, adopting a holistic and integrative approach, to address root causes including water scarcity, infrastructure gaps, governance deficiencies, gaps in active citizenships with behavioral malpractices, and identification of innovative alternative water sources.

7.1- Insights for Future Actions under Regulating Water Extraction, Non-Revenue Consumption and Illegal Activities with Focus on Priority Hotspots

- **Water Metering Systems**: Multiple participants recommended meter installation to track consumption. However, participants emphasized that meters must be paired with adequate water sources—metering alone institutionalizes rationing rather than ensuring equitable access. Metering

should target all users and mostly large users (industries and businesses) to identify significant consumers and enable targeted conservation.

- **Water Quality Monitoring and Quality Control**: Despite some monitoring and chlorination efforts, participants reported that "there is no real/ effective monitoring and follow up by the water establishments on water treatment and quality." Hence the need to unpack ways forward that can establish/support local-level quality control mechanisms, that can ensure quality and transparency, with a conflict sensitive approach, aiming to enhance horizontal and vertical trust in institutions regarding safe and fair water delivery. One action could be systematic water quality testing at sources, distribution networks, and household levels, to enable identification of pollution and targeted interventions.
- **Water efficiency measures** (water efficient fixtures, leakage detection, etc.) troubleshooting any technical issues and facing any damage to the water supply infrastructure.
- **Pricing Regulation and Consumption Limits**: Price regulation protects lower-income and vulnerable households, including refugees, from unaffordable water services, while consumption limits prevent monopolization by large users. With a 60% increase in water trucking prices since 2020, pricing reform is urgently needed.
- **Strengthen Active Citizenship and Awareness on Water Rules and Conservation**: Community-led awareness via trusted channels and education system on rights, responsibilities, risks of illegal connections and activities, pollution, and water-saving behaviours, alongside accessible reporting pathways (to report on theft, quality, etc.), can transform users into active citizens who support the formal system.
- **Transparent Licensing and Registration of Wells**: Formalizing well registration with scientific/ environmental verification can manage cumulative groundwater extraction. However, transparent appeals mechanisms with transparent criteria are essential to prevent discrimination and ensure equitable access.
- **Mapping of dried sources & high-risk localities:** This will help prioritize high risks area for deployment of targeted measures e.g. water trucking, targeted support to most vulnerable farmers and households, etc. before summer 2026.
- **Informal Water Economy and Conflict--Sensitive Regulation**: Any regulation of informal water access (private pumping, unlicensed wells, and unregulated trucking) must recognize that these systems are embedded in local power structures and livelihoods, not just technical violations; a purely punitive approach risks provoking backlash, deepening mistrust, and pushing access further underground, worsening inequity and tension. Reform efforts should be conflict-sensitive: map the informal economy (routes, pricing, key actors), engage local authorities and community leaders in dialogue, and design phased, regulated pathways that formalize parts of this system while protecting the most vulnerable including basic quality/price controls, etc.

7.2- Insights for Future Actions under Identification/Development of Alternative Water Sources and Adaptation Techniques

- **Decentralized Water Systems with Renewable Energy**: Solar-powered pumping, as piloted in Al Ain by Oxfam, reduces dependence on grid infrastructure and helps maintain water supply during crises.
- **Water Harvesting and Storage Systems**: The Deputy Mayor of Deir El Ahmar proposed establishing "ponds that would accumulate water and save them for the Summer season," capturing seasonal water availability for year-round access. A representative from Karama Association noted that traditional water-harvesting knowledge, including prototypes based on indigenous techniques, can be revived and adapted for contemporary contexts.
- **Weather Modification Techniques such Cloud Seeding Technology**: The WEAM Consortium Coordinator proposed cloud seeding as a time-sensitive solution already implemented in the UAE and Saudi Arabia over 20 years, which could provide rapid relief for farmers and reduce immediate local

tensions while longer-term sustainable solutions are developed. Participants emphasized the need for robust data, feasibility studies, and safeguards before considering such options.

- **Promoting Agricultural Adaptation**, such as crop changes and new irrigation techniques that require less water, to reduce demand and decrease tensions between farming and domestic uses.
- **Unified Water Source Strategy**: Participants suggested transitioning from fragmented sources (separate sources for drinking, household, and irrigation water) to a single integrated water source for multiple uses, with adequate treatment and allocation mechanisms, improving efficiency and reducing overall consumption.
- **Investing in Non-Conventional Water Resources**, such as treated wastewater reuse for agriculture, and improved storage and recharge systems, where technically and environmentally appropriate.

7.3- Insights for Future Actions under Establishing & Supporting Local Water Governance Mechanisms, Information Management, Ownership, and Coordination

- **Local Water Management Committees**: Participants recommended establishing committees at water basin-levels including municipalities, water establishment, civil society, agriculture actors, and local conflict resolution groups. The Al Ain municipality exemplified this approach: "three villages unified voices around common issues through their public institutions, which was effective and diffused tensions." These committees enable collaborative water allocation during scarcity and coordinate long-term planning at the local level.
- **Demarcation of Water Basins and Institutional Mandate Clarification**: The Government of Lebanon must officially demarcate hydrological basin boundaries, assign water management authority to specific institutions, and define coordination mechanisms. Without this foundational reform, local-level interventions will remain limited.
- **Investing in a shared, open access water and tension monitoring database**, including basin-level hydrogeological assessments, ground water and surface water monitoring, water quality dashboards, and localized social tension indicators linked to tension early warning and conflict-sensitive decision-making.
- **Regular and accessible communication:** On water availability, allocation criteria, infrastructure and institutional performance, and budgets, paired with community level reporting and dialogue platforms to address both real grievances and perceptions.
- **Capacity Building for Local Institutions & Authorities and CSOs[13]**: Local institutions[14], municipalities and community including CSOs, require enhanced conflict-sensitive water management skills to manage water issues and resolve related tensions through dialogue rather than security-force responses. Sustained institutional strengthening is essential for effective service delivery and governance implementation. International Alert representative highlighted that CSOs serve as crucial intermediaries, boosting dialogue between farmers, communities, government, and other stakeholders to advance collective solutions. On another hand, NGOs and international actors should focus on strengthening state and local institutions rather than creating parallel systems.
- **Technical Expertise Provision**: The Al Ain municipality emphasized that "technical expertise was a key factor in project success, fostered by conducive environment for coordination among all key stakeholders." Providing communities with technical expertise in hydrogeological assessments and renewable energy analysis enables evidence-based dialogue grounded in data.
- **National Drought and Water Access Strategy**: A comprehensive strategy coordinating across sectors (WASH, agriculture, health, social protection) ensures vulnerable populations receive prioritized support and addresses root causes rather than fragmenting and siloed interventions.

[13] The transitional phase under the Lebanon response plan presents an opportunity to transfer knowledge from the international community and NGOs to public institutions and local CSOs.

[14] Support for Water Establishment Capacity: Despite national strategies, water establishments lack financial, human, and technical resources to implement mandates.

7.4- Insights for Future Actions under Dialogue and Trust-Building Mechanisms

- **Mobilization of Local Conflict Prevention Mechanisms**: Local conflict prevention committees and informal mechanisms are essential for de-escalating water-related disputes and should be systematized as part of local water governance structures.
- **Facilitated Community Dialogues**: Structured dialogue processes, facilitated by conflict resolution professionals, enable communities to express concerns and negotiate competing interests. Participants noted that dialogue is proven effective in local development and community engagement.
- **Women and Youth Leadership**: Community representatives noted that women prioritize pragmatic problem-solving, making them effective mediators. Youth, less invested in existing power structures, can challenge rooted positions and advocate for innovative solutions.

8- CONCLUSION

Water scarcity in the Bekaa has become a direct driver of social tension, exposing and amplifying long-standing governance gaps, data and communication deficits, and inequalities in access between and within communities. The roundtable highlighted that treating water as a peacebuilding and social stability priority requires combining immediate water-security measures with structural reforms in governance, regulation, and transparency, while protecting the most vulnerable groups, including refugees and low-income households. A key message from this roundtable is that the priority now is not more policy documents or long lists of recommendations, but concrete, conflict-sensitive action on the ground. The actionable insights proposed here are meant to be pragmatic entry points, not another abstract policy paper, that partners can use to start closing the gap between existing plans and on-the-ground reality.

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